COLUMBUS STATE
COMMUNITY COLLEGE

2024 - 2025

Catalog

Table of Contents

3 ABOUT US
- Message from the President 4
- Directory 5
- Building Codes 6
- Campus Maps and Information 7
  - COLUMBUS CAMPUS 7
  - DELAWARE CAMPUS 8
  - REGIONAL LEARNING CENTERS 9
  - ACCELERATED TRAINING CENTERS 10
- TELEPHONE INFORMATION CENTER (TIC) 10
- Academic Calendars 11

14 ACADEMICS
- Areas of Study 14
  - DEGREES AND CERTIFICATES 15
- Academic Programs 15
- Institutional Learning Goals 18
- Career and Technical Programs 19
- Bachelor of Science in Nursing (RN to BSN) 19
- Arts and Sciences/Transfer Programs 19
- Graduation Requirements 20
  - CATALOG RIGHTS 20
  - REQUIREMENTS OF ALL GRADUATES 20
  - ASSOCIATE OF TECHNICAL STUDIES DEGREE 21
  - K-12 PARTNERSHIPS (COLLEGE CREDIT PLUS) 21
- Ohio Transfer Policy 22
- Columbus State Community College Transfer Agreements 24
  - COLLEGE PARTNERS 24
- Online Learning 25
  - TYPES OF DISTANCE LEARNING COURSES 25
  - DISTANCE LEARNING DEGREE PROGRAMS AND CERTIFICATES 26
  - ONLINE LEARNING COURSES 27
- Grades and Academic Requirements 28
  - GRADES & ACADEMIC PROGRESS 28
  - ACADEMIC STANDING 30
  - PRIOR LEARNING ASSESSMENT 31
  - FRESH START RULE 32
  - COURSE DROP/WITHDRAWAL PROCEDURE 32
  - ADMINISTRATIVE WITHDRAWAL 32
  - REPEATING COURSES 32
  - PROGRAM OF STUDY CHANGE 32
  - DEGREE AUDIT REPORT 32
  - STUDENT STATUS 33
  - GRADUATING 33
  - STUDENT RIGHTS UNDER THE FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT OF 1974 AS AMENDED (FERPA) 34
- Honors Program 36
  - PHI THETA KAPPA HONOR SOCIETY 36
  - SOCIETY OF THE COMPASS 37
- Academic Study Abroad Opportunities 37
- Tuition and Fees 38
  - FEES 38
  - FEE PAYMENT 39

41 ADMISSIONS, WELCOME, AND ENTRY
- Admissions 42
  - GENERAL INFORMATION 42
  - ADMISSION POLICY 42
  - APPLICATION/ENROLLMENT PROCEDURES 42
  - INTERNATIONAL ADMISSIONS 42
  - COLLEGE CREDIT PLUS 42
  - STUDENT IDENTIFICATION NUMBER 43
  - SELECTIVE SERVICE SYSTEM REGISTRATION 43
- New Student Onboarding and Assessment 43
  - GENERAL INFORMATION 43
  - HIGH SCHOOL TRANSCRIPT/GED TRANSCRIPT 44
  - PREVIOUS COLLEGE TRANSCRIPT 44
  - HEALTH RECORD 44
  - DISCLOSURE FOR STUDENTS PURSUING HEALTH, HUMAN SERVICES, AND RELATED PROGRAMS 44
  - NEW STUDENT PROGRAMS 45
  - NEW STUDENT ASSESSMENT 45
  - RETURNING STUDENTS 45
  - REGISTERING FOR CLASSES 46
  - CROSS-REGISTRATION AT OTHER INSTITUTIONS 46
  - GOOD AS GOLD EDUCATIONAL PROGRAM 46

47 CAMPUS LIFE
- Food Services 48
- Student Engagement and Belonging 49
  - COUGARCONNECT 49
  - STUDENT AMBASSADOR LEADERSHIP PROGRAM (SALP) 49
  - STUDENT CLUBS 49
  - SOCIAL ACTIVITIES 49
  - COLUMUBUS STATE STUDENT CAMPUS INSIDER 49

50 COMMUNITY
- Language Institute 51
  - BASIC ESL PROGRAM 51
- Manufacturing Extension Partnership 51
- Non-Credit Registration Office 51
- Office of Talent Strategy 52
- The Ohio Small Business Development Center 52

53 STUDENT SERVICES
- Advising Services 54
- Columbus State Bookstore 54
- Career Services 55
- Cashiers and Student Accounting 55
- Student Record and Program of Study Updates 57
- Counseling Services 57
- Accessibility Services 57
- Financial Aid Resources 58
  - FINANCIAL AID OFFICE 58
- IT Support Services 60
- Library and Delaware Learning Center 60
- Military and Veteran Services 61
- Columbus State Police Department 62
- Reserve Officers Training Corps (ROTC) 68

Student Central 68
Student Email 68
Student ID Cards 69
Telephone Information Center 69
College Testing Services 69
ACADEMIC TESTING CENTERS 69
The Columbus Promise 70
Compliance Office (Discrimination/Harassment Policies & Title IX), Student Conduct, and Campus Security Information. 70
STUDENT RIGHTS AND RESPONSIBILITIES 70
TRIO Programs 72
Tutoring Services 73
University Transfer Center 75

76 DIRECTORIES AND ACCREDITATIONS
Directories 77
BOARD OF TRUSTEES 77
ADMINISTRATION 77
FACULTY AND ADVISORY COMMITTEE MEMBERS 80

94 ACCREDITATIONS

96 ACADEMIC ASSESSMENT

97 CURRICULUM
Programs - Degrees and Certificates 98

ABOUT US

Columbus State Community College makes every effort to present accurate/current information at the time of this publication. However, the college reserves the right to make changes to information contained herein as needed. The online college catalog is deemed the official college catalog and is maintained at cscc.edu. For academic planning purposes, the online catalog should be consulted to verify the currency of the information presented herein.

ACCREDITATION

Columbus State Community College is accredited by
The Higher Learning Commission
230 South LaSalle Street, Suite 7-500
Chicago, IL 60604-1411

Telephone: 312-263-0456 or 800-621-7440

Website: www.hlcommission.org.

DISCRIMINATION/HARASSMENT/RETALIATION POLICY

(Ref. Policy 3-43)

cscc.edu/about/policies-procedures/3-43.pdf

Columbus State Community College is committed to supporting a respectful and productive learning and working environment free of discrimination, harassment, and retaliation. The college prohibits discriminatory or harassing behavior based on a protected class by or against students, employees, persons participating in a college program or activity, vendors, and college visitors. Protected classes include sex, race, color, religion, national origin, ancestry, age, disability, genetic information (GINA), military status, sexual orientation, pregnancy, status as a parent of a young child, status as a nursing mother, status as a foster parent, and gender identity and expression.

SEXUAL HARASSMENT/SEXUAL VIOLENCE POLICY

(Ref. Policy 3-44)

cscc.edu/about/policies-procedures/3-44.pdf

Columbus State Community College is committed to supporting a respectful and productive learning and working environment. In furtherance of this commitment, the college prohibits sexual harassment, which includes sexual violence (dating violence, domestic violence, sexual assault and stalking) in compliance with applicable statutory and regulatory guidance.

This policy applies to all students, employees, volunteers, vendors, and visitors to the college.

The college will address the behavior and its impact when it affects the learning or working environment, college programs, activities, or interests whether the behavior takes place on or off college property.

REASONABLE ACCOMMODATIONS

cscc.edu/about/policies-procedures/3-41.pdf

It is the policy of Columbus State Community College to make reasonable accommodations, which will provide otherwise qualified applicants, employees, and students with disabilities equal access to participate in college opportunities, programs, and services. It is the college's intent to provide such accommodations unless doing so would fundamentally alter the nature of the employment, program, or service; would result in an undue hardship to the college; or would result in a direct threat to health and safety.

Students in need of an accommodation due to a physical, mental, or learning disability can contact Accessibility Services, Eibling Hall, Room 101 or 614-287-2570 (VOICE/TTY). On the Delaware Campus, see Student Services in Moeller Hall or call 740-203-8345.

COLUMBUS STATE IS TOBACCO FREE

(Ref. Policy 13-13)

cscc.edu/about/policies-procedures/13-13.pdf

Columbus State Community College strives to enhance the general health and wellbeing of its students, faculty, staff, and visitors. We seek to help individuals live healthy, tobacco-free lives and enter their careers at a high level of health and wellbeing. To that end, the use of all types of tobacco products is prohibited in all Columbus State buildings and on all college-owned, operated, or leased property, including parking lots, garages, outside areas, and vehicles.

Message from the President

Dear Students,

Thank you for choosing Columbus State as your pathway into a successful future. Your success is our highest priority, and you will find a supportive environment in and out of the classroom. Our faculty and staff are primed to be your No. 1 resource here, helping you prepare for a career, resolve scheduling issues, or master novel theories and concepts. Get to know them and put them to work for you.

We provide the most affordable path to a college degree in central Ohio. Whether you plan to go to work directly after graduation or continue your education, Columbus State will provide you with an excellent and affordable credential. Through our Preferred Pathway program with universities, you can earn your bachelor's degree with little or no student debt.

Our graduates are moving into exciting jobs leading to great careers. More and more employers in a growing number of industries are relying on Columbus State credentials to fuel their workforce needs. More than 100,000 graduates have entered the workforce or gone on to further studies after experiencing academic success at Columbus State. About 80% of our graduates remain right here in central Ohio after graduation, so you are joining a strong community of proud alumni.

I urge you to take advantage of Columbus State's many student support resources, most of which are free for the asking. Your first stop should be the college's Student Central office, where you can find the answers to your Admissions, Registration, and Financial Aid questions. Staff in the Telephone Information Center (614-287-5353) are also available to answer your questions by phone. If you prefer to chat virtually, you can visit the **Student Central homepage**. The college has also published **virtual resources** to help familiarize you with some important departments and processes.

This 2024-2025 College Catalog lists all current programs of study, along with descriptions of required and elective courses. With catalog data as a guide, you can plot each semester of your degree path, locate transfer opportunities to complete a bachelor's degree, or find the right certificate program to meet your career aspirations. The College Catalog is maintained and updated online, which can be accessed **here**.

Columbus State has assembled the faculty, staff, programs, and resources to promote student success. Now it's up to you to continue the process.

Have a great academic year at Columbus State!

Very truly yours,

David T. Harrison, Ph.D.
President, Columbus State Community College

Directory

DEPARTMENT/OFFICE/SERVICE	LOCATION	PHONE
Accessibility Services	EB 101	614-287-2570
Admissions	MA 101	614-287-2669
Advising Services	AQ 116	614-287-3535
Campus Tours	MA 101	614-287-2669
Career Services	NH 108	614-287-2782
Cashiers and Student Accounting	RH 2nd Fl	614-287-5658
Center for Workforce Development	WD 317	614-287-5000
Choose Ohio First	WD	614-287-2065
Columbus Promise	FR 223	614-287-5319
Columbus State Bookstore (DX)	DX Bldg	614-287-2427
Columbus State Police Department	DE 047	614-287-2525
Columbus State Foundation		614-287-2436
Community and Civic Engagement	WD 342	614-287-2511
Compliance Office (Title IX)		614-287-2636
Conference and Event Services	WD 4th Fl	614-287-5500
Counseling Services	NH 010	614-287-2818
Delaware Campus Student Services	MO	740-203-8345
Delaware Campus Learning Center	MO 149	740-203-8183
Dublin Center	DB	614-287-7050
Financial Aid	MA 201	614-287-2648
Food Court and Services	UN 1st Fl	614-287-2483
Health Records Office	UN 053	614-287-2450
Human Resources	EN	614-287-2408
IT Support Services		614-287-5050
K-12 Partnerships	WD 1078	614-287-3938
Language Institute	WD 1090	614-287-5858
Library	CO	614-287-2465
Manufacturing Extension Partnership	WD	614-287-5000
Mid-Ohio Market		614-287-5258
Military and Veterans Services	UN 056	614-287-2644
New Student Assessment	MA 202	614-287-2478
New Student Onboarding	MA 101	614-287-5353
Noncredit Registration Office	WD 1090	614-287-5858
Parking		614-287-2783
Regional Learning Centers	DA 128A	614-287-7050
Southwest Center (Bolton Field)	SW	614-287-7100
Student Conduct	WD 1099	614-287-2104
Student Engagement and Belonging	NH 116	614-287-2637
Student IDs	MA-LL	614-287-5353
Telephone Information Center (TIC)	TIC	614-287-5353
Testing Services (Columbus Campus)	WD 223	614-287-5750
Testing Services (Delaware Campus)	MO 157	740-203-8383
Transitional Workforce	WD 1090	614-287-5858
TRiO Programs	FR 223	614-287-5777
Tutoring Services	AQ 241	614-287-2232
University Transfer Center	AQ 126	614-287-2847
Weiler Scholars	FR 223	614-287-5712

ARTS AND SCIENCES PROGRAMS	LOCATION	PHONE
Biological and Physical Sciences	NH 432	614-287-2522
English	NH 420	614-287-2531
Humanities	NH 408	614-287-5043
Languages and Communication	FR 245	614-287-5400
Mathematics	DH 415	614-287-2330
Social and Behavorial Sciences	TL 309	614-287-5005

CAREER AND TECHNICAL PROGRAMS	LOCATION	PHONE
Accounting	DE 259	614-287-5351
Architecture	DH 205	614-287-5030
Automotive Technology	DE 259	614-287-5495
Aviation Maintenance Technology	SW	614-287-7100
Business Management	DE 259	614-287-5351
Business Office Administration	DE 259	614-287-5351
Civil Engineering Technology	DH 205	614-287-5030
Computer Science	EB 312	614-287-5009
Construction Management	DH 205	614-287-5030
Digital Design and Graphics	EB 401	614-287-3697
Digital Photography	EB 401	614-287-5045
Electro-Mech. Engineering Technology	DH 205	614-287-5350
Electrical Engineering Technology	DH 205	614-287-5350
Environmental Science, Safety and Health	DH 205	614-287-5030
Finance	DE 259	614-287-5351
Geographical Information Systems	DH 205	614-287-5030
Heating, Ventilating and A/C Technology	DE 205	614-287-5030
Human Resources Management	DE 240	614-287-5351
Interactive Media	EB 401	614-287-5647
Landscape Design and Management	DH 205	614-287-5030
Marketing	EB 401	614-287-5351
Mechanical Engineering Technology	DH 205	614-287-5350
Quality Assurance Technology	DH 205	614-287-5350
Paralegal Studies	FR 206B	614-287-2591
Real Estate (includes Appraisal)	WD 1099	614-287-5351
Skilled Trades Technology	WD 004	614-287-5211
Supply Chain Management (Logistics)	EB 401	614-287-5175

HEALTH AND HUMAN SERVICES	LOCATION	PHONE
Criminal Justice	FR 206B	614-287-2591
Dental Hygiene	UN 308	614-287-2597
Early Childhood Dev. and Education	UN 208	614-287-2540
Emergency Medical Services Technology	GA 001	614-287-3812
Fire Science	SW	614-287-3812
Healthcare Manager	UN 308	614-287-5261
Health Information Management Technology	UN 318	614-287-2541
Health Science	UN 308	614-287-2597
Hospitality Management	MH 300	614-287-5126
Interpreter Education Program	UN 208	614-287-2540
Massage Therapy/Entrepreneurship	UN 576	614-287-5786
Medical Assisting	UN 308	614-287-3638
Medical Laboratory Technology	UN 308	614-287-5099
Multi-Skilled Health	UN 308	614-287-5099
Nursing	UN 508	614-287-2506
Radiography/Medical Imaging	GR 109	614-287-5215
Respiratory Care	GR 109	614-287-5215

HEALTH AND HUMAN SERVICES	LOCATION	PHONE
Social Work and Human Services	UN 208	614-287-2540
Sport and Exercise Studies	DE 077	614-287-3681
Sterile Processing Technology	GR 109	614-287-5215
Surgical Technology	GR 109	614-287-5215
Veterinary Technology	VT 104	614-287-2540
Interpreter Education Program	UN 208	614-287-2540
Massage Therapy/Entrepreneurship	UN 576	614-287-5693
Medical Assisting	UN 308	614-287-3638

Building Codes

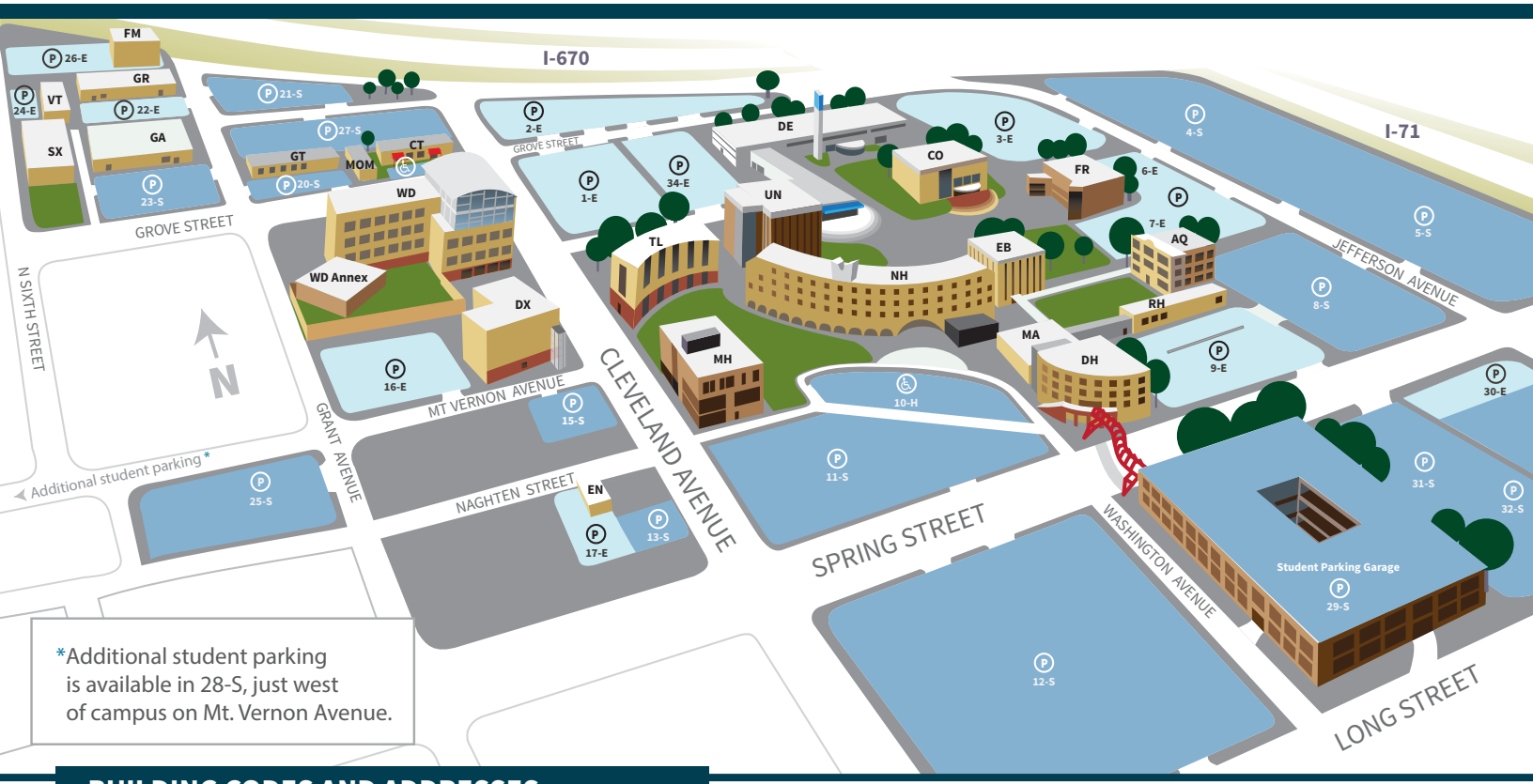
CODE	BUILDING NAME
AQ	Aquinas Hall
CO	Columbus Hall
CT	Center for Teaching and Learning Innovation
DA	Delaware Campus Administration Building
DB	Dublin Center
DE	Delaware Hall (Columbus Campus)
DH	Davidson Hall
DX	Bookstore/Discovery Exchange Building
EB	Eibling Hall
EN	385 East Naughten Street
FR	Franklin Hall
GA	389 North Grant Avenue
MA	Madison Hall
MH	Mitchell Hall
MO	Moeller Hall (Delaware Campus Academic Building)
NE	Northeast Franklin County Accelerated Training Center
NH	Nestor Hall
PG	Parking Garage (Student Parking)
RH	Rhodes Hall
SW	Southwest Center (Bolton Field)
SX	366/370 North 6th Street
TL	Center for Technology and Learning
UN	Union Hall
VT	384 North 6th Street
WD	Center for Workforce Development
WD.C	Center for Workforce Development Annex

Campus Maps and Information

Columbus Campus

550 East Spring Street
Columbus, Ohio 43215

614-287-5353 | www.cscc.edu



*Additional student parking is available in 28-S, just west of campus on Mt. Vernon Avenue.

BUILDING CODES AND ADDRESSES

AQ Aquinas Hall *(Advising)* .....249 Jefferson Ave
CO Columbus Hall (*Library, Tutoring, Writing Center*)291 Jefferson Ave
CT .....339 Cleveland Ave
DE Delaware Hall *(Police)*.....499 Grove St
DH Davidson Hall.....520 E Spring St
DX Bookstore.....283 Cleveland Ave
EB Eibling Hall *(Accessibility Services)* .....255 Jefferson Ave
FM Facilities .....407 N Grant Ave
FR Franklin Hall.....277 Jefferson Ave
GA .....375 N Grant Ave
GR .....389 N Grant Ave
GT .....356 N Grant Ave
MA Madison Hall *(Admissions, Financial Aid, Placement Tests, Student Central, Student IDs)* .....518 Mt Vernon Ave
MOM Mid-Ohio Market ..... 400 Grove St
MH Mitchell Hall *(Hospitality, Dining)* ..... 250 Cleveland Ave
NH Nestor Hall *(Counseling, Career Services)* ..... 488 Mt Vernon Ave
PG Student Parking Garage ..... 534 E Long St
RH Rhodes Hall *(Cashier)*..... 550 E Spring St
SX ..... 370 N Sixth St
TL Center Tech/Learning *(Computer Lab)* ..... 290 Cleveland Ave
UN Union Hall (*Food Court, Veterans Services*) .....489 Edward St
VT Veterinary Technology..... 384 N Sixth Ave
WD Center for Workforce Development *(Academic Testing Center, Language Institute, Student Advocacy)* .....315 Cleveland Ave
WD Annex *(Center for Early Learning)* ..... 315 Cleveland Ave

PARKING GUIDE

STUDENT
EMPLOYEE

Find information about campus parking at **cscc.edu/parking**

DELAWARE CAMPUS

Our Delaware Campus is located off U.S. Route 23 between Hyatts and Winter roads. This modern, clean-energy campus brings all the benefits of Columbus State – affordable, high-quality education and training, transferable credit, and hands-on, supportive learning – close to home.

Delaware Campus

5100 Cornerstone Drive, Delaware, Ohio 43015

740-203-8345 or 614-287-5353
cscc.edu/delaware

Opened in Autumn 2010 in southern Delaware County, Columbus State's Delaware Campus (Moeller Hall) represents the institution's commitment to provide access to affordable education to the community. The College's 106-acre second-campus offers students the opportunity to complete associate degrees and certificates.

The Delaware Campus is a gateway to approximately 200 degrees and certificates available at Columbus State, including several online degrees.

The full-time faculty at the Delaware Campus are experts in their fields and dedicated to teaching. Along with the Delaware faculty, select adjunct instructors lead classes in more than 30 subjects, from Accounting to Surveying.

Any Columbus State student is welcome to use all services at the Delaware Campus regardless of course registration.

STUDENT SERVICES CENTER

Staff can help with your general questions about admissions, financial aid, scheduling an academic advising appointment, and signing up for classes. Call (740) 203-8345.

Accessibility Services	614-287-2570
Equity and Compliance	614-287-5519

LEARNING CENTER

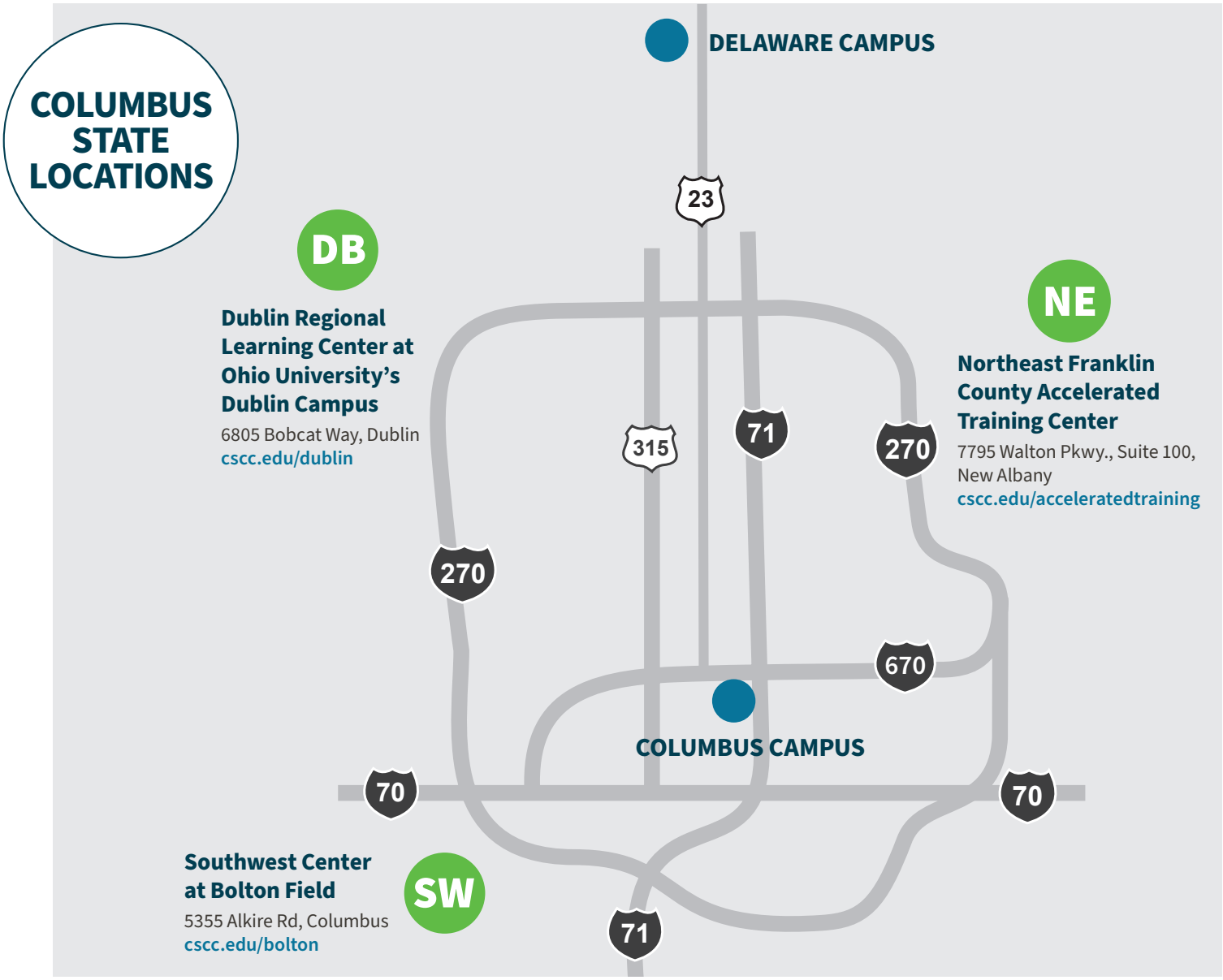
Library	740-203-8183
IT Support	740-203-8310
Tutoring	740-203-8183

TESTING CENTER

Academic and Placement Testing	740-203-8383

View current hours of operation* and additional services online at cscc.edu/delaware.

**Hours of operation may change during breaks between semesters.*



Regional Learning Centers

RLC Office Location: DB-320
614-287-7050 or 614-287-5353 | cscc.edu/rlc

Columbus State's Regional Learning Centers provide educational opportunities throughout the region. Some locations offer a convenient start to your degree with general education courses, while others offer full associate degree and certificate programs.

Instructors at the Regional Learning Centers are approved and trained by Columbus State's experienced faculty. Academic advisors are available to assist with course selection, registration, and financial aid. Testing centers provide all academic and placement tests, and some vendor testing. Textbook order pick-up is free at every location.

Any Columbus State student is welcome to use all services at any regional learning center regardless of course registration.

Please contact the individual center for times when specific services are available.

View current hours of operation* and additional services online at **cscc.edu/rlc**.

**Hours of operation may change during breaks between semesters.*

DUBLIN CENTER (DB)
DUBLIN INTEGRATED EDUCATION CENTER

6805 Bobcat Way
Dublin, OH 43016
614-287-7050

General Hours:
Monday – Thursday 8 a.m. - 8 p.m.
Friday 8 a.m. - 4 p.m. | Saturday 8 a.m. - 1 p.m.

Services Available: Academic advising, testing center (placement and academic), open computer lab, tutoring

SOUTHWEST CENTER AT BOLTON FIELD (SW)

5355 Alkire Road
Columbus, Ohio 43228
614-287-7102

General Hours:
Monday – Thursday 8 a.m. - 10 p.m.
Friday 8 a.m. - 2 p.m.

Services Available: Open computer lab

Accelerated Training Centers

NORTHEAST FRANKLIN COUNTY ACCELERATED TRAINING CENTER

7795 Walton Pkwy., Suite 100
New Albany, OH 43054
614-287-5528 | cscc.edu/acceleratedtraining

Columbus State's Northeast Franklin County Accelerated Training Center is located within the New Albany International Business Park. It is designed to be a talent-development hub for New Albany area employers, providing career upskilling for workers across the central Ohio region. The center is intended to facilitate introductory career path opportunities for participants to access work at current and rapidly expanding businesses in the area. It will be focused on supporting the needs of business park employers and the surrounding area.

TELEPHONE INFORMATION CENTER (TIC)

614-287-5353

General Hours:

Mon., Tues., Thurs.	8 a.m. – 5 p.m.
Wednesday	8 a.m. – 7 p.m.
Friday	9:30 a.m. – 4:30 p.m.
Last Sat. of Month	9:00 a.m. – noon

** Extended TIC hours one week prior to the start of the semester and during the first week of the semester.*

Telephone Information Center (TIC) representatives assist callers with services and questions related to many campus departments such as Admissions, Advising, Bookstore, Cashiers and Student Accounting, Enrollment Services, and Financial Aid.

They also can provide callers with general information about the college and specific information for contacting academic program offices, faculty, staff, and department offices at Columbus State. The TIC also houses the main college switchboard. When you need information about the college, the TIC is the place to call.

Academic Calendars

AUTUMN SEMESTER 2024

Approved 02/27/2019

AUGUST 26, 2024 – DECEMBER 14, 2024	
APRIL 15, 2024 (M)	Autumn Semester 2024 Registration begins
JUNE 27, 2024 (TH)	Readmission Deadline for Academic Dismissal and Academic Review-AU24
AUGUST 23, 2024 (F)	Convocation – Offices will open at 11:00 am
AUGUST 26, 2024 (M)	Full Term, First 8-week Term and First 5-week Term classes begin
SEPTEMBER 2, 2024 (M)	Labor Day – Campuses closed
SEPTEMBER 15, 2024 (SU)	Last day to drop First 5-week Term classes
SEPTEMBER 27, 2024 (F)	Last day to drop First 8-week Term classes
SEPTEMBER 29, 2024 (SU)	First 5-week Term classes end – grades due 10/1/24 before 11:00 pm
SEPTEMBER 30, 2024 (M)	Second 5-week Term classes begin
OCTOBER 1, 2024 (T)	Day of Service – Offices closed, no day classes
OCTOBER 6, 2024 (SU)	Last day to remove Incompletes (I) incurred Summer Semester 2024
OCTOBER 19, 2024 (S)	First 8-week Term classes end – grades due 09/21/24 before 11:00 pm
OCTOBER 20, 2024 (SU)	Last day to drop Second 5-week Term classes
OCTOBER 20, 2024 (SU)	Second 8-week Term classes begin
OCTOBER 31, 2024 (TH)	Last day to drop Full Term classes
NOVEMBER 3, 2024 (SU)	Second 5-week Term classes end – grades due 11/5/24 before 11:00 pm
NOVEMBER 4, 2024 (M)	Third 5-week Term classes begin
NOVEMBER 11, 2024 (M)	Veterans Day – Campuses closed
NOVEMBER 14, 2024 (TH)	Readmission Deadline for Academic Dismissal and Academic Review-SP25
NOVEMBER 22, 2024 (F)	Last day to drop Second 8-week Term classes
NOVEMBER 24, 2024 (SU)	Last day to drop Third 5-week Term classes
NOV. 27- DEC. 1, 2024 (W-SU)	Thanksgiving Holiday – Campuses closed
DECEMBER 8, 2024 (SU)	Third 5-week Term classes end – grades due 12/10/24 before 11:00 pm
DECEMBER 13, 2024 (F)	Graduation Ceremony
DECEMBER 14, 2024 (S)	Full Term and Second 8-week Term classes end – grades due 12/16/24 before 11:00 pm
DECEMBER 14, 2024 (S)	Autumn Semester 2024 ends

Please refer to the college website www.cscc.edu for additional detailed information. Note the Financial Aid deadline dates.

**Classes begin for Terms that start on a Holiday.

Note: Tuition refunds are based upon the percentage of time elapsed in each course. If the course is dropped before 10% of the time elapsed in the course, a 100% tuition refund will be issued. If the course is dropped before 20% of the time elapsed in the course, a 50% tuition refund will be issued.

Note: A course must be dropped before 20% of the course has elapsed in order to avoid a “W” appearing on the academic transcript.

Columbus State Community College reserves the right to change this calendar if appropriate.

SPRING SEMESTER 2025

Approved 02/27/2019

JANUARY 13, 2025– MAY 10, 2025	
OCTOBER 21, 2024 (M)	Spring Semester 2025 Registration begins
NOVEMBER 20, 2024 (TH)	Readmission Deadline for Academic Dismissal and Academic Review-SP25
DECEMBER 25, 2024 (W)	Christmas Day Observed – Campuses closed
DEC. 26 – 31, 2024 (TH-T)	Winter Break – Campuses closed
JANUARY 1, 2025 (W)	New Year's Day Observed – Campuses closed
JANUARY 13, 2025 (M)	Full Term, First 8-week Term and First 5-week Term begins
JANUARY 13, 2025 (M)	**First day of classes for Full Term, First 8-week Term and First 5-week Term
JANUARY 20, 2025 (M)	Dr. Martin Luther King, Jr. Day – Campuses closed
FEBRUARY 2, 2025 (SU)	Last day to drop from First 5-week Term classes
FEBRUARY 14, 2025 (F)	Last day to drop from First 8-week Term classes
FEBRUARY 14, 2025 (F)	Presidents Day Observed – Campuses closed
FEBRUARY 16, 2025 (SU)	First 5-week Term classes end – grades due 2/18/25 before 11:00 pm
FEBRUARY 17, 2025 (M)	Second 5-week Term classes begin
FEBRUARY 23, 2025 (SU)	Last day to remove Incompletes (I) incurred Autumn Semester 2024
MARCH 8, 2025 (S)	First 8-week Term classes end – grades due 3/11/25 before 11:00 pm
MARCH 10-15, 2025 (M-S)	Spring Break – No classes
MARCH 13, 2025 (TH)	Last day to drop from Second 5-week Term classes
MARCH 16, 2025 (SU)	Second 8-week Term classes begin
MARCH 24, 2025 (M)	Last day to drop from Full Term classes
MARCH 27, 2025 (TH)	Readmission Deadline for Academic Dismissal and Academic Review-SU25
MARCH 30, 2025 (SU)	Second 5-week Term classes end – grades due 4/1/25 before 11:00 pm
MARCH 31, 2025 (M)	Third 5-week Term classes begin
APRIL 17, 2025 (TH)	In-Service Day – Offices closed, no day classes
APRIL 18, 2025 (F)	Last day to drop from Second 8-week Term classes
APRIL 20, 2025 (SU)	Last day to drop from Third 5-week Term classes
APRIL 20, 2025 (SU)	Easter – Campuses Closed
MAY 4, 2025 (SU)	Third 5-week Term classes end – grades due 5/6/25 before 11:00 pm
MAY 9, 2025 (F)	Graduation Ceremony
MAY 10, 2025 (S)	Full Term and Second 8-week Term classes end – grades due 5/12/25 before 11:00 pm
MAY 10, 2025 (S)	Spring Semester 2025 ends

Please refer to the college website www.cscc.edu for additional detailed information. Note the Financial Aid deadline dates.

**Classes begin for Terms that start on a Holiday.

Note: Tuition refunds are based upon the percentage of time elapsed in each course. If the course is dropped before 10% of the time elapsed in the course, a 100% tuition refund will be issued. If the course is dropped before 20% of the time elapsed in the course, a 50% tuition refund will be issued.

Note: A course must be dropped before 20% of the course has elapsed in order to avoid a "W" appearing on the academic transcript.

Columbus State Community College reserves the right to change this calendar if appropriate.

SUMMER SEMESTER 2025

Approved 02/27/2019

MAY 26, 2025 – AUGUST 09, 2025	
FEBRUARY 17, 2025 (M)	Summer Semester 2025 Registration begins
MARCH 27, 2025 (TH)	Readmission Deadline for Academic Dismissal and Academic Review-SU25
MAY 26, 2025 (M)	Memorial Day – Campuses closed
MAY 26, 2025 (M)	Full Term and First 5-week Term begin
MAY 27, 2025 (T)	**First day of classes for Full Term and First 5-week Term
JUNE 8, 2025 (M)	First 8-week Term begins
JUNE 15, 2025 (SU)	Last day to drop from First 5-week Term classes
JUNE 19, 2025 (TH)	Juneteenth – Campuses closed
JUNE 29, 2025 (SU)	First 5-week Term classes end – grades due 7/1/25 before 11:00 pm
JUNE 30, 2025 (M)	Second 5-week Term begins
JULY 3, 2025 (TH)	Readmission Deadline for Academic Dismissal and Academic Review-AU25
JULY 4, 2025 (F)	Independence Day – Campuses closed
JULY 6, 2025 (SU)	Last day to remove Incompletes (I) incurred Spring Semester 2025
JULY 9, 2025 (TH)	Last day to drop from Full Term classes
JULY 10, 2025 (F)	Last day to drop from First 8-week Term classes
JULY 20, 2025 (SU)	Last day to drop from Second 5-week Term classes
AUGUST 1, 2025 (S)	First 8-week Term classes end – grades due 8/3/25 before 11:00 pm
AUGUST 3, 2025 (SU)	Second 5-week Term classes end – grades due 8/5/25 before 11:00 pm
AUGUST 9, 2025 (S)	Full Term classes end – grades due 8/11/25 before 11:00 pm
AUGUST 9, 2025 (S)	Summer Semester 2025 ends

Please refer to the college website www.cscc.edu for additional detailed information. Note the Financial Aid deadline dates.

**Classes begin for Terms that start on a Holiday.

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ACADEMICS

Areas of Study

2024–2025

Areas of Study

Types of Degrees at Columbus State

The type of degree or certificate you choose depends on your academic and career goals. Some programs are designed to fulfill the first two years of a bachelor's degree, while others focus on preparing you to enter the workforce immediately after graduation.

TRANSFER PROGRAMS

Transfer programs complete the first two years of a bachelor's degree for students who intend to transfer and complete a Bachelor of Arts or Bachelor of Science prior to entering the workforce.

Associate of Arts Degree (A.A.)
Associate of Science Degree (A.S.)
The Associate of Arts (A.A.) completes the first two years of a Bachelor of Arts degree, while the Associate of Science (A.S.) completes the first two years of a Bachelor of Science degree.

Upon graduating with an A.A. or A.S. degree, students are guaranteed admission and credit transfer to any public college or university in Ohio. Additional transfer agreements with private colleges and our Preferred Pathway partners expand transfer options even further. Visit **cscc.edu/transfer** to learn more.

BACHELOR'S DEGREE COMPLETION PROGRAM

Columbus State offers one bachelor's degree completion program, the Bachelor of Science in Nursing, aimed at students who already have an associate degree in nursing (ADN) or the equivalent.

CAREER PROGRAMS

Career programs are intended to give students the knowledge and technical skills to begin a career in a specific discipline upon receiving an associate degree.

Associate of Applied Science Degree (A.A.S.)
Associate of Technical Studies Degree (A.T.S.)
The Associate of Applied Science and Associate of Technical Studies are two-year degrees intended to lead directly into a career field. Students graduating with an A.A.S. or A.T.S. also have transfer opportunities with select universities, which should be discussed with an academic advisor.

CERTIFICATE PROGRAMS

Certificate programs at Columbus State offer the opportunity to earn career credentials through intensive study in a discipline or specialty.

Degrees and Certificates

+ = Additional admissions requirements = Available Online

ARTS, HUMANITIES, AND SOCIAL SCIENCES

In the Arts, Humanities, and Social Sciences Pathway, students can choose from a variety of subjects, including English, communications, history, anthropology, economics, languages, political science and more. These degrees are designed for students who intend to transfer directly to a four-year college or university, generally in a Bachelor of Arts program.

Associate of Arts
[A.A.] (General)
Anthropological Sciences
Anthropological Sciences [A.S.]
Anthropology
Anthropology [A.A.]
Art History
Art History [A.A.]
Communication
Communication [A.A.]
Criminology
Criminology [A.A.]
Economics
Economics [A.A.]
Economics [A.S.]
English
English [A.A.]
Geography
Geography [A.A.]
Geography [A.S.]
Health Communication
Health Communication [A.A.]
History
History [A.A.]
Humanities
Humanities [A.A.]
International Studies
International Studies [A.A.]
Philosophy
Philosophy [A.A.]
Political Science
Political Science [A.A.]
Psychology
Psychology [A.A.]
Psychology [A.S.]
Religious Studies
Religious Studies [A.A.]
Sociology
Sociology [A.A.]
Spanish
Spanish [A.A.]
Studio Art
Studio Art [A.A.]
Theater
Theater [A.A.]

BIOLOGICAL, PHYSICAL, AND MATHEMATICAL SCIENCES

In the Biological, Physical, and Mathematical Sciences Pathway, students will find majors that give them a strong foundation in STEM subjects. These degrees are designed for students who intend to transfer directly to a four-year college or university, generally in a Bachelor of Science program.

Associate of Science
[A.S.] (General)
Biology
Biology [A.S.]
Biotechnology
Biotechnology [A.S.]
Chemistry
Chemistry [A.S.]
Geology
Geology [A.S.]
Mathematics
Mathematics [A.S.]
Physics
Physics [A.S.]

BUSINESS AND HOSPITALITY SERVICES

Students in the Business and Hospitality Services Pathway can study business, finance, entrepreneurship, commerce, marketing, real estate, retail, and supply chain management, as well as culinary arts, and hotel and tourism management. This pathway offers both Transfer and Career program options.

Accounting
Accounting [A.A.S.]
Accounting Concentration *(CPA Exam Preparation)* [Certificate]
Baking and Pastry Arts
Hospitality Management, Baking and Pastry Arts [A.A.S.]
Baking [Certificate]
Business
Business [A.A.]
Business Management [A.A.S.]
Business Management, Entrepreneurship [A.A.S.]
Business Operations Analysis [Certificate]
Entrepreneurship [Certificate]
Entrepreneurship, Automotive Technology [Certificate]
Entrepreneurship, Hospitality [Certificate]
Entrepreneurship, Real Estate Management [Certificate]
Entrepreneurship, Sport Management [Certificate]
Foundations of Business [Certificate]
Foundations of Business, Advanced [Certificate]
Managing Interpersonal Skills [Certificate]
Pre-MBA [Certificate]
Project Management [Certificate]
Business Office Administration
Administrative Assistant [A.A.S.]
Medical Administrative Assistant [A.A.S.]
Bookkeeping [Certificate]
Office Specialist [Certificate]
Culinary
+ Hospitality Management, Culinary Apprenticeship [A.A.S.]
Hospitality Management, Culinary Arts Major [A.A.S.]
Culinary Arts [Certificate]
Mixology [Certificate]
Finance
Finance [A.A.S.]
Banking Fundamentals [Certificate]
Hotel, Tourism, and Event Management
Hospitality Management, Hotel Management Major [A.A.S.]
Hospitality Management, Hotel, Tourism, and Event Management [A.A.S.]
Casino Management [Certificate]
Hotel Administration [Certificate]
Meeting and Event Management [Certificate]
Human Resources
Business Management, Human Resources Management [A.A.S.]
Human Resource Management [Certificate]
Marketing
Marketing [A.A.S.]
Customer Service [Certificate]
Digital Marketing [Certificate]
Nutrition and Dietetics
+ Hospitality Management, Nutrition and Dietetics [A.A.S.]
Dietary Manager [Certificate]
Real Estate
Real Estate [A.A.S.]
Real Estate Pre-Broker [Certificate]
Real Estate Pre-Licensure [Certificate]
Real Estate Professional [Certificate]
Real Estate Property Management [Certificate]
Restaurant and Foodservice Management
Hospitality Management, Restaurant and Foodservice Management [A.A.S.]

COMPUTER SCIENCE, INFORMATION TECHNOLOGY, AND DESIGN

In the Computer Science, Information Technology, and Design Pathway, students can study cybersecurity, game development, network administration, and many other majors within the field of computer science. Creative-minded students can learn video game art and animation, digital design, and digital photography. Students considering continuing on for a bachelor's degree should consult with their advisor about transfer opportunities for their chosen major.

Computer and Information Science
Computer and Information Science [A.S.]
Computer Literacy
Computer Literacy [Certificate]
Cybersecurity
Computer Science, Cybersecurity [A.A.S.]
Digital Design and Graphics
Digital Design and Graphics [A.A.S.]
Adobe Illustrator [Certificate]
Adobe InDesign Advanced [Certificate]
Adobe Photoshop Advanced [Certificate]
Digital Design [Certificate]
Digital Painting [Certificate]

Digital Photography
- Digital Photography [A.A.S.]
- Black and White Film [Certificate]
- Business of Photography [Certificate]
- Digital Photography, Basic [Certificate]
- Digital Photography, Intermediate [Certificate]
- Digital Photography, Advanced [Certificate]
- Off-Camera Flash [Certificate]
- Photoshop for Photographers, Basic [Certificate]
- Photoshop for Photographers, Intermediate [Certificate]
- Photoshop for Photographers, Advanced [Certificate]

Game Developer
- Computer Science, Game Developer [A.A.S.]
- Mobile Game Apps [Certificate]

Geographic Information Systems (GIS)
- Geographic Information Systems [A.A.S.]
- Geographic Information Systems [Certificate]

Information Technology Support Technician
- Computer Science, Information Technology Support Technician [A.A.S.]
- IT Security Stackable [Certificate]
- IT Support Stackable [Certificate]
- IT Technician Stackable [Certificate]

Interactive Media
- Interactive Media [A.A.S.]
- Digital Video Production [Certificate]
- Mobile Application Design [A.A.S.]
- Video Game Art and Animation [A.A.S.]

Management Information Systems
- Computer Science, Data Analytics, Analysis, and Visualization [A.A.S.]
- Computer Science, Management Information Systems [A.A.S.]
- Data Analytics [Certificate]
- Data Center Technician [Certificate]
- Database Specialist [Certificate]
- Linux Stackable [Certificate]
- Management Information Systems [Certificate]

Mobile App Development
- Computer Science, Mobile App Development [A.A.S.]

Network Administrator
- Computer Science, Network Administrator [A.A.S.]
- Cisco Certified Network Administrator (CCNA) Routing and Switching [Certificate]
- Network Administrator [Certificate]

Software Developer
- Computer Science, Software Developer [A.A.S.]
- Software Developer [Certificate]

Web Developer
- Computer Science, Web Developer [A.A.S.]

CONSTRUCTION AND SKILLED TRADES

Students in the Construction and Skilled Trades Pathway can study traditional trades as well as emerging technologies such as sustainable building. Degrees and certificates in this Pathway lead to careers in carpentry, electrical trades, plumbing, welding, HVAC, landscaping, and other fields. Students considering continuing on for a bachelor's degree should consult with their advisor about transfer opportunities for their chosen major.

Apprenticeship Readiness
- Carpenter Apprenticeship Readiness [Certificate]
- Electrician Apprenticeship Readiness [Certificate]
- HVAC Apprenticeship Readiness [Certificate]
- Plumbing Apprenticeship Readiness [Certificate]
- Sheet Metal Apprenticeship Readiness [Certificate]

Construction Management
- Construction Management [A.A.S.]
- Building Information Modeling (BIM) [Certificate]
- Estimating/Procurement [Certificate]
- Facility Conservation and Energy Management [Certificate]
- Field Supervision [Certificate]
- Residential Construction Management [Certificate]

Heating, Ventilating, and Air Conditioning Technology
- Heating, Ventilating, and Air Conditioning Technology [A.A.S.]
- HVAC Controls [Certificate]
- HVAC Test and Balance [Certificate]
- High Pressure Boiler License Training Program [Certificate]
- Large Commercial [Certificate]
- Residential/Light Commercial [Certificate]

Landscape Design and Management
- Landscape Design and Management [A.A.S.]
- Landscape [Certificate]

Skilled Trades Technology
- Facilities Maintenance [A.A.S.]
- Welding [A.A.S.]
- Facilities Maintenance [Certificate]
- Facilities Maintenance, Carpentry Module [Certificate]
- Facilities Maintenance, Electrician Module [Certificate]
- Facilities Maintenance, Plumbing Module [Certificate]
- Facilities Maintenance, Welding Module [Certificate]
- Intermediate Pipe and Plate Tig Welder [Certificate]
- Intermediate Pipe I Welder [Certificate]
- Intermediate Pipe II Welder [Certificate]
- Intermediate Welder [Certificate]

EDUCATION, HUMAN SERVICES, AND PUBLIC SAFETY

In the Education, Human Services, and Public Safety Pathway, students can choose from a wide variety of programs in the helping professions, including early childhood education, American sign language, interpreting, fire science, EMS, and criminal justice. This Pathway offers both Degree-to-Degree Transfer and Career program options.

Addiction Studies
- Addiction Studies [Certificate]
- + Advanced Addiction Studies [Certificate]

Criminal Justice
- Criminal Justice [A.A.S.]
- Law Enforcement [A.A.S.]
- Probation and Supervision [A.A.S.]
- Basic Peace Officer [Certificate]
- Homeland Security [Certificate]

Early Childhood
- + Early Childhood Development and Education [A.A.S.]
- Early Childhood Education [A.A.]
- Childhood Development Associate (CDA) [Certificate]
- Early Childhood Aide [Certificate]
- Early Childhood Education and Administration [Certificate]

Emergency Medical Services Technology
- Paramedic [A.A.S.]
- Emergency Medical Technician (EMT) [Certificate]
- Paramedic [Certificate]

Fire Science
- + Fire Science Professional [A.A.S.]
- Fire and Emergency Services Higher Education [Certificate]
- Firefighter I [Certificate]
- Firefighter II [Certificate]
- Fire Inspector [Certificate]
- Red Cross Lifeguard and Waterfront [Certificate]
- Rescue Technician [Certificate]

Human Development and Family Science
- Human Development and Family Science [A.A.]

Integrated Science Education
- Integrated Science Education [A.S.]

Interpreter Education
- + Interpreter Education Program [A.A.S.]
- American Sign Language/Deaf Studies [Certificate]

Middle Childhood Math & Science Education
- Middle Childhood Math & Science Education [A.S.]

Paralegal Studies
- Paralegal Studies [A.A.S.]
- Paralegal Studies *(Post Baccalaureate Option)* [Certificate]

Social Work and Human Services
- + Social Work and Human Services [A.A.S.]
- Social Work [A.A.]
- + Advanced Mental Health [Certificate]
- Human Services Assistant [Certificate]

+ = Additional admissions requirements = Available Online

ENGINEERING, MANUFACTURING, AND ENGINEERING TECHNOLOGY

In the Engineering, Manufacturing, and Engineering Technology Pathway, students can study automotive technology, aviation maintenance, systems engineering, and multiple specialties of engineering technology. This pathway offers both Degree-to-Degree Transfer and Career program options.

Architecture
- Architecture [A.A.S.]
- 3-D Visualization [Certificate]
- Architectural CAD Drafting [Certificate]

Automotive
- Automotive Technology [A.A.S.]
- + FORD ASSET Program [A.A.S.]
- + Alternative Energy Automotive Technician [Certificate]
- Automotive Service Technician [Certificate]
- Ford Maintenance and Light Repair [Certificate]
- Maintenance and Light Repair [Certificate]
- Master Automotive Service Technician (MAST) [Certificate]

Aviation Maintenance Technology
- Aviation Maintenance [A.A.S.]
- Aviation Maintenance Technician, Airframe [Certificate]
- Aviation Maintenance Technician, Powerplant [Certificate]

Civil Engineering Technology
- Civil Engineering Technology, Civil [A.A.S.]
- Civil Engineering Technology, Survey [A.A.S.]
- Bridge to Fundamental Surveying *(Post Associate Degree)* [Certificate]
- Land Surveying [Certificate]
- Surveying [Certificate]
- Transportation Construction Inspection Level 1 [Certificate]
- Transportation Construction Inspection Level 2 [Certificate]

Engineering Technology
- Electro-Mechanical Engineering Technology [A.A.S.]
- Electronic Engineering Technology [A.A.S.]
- Mechanical Engineering Technology [A.A.S.]
- CNC (Computer Numerical Controls) Engineering Technician [Certificate]
- Computer Aided Drafting Technician [Certificate]
- Manufacturing Engineering Technician [Certificate]
- Manufacturing Equipment Technician [Certificate]
- Semiconductor Fundamentals [Certificate]

Environmental Science, Safety, and Health
- Environmental Science, Safety, and Health Technology [A.A.S.]
- Health & Safety/Hazardous Waste Operations [Certificate]
- Occupational Health and Safety [Certificate]
- Sustainable Building [Certificate]
- Water/Wastewater Technology [Certificate]

International Commerce
- Supply Chain Management, International Commerce [A.A.S.]
- International Commerce [Certificate]

Supply Chain Management
- Logistics Engineering Technology [A.A.S.]
- Supply Chain Management [A.A.S.]
- Supply Chain Management [Certificate]

Systems Engineering
- Systems Engineering [A.S.]

HEALTH SCIENCES

In the Health Sciences Pathway, students can choose from programs focused on patient care, healthcare technology, and sport and exercise science. Students considering continuing on for a bachelor's degree should consult with their advisor about transfer opportunities for their chosen major.

Dental Hygiene
- + Dental Hygiene [A.A.S.]

Healthcare Management
- Healthcare Management [A.A.S.]
- Healthcare Manager [Certificate]

Health Information Management Technology
- + Health Information Management Technology [A.A.S.]
- Health Information Management Technician [Certificate]
- + Medical Coding [Certificate]

Health Sciences
- Health Sciences [A.A.S.]

Massage Therapy/Entrepreneurship
- + Massage Therapy/Entrepreneurship [A.T.S.]
- + Massage Therapy [Certificate]
- + Massage Therapy Advanced Techniques [Certificate]

Medical Assisting
- + Medical Assisting [A.T.S.]
- + Medical Assisting [Certificate]

Medical Imaging
- + Medical Imaging/Radiography [A.A.S.]
- GXMO (General X-Ray Machine Operator) Radiography/Medical Imaging [Certificate]

Medical Laboratory Technology
- + Medical Laboratory Technology [A.A.S.]
- + Medical Laboratory Technology Clinical Laboratory Assisting [Certificate]

Multi-Skilled Health
- Multi-Skilled Health [A.A.S.]
- + Basic Electrocardiography (EKG) [Certificate]
- + Pharmacy Technician [Certificate]
- + Phlebotomy [Certificate]

Nursing
- + Nursing [B.S.]
- + Nursing [A.A.S.]
- + Practical Nursing (LPN) [Certificate]
- + Nurse Aide Training Program (STNA) [Certificate]
- + Patient Care Assistant [Certificate]
- + Train the Trainer Nurse Aide [Certificate]

Respiratory Care
- + Respiratory Care [A.A.S.]

Sport and Exercise Studies
- Coaching Administration [A.A.S.]
- Exercise Science [A.A.S.]
- Exercise Science, Athletic Performance [A.A.S.]
- Recreation Administration [A.A.S.]
- Sport Management [A.A.S.]
- Wellness & Health Promotion [A.A.S.]
- Exercise Specialist [Certificate]
- Youth Coaching [Certificate]

Sterile Processing Technology
- + Sterile Processing Technology [Certificate]

Surgical Technology
- + Surgical Technology [A.A.S.]

Veterinary Technology
- + Veterinary Technology [A.A.S.]

COLUMBUS STATE
ADMISSIONS

Information on areas of study is subject to change. For the most up-to-date information, visit cscc.edu.

For additional information on majors, or for assistance with the admissions process, contact our Admissions team:

Columbus Campus
Madison Hall, Ground Floor
(614) 287-5353
Toll free in the U.S. (800) 621-6407

Delaware Campus
Moeller Hall
(740) 203-8345

cscc.edu

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+ = Additional admissions requirements = Available Online

Institutional Learning Goals

GENERAL EDUCATION STATEMENT

General education at Columbus State Community College provides students with a well-rounded educational experience that develops critical thinking skills and a broader knowledge of the larger world around them. Through a variety of academic disciplines, students develop and refine intellectual virtues like curiosity, open-mindedness, and analytical judgment. Students also explore ideas, concepts, values, beliefs, social institutions, and cultural experiences that build a basis for civic virtues like public mindedness and an appreciation of the varieties of human existence.

ACADEMIC ASSESSMENT

Central to the mission of Columbus State Community College is the provision of a quality education that provides students with the opportunity to achieve their goals. The Institutional Learning Goals and Outcomes articulate measurable knowledge and skills that serve as the foundation for success in society and in the student's discipline or vocation. To assess student learning, all academic divisions align their degree programs and course outcomes to Columbus State's Institutional Learning Goals and Outcomes.

ASSESSMENT PROCESS

To insure quality education, faculty at Columbus State Community College engage in outcomes based assessment in all credit-bearing courses and programs to determine whether students are achieving the skills associated with the Institutional Learning Goals and Institutional Learning Outcomes.

INSTITUTIONAL LEARNING GOALS	INSTITUTIONAL LEARNING OUTCOMES
1. Critical Thinking	Students will be able to apply critical and creative reasoning, including diverse perspectives, to address complex problems.
2. Ethical Reasoning	Students will be able to identify, assess and develop ethical arguments from a variety of perspectives and engage in the ethical use of technology and information.
3. Quantitative Skills	Students will be able to demonstrate mathematical and statistical knowledge through solving equations, interpreting graphs, and working with other forms of numeric data.
4. Scientific Literacy	Students can identify and apply the use of scientific methods to advance their knowledge in contemporary society.
5. Technological Competence	Students will be able to use their knowledge and skills to properly incorporate technology into their discipline or vocation.
6. Communication Competence	Students can demonstrate the ability to communicate effectively in both written and unwritten forms.
7. Cultural and Social Awareness	Students will be able to recognize democratic values and civic and community responsibilities associated with a socially, politically, economically, and historically diverse world.
8. Professional & Life Skills	Students will be able to demonstrate skills and activities that enhance professional values, teamwork, and cooperation.

Career and Technical Programs

ASSOCIATE OF APPLIED SCIENCE
ASSOCIATE OF TECHNICAL STUDIES
CERTIFICATE PROGRAMS

Technical degree programs are designed to prepare students for immediate employment upon graduation. Programs of Study usually can be completed within two years for students enrolled full-time. Agreements offering 2+2, 3+1 and online pathways have been developed with public and private four-year partners that allow students to transfer to a baccalaureate degree program in specific areas. Baccalaureate degree completion information is available on the Transfer Agreements page at **cscc.edu/academics/transfer**. Within many of the technologies, short-term certificate programs are offered which qualified students can complete in less than two years.

Bachelor of Science in Nursing (RN to BSN)

Columbus State offers the Bachelor of Science in Nursing as a bachelor's degree completion program (RN to BSN) for students who have earned an associate degree in nursing (ADN).

The BSN degree at Columbus State requires completion of 120 semester credit hours consisting of applicable ADN technical course work, upper division nursing course work (BNUR), general education, and degree electives.

Arts and Sciences/ Transfer Programs

ASSOCIATE OF ARTS
ASSOCIATE OF SCIENCE
OHIO TRANSFER 36

The Associate of Arts and Associate of Science degrees are specifically designed to allow for the transfer and application of all college-level credits earned at Columbus State to the bachelor's degree requirements of most colleges and universities. The Associate of Science degree requires completion of additional math and science courses, which are the foundation for further study in Science, Technology, Engineering, and Mathematics disciplines. The Associate of Arts and Associate of Science degree options and course listings can be found at **catalog.cscc.edu/programs**.

Agreements have been developed with public and private four-year partners, which guarantee admission and the application of all college-level courses taken in the Associate of Arts and Associate of Science degree programs at Columbus State to the bachelor's degree requirements at those institutions. Baccalaureate degree completion information is available at **cscc.edu/academics/transfer**.

Completion of the Associate of Arts and Associate of Science degrees at Columbus State ensures completion of Ohio Transfer 36. This guarantees the application of a minimum of 36 semester hours to the General Education Requirements of all state-supported institutions in Ohio. Those students who complete the A.A. or A.S. degree are to be given preferential consideration for admission to all Ohio public colleges.

In 2005, at the urging of the Ohio Legislature, all publicly supported state institutions in Ohio agreed to enhance transfer opportunities for Ohio residents by establishing Transfer Assurance Guides (TAGs), which guarantee the transfer and application of disciplinary courses to specific baccalaureate majors.

Graduation Requirements

Catalog Rights

In order for a student to be considered a candidate for an associate degree, they must have completed all the requirements for that degree as described in the official College Catalog in effect at the time the student enrolled in the program leading to that degree. If the requirements for the degree change while the student is enrolled in a degree program, the original requirements will apply to the student until he/she earns the degree or for a period of three years from the time the student initially enrolled in the program. If the student does not receive a degree within three years of initial enrollment, and there is a change in the degree requirements, the Senior Vice President for Academic Affairs shall decide what requirements the student shall meet in order to be awarded a degree. These catalog rights are also applicable to Ohio Transfer 36 and Ohio Transfer Assurance Guides.

Requirements of All Graduates

1. The satisfactory completion of 60 – 65 semester credit hours as required by the particular plan of study.
2. In order for a student to be considered a candidate for an associate degree, the student must have earned a cumulative 2.000 grade point average for all college level courses completed at Columbus State Community College.
3. The completion of no fewer than 20 of the required semester credit hours, including no fewer than 14 credit hours in technical courses approved by the department chairperson, while in attendance at Columbus State Community College. Credits by examination/proficiency, nontraditional credit, and transfer credit do not apply toward meeting residency credit hour requirements.
4. All students complete a Graduation Application by the published deadline date of their intended semester of graduation.

GENERAL EDUCATION REQUIREMENTS

Each program has a required plan of study (**catalog.cscc.edu/programs**). Please refer to the plan of study for each program for the exact courses required to fulfill 15 semester hours in the following general education categories. A minimum of six semester hours must be found in the following two categories:

- At least one course (three semester credit hours) in the English Composition & Oral Communication area (e.g., First Writing, Second Writing, Public Speaking)
- At least one course (three semester credit hours) in the Mathematics, Statistics & Logic area (e.g., Algebra, Calculus, Statistics, Formal/ Symbolic Logic)

A minimum of six semester hours must come from the following three categories, and at least two of the three categories must be represented.

- At least one course (three semester credit hours) in the Arts & Humanities area (e.g., Art History, Ethics, History, Philosophy, Religion, Ethnic or Gender Studies)
- At least one course (three semester credit hours) in the Social & Behavioral Sciences area (e.g., , Communication, History, Economics, Political Science, Psychology, Sociology)
- At least one course (three semester credit hours) in the Natural Sciences area (e.g., Anatomy, Biology, Chemistry, Environmental Science, Physics, Physiology)

BASIC STUDIES REQUIREMENTS

Each technical program requires completion of at least 15 semester credit hours in Basic Studies. Basic Studies are those that provide students with the scientific and theoretical foundations of their technology, or those that provide students with an understanding of the legal, social, economic, or political environments within which they will practice their technology. Courses that fulfill the Basic Studies requirements vary from program to program. Please refer to the plan of study for each program to determine the courses to fulfill the requirement.

TECHNICAL STUDIES REQUIREMENTS

Each technical program requires completion of 30 – 35 semester credit hours in courses clearly identifiable with the technical skills, proficiency, and knowledge required for career competency. Technical studies requirements also vary from program to program; they are also listed in the following section by program.

Students need to work closely with an assigned advisor to assure they meet all requirements for graduation. The student is responsible for meeting all requirements.

Associate of Technical Studies Degree

"DESIGNING YOUR OWN DEGREE"

APPLICATION PROCEDURES

The Associate of Technical Studies degree program enables a student to design an individualized program of study to fulfill a unique career goal that cannot be met through the completion of any one of the college's technical programs. This is accomplished by selecting courses from up to four different technical disciplines, thereby fashioning a coherent technical program. In order to be considered for admission to this program, an applicant must:

1. Demonstrate a level of maturity and motivation which gives promise of successfully handling the responsibilities inherent in this program.
2. Satisfy the general admission requirements of Columbus State Community College.
3. Prepare and submit the Associate of Technical Studies (A.T.S.) application, which includes the proposed program of study.

To prepare and submit the A.T.S. application, applicants should first call Advising Services to set up an appointment with an academic advisor, (614) 287-2668. The advisor will then provide the student with an application. Next, the student should submit the application draft, which includes a personal statement and employment rationale for the A.T.S. program.

The application will then be reviewed and the degree content will be developed by the Dean of Business and Engineering Technology or Dean of Health and Human Services, as appropriate for the curriculum. Upon final approval, the Dean's Office will identify the faculty advisor(s) or others with whom the student will work for their A.T.S. program.

Columbus State reserves the right not to approve any A.T.S. request that, in the opinion of the appropriate department chair and dean, does not contain depth, rigor, and coherence at levels comparable with existing career and technical degree programs.

GRADUATION REQUIREMENTS OF ALL A.T.S. GRADUATES

1. Satisfactory completion of 60 – 65 semester credit hours.
2. In order for a student to be considered a candidate for an associate degree, he/she must have earned a cumulative 2.000 grade point average for all college level courses completed at Columbus State Community College.
3. Completion of no fewer than 20 of the required credit hours, including no fewer than 14 credit hours in technical courses approved by the department chairperson(s), while in attendance at Columbus State Community College. Credits by examination/ proficiency, nontraditional credit, and transfer credit do not apply toward meeting residency credit hour requirements.
4. All students must complete a Graduation Application by the published deadline date of their intended semester of graduation.

K-12 Partnerships (College Credit Plus)

Center for Workforce Development, Suite 1078
Columbus Campus
614-287-3938

cscc.edu/CCP

Columbus State welcomes middle and high school students who meet the eligibility requirements for both admission to the College and enrollment in college courses prior to high school graduation. Students interested in the College Credit Plus (CCP) program must follow the steps required by their school district to fulfill all high school graduation requirements, and they must complete the college enrollment process to successfully earn free*, transcripted college credit.

Students should consult with their high school counselor to learn which courses meet graduation requirements and discuss with a college advisor which courses within a particular program of study are available to College Credit Plus students. College Credit Plus students are expected to enroll in a cohesive set of college classes that are part of a pathway leading to a credential and a career. High school and college GPA, academic record, and financial aid opportunities will be impacted by participation in the program. Dual credit students have the same rights, privileges, and responsibilities as any other college students and are held to the same standards.

**Free to Ohio residents and students attending public schools. Nonpublic and home-schooled students must apply for funding through the Ohio Department of Education. Non-Ohio residents are ineligible for funding but have the option to self- pay.*

Ohio Transfer Policy

INSTITUTIONAL TRANSFER

The Ohio Department of Higher Education in 1990, following a directive of the 119th Ohio General Assembly, developed the Ohio Articulation and Transfer Policy to facilitate each student's ability to transfer credits from one Ohio public college or university to another in order to avoid duplication of course requirements. A subsequent policy review and recommendations produced by the Articulation and Transfer Advisory Council in 2004, together with mandates from the 125th Ohio General Assembly in the form of Amended Substitute House Bill 95, have prompted improvements of the original policy. While all state-assisted colleges and universities are required to follow the Ohio Articulation and Transfer Policy, independent colleges and universities in Ohio may or may not participate in the transfer policy. Therefore, students interested in transferring to independent institutions are encouraged to check with the college or university of their choice regarding transfer agreements. In support of improved articulation and transfer processes, the Ohio Department of Higher Education will establish a transfer clearinghouse to receive, annotate, and convey transcripts among state-assisted colleges and universities. This system is designed to provide standardized information and to help colleges and universities reduce undesirable variability in the transfer credit evaluation process.

OHIO TRANSFER 36

The Ohio Department of Higher Education's Transfer and Articulation Policy established the Ohio Transfer 36 (OT-36), which is a subset or entire set of a college or university's General Education curriculum in A.A., A.S., and baccalaureate degree programs. Students in Associate of Applied Science (A.A.S.) degree programs may complete some individual OT-36 courses within their degree program or continue beyond the degree program to complete the entire transfer module. The Ohio Transfer 36 contains 54–60 quarter hours or 36–40 semester hours of course credit in English composition (minimum 5-6 quarter hours or 3 semester hours); mathematics, statistics and formal/symbolic logic (minimum of 3 quarter hours or 3 semester hours); arts/humanities (minimum 9 quarter hours or 6 semester hours); social and behavioral sciences (minimum of 9 quarter hours or 6 semester hours); and natural sciences (minimum 9 quarter hours or 6 semester hours). Oral communication and interdisciplinary areas may be included as additional options. Additional elective hours from among these areas make up the total hours for a completed Ohio Transfer 36.

Courses for OT-36 should be 100- and 200-level General Education courses commonly completed in the first two years of a student's course of study. Each state-assisted university, technical and community college is required to establish and maintain an approved OT-36.

Ohio Transfer 36 course(s) or the full OT-36 completed at one college or university will automatically meet the requirements of individual OT-36 course(s) or the full OT-36 at another college or university once the student is admitted. Students may be required, however, to meet additional General Education Requirements at the institution to which they transfer. For example, a student who completes the OT-36 at Institution S (sending institution) and then transfers to Institution R (receiving institution) is said to have completed the OT-36 portion of Institution R's General Education program. Institution R, however, may have General Education courses that go beyond its OT-36. State policy initially required that all courses in the OT-36 be completed to receive its benefit in transfer. However, subsequent policy revisions have extended this benefit to the completion of individual OT-36 courses on a course-by- course basis. The full list of Columbus State Community College Ohio OT-36 courses can be found at: **catalog.cscc.edu/programs**.

TRANSFER ASSURANCE GUIDES

Transfer Assurance Guides (TAGs) comprise Transfer Module courses and additional courses required for an academic major. A TAG is an advising tool to assist Ohio university, community, and technical college students planning specific majors to make course selections that will ensure comparable, compatible, and equivalent learning experiences across the state's higher education system. A number of area-specific TAG pathways in the arts, humanities, business, communication, education, health, mathematics, science, engineering technologies, and the social sciences have been developed by faculty teams.

TAGs empower students to make informed course selection decisions and plans for their future transfer. Advisors at the institution to which a student wishes to transfer should also be consulted during the transfer process. Students may elect to complete the full TAG or any subset of courses from the TAG. Because of specific major requirements, early identification of a student's intended major is encouraged.

Students who complete Columbus State's degree requirements in Communication, Mathematics, Humanities, Biological and Physical Sciences, and

Social and Behavioral Sciences will automatically have completed the Transfer Module.

CONDITIONS FOR TRANSFER ADMISSION

1. Ohio residents with associate degrees from state-assisted institutions and a completed, approved Ohio Transfer 36 shall be admitted to a state institution of higher education in Ohio, provided their cumulative grade point average is at least 2.0 for all previous college-level courses. Further, these students shall have admission priority over out-of-state associate degree graduates and transfer students
2. When students have earned associate degrees but have not completed the Ohio Transfer 36, they will be eligible for preferential consideration for admission as transfer students if they have grade point aver- ages of at least a 2.0 for all previous college-level courses
3. In order to encourage completion of the baccalaureate degree, students who are not enrolled in an A.A. or A.S. degree program but have earned 60 semester or 90 quarter hours or more of credit toward a baccalaureate degree with a grade point average of at least a 2.0 for all previous college-level courses will be eligible for preferential consideration for admission as transfer students.
4. Students who have not earned an A.A. or A.S. degree or who have not earned 60 semester hours or 90 quarter hours of credit with a grade point average of at least a 2.0 for all previous college level courses are eligible for admission as transfer students on a competitive basis.
5. Incoming transfer students admitted to a college or university shall compete for admission to selective programs, majors, and units on an equal basis with students native to the receiving institution.

Admission to a given institution, however, does not guarantee that a transfer student will be automatically admitted to all majors, minors, or fields of concentration at the institution. Once admitted, transfer students shall be subject to the same regulations governing applicability of catalog requirements as native students. Furthermore, transfer students shall be accorded the same class standing and other privileges as native students on the basis of the number of credits earned. All residency requirements must be completed at the receiving institution.

ACCEPTANCE OF TRANSFER CREDIT

To recognize courses appropriately and to provide equity in the treatment of incoming transfer students and students native to the receiving institution, transfer credit will be accepted for all successfully completed college-level courses completed in and after Fall 2005 from Ohio state-assisted institutions of higher education. Students who successfully completed A.A. or A.S. degrees prior to Fall 2005 with a 2.0 or better overall grade point average would also receive credit for all college-level courses they have passed. (See Ohio Articulation and Transfer Policy, Definition of Passing Grade and Appendix D.) While this reflects the baseline policy requirement, individual institutions may set equitable institutional policies that are more accepting. Pass/Fail courses, credit by examination courses, experiential learning courses, and other nontraditional credit courses that meet these conditions will also be accepted and posted to the student record.

RESPONSIBILITY OF STUDENTS

In order to facilitate transfer with maximum applicability of transfer credit, prospective transfer students should plan a course of study that will meet the requirements of a degree program at the receiving institution. Students should use the Ohio Transfer 36, Transfer Assurance Guides, and Transferology for guidance in planning the transfer process. Specifically, students should identify early in their collegiate studies an institution and major to which they desire to transfer. Furthermore, students should determine if there are language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable students to plan and pursue a course of study that will articulate with the receiving institution's major. Students are encouraged to seek further information regarding transfer from both their advisor and the college or university to which they plan to transfer.

APPEALS PROCESS

Following the evaluation of a student transcript from another institution, the receiving institution shall provide the student with a statement of transfer credit applicability. At the same time, the institution must inform the student of the institution's appeals process. The process should be multi-level and responses should be issued within 30 days of the receipt of the appeal.

The Columbus State Community College appeals process begins after the student with previous college credit receives an email, which indicates that some previous coursework may not be applicable to the student's new degree. The email explains the procedure for requesting a second evaluation of the transcript. If the re-evaluation is not satisfactory to the student, the student may then appeal by asking the staff of the Registrar to initiate the next step in the

appeals process, which consists of a review of the transcript and supporting documentation by the department housing the academic discipline of the course(s) in question. Appeals denied at the department level will automatically be forwarded to the Dean of Arts and Sciences for a final decision on behalf of the college. If the appeal is denied at this level, the student will be advised in writing of the reasons for the denial and how to appeal to the state level.

Fulfillment of the Associate of Arts or Associate of Science degree requirements assures fulfillment of Ohio Transfer 36 requirements.

OHIO GUARANTEED TRANSFER PATHWAYS

The **Ohio Guaranteed Transfer Pathways (OGTPs)** are designed to provide a clearer path to degree completion for students pursuing associate degrees who plan to transfer to an Ohio public university to complete their bachelor's degree. The OGTPs also constitute an agreement between public community colleges and universities confirming that community college courses meet major preparation requirements and will be counted and applied toward the bachelor's degree. Students still must meet all university program admission requirements, which in some cases may be competitive.

Students may review all Ohio Guaranteed Transfer Pathways available at every Ohio public college or university on the Ohio Department of Higher Education's **Ohio Guaranteed Transfer Pathway** website. Programs that have earned the "OGTP" designation at Columbus State are indicated on the transfer graduation plan (pathway). Students who complete these programs as they are written will have the designation "Ohio Guaranteed Transfer Pathway" on their official Columbus State transcript.

A list of Ohio Guaranteed Transfer Pathways available at Columbus State can be found at **cscc.edu/academics/transfer/degrees.shtml.**

Columbus State Community College Transfer Agreements

Columbus State Community College has transfer relationships with many institutions. Students should contact the four-year college or university to confirm that the degree being pursued at Columbus State is the best fit to transfer and achieve the student's long-term educational goals

College Partners

These institutions are academic partners with Columbus State and offer Preferred Pathways® to a four-year degree:

- Capital University
- Columbus College of Art and Design
- Franklin University
- Miami University
- Ohio Dominican University
- Ohio University
- Ohio Wesleyan University
- Otterbein University
- The Ohio State University

In addition, Columbus State has transfer agreements with many other higher education institutions.

For the most current list of Institutional Agreements, and details and information on program-to-program agreements, please see our search tool at: **cscc.edu/academics/transfer/search-transfer-agreements.shtml.**

Online Learning

cscc.edu/academics/online-learning

Columbus State's online courses offer an alternative to traditional on-campus learning. With online/distance learning, students from around the city — or across the globe — can take classes using online technologies, unlimited by time and place.

GETTING STARTED

On the Columbus State Online Learning webpage, students can find information on getting started with distance learning, the current courses and programs being offered, tips for online learning, and more.

Columbus State has an online Blackboard Orientation to help students become familiar with our learning management system before enrolling in an online class. To access the Blackboard Orientation, see

cscc.edu/academics/online-learning/get-started-online.shtml

IMPORTANT NOTICE FOR DISTANCE LEARNING STUDENTS:

Certain online courses may require some face-to-face learning experiences, such as testing at a proctored testing site, while other online courses may utilize virtual proctoring. A student can find testing information for their course on their course syllabus, or online in their courses learning page. If a student cannot find testing information for their course, they should contact their instructor as soon as possible so they can adequately prepare for their assessments.

ON-CAMPUS TESTING REQUIREMENTS

If you live within Columbus State's four-county service area: (Franklin, Delaware, Union, Madison) Columbus State has three testing locations available for exam proctoring. They are located at the Columbus Campus, the Delaware Campus, and the Dublin Regional Learning Center.

For more information on hours of operation, locations, and policies, go to: cscc.edu/services/testing-center.

If you live outside of Columbus State's four-county service area: (Franklin, Delaware, Union, Madison) and it is more than 45 miles to drive to one of our testing locations, there is a process that may enable you to complete exams near your current location. Locate a testing site (a college/university, library, etc.) within an area that is convenient for you, then complete and submit an electronic Out of Region Proctor Request Form. Detailed information and the requirements for this process are located at the following link:

cscc.edu/services/testingcenter/academic-testing/distance-learning-testing.shtml.

We strongly encourage you to begin the Out of Region process as soon as possible to ensure that your exams get delivered for administration within the testing window established by your instructor(s). For efficient and quality service to be provided, please submit Out of Region Proctor Requests to Testing Services no later than the first two weeks of the semester. For questions about the Out Of Region process, please contact the Distance Learning – Out of Region Project Coordinator through email at dloctest@cscc.edu or call (614) 287-5675.

VIRTUAL TESTING REQUIREMENTS

Some online classes will use virtual testing. Virtual testing requires a student to have access to a laptop or computer with a working microphone and webcam. A student will need a quiet and private space to take a test virtually. Virtual tests are proctored in two different ways: using a virtual proctoring tool or with a web conferencing platform.

Virtual proctoring with a virtual proctoring tool: Some classes may utilize a virtual proctoring tool that uses a laptop or computer webcam to record a test without requiring instructor presence. The virtual proctoring tool allows students to take their test at their convenience within their designated testing window. This type of virtual proctoring often requires students to take a quick practice test to demonstrate proficiency at using the virtual proctoring tool and guidelines within the first few weeks of the semester.

Virtual proctoring with web conferencing: Some instructors will proctor assessments live online via a web conferencing platform. This requires instructors to administer a test on a specific day and time.

Types of Distance Learning Courses

WEB (ONLINE)

Web course instruction is delivered completely online, although some online courses require testing at one of the Columbus State testing centers. Students located outside of the central Ohio area may be proctored at an authorized institution, with the approval of their instructor (see On-Campus Testing Requirements.) To participate in an online course, a student must have access to a computer, the internet, and a basic computer knowledge. A student may use a computer at home, at a campus lab, a library, or elsewhere.

WEB Online Technology: In WEB Online Technology course content is made available in an asynchronous format online. While students are not required to attend a set meeting time, there are scheduled due dates for assignments.

WEB Live Online: WEB Live Online courses are online courses in which there are set class meeting times held virtually through a web-conferencing platform.

BLENDED (ONLINE AND FACE-TO-FACE)

A blended course is an online course with required real-time, face-to-face sessions. Blended course instruction is split between learning activities online and in a specified location, based on course content. To participate in the online portion of a blended course, a student must have basic computer knowledge along with access to a computer and the Internet. (Please consult the course syllabus or academic department for details and technical requirements for your computer.)

A student may use a computer at home, at a campus lab, a library or elsewhere. The face-to-face sessions require meetings at dates and times specific to each different blended course. The face-to-face sessions may be held in a campus classroom, lab or at an external location, such as a clinical site for health-related classes.

Some online or blended courses may employ web-conferencing. Web-conferencing is an online learning modality, which allows for real-time interaction between the instructor and students using the home computer. Students are expected to be available at prearranged times to participate in this type of real-time distance learning. Some examples of the use of this technology are advising, tutoring, group work, lecture delivery, and real time instructor-student interaction. Participants will be required to have audio/microphone capabilities on their home computer.

SERVICE LEARNING COURSES AT COLUMBUS STATE

A service-learning course offers experiential education in which students learn and are exposed to course content in a hands-on manner. Students participate in an organized service activity that meets identified community needs in a manner that connects the course content with an enhanced sense of civic responsibility. Service-learning offers the participants the opportunity to address the concerns, needs, and hopes of communities. It is a dynamic process in which a student's personal and social growth is interwoven into their academic and cognitive development.

Distance Learning Degree Programs and Certificates

The following list indicates online degrees and certificate programs. Any degree or certificate that requires a practicum, clinical, or other course that requires placement, could entail face-to-face attendance to complete the course. This list is subject to change.

ACCOUNTING
- Accounting Associate of Applied Science
- Certificate of Accounting Concentration (CPA Prep)

ARCHITECTURE
- 3-D Visualization Certificate

ARTS AND SCIENCES
- Associate of Arts
- Associate of Arts, Communication
- Associate of Arts, Health Communication
- Associate of Arts, English
- Associate of Arts, History
- Associate of Arts, Anthropology
- Associate of Arts, Criminology
- Associate of Arts, Economics
- Associate of Arts, International Studies
- Associate of Arts, Political Science
- Associate of Arts, Sociology

BUSINESS MANAGEMENT
- Advanced Foundations of Business Certificate
- Business Management Associate of Applied Science
- Business Operations Analysis Certificate
- Entrepreneurship Certificate – Sport Management
- Entrepreneurship Certificate - Real Estate,
- Entrepreneurship Certificate
- Entrepreneurship Major
- Foundations of Business Certificate
- Managing Interpersonal Skills Certificate
- Project Management Certificate
- Pre-MBA Certificate

BUSINESS OFFICE APPLICATIONS
- Administrative Assistant Major, Medical
- Administrative Assistant Major
- Bookkeeping Certificate
- Office Specialist Certificate

COMPUTER SCIENCE
- Computer Literacy Certificate

CRIMINAL JUSTICE
- Criminal Justice Associate of Applied Science
- Criminal Justice - Probation and Supervision
- Associate of Applied Science
- Homeland Security Certificate

DIGITAL DESIGN AND GRAPHICS
- Adobe Illustrator Certificate

Adobe InDesign Advanced Certificate
Adobe Photoshop Advanced Certificate
Digital Design and Graphics Associate of Applied Science
Digital Design Certificate
Digital Painting Certificate

DIGITAL PHOTOGRAPHY

Advanced Digital Photography Certificate
Advanced Photoshop for Photographers Certificate
Basic Digital Photography Certificate
Basic Photoshop for Photographers Certificate
Business of Photography Certificate
Digital Photography Associate of Applied Science
Intermediate Digital Photography Certificate
Off-Camera Flash Certificate

ENVIRONMENTAL SCIENCE, SAFETY AND HEALTH

Sustainable Building Certificate

FINANCE

Associate of Applied Science in Finance
Certificate of Banking Fundamentals

GEOGRAPHIC INFORMATION SYSTEMS

Geographic Information Systems Associate of Applied Science
Geographic Information Systems Certificate

HEALTH INFORMATION MANAGEMENT TECHNOLOGY

Health Information Management Technician Certificate
Health Information Management Technology Associate of Applied Science
Medical Coding Certificate

INTERACTIVE MEDIA

Interactive Media – Video Game Art & Animation track degree

MARKETING

Customer Service Certificate
Digital Marketing Certificate
Marketing Associate of Applied Science

MULTI-SKILLED HEALTH

Health Care Manager Certificate

REAL ESTATE

Real Estate Pre-Broker Certificate
Real Estate Pre-Licensure Certificate

SUPPLY CHAIN MANAGEMENT

International Commerce Certificate
Supply Chain Management Associate of Applied Science
Supply Chain Management Certificate

Online Learning Courses

The following programs of study/departments offer fully online courses:

Anthropology
Architecture
Arts and Sciences
Astronomy
Automotive Technology
Biology
Business Management
Business Office Administration
Chemistry
Classics
Clinical Laboratory Assisting
Communication
Computer Science
Construction Management
Criminal Justice (Law Enforcement)
Dental Hygiene
Developmental Education
Digital Design and Graphics
Digital Photography
Early Childhood Development and Education
Economics
Education
Electro-Mechanical Engineering Technology
Electronic Engineering
Emergency Medical Services Technology
English
English as a Second Language
Environmental Science, Safety and Health
Financial Management
Fire Science
French
Geographical Information Systems
Geography
Geology
Health Information Management Technology
Heating, Ventilation and Cooling
History
Hospitality Management
Human Nutrition
Human Resources Management
Humanities
Information Technology Support Technician
Interactive Media
Interpreter Education Program
Landscape Design and Management Massage
Marketing
Mathematics
Mechanical Engineering Technology

Medical Imaging
Medical Laboratory Technology
Multi-Competency Health
Music
Nursing Certificate
Nursing
Paralegal Studies
Philosophy
Physics
Political Science
Practical Nursing
Psychology
Quality Assurance Technology
Real Estate
Skilled Trade Technologies
Social and Human Services
Sociology
Spanish
Sport and Exercise Studies
Statistics
Supply Chain Management
Surveying
Theatre
Veterinary Technology

Grades and Academic Requirements

Grades & Academic Progress

GRADES

At the end of each semester, and upon the completion of course requirements, the instructor reports a letter grade indicating the quality of a student's work. Points for each semester hour of credit attempted are assigned according to the following system:

GRADE DEFINITIONS	GRADE NOTATION	GRADE POINTS PER ACADEMIC CREDIT HOUR	CREDIT AWARDED
High Achievement	A	4	Yes
Good Achievement	B	3	Yes
Satisfactory Achievement	C	2	Yes
Below Satisfactory	D	1	Yes
Failing	E	0	No
Failing due to Nonattendance/ Nonparticipation	EN	0	No
Satisfactory	S	0	Yes
Unsatisfactory	U	0	No

OTHER MARKS

Incomplete (I): When circumstances beyond the control of a student or a faculty member prevent the completion of course requirements during the course, an "I" (Incomplete) may be recorded until the final grade is established. An Incomplete is indicated only when the student has arranged for that grade with the faculty member and specific arrangements have been made for fulfilling the course requirements. Coursework must be completed within six weeks after the beginning of the next semester. If a new grade is not submitted by the faculty member by that time, a grade of "E" is automatically recorded.

Transfer Credit (K/KD): To receive credit for a course taken at another college or university, a student must request that an official copy of the transcript from each previous institution attended be sent to Columbus State Community College before the student's second semester of attendance has elapsed. An official transcript is one that is in a sealed envelope bearing the other institution's official letterhead and/or logo; is printed on official, secure paper that has been signed and sealed by the other college or university; and has not been opened prior to being submitted to Columbus State Community College. Alternately, an official

transcript can be provided through another college/university or its authorized third-party application through secure electronic transmission directly from the other college/university to Columbus State Community College. The official transcript copy becomes and remains the property of the college. Please see the information on the Ohio Transfer Policy in this catalog. Transfer credit does not apply to meeting residency credit hour requirements. Transfer credit (K/KD) will not be removed from the Columbus State Community College academic transcript once transfer credit is awarded to the student.

Proficiency Examination (X): A student may, upon the department chairperson's approval of the student's petition, be permitted to take a proficiency examination for credit. Permission is given only in cases when it is evident that previous experience or study warrants. A $50 nonrefundable fee will be charged for each proficiency examination. Nursing students may take proficiency examinations only after they have been accepted into the Nursing Technology. Proficiency examinations do not apply to meeting residency credit hour requirements.

Audit (R): A student may audit a course for informational instruction only and with the understanding that credit may not be granted or later claimed as a result for the audited course. The course may be taken at a later date for credit. Neither proficiency nor nontraditional, transfer, or waiver credit will be given for a course that has been audited. Audit status is declared at the time of registration and no later than the fifteenth calendar day of the semester. The audit status cannot be declared after the fifteenth calendar day of the semester. Once the audit status for a course is declared, the status cannot be changed back to a credit status during the semester or after the semester has ended. Any student wishing to audit a course is required to register for the course in the same manner as all other students and pay regular fees. The instructor will record a grade of "R" for the audited course.

Nontraditional Credit (N): Nontraditional credit through Prior Learning Assessment (PLA) may be awarded by the appropriate department chairperson for a student's documented life experiences that provide evidence of knowledge equivalent to that of a required course. If a portfolio is required, a fee of $50 will be charged for portfolio evaluation. Nontraditional credit does not apply to meeting residency hour requirements. Approved nontraditional credit is posted to the transcript after the student has completed one course at Columbus State.

Withdrawal (W): A course must be dropped before 20% of the course has elapsed to avoid a "W" appearing on the academic transcript. Withdrawals after 20% and before 61% of the course has elapsed is recorded as a "W" on the academic transcript. Refer to **cscc.edu** for specific semester date information. See "Course Drop/Withdrawal Procedure" in this catalog section.

Administrative Withdrawal (AW): This is a withdrawal that requires a petition and which documents extenuating circumstances for approving the course withdrawal past the 61% deadline. The credit for this course will not be calculated into the student's GPA. See "Administrative Withdrawal" in this section of the catalog.

No Grade Reported ( ): A blank space indicates that the instructor did not report a grade. The instructor must report a grade within six weeks after the beginning of the next semester, otherwise a final grade of "E" is automatically recorded. A student receiving a ( ) should contact their instructor.

Incorrect Grade Reported: A student who believes a grade reported is incorrect should contact their instructor. If the grade is determined to have been incorrectly reported, the instructor must submit a Grade Change Form/Request for Updated Transcript to update the student's transcript.

GRADE REPORT

Grades are issued by the instructor via **Self-Service**. Once grades are issued by the instructor, the student can view the grades via a secure site at **cscc.edu**. An individual who is not enrolled in a course at the time of grade reporting is not eligible to register for the course and receive a grade after the course ends.

ACADEMIC STANDING

Each active student's record is reviewed at the close of each semester. If a student's academic record (all courses attempted with a grade received) does not meet the Standards of Satisfactory Academic Performance, the student is subject to being placed on academic warning, academic probation, or academic dismissal. The entire record, including each grade in each credit course attempted, is used to determine academic standing. See the Standards of Satisfactory Academic Performance below:

TOTAL GPA CREDITS	GPA
1 - 16	1.50
17 - 32	1.60
33 - 43	1.75
44 - 54	1.90
55 hours or more	2.0

CALCULATING GRADE POINT AVERAGE

The basis for determining scholastic standing is the cumulative grade point average (GPA). The college uses a 4.0 scale (A=4.0, B=3.0, C=2.0, D=1.0, E=0.0). The grade point average is calculated by first multiplying credit hours for each course by the grade point value earned for the course. See the example in the chart below (credit hours x grade point value = total grade points earned for a course). Divide the total grade points earned for all courses attempted by the total credit hours for all courses attempted to determine cumulative grade point average.

EXAMPLE:

COURSE	CREDIT HOURS	COURSE GRADE RECEIVED	GRADE POINT VALUE	COURSE GRADE POINTS
Composition (ENGL 1100)	3	A	4	3x4 = 12
Med Term (MULT 1110)	2	B	3	2x3 = 6
Human Physiology (BIO 2232)	4	C	2	4x2 = 8
Hematology I (MLT 1120)	2	A	4	2x4 = 8
Respond/Emer (MULT 1130)	2	B	3	2x3 = 6
Total Credit Hours:	13		Total Grade Points:	40
40 Total Grade Points ÷ 13 Total Credit Hours =				3.08 GPA

DEAN'S LIST

To recognize outstanding scholastic achievement, a Dean's List is compiled each semester. To qualify for the Dean's List, a student must complete a minimum of 6 credit hours and earn a grade point average of 3.5 or higher in that semester. All credits must be in courses included in the calculation of the GPA. No student is eligible for the Dean's List who has a grade of "I."

CLASS ATTENDANCE

Students are expected to attend all of their scheduled classes. Official attendance policies are defined by each college department. It is the student's responsibility to check with the instructor to clarify the absence policy for their class. If a student decides to stop attending a class, it is important to officially withdraw from the class by using Self-Service, completing a Registration Add/Drop Form, calling 614-287-5353, or calling the Delaware Campus at 740-203-8000, within the deadline dates. If withdrawal procedures are not completed, a failing grade (E) will be issued for the class.

SATISFACTORY ACADEMIC PROGRESS

Satisfactory Academic Progress is defined as progress in credit courses taken at the college that result in the credit hour to grade point average ratio as specified by the Standards of Satisfactory Academic Performance.

Academic Standing

Academic Warning: For any semester in which a student's grade point average for the term drops below 2.00, they will be placed on academic warning.

Academic Probation: A student who is beyond their first semester is placed on academic probation when their cumulative grade point average is below that designated by the Standard of Satisfactory Academic Progress. The student will be restricted from registering for classes until he/she meets with an academic advisor in Advising Services for academic intervention. This restriction also applies to students on academic probation who have already registered for classes for the next semester and attempt to add a class. During the meeting, an Academic Probation Form will be completed to designate what difficulties led the student to be placed on academic probation, to provide recommendations for improved grades the next semester, and to promote academic success at the college. A student who has been placed on academic probation will have 24 additional credit hours (over two or more terms) to raise their cumulative grade point average to that designated by the Standards of Satisfactory Academic Progress.

Academic Dismissal: A student will be academically dismissed from the college if, after being placed on academic probation and registering for 24 additional credit hours (over 2 or more semesters), the student's cumulative grade point average remains below the designated Standards of Satisfactory Academic Progress. A student who is academically dismissed from the college **will not be permitted to enroll the following semester**. If the student has already registered for the next semester, their **courses will be dropped and the student will not be permitted to attend**. The student may petition for readmission according to college procedures.

READMISSION AFTER DISMISSAL

Petition for Readmission (First Dismissal)

A student petitioning for readmission must submit a Petition for Academic Readmission, **prior to the semester for which the student seeks readmission**. At least two college reviewers will determine conditions under which the student may return. One reviewer must be an academic advisor; the second must

be the student's academic department chairperson or designee. For undeclared, transient/guest, transfer, and pre-health students, the second reviewer will be an academic advisor, Advising Services administrator, or their designee.

If a student is readmitted to the college, the student then is able to schedule classes and pay fees. The student **must make satisfactory progress in accordance with the Standards of Satisfactory Academic Performance and meet the conditions as specified on the petition for academic readmission.**

Petition for Academic Review (Second Dismissal)

A student will be placed on academic review if, after being dismissed from the college, both the student's term **and** cumulative GPA fall below the designated requirement. A student placed on academic review will not be permitted to enroll the following two semesters. If the student has already registered for the next semester, their courses will be dropped and the student will not be permitted to attend. The student may petition for academic review according to college procedures.

Dismissal after Academic Review (Third Dismissal)

Failure to satisfy the requirements of the academic review board will result in a third academic dismissal. A student dismissed for the third time may apply for readmission after they are separated from the college long enough to meet the required time of non-attendance condition of the Fresh Start Rule.

Readmission Deadline for Academic Dismissal and Academic Review

The readmission deadline for Academic Dismissal and Academic Review falls approximately **sixty days** prior to the start of the term for which readmission is sought. Specific dates are found in the academic calendars located within this catalog.

Prior Learning Assessment

Columbus State Community College has a comprehensive policy that allows students to apply previous learning from a variety of sources toward completion of a college degree. However, it is important that students understand that the college grants credit for demonstrated learning, not merely for previous experience or employment. In order to obtain credit, the student must be able to provide sufficient documentation to verify the prior learning experiences, along with providing evidence that he/she has mastered the competencies included in that learning experience.

Prior learning experiences that can be considered for college credit are:

Transfer Credit: Previous college coursework from an accredited college or university can be applied for credit toward a comparable course at Columbus State.

Standardized Testing: Mastery of knowledge or skills measured by a nationally accepted standardized examination (such as CLEP, licensing and certification examinations).

Articulation Credit/Advanced Placement Agreements: College-level learning achieved and documented while participating in a program in which the college has made previous arrangements to accept the coursework for credit, if specific curriculum and performance outcomes standards have been met. (See *AP Credit below.)

Formal Training: College-level, noncredit training experiences that, singly or in combination, cover the competencies of one or more college courses (such as continuing education courses, company training programs, professional seminars).

Military Training: College-level learning obtained while a member of the U.S. Armed Forces that directly relates to knowledge and skills included in existing coursework can be granted in accordance with the American Council on Education (A.C.E.) guidelines.

Life Experience Learning: College-level learning from sources other than those listed above that can be documented /demonstrated (such as self-study and work experience).

***AP/Advanced Placement Credit:** The state of Ohio, working through the University System of Ohio, has initiated policies to facilitate the ease of transition from high school to college as well as between and among Ohio's public colleges and universities.

Beginning in the Fall Term 2009:

- Students obtaining an Advanced Placement (AP) exam score of 3 or above will be awarded the aligned course(s) and credits for the AP exam area(s) successfully completed.
- General Education courses and credits received will be applied towards graduation and will satisfy a general education requirement if the course(s) to which the AP area is equivalent fulfill a requirement.
- If an equivalent course is not available for the AP exam area completed, elective or area credit will be awarded in the appropriate academic discipline and will be applied towards graduation where such elective credit options exist within the academic major.

- Additional courses or credits may be available when a score of 4 or 5 is obtained. Award of credit for higher score values varies depending on the institution and academic discipline.
- In academic disciplines containing highly dependent sequences (STEM: Sciences, Technology, Engineering and Mathematics), students are strongly encouraged to confer with college/university advising staff to ensure they have the appropriate foundation to be successful in advanced coursework within the sequence (Ohio Department of Higher Education).

Because course content and technology may change rapidly, departments may determine a time that can lapse between the acquisition of learning and when the credit is being sought. This may vary depending upon the course.

Students who wish to request nontraditional credit through prior learning assessment must complete the Request for Nontraditional Credit Form and meet with the chairpersons of the department offering the course for which nontraditional credit is requested for a preliminary interview.

Fresh Start Rule

The Fresh Start Rule is intended to help students who were unsuccessful in their previous academic attempts and who voluntarily left Columbus State Community College and returned after a substantial period of time. In general, a student with courses in which grades of "D," "E" or "U" were earned, may be eligible to have the grades expunged from the student's record; the course(s) remain on the transcript. A student may use the rule one time. An information sheet providing the complete requirements for the Fresh Start Rule and petition is available at cscc.edu/services/student-forms/fresh-start.shtml.

Course Drop/Withdrawal Procedure

Students may drop a course before 61% of the course has elapsed. Please see the Semester Calendar on the web for the specific deadlines. Dropping a class can have an impact on degree completion and financial aid, so students should consult with an academic advisor and a financial aid advisor prior to dropping. To drop a class, it is the responsibility of the student to initiate the process with the college using Self-Service; calling the Telephone Information Center, 614-287-5353; or submitting a completed Registration Add/Drop Form to Student Central, Madison Hall on the Columbus Campus or the Student Services Center on the Delaware Campus or a regional learning center during business hours. Failure on the part of a student to follow drop procedures will result in an "E" (failing grade) being recorded for the course or courses on the grade report.

Administrative Withdrawal

A student, as the result of documentable extenuating circumstances that prevented the student from following academic withdrawal procedures, may be eligible to petition to for an administrative withdrawal from courses and have those grades changed to "AW." Students must provide adequate third-party documentation that explains the extenuating circumstances. More information is available at **www.cscc.edu**.

Repeating Courses

A student may repeat a course. Only the repeated course grade received will be used to compute the overall grade point average. However, both grades shall remain a part of the student's permanent record. Veterans and other financial aid recipients should check with the Financial Aid Office before repeating a course for which credit has been earned.

Program of Study Change

Program of Study changes can be made by submitting a completed Program of Study Update Form available on the web at cscc.edu/services/student-forms/change-of-information.shtml.

Students may call the Telephone Information Center, at 614-287-5353, to change their program of study if the new program of study does not have a separate application procedure (such as many of the health related fields). Students may also request a program of study change on the Columbus Campus in Student Central in Madison Hall or on the Delaware Campus in the Student Services Center in Moeller Hall. Students transferring from one technology program to another shall not be required to carry the technical grade point average of the previous technical courses as a part of the technical grade point average of the new technical program. However, the grade point average of all courses taken will remain part of the official transcript record. Only those courses comprising the curriculum of the new technology will be considered when calculating the technical and nontechnical grade point averages for determining eligibility to graduate.

Degree Audit Report

The U.Achieve Self Service Degree Audit is an important advising tool that helps students determine

progress toward completion of their degree or certificate program requirements. The degree audit tool provides a written report of courses in progress, courses completed, and courses remaining for completion of certificate or degree requirements. It also reflects technical and nontechnical graduation grade point averages for technical programs and the graduation grade point average for the Associate of Arts and Associate of Science degrees. An academic advisor can help the student interpret this report. Regular use of the degree audit tool will assist the student in making prudent course selections. Students may view or print copies of their U.Achieve Self Service Degree Audit through Self-Service.

Student Status

Students are considered first-year status when they have successfully completed up through and including 30 credit hours as recognized by the college. A student shall be considered second-year after having satisfactorily completed greater than 30 credit hours of coursework as recognized by the college.

A full-time student is one who is registered for 12 or more credit hours during a semester. A part-time student is one who is registered for 11 or fewer credit hours during a semester.

Graduating

GRADUATION APPLICATION

Each student who wishes to graduate must complete an online Graduation Application from cscc.edu/graduation at the beginning of the semester in which the student intends to graduate. (*See note below regarding Summer Semester graduates.) The student must meet with their academic advisor or faculty advisor for the evaluation of all course work completed, review of cumulative grade point averages, and review of courses for which they are registered the current semester to determine eligibility for graduation. The Graduation Application must be submitted by the published deadline date for the intended semester of graduation before 4:30 p.m. The student will be notified of graduation eligibility.

Graduation Application deadline dates are available on the web at cscc.edu/graduation.

***NOTE:** A graduation ceremony will not be held for Summer Semesters. Students graduating during Summer Semester may attend the Autumn Semester graduation ceremony.

GRADUATION REQUIREMENTS

Graduation requirements for technical and transfer programs are listed in the Programs of Study section in this catalog.

GRADUATION HONORS

Grade calculations through the semester of graduation determine the appropriateness of posting "Honors" on the graduate's transcript and Summa Cum Laude, Magna Cum Laude, or Cum Laude on the diploma.

Verification of the completion of graduation requirements will be done after grades have been issued. Please allow eight weeks for delivery of the diploma via mail. Graduates' grade point averages and honors designations printed in the graduation program are based on calculations of all grades through the semester prior to their graduation semester. Honors categories are as follows:

***	SUMMA CUM LAUDE (WITH GREATEST PRAISE)	4.000–3.950 GPA
**	MAGNA CUM LAUDE (WITH GREAT PRAISE)	3.949–3.800 GPA
*	CUM LAUDE (WITH PRAISE)	3.799–3.500 GPA

COMMENCEMENT

A formal graduation ceremony is held at the end of Autumn Semester and Spring Semester. All students who have completed a graduation application are invited to attend. Students who complete a graduation application for Summer Semester will be invited to attend the Autumn Semester graduation ceremony. Diplomas are not distributed during the ceremony. Diplomas will be issued after the verification of graduation requirements is complete. Allow 10 weeks from the date of the commencement ceremony for delivery of the diploma via mail. Caps and gowns are required standard attire for the ceremony and are available through the college Bookstore. Students graduating with honors are distinguished by wearing gold honor cords.

REPLACEMENT DIPLOMAS

To request a replacement diploma go to **Parchment: Digital Credential Service**.

The cost of the replacement diploma is $20.00. This is a replacement diploma and not a copy of the original diploma. The replacement diploma will be sent to the address you submit with the order. Please allow up to six weeks for delivery. If you have any questions or need more information please contact Parchment: Digital Credential Service via telephone at (847) 716-3005.

Student Rights under the Family Educational Rights and Privacy Act of 1974 as Amended (FERPA)

1. Definition of Education Record

   Under the Act, "education records" mean, with certain exceptions as listed below, those records, files, documents and other materials that contain information directly related to a student and are maintained by any unit of the college. The following categories of information are exempted and are not considered to be "education records":
   a. Records made by college personnel that are in the sole possession of the maker and are not accessible or revealed to any other person.
   b. Records maintained by the college Public Safety Department.
   c. Medical and counseling records used solely for treatment; medical records may be reviewed by a physician of the student's choice.

2. Right to Inspect and Review

   Each student is granted the right to inspect and review all of their education records except the following:
   a. Financial records of parents.
   b. Confidential letters and statements of recommendation for admission, employment or honorary recognition placed in education records after January 1, 1975, for which a student has signed a waiver of their right of access recorded by the Act.

3. Waiver of Rights of Access

   A student may waive their right of access to confidential letters and statements of recommendation. If the student signs a waiver, they will be notified, upon request, of the names of all persons making confidential recommendations. Waivers are valid only so long as they are made for the purpose stated in paragraph 2b. The college may not require a student to waive their right of access accorded by the Act of receipt of college benefits or services.

4. Location of Education Records

   Columbus State Community College does not maintain education records in any one central office. Academic education records are maintained in the Admissions Office, Financial Aid Office, and the Office of the Registrar. Other college departments maintain education records (e.g., Disability Services, Advising Services). Questions regarding the location of individual student records should be directed to the Office of the Registrar.

5. Procedures for Inspection and Review
   a. Requests to review records must be made in writing separately to each office maintaining records.
   b. If any material or document in the education record of a student includes information on more than one student, the right extends to inspect and review only such part of such material or document as relates to such student or to be informed of the specific information contained in such part of such material.
   c. Periodically, student records are reviewed and expunged, and only records that are necessary to determine education status and demography are maintained indefinitely. Pertinent documents of Columbus State Community College students will be microfilmed or scanned periodically and the originals destroyed.
   d. All submitted and generated student education record information, documentation, and material becomes and remains the property of Columbus State Community College.

6. Right to Challenge Information in Records

   Students have the right to a hearing to challenge the content of their records on the grounds the information contained therein is inaccurate, misleading, inappropriate, or in violation of their privacy or other rights. The hearing process includes an opportunity for the correction or deletion of such information and to insert into such records written explanations by the student regarding the content of such records.
   a. Note: The right to challenge grades does not apply under the Act unless the grade assigned was inaccurately recorded.

7. Procedures for Hearings to Challenge Records

   Students challenging information in their records must submit in writing a request for a hearing to the appropriate office maintaining the records, listing the specific information in question and the reasons for the challenge. Hearings shall be con- ducted, with a decision rendered in writing, within a reasonable period of time after the challenge is filed.

   Hearings will be conducted and a decision rendered by a college official who does not have a direct interest in the outcome of the hearing. Students shall be afforded a full and fair opportunity to present evidence relevant to the reasons for the challenge as referenced in paragraph 6. It shall be the responsibility of the office maintaining the record in question to ensure the hearing is conducted in accordance with the provisions of the Act and within

applicable Columbus State Community College procedures. Students may appeal the decision of the hearing officer. Appeals shall be in writing and submitted to the Vice President of Enrollment Services and Marketing Communications within 10 days of the student's notification of the decision of the hearing officer. The appeal shall be heard and decided, with a decision rendered in writing within a reasonable period of time.

8. Consent for Release

   Written consent must be obtained from students for the release of education records or information that makes it possible to identify the student with reasonable certainty. The consent statement shall specify which records are to be released, the reasons for release, for how long, and to whom the records will be released. Written consent must be obtained from each department. An informed consent form is kept on file in each department from which the record was requested. A copy of the informed consent form shall be made available to the student if they requests. Columbus State Community College, in all good faith, will not release non-directory information to individuals and organizations outside of the college without the student's written permission, except when required by law.

   The requirement for written consent does not apply to the following:

   a. Requests from officials of Columbus State Community College (faculty, staff, administrators and designated agents of the college) who have a legitimate educational interest on a "need-to-know" basis.
   b. Requests in compliance with a lawful subpoena or judicial order; students shall be notified of all such subpoenas or orders in advance of compliance.
   c. Requests in connection with a student's application for, or receipt of, financial aid.
   d. Request by state or federal authorities and agencies specifically exempted from the prior consent requirements by the Act–organizations conducting studies on behalf of the college if such studies do not permit the personal identification of students to any persons other than to representatives of such organizations and if the personal identification is destroyed when no longer needed.
   e. Information submitted to accrediting organizations
   f. In the case of emergencies, the college may release information from education records to appropriate persons in connection with an emergency if the knowledge of such information is necessary to protect the health or safety of a student or other persons.
   g. Requests from officials of another school, school system or institution of postsecondary education where the student seeks or intends to enroll.
   h. Requests for "directory information." (See item 9)

   Note: The College will not unilaterally send student records to other educational institutions. Students transferring from the college or making application to other educational institutions must request an official transcript be sent to the other institution. A student may request official transcripts via the link to Credential Solutions on the Registrar's web page.

9. Columbus State Community College, in accordance with the Act, has designated the following categories of information about students as public information:
   - Name
   - Address (home/present) Telephone Number (home) Program of Study/Technology
   - Participation in officially recognized activities and sports
   - Enrollment status (less than half-time, half-time, part-time, full-time, over full-time, inclusive dates and semesters of enrollment.
   - Degrees, certificates, transfer module and awards received, (including Deans List and other honors)
   - Most recent previous educational agency or institution attended.
   - Student.cscc.edu email address for the purposes of electronic proxy and conducting studies on behalf of the college.

   NOTE: Students have the right to have this directory information withheld from the public if they so desire. Each student who desires that directory information be withheld shall so indicate by completing the Request to Withhold Personal Information From Directory form available at **www.cscc.edu**.

10. Inquiries Outside Columbus State Community College

    The college receives many inquiries for directory information from a variety of sources, including friends, spouses, parents, other relatives, prospective employers, institutions of higher education, honor societies, licensing agencies, government agencies, and the news media. Each student is advised to carefully consider the consequences of a decision to withhold directory information.

Columbus State Community College, in all good faith, will not release non-directory information to individuals and organizations outside of the college without the student's written permission, except when required by law.

11. Record of Access
    a. Each office maintaining and releasing student records shall maintain a record, kept with the education records of each student, which will indicate all parties, other than those specified in paragraph 8 above, who have requested or obtained access to the education records and specifically the legitimate interest that each such party has in obtaining this information.
    b. Columbus State Community College, in all good faith, will not release personal information about students except on the condition the party to which the information is being transferred will not permit access by a third party without the consent of the student, except when required by law.
12. Complaints

    Any student who has reason to believe the college is not complying with the Act should inform the Vice President of Enrollment Services and Marketing Communications and the U.S. Department of Education in writing. The Vice President of Enrollment Services and Marketing Communications shall promptly review all such allegations.
13. Questions

    Students should direct questions concerning their understanding of the Act to the Registrar.

Honors Program

The Honors Program at Columbus State Community College is committed to providing high-achieving, high-potential students with opportunities for personal, educational, and professional growth through academically enriching experiences and coursework. The Honors Program seeks to engage students through scholastic rigor, foster a diverse community of service and friendship, stimulate collegiate exploration and development, facilitate experiences that enrich cultural understanding, and prepare students for future excellence throughout their lives.

Students in the Honors Program will be invited to engage in specialized research/projects and participate in various co-curricular activities to supplement their Honors classes. Honors students will receive a variety of Honors-specific benefits including: one-stop registration, faculty mentorship, enhanced transfer opportunities to four-year degree-granting institutions, and additional scholarship opportunities.

Honors course offerings include, but are not limited to:

COLS 1100

PSY 1100 and 2340

SOC 1101

MATH 1151

BIO 1111 and 1113

CHEM 1171 and 1172

HIST 1151 and 1152

ENG 1100 and 2367

PHIL 1130

Honors Program members who complete their studies at Columbus State Community College and meet specified qualifications will become eligible for final Honors Program acknowledgement on transcripts and/ or diplomas as well as recognition at graduation.

For more information, including admission and graduation requirements, see **cscc.edu/honors**.

Phi Theta Kappa Honor Society

Alpha Rho Epsilon Chapter at Columbus State

Phi Theta Kappa is recognized by the American Association of Community Colleges (AACC) as the official community college honor society. Phi Theta Kappa remains an active member of the affiliated council of the AACC.

Columbus State's chapter (Alpha Rho Epsilon) was established to recognize and encourage scholarship,

provide opportunities for service and leadership development, present a forum for exchange of ideas and stimulate fellowship among students.

Phi Theta Kappa at Columbus State also offers direction to student members, and non-members, concerning applying for valuable scholarships to continue their education.

Membership is open to all students who have earned at least 12 credit hours and who currently hold a 3.5 grade point average at Columbus State. Invitations to join are emailed to all eligible students about five weeks into each new semester.

For more information, stop by our campus office in Nestor Hall 122-A, call the office at 614-287-5608, or email the chapter at **phitheta@cscc.edu**

Society of the Compass

The Society of the Compass, created in honor of the college's 50th Anniversary in 2013, allows faculty and staff to recognize graduating students who have demonstrated extraordinary achievements during their time at Columbus State. Membership in the Society of the Compass represents the successful achievement and navigation of the four points that serve as the foundation of the Society's Creed: Nobility, Excellence, Service, and Wisdom. Faculty and staff members may nominate eligible students, and those nominees submit applications to the Society of the Compass Committee for consideration. Recipients of the award are inducted to the Society at the end of each academic year (Spring Semester), and recognized during the spring commencement ceremony.

For more information, see **www.cscc.edu/academics/departments/society-of-compass**.

Academic Study Abroad Opportunities

Email: khogan6@cscc.edu

Columbus State offers study abroad courses that promote learning in multiple locations, mostly outside the United States. The Study Abroad office works in partnership with faculty to support study abroad experiences as part of specific courses offered at Columbus State. Past destinations have included Guatemala, Greece, Jamaica, China, Mexico, the American Southwest (sovereign Native American nations) and Japan. Some of these courses also incorporate service-learning opportunities. Availability of class offerings is dependent upon the approved travel proposals of lead faculty and factors such as the number of participants and international safety issues. For information on current study abroad course opportunities and travel requirements, visit the website **cscc.edu/academics/study-abroad**.

Tuition and Fees

Fees

Note: All fees are subject to change based upon action by the Board of Trustees. For current fees, including instructional, technology and general fees, refer to the college website, cscc.edu/tuition.

LAB FEES

Lab fees are charged to cover the cost of supplies and materials used by the student in labs. The cost of student limited professional liability insurance, required in certain health technologies, will be included in the lab fee.

APPLICATION, RECORDS AND ID FEE

The Application, Records, and ID fee defrays the cost of enrolling at the college, including application and permanent record maintenance, and the cost of one student identification card which can be obtained in the semester the fee is paid or a future semester. The $50 Application, Records, and ID fee is assessed at the time of initial registration, and is non-refundable. For students who were not charged and/or did not pay a Matriculation fee or Application, Records, and ID fee during a prior quarter/semester for any reason, the Application, Records, and ID fee is charged and due the current semester of registration in which the fee is invoiced to the students account. International students may be assessed an Application, Records, and ID fee different from domestic students to offset the costs of doing business.

INSTRUCTIONAL AND GENERAL FEES

Ohio residents are charged a combined instructional and general fee of $182.93 per credit hour. This fee is comprised of a $162.43 instructional fee and a $20.50 general fee. The general fee defrays the cost of registration, student activities services, and student support services of a non-instructional nature. Fees for non-Ohio residents and international students reflect a similar prorated instructional and general fee amount.

TECHNOLOGY AND FACILITIES FEE

The Technology and Facilities Fees will be applied during Autumn and Spring semesters at the time of registration and is based on the number of credit hours registered. This fee is used to maintain technology infrastructure for both enterprise systems and learning platforms that students use within courses, to expand technology-enhanced learning and student services through mixed-mode courses and programs, the use of open-source learning materials in campus-based courses and alternative delivery of student services, and to ensure that facilities are updated to stay current with the learning needs of students and the demands of a 21st Century workplace. Fees will be adjusted when courses are added or dropped in accordance with the fee schedule below and the college's published refund periods. Below is the Technology and Facilities fee structure.

TIER	CREDIT LOAD (HOURS)	FEE AMOUNT PER STUDENT
1	1-3	$0
2	4-9	$60
3	10-14	$120
4	15+	0

Please note: All fees are subject to change based upon action by the Board of Trustees. For current instructional and general fee listings, refer to the college website.

SEMESTER ACADEMIC FEES

Ohio Residents

The Ohio resident credit hour fee of $182.93 is comprised of a $162.43 instructional fee and a $20.50 general fee.

Non-Ohio, U.S. Residents

The non-Ohio, U.S. resident credit hour fee of $374.14 is comprised of a $343.14 instructional fee and a $31.00 general fee.

International Students

The international student credit hour fee of $443.89 is comprised of a $405.39 instructional fee and a $38.50 general fee.

PRIOR LEARNING ASSESSMENT FEE

Students with life experience that has provided learning similar to academic course outcomes may request a review of that experience by the appropriate academic department chairperson. A nonrefundable $50 fee is charged to review the information and/or portfolio.

PROFICIENCY EXAMINATION FEE

Students who believe they possess the knowledge contained in a course may request of the academic department to take a proficiency examination. A nonrefundable $50 fee is charged for each proficiency examination to be taken and is payable at Cashiers and Student Accounting prior to taking the exam. Infor- mation concerning proficiency examinations may be obtained by contacting the chairperson of the

department offering the course for which the exam is to be taken.

TRANSIENT/GUEST STUDENT FEES

Transient/Guest students (those who are taking one or more courses to transfer back to another college or university) complete the same application and follow the same registration process as other students taking courses for credit. The instructional, general, lab and appropriate residency status fees shall be charged for courses taken. The one-time, nonrefundable $50 Application, Records and ID fee covers the cost of enrolling at the college, including application and permanent record maintenance, and a student identification card. The Application, Records and ID fee will appear and be due for payment on the schedule and fee statement for the academic semester in which the student initially registers for a class, whether the class is dropped or cancelled. ***It is recommended that transient/guest students receive approval from their home institution to take specific Columbus State Community College courses to ensure transferability and applicability of the credit at their home institution.***

Fee Payment

Students can access their class schedule online after logging in at **selfservice.cscc.edu** (under "Academic Profile," select "My Schedule"). Students can also check their charges or make a payment at the same website under "Financial Information." Fee payment deadlines are listed at **cscc.edu** under the **Resources For** drop down, select Current Students, (select "Academic Calendar"). All fee payment information is posted at **cscc.edu** or emailed to student email accounts (see Email in the Additional Services to Students section of this catalog).

Student account notices are sent via the student account email, so it is important that student email accounts are checked regularly to avoid missing billing notices, account information, and other important communications.

FEE PAYMENT OPTIONS

Columbus State offers a variety of payment options including online, U.S. Mail, phone, and in-person. Detailed information can be found at cscc.edu/academics/tuition-and-fees/how-to-pay-fees.shtml.

You may pay partial fees up until the fee payment deadline, with the entire amount paid in full by the posted fee payment deadline. The partial payments option requires no set-up charge, no minimum/ fixed payment amounts, and no scheduled payment dates.

A tuition extended payment plan option is available. This payment plan option has a $15 set-up fee, fixed payment amounts, and scheduled payment dates, where some payments will be scheduled after the posted fee payment deadline, but the final payment(s) will be due before the end of the term. Down payment is due immediately.

A deferred payment plan option is available. This payment plan option has a $115 plan set up fee to be paid immediately. This defers tuition payments after the posted fee payment deadline, but the final payment will be due before the end of the term. See details on cscc.edu/academics/tuition-and-fees/payment-deferral.shtml.

Please note: Fees not paid by the published semester deadline dates will result in the student's schedule being dropped.

NOTE: Financial aid may not automatically be adjusted for registration activity after the fee payment deadline. Additionally, students adding classes after the 100% refund period should contact the Financial Aid Department to insure that financial aid is adjusted correctly.

RELEASE OF RECORDS AND TRANSCRIPTS

Columbus State Community College, in all good faith, will not release non-directory information to individuals and organizations outside of the college without the student's written permission, except when required by law. Students may request that an official Columbus State transcript be sent to organizations and individuals outside of the college by completing a Transcript Request available at **cscc.edu/transcript**. Transcripts will in, most cases, be delivered electronically through secure link to the receiving university or other authorized entity as directed in the request. Transcripts may be delivered via U.S. Mail but cannot be picked up in person at the college. A transcript request will not be processed if the student has a restriction on their record. The student will be notified immediately if there is a hold on their record that must be addressed before the request may be submitted. An outstanding balance will not prevent students from ordering and receiving official Columbus State Community College transcripts.

REFUNDS

The instructional, general and lab fees are refundable for student-initiated drops in accordance with the following guidelines:

Instructional and general fee refunds are based upon the percentage of time elapsed in each course. If the course is dropped with 10% of the time elapsed in the

course, a 100% refund of instructional and general fees will be issued.

If the course is dropped with 20% of the time elapsed in the course, a 50% refund of instructional and general fees will be issued.

Lab fees may be refundable based upon the same percent of refund issued for instructional and general fees.

No refunds are given if beyond 20% of the time for the course has elapsed.

Check cscc.edu for refund deadlines.

A total refund of instructional, general and lab fees is made when a course is cancelled or closed and the student does not elect, or is not permitted, to enroll in another course or section.

If there are extenuating circumstances that have prevented the student from dropping his or her class(es) within the 100% or 50% refund periods and warrant exception to the refund procedure, the student must complete the Tuition Refund Request form. All tuition refund requests submitted by the deadline along with the statement of explanation, written and signed by the student, and supporting third-party documentation are reviewed and approved or denied by a committee. All requestors are notified of the committee's decision via USPS mail.

Refund requests submitted after the following dates will not be considered:

Autumn Semester: February 15 of the **following** calendar year

Spring Semester: August 15 of the **same** calendar year

Summer Semester: November 15 of the **same** calendar year

The Tuition Refund Request form is available at **cscc.edu**.

NON-RESIDENT, INTERNATIONAL, AND RESIDENT STATUS FOR TUITION PURPOSES

All public, state-supported institutions are required to report enrollment data to the State of Ohio according to Section (F)(4) of the Ohio Administrative Code, Section 3333-1-10. A student's residency status, i.e., Non-Resident, International, or Resident, is initially determined by the information they provide at the point of application for admission to Columbus State Community College.

According to the Residency Rule 3333-1-10, Section (F) (5), it is incumbent upon a person to apply for a change in residency, and his or her failure to do so as soon as he or she is entitled to a change shall preclude the granting of residency retroactive to that date. A change in residency shall be prospective only from the date such application is received. A change in residency status under this section is never automatic, and must be initiated by an application for such a change by the person seeking it. Please be advised that retroactive residency re-classifications are not allowed under the guidelines of the Residency Rule.

If a student is designated as a non-resident, they may qualify for in-state residency by meeting specific qualifications. A Residency Re-classification Application must be completed, important verification documentation submitted, and residency determination approved prior to the first day of the semester for which the student desires reclassification to be effective.

To inquire about the residency status process, please call (614) 287-5533 or visit Student Central, Madison Hall, Upper Level.

PARKING PERMITS

Parking registration is required to park at all Columbus State locations. Students and employees both access registered parking virtual permits through the college's management provider, SP+. Students seeking semester-long parking access must purchase a $50 virtual permit for each registered semester.

All vehicles must display an outward-facing license plate for parking authorization to be valid. Vehicles should pull in to Columbus State parking spaces with rear license plate facing out, unless a valid front plate is installed. Registration verification is monitored through license plate scan. No physical permits will be issued.

All parking payments, whether for permit or hourly access, are permanent and nonrefundable. Students must remain registered to retain permit validity. Visit cscc.edu/parking for more information.

ADMISSIONS, WELCOME, AND ENTRY

Admissions

General Information

Location:
Madison Hall, Lower Level
Columbus Campus

Phone: 614-287-2669

Email: **admissions@cscc.edu**

HOURS OF OPERATION

Admissions Office hours:

Mon, Tues, & Thurs	8 a.m. – 5 p.m.
Wednesday	8 a.m. – 7 p.m.
Friday	10 a.m. – 4:30 p.m.

Find regularly scheduled info sessions as well as specialized sessions on particular programs. Or, schedule a one-on-one call with an Admissions Representative by visiting **cscc.edu/visit.**

The Admissions Office is open for extended hours during certain periods of the semester. Check **cscc.edu/contactadmissions** for current hours.

Prospective and new students are invited to begin the enrollment process by visiting our website **cscc.edu/admissions**. For more information, contact the Admissions Office at (614) 287-2669 or by email **admissions@cscc.edu**,

Student Services staff members are also available in Moeller Hall on the Delaware Campus to help prospective and new students with admissions and other enrollment-related services. For more information, visit Student Services in Moeller Hall or call (740) 203-8345. Learn more at **cscc.edu/delaware.**

Admission Policy

Columbus State Community College is committed to the principle of providing each student access to quality educational programs and lifelong learning. An application for admission is required for all applicants pursuing enrollment in academic credit courses.

This application is not required for students enrolled exclusively in noncredit courses. Information provided on the Columbus State Community College admissions application is used to determine initial admission status. Additional documentation is required for certain applicant categories, such as international, applicants or those with misconduct at a previous institution.

Applicants not meeting established requirements may be denied admission or may have admission deferred to a future term. Admission procedures, including changes in conditions of admission status, will be adopted and implemented by the college.

Admission to a specific program of study for the purpose of earning a degree or certificate shall be according to requirements and procedures established for the specific program of study and adopted by the college. Admission to the college does not ensure admission to a particular program of study. Many academic programs have established additional requirements that must be fulfilled prior to acceptance. For specific information, applicants are encouraged to contact the Admissions Office or refer to an academic department's online resources. For some students, prerequisite credit and/or noncredit coursework in mathematics, reading, science, and/or writing may be needed prior to enrolling in certain courses and programs. While most degree programs can be completed in two years of full-time study, it may take longer for some students, including those who need developmental courses and those attending on a part-time basis.

For more information, visit the website **cscc.edu/admissions**, call (614) 287-2669, or email **admissions@cscc.edu**.

Application/Enrollment Procedures

Prospective students can learn more about the application and enrollment process at Columbus State by visiting the college website at **cscc.edu/admissions/getstarted** . This webpage links you to a step-by-step guide to enrollment with links to additional information and resources for each step of the process.

International Admissions

Applicants who are immigrants (permanent residents, refugees, asylees) must submit documentation verifying their current valid immigration status to the Admissions Office.

For complete application procedures and deadlines, please view the Columbus State International Student Services webpage at **cscc.edu/international** or (614) 287-2074, or at **istudent@cscc.edu.**

College Credit Plus

Applicants who are middle school or high school students interested in College Credit Plus (concurrent enrollment in college classes while still in high school or home school) must complete the College Credit Plus application for admission and complete additional required documentation to determine eligibility for

these programs. For more information, contact the College Credit Plus Services Office at (614) 287-5349 or visit **cscc.edu/academics/college-credit-plus**.

Student Identification Number

A student identification number, called a Cougar ID number, is assigned to each student upon admission to the college. Social security numbers are not used as identifiers for student records. Students have access to schedules, grades, and other information related to enrollment through the **Self-Service** system. Columbus State assigned usernames and student determined passwords allow access to Self-Service functions.

Columbus State Community College provides each student with a student email account which is the college's primary method of communication to students. For assistance with Self-Service or email, contact IT Support Services at (614) 287-5050. (Please refer to the statement on the Family Educational Rights and Privacy Act for information on the release of student records.)

Selective Service System Registration

Under the provisions of Section 3345.32 of the Ohio Revised Code, a male student born after December 31, 1959, who is at least 18 years of age and who is classified as an Ohio resident for fee purposes by the state-assisted college or university he is attending, is required to be registered with the Selective Service System or be charged a tuition surcharge equal to that charged a nonresident student. Such a student is required to provide his Selective Service number on the Columbus State Community College admissions application if he is between the ages of 18 and 26. If said student turns 18 after completing an admissions application, he is required to provide the Selective Service number within 30 days of his 18th birthday to Student Central. If he does not submit his Selective Service number, the student will be billed a surcharge equivalent to nonresident tuition rates. This surcharge will be billed until the Selective Service number is provided.

Students are exempt from registration with the Selective Service System on the basis of one of the following criteria:

- Female
- Under 18 years of age
- 26 years of age or older
- Currently on active duty in the U.S. Armed Forces (note: training in a Reserve or National Guard unit does not constitute active duty).
- A non-immigrant alien lawfully in the United States in accordance with Section 101(a)(15) of the Immigration and Nationality Act, USC 1101, as amended.
- A permanent resident of Micronesia, Marshall Islands or Palau.

Note: Male students who receive federal student aid must sign a statement on the FAFSA indicating compliance with current Selective Service regulations. International students who are just entering the country and are beyond the age of 26 need to complete Selective Service verification for the Financial Aid Office and provide documentation of the date of arrival to this country.

*If you are a male who is within 30 days of becoming 18 years of age or between 18 and 26 years of age and have never applied for a Selective Service number, registration may be processed online at **www.sss.gov** or through a local post office. You may also contact the Selective Service System at (847) 688-6888 or **www.sss.gov** to retrieve your Selective Service number. Report your Selective Service number to the Telephone Information Center, 614-287-5353, as soon as you receive it.

New Student Onboarding and Assessment

General Information

New Student Onboarding Location:
Madison Hall, Lower Level
Columbus Campus

Phone: 614-287-2669

Email: orientation@cscc.edu

New Student Assessment Location:
Madison Hall, Room 202
Columbus Campus

Phone: 614-287-2478

Email: **placement@cscc.edu**

HOURS OF OPERATION

New Student Onboarding and Assessment

Office hours:

Mon, Tues, & Thurs	8 a.m. – 5 p.m.
Wednesday	8 a.m. – 7 p.m.
Friday	10 a.m. – 4:30 p.m.

High School Transcript/GED Transcript

If required for admission to their chosen program of study or if needed as a requirement for some forms of financial aid or scholarships, students should submit a final official high school transcript and/or an official GED transcript. Check the Specific Program Admissions Information online at **explore.cscc.edu/programs** to determine if a high school or GED transcript is required for admission to a particular program of study.

A final official high school transcript is a transcript received in the original, sealed envelope on official paper with an official seal and/or official signature verifying the date of graduation and has not been opened prior to being submitted to Columbus State Community College.

An official GED transcript is a transcript received in the original sealed envelope from the state board of education. If the student delivers the GED transcript, it must be in its original sealed envelope and not opened prior to submission to Columbus State Community College. For more information on transcripts please visit **cscc.edu/admissions/getstarted.**

The final official high school transcript and/or official GED transcript should be mailed to:

Columbus State Community College
ATTN: Transcript Evaluation
P.O. Box 1609
Columbus, Ohio 43216

All information submitted to the college relative to admission and academic status, including the final official high school transcript and/or official GED transcript, becomes and remains the property of Columbus State Community College and the original documents and/or copies of the documents will not be released unless required by law.

Previous College Transcript

An official college transcript is required of applicants who have attended other colleges or universities. An official transcript from each college attended is required of all who are seeking transfer credit or who have completed prerequisite coursework at another institution. An official transcript is one that is in a sealed envelope bearing the other institution's official letterhead and/or logo; is printed on official, secure paper that has been signed and sealed by the other college or university; and has not been opened prior to being submitted to Columbus State Community College. The transcript(s) should be mailed from the other college(s) to:

Columbus State Community College
ATTN: Transcript Evaluation
P.O. Box 1609
Columbus, Ohio 43216

The transcript(s) should be submitted before the student's second semester of attendance has elapsed. All student education record information, documentation and material submitted to Columbus State Community College, including official transcripts from other colleges and universities, becomes and remains the property of Columbus State Community College and the original documents and/or copies of the documents will not be released unless required by law. Applicants will be able to view transfer credit awarded through the Academic Profile tab on **Self-Service** once their official transcripts have been evaluated.

Health Record

Many health programs require you to fill out a health record before you can enroll in the program. These health records disclose health history, immunizations, and information of that nature.

The Health Records Office collects and manages health records forms. Please visit **cscc.edu/services/health-records** for more information.

Office Information:
Health Records Office
Union Hall, Room 132

Phone: (614) 287-2450

Fax: (614) 287-5386

healthrecords@cscc.edu

Disclosure for Students Pursuing Health, Human Services, and Related Programs

Students who are pursuing degrees or certificates leading to application for professional licensure or certification, and/or who will be participating in clinical placements, internships, or practicums through their program, should be aware that Columbus State Community College may require a criminal

background check, fingerprinting, or drug screening prior to placement. Each student is responsible for paying for the background check or other screening process. If the college's screening process indicates a conviction or a positive/abnormal drug screening result, the student may be disqualified from acceptance into a program or from continued participation in a clinical placement, internship, or practicum experience. Students shall further be aware that a criminal record may jeopardize licensure by the state certification body. Students should consult the licensing certification body corresponding with their intended occupation for more details. Successful completion of a program of study at the college does not guarantee licensure, certification, or employment in the relevant occupation. Standards may change during a student's program of study.

New Student Programs

Columbus State offers New Student Programs to help new students learn their next steps, get oriented to the college and get off to a good start by equipping students with the tools necessary to achieve their goals. In these sessions, students will experience first-term advising, proactive financial aid education, and exposure to campus resources. Students will leave feeling a connection to the Columbus State community and will be prepared to begin their academic journey. For more information please visit **cscc.edu/admissions/orientation.**

New Student Assessment

Placement testing, or an approved college readiness assessment equivalent, is required for most applicants prior to registering for classes. Please visit **cscc.edu/placement** for more information.

We use Placement Information to determine which classes you'll start with at Columbus State. We want to ensure you have the best chance to succeed. We also don't want you to retake subjects you have already passed. Before registering for classes, new students should submit their transcripts and ACT/SAT test scores to the college. If you've been out of high school for more than 10 years or do not have documentation, the college offers placement assessments to determine your starting point. Please visit **cscc.edu/placement** for more information.

Applicants with a prior degree, a declared transient or non-degree credit major, or a declared intent to participate in the college's Good as Gold program, are not required to complete college readiness assessments. However, students will need to provide proof of prerequisite coursework which may result in completion of a college readiness assessment.

The New Student Assessment Center utilizes ACCUPLACER and ALEKS placement tests to determine the appropriate starting level for math, reading, writing, and when appropriate, English as a Second Language courses. Developmental Education, English as a Second Language, noncredit Basic Education and/or ESL Basic English courses may be required to maximize the student's opportunity for academic and personal success.

After completing the appropriate placement tests, students testing into credit courses will attend a New Student Program for an interpretation of their test results and assistance selecting appropriate courses for their first semester. This session also includes an introduction to the **Self-Service** registration system and registration of first semester courses.

Students with transfer credit in college-level composition or math from an accredited institution may not need to complete all sections of the placement test. These students should have official transcripts submitted to the college. They should also obtain a copy of their transcripts or other documentation verifying completed courses and contact New Student Programs, located in the lower level of Madison Hall, for course selection and registration information. Visit **cscc.edu/admissions/new-students/contact-us.shtml** for contact information.

Students with an ACT, SAT, AP (Advanced Placement), CLEP (College Level Examination Program), or IB (International Baccalaureate) credit may be exempt from completing all or select sections of the placement test. For more information, visit **cscc.edu/need-placement** or visit **cscc.edu/admissions/placement-testing/contact-us.shtml**.

Placement assessments require an appointment, and a photo ID is required. In an effort to provide a distraction-free testing environment, children, food, beverages, and cell phones are not permitted in the Testing Centers. Placement assessments are offered on the Columbus Campus in MA 202, the Delaware Campus in MO 157, and at the Dublin RLC in 311. To schedule an appointment, visit **cscc.edu/placement**.

For information about placement testing for noncredit Basic English courses, contact the Language Institute at 614-287-5858 or **cscc.edu/community/language-institute**.

Returning Students

Students who would like to return to the college after two or more years should update their academic record

by completing the appropriate steps. Returning student steps can be found by visiting cscc.edu/admissions/returning-students.shtml. The student should also request that official transcripts from any other college they attended during their absence be forwarded to Columbus State. An official transcript is one that is 1) in a sealed envelope bearing the other institution's official letterhead and/or logo, 2) printed on official, secure paper which has been signed and sealed by the other college or university, and 3) has not been opened prior to being submitted to Columbus State Community College. For information about submitting official transcripts, visit cscc.edu/services/registrar/transcript-evaluation.shtml.

Registering For Classes

Students can register for classes through their online Self-Service account at selfservice.cscc.edu, with a Telephone Information Center representative at 614-287-5353, in person on the Columbus Campus at Student Central in Madison Hall, on the Delaware Campus at Student Services in Moeller Hall, or at one of the college's regional learning centers. Check the Academic Calendar at cscc.edu/calendar for pertinent deadlines.

Students who wish to register for 19 or more credit hours in a semester must have the permission of their academic advisor.

Cross-Registration at Other Institutions

The Higher Education Council of Columbus (HECC) is an association of colleges and universities in central Ohio established to develop programs that benefit its member institutions and the community at large. As a service to students, HECC member institutions have approved a system of cross-registration for regularly enrolled, full-time undergraduate students at the following colleges and universities:

- Capital University
- Central Ohio Technical College
- Columbus College of Art and Design
- Columbus State Community College
- Franklin University
- Ohio Dominican University
- Otterbein University
- The Ohio State University

Cross-registration is limited to one course per term (Autumn and/or Spring only), with a maximum of three cross-registered courses during a student's academic experience. The course taken must be an enrichment class to the student's program of study at Columbus State. To participate in cross-registration, a Columbus State Community College student must be in good academic standing and maintain full-time status during the semester they are requesting permission to participate in cross-registration. The course section requested for cross-registration must have space available as determined by the host institution. The Columbus State student does not pay tuition to the host institution but may be charged other enrollment-related fees, such as laboratory or parking fees. A grade for the course taken at a host institution will be posted only on the student's Columbus State transcript.

A Columbus State student interested in cross-registering for a course must obtain approval at Columbus State, and from the host institution's registrar. If you have further questions please email HECC@cscc.edu.

Each institution has established cross-registration deadlines which must be met to participate. For more information, contact HECC@cscc.edu.

Good as Gold Educational Program

As a community service, Columbus State offers senior citizens who are 60 years old or older the opportunity to enroll in credit courses for self-enrichment – tuition free on a space-available basis – for audit ("R") only.

Good as Gold students are registered to take the course for audit. Students registered for audit are not taking the course for credit. Faculty members are not obligated to spend office hours and/or evaluate course work for a grade. Good as Gold student enrollment may not exceed 10% of the class.

If you have questions or would like to declare your intent to participate in the Good as Gold program, please e-mail goodasgold@cscc.edu or call the Telephone Information Center at 614-287-5353 and ask for the Good as Gold specialist.

CAMPUS LIFE

Food Services

Visit cscc.edu/campus-life/dining/ for additional information including hours of operation.

Services Offered:

- Degrees Restaurant
- Blend Cafe + Bakery
- Union Cafe
- Sips @ Davidson Hall
- Market-C @ Delaware Campus
- Campus Vending
- Food Trucks
- Subway @ DX

Degrees Restaurant:
Located in Mitchell Hall and serving elevated American classics, Degrees gives hospitality and culinary arts students valuable experience in the front and back of the house. Degrees is open for lunch and dinner. degrees.cscc.edu

Blend Cafe + Bakery:
Blend Bakery and Cafe serves coffee, tea, and a rotating seasonal menu of scratch-made baked goods, soups, salads, and sandwiches. The cozy space attracts customers from across campus to the lower level of Mitchell Hall. blend.cscc.edu

Union Cafe:
Located in Union Hall, Union Cafe offers a great place to meet up with friends. A wide variety of seating and collaborative spaces with plenty of places to plug-in. Union Cafe has a variety of hot and cold food stations. You'll also find grab-and-go sandwiches, burgers, pizza, soups, salads, snacks, and beverages. Just outside the food court is an in-house coffee kiosk proudly serving Starbucks drinks.

Sips @ Davidson:
Located on the first floor of Davidson Hall. Enjoy your favorite Crimson Cup drinks at Sips Cafe. Serving grab and go salads, sandwiches, pastries, and more.

Market-C @ Delaware Campus:
An automated C-store located in Moeller Hall. This self-service convenience store makes foods available at all times that Moeller Hall is open. Look for gourmet selections, premium sandwiches, pastry and snack options, and quick brew hot beverages.

Vending:
Vending Machines are located throughout Columbus State campuses. These machines are credit card enabled for your convenience. Offering a wide variety of snacks and a large assortment of Pepsi-brand beverages.

Food Trucks:
Columbus State hosts a rotating roster of three food trucks located in the courtyard in front of Delaware Hall on the Columbus Campus.

Tortillas "Delicious Mexican Street Food" is on campus every Monday, Wednesday, and Thursday throughout the Autumn and Spring semesters.

Schmidt's Sausage Truck visits campus every other Tuesday on a rotating schedule.

Pitabilities truck is on campus every other Tuesday on a rotating schedule.

Subway @ DX:
Enjoy the nationally branded foods of Subway Restaurant at the Discovery Exchange Bookstore. Located on the Corner of Mt. Vernon and Cleveland Avenue.

Student Engagement and Belonging

Office Location: Nestor Hall, Room 116

Telephone: 614-287-2637

Email: studentengagement@cscc.edu

College is a time to grow, meet new people, and have fun - you can do all three when you get involved with Student Engagement and Belonging at Columbus State. From fun social events such as Week of Welcome and Spring Fling to leadership-building opportunities such as the Collegiate Leadership Conference of Ohio, there is something for every student. Check out what is available by getting involved and learn so much about yourself and all that is to offer within our great campus community!

Additionally, the East Lounge on the first level of Nestor Hall is devoted to recreation with a large-screen monitor with connections for video games. There are also ping-pong tables for a quick game or two. Equipment for use with the tables is available 8:00 a.m. to 4:00 p.m. Monday through Friday.

The Delaware Campus also hosts student activities and programs to support student success. Inquire at Student Services in Moeller Hall about any upcoming events or call 740-203-8345.

CougarConnect

CougarConnect is the college's online social platform where students and departments can stay connected to all the amazing resources and things happening at Columbus State. CougarConnect has information about upcoming events, student groups, campus resources, and so much more! Visit CougarConnect at **connect.cscc.edu** and begin building your college community at Columbus State today!

Student Ambassador Leadership Program (SALP)

Student Ambassadors are involved all across campus, from volunteering on the Welcome Team to planning events. Through SALP, students develop into an influential community of learners and leaders. Student Ambassadors represent and promote Columbus State, including, sharing their Cougar pride through campus programming and working within departments and offices. These student leaders can also be seen off campus leading and participating in civic engagement opportunities.

Find out more about Student Ambassadors by asking a current Ambassador around campus, in their office in the Nestor Hall East Lounge, or by visiting the Student Engagement and Belonging Office in Nestor Hall 116.

Student Clubs

Student Clubs are a great opportunity for students at Columbus State to develop a sense of community, build leadership skills, and get engaged on our campuses! Fortunately, Columbus State offers a variety of groups that you can join. Student clubs are completely student-led and are formed based on the wants and needs of the current student body including: recreational, academic, special interest, and cultural identities.

Experiences in the areas of interpersonal relationships, decision-making, and leadership related to the operations of the organization can be vital learning tools. The college encourages students to form student groups in accordance with college policies, procedures, and guidelines. In order to be recognized by Columbus State Community College and to be eligible for benefits, student clubs must complete a registration/renewal annually and receive approval from Student Engagement and Belonging.

To view the list of current clubs available or explore how to start a new club visit CougarConnect! Have questions? Contact the Office of Student Engagement and Belonging.

Social Activities

Student Engagement and Belonging offers a number of special events throughout the year based on College traditions and student interests. Examples of regular programming include Week of Welcome and Spring Fling. In addition, the office collaborates with campus and community partners to offer cultural celebrations and other special interest activities.

Columubus State Student Campus Insider

The Campus Insider is your weekly dose of news at Columbus State. It is emailed to students every Monday and has information related to academics, workshops, opportunities to get involved, upcoming events, and much more. Check it out in your student email.

COMMUNITY

Language Institute

Flo Plagenz, Director

Phone: 614-287-5868

Central Ohio's increasing international connections and growing immigrant population have brought new attention to the importance of language instruction. In response to the growing need for focused language programming, the Language Institute provides non-credit courses as outlined below in Basic English as a Second Language on an open-enrollment basis and by agreement for interested organizations. For information, contact the Non-Credit Registration Office at (614) 287-5858 or **cewdreg@cscc.edu**. You may also visit our web site at **cscc.edu/community/language-institute**.

Basic ESL Program

Columbus State's Language Institute offers low-cost non-credit Basic ESL classes for beginning to high intermediate English learners. These courses help English learners improve their English language and literacy skills.

Core courses teach grammar, reading, writing, listening, and speaking together in the same course. Core courses are numbered from 1 to 8.

Elective courses focus on special topics like pronunciation, conversation, and vocabulary. These classes are open to anyone who wants to improve their English, for daily life or for their academic career. Many students take credit ESL classes after completing coursework in the non-credit program.

All students must complete a placement test to determine their correct English level. Students take a final exam at the end of each course. A passing final exam score is required to move to the next level.

Basic ESL Core Classes

Basic ESL 1 $210 (BESL-0101)

Basic ESL 2 $210 (BESL-0102)

Basic ESL 3 $210 (BESL-0103)

Basic ESL 4 $210 (BESL-0104)

Basic ESL 5 $210 (BESL- 0105)

Basic ESL 6 $210 (BESL-0106)

Basic ESL 7 $210 (BESL-0107)

Basic ESL 8 $210 (BESL-0108)

Basic ESL Elective Courses

Pronunciation 1 $110 (BESL-0130)

Pronunciation 2 $110 (BESL-0135)

Pronunciation 3 $110 (BESL- 0133)

Conversation 1 $110 (BESL-0140)

Conversation 2 $110 (BESL-0145)

Conversation Club $110 (BESL - 0143)

Vocabulary 1, 2 or 3 $110 (BESL-0150, BESL-0155, BESL-0153)

Grammar: Present Tenses $110 (BESL-0161)

Grammar: Past Tenses $110 (BESL-0162)

Grammar: Future & Perfect Tenses $110 (BESL-0163)

Successful Writing Basics $110 (BESL-0170)

Successful Reading Basics $110 (BESL - 0180)

Reading for College Readiness $110 (BESL-0210)

Writing for College Readiness $210 (BESL-0220)

Manufacturing Extension Partnership

The Manufacturing Extension Partnership (MEP) at Columbus State is a full-service solutions provider for central Ohio manufacturers. From consulting and product development to education and talent acquisition, we partner with local manufacturers to grow their manufacturing business. For additional information, visit our website at **mep.cscc.edu**.

Non-Credit Registration Office

Location:
315 Cleveland Ave., WD Building, Room 1090

Phone: 614-287-5858

En español: (614) 287-3929

E-mail: **cewdreg@cscc.edu**

This office is a starting point for many activities related to non-credit courses and programs. Here, students can find information as well as register and pay for non-credit courses such as those in the Basic English and GED programs. The knowledgeable office staff supports several programs within the Office of Talent Strategy.

Office of Talent Strategy

Additional Information: **cscc.edu/workforce**

Columbus State's Office of Talent Strategy partners with businesses, economic development, community-based organizations and other stakeholders to proactively develop a talent ecosystem within central Ohio. This includes developing both credit and non-credit solutions delivered by the college to upgrade the skills of incumbent workers, transitioning workers, career changers, and emerging talent populations. For more information visit our website **cscc.edu/workforce**.

The Ohio Small Business Development Center

Phone: 614-287-5294

Additional Information: **https://sbdccolumbus.com**

The Ohio Small Business Development Center (SBDC) at Columbus State Community College stands ready to help you take your business to the next level. The SBDC provides high-end business advising and training to start-up and existing small business owners. The SBDC team provides assistance in areas such as business start-up, marketing, financial operations, business funding, minority business certification, manufacturing and export assistance.

Whether you are exploring a new idea or have been in business for 30 years, the SBDC has the expertise to guide you through the process of building a profitable business.

The SBDC office is located on the Columbus State Community College campus at 356 N. Grant St., Columbus, Ohio. The SBDC provides consulting and training throughout nine counties in central Ohio. Business advising services are offered at no cost to the client and all services are provided on a nondiscriminatory basis.

The Ohio SBDC at Columbus State also has specialized services. The SBDC also hosts an Export Assistance Network location and a Latino SBDC.

SBDC EXPORT ASSISTANCE NETWORK AT COLUMBUS STATE COMMUNITY COLLEGE

Our Ohio SBDC Export Assistance Network provides export assistance for new-to-export businesses as well as existing exporters looking to expand overseas markets. These efforts strengthen individual companies, and also diversify Ohio's economy, create additional jobs, support the future competitiveness of Ohio companies, and help to restore America's balance of trade through Ohio's participation in global markets.

LATINO SBDC AT COLUMBUS STATE COMMUNITY COLLEGE

The Latino Center provides counseling and training in Spanish to start-up and existing businesses. Our counseling and training events are conducted by bilingual, culturally competent advisors to improve Latino-Owned business's ability to compete effectively in domestic and international markets.

For more information on any SBDC, Latino SBDC or the Export Assistance Network, call (614) 287-5294 or visit **sbdccolumbus.com**.

STUDENT SERVICES

Advising Services

COLUMBUS CAMPUS:

Location:
Advising Central
Aquinas Hall 116

- *Arts & Sciences Advising*
- *Health & Human Services Advising*
- *Business Programs & Engineering Technologies Advising*

Additional service information, hours of operation and contact information for these areas can be found at **cscc.edu/advising.**

DELAWARE CAMPUS:

Location:
Moeller Hall, Student Services

Telephone: 740-203-8345

Email: **delaware@cscc.edu**

Additional service information, hours of operation and contact information can be found at cscc.edu/delaware.

DUBLIN REGIONAL LEARNING CENTER

Telephone: 614-287-7050

Advisors offer a full range of academic advising and planning services to assist Columbus State learners:

- Interpreting placement test results
- Understanding program requirements
- Developing an academic plan for degree and/or goal completion
- Accessing college resources
- Clarifying academic policies and procedures
- Addressing academic difficulty
- Utilizing transfer resources

For more information about academic advising for new and continuing students, visit **cscc.edu/advising**.

Columbus State Bookstore

Location:
Discovery Exchange (DX), 283 Cleveland Ave. (corner of Cleveland and Mt. Vernon)

Telephone: 614-287-2427

email: csbookstore@cscc.edu

Hours of Operation:

Monday – Thursday	9 a.m. – 6 p.m.
Friday	10 a.m. – 4:30 p.m.

Extended hours of operation are offered at the start of each semester

Online Store: **bookstore.cscc.edu**

Website: **cscc.edu/bookstore**

The Columbus State Bookstore is owned and operated by the college and dedicated to serving the campus community and supporting student success. The bookstore partners with CState faculty to ensure students have all required course materials available to them, including required uniforms for applicable areas of study. There is a robust selection of technology products, a wide variety of apparel, and an extensive school and art supplies section. There are COTA bus passes and a selection of snacks and drinks available to purchase in-store, convenient seating and study areas, and a Subway restaurant.

Career Services

Location:
Nestor Hall, rooms 108 & 113

Hours of Operation:

Monday – Thursday	8 a.m. - 5 p.m.
Friday	9:30 a.m. – 4:30 p.m.

Telephone: 614-287-2782

cscc.edu/career

Career Services offers a suite of programs and services to currently enrolled students, recent alumni, faculty, staff, and employers.

Delaware Campus students can make an appointment for career advising by visiting Student Services in Moeller Hall, or by calling 740-203-8345.

Services for Students:

- Major and Career Exploration
- Career Assessments and Counseling
- Career Success Plans
- Resume and Cover Letter Review
- Interview Coaching and Practice
- Labor Market Information Resources
- Career Development Workshops
- Job and Internship Search Strategies
- Job Postings (Full-time, Part-time, Internship)
- Career Fairs
- Mentorship Opportunities
- Career Conversations and Informational Interviewing
- Dress for Success Referrals

STUDENT EMPLOYMENT

Student Employment is another resource available to help currently enrolled students gain valuable work experience and relieve some of the cost of completing their degree. The type of employment varies according to the student's enrollment level at the college, and whether the student was awarded Federal Work Study as a portion of their Financial Aid.

Student Employment services include:

- Job Postings (on campus and with select community partners) cscc.edu/studentjobs
- Advising on Federal Work Study Eligibility
- Professional Development Opportunities

SERVICES FOR FACULTY & STAFF

- Classroom Presentations
- Student Organization Presentations
- Career Services Assistance for Campus Events
  - Career Services Information/Resource Tables
  - Resume Reviews or Mock Interviews for Campus Events
- Federal & College Work Study: Hiring manager support for job postings, selection/hiring, and managing students

SERVICES FOR EMPLOYERS & COMMUNITY

- Handshake Job and Internship Platform
- Career Fairs
- Recruitment Tables
- Community Work Study Partnerships
- Information Session

To access resources available through Career Services, visit Nestor Hall 108 during posted hours of operation, or call 614-287-2782. Current students can schedule appointments online through Handshake at cscc.joinhandshake.com.

Cashiers and Student Accounting

COLUMBUS CAMPUS

Location: Rhodes Hall, second floor

Hours of Operation:

Mon, Tues, & Thurs	8 a.m. - 5 p.m.
Wednesday	8 a.m. - 7 p.m.
Friday	9:30 a.m. - 4:30 p.m.

The office is closed Saturdays, but opens for extended hours during fee payment periods at the beginning of each semester.

Telephone: 614-287-5658

The Cashiers and Student Accounting operation handles the following:

- All tuition and fee payments
- Payment for replacement identification cards
- Approved tuition and financial aid refunds

Postage stamps can also be purchased here.

DELAWARE CAMPUS

Location: Moeller Hall

Hours of Operation:
Thursday 1 – 6 p.m.

Telephone: 614-287-5658

On the Delaware Campus, student accounting services, including IDs and inquiries, are provided at the Business Services office. The Delaware Campus is a cashless operation, payments by check and money order may be collected at the window during office hours or placed in the drop box (around the corner from the Business Services Office). Credit card payments should be made online using Self-Service.

Payments may also be made by **mail**, **by calling 614-287-5658**, or **online using** Self-Service, for the Columbus and Delaware campuses as well as for all regional learning centers and distance learning classes. The mailing address is: Columbus State Community College, P.O. Box 1609, Columbus, OH 43216-1609. Payments or paperwork that are mailed must be received, not postmarked, by the stated deadline.

Please note that a 2.25% service fee will be charged for credit/debit card payments.

COLLECTION OF PAST DUE BALANCES

In accordance with the Ohio Revised Code (O.R.C. §131.02), Columbus State Community College is required to certify unpaid balances to the State of Ohio, Office of the Attorney General, for collection. Students have forty-five (45) days from the date of invoice by the college to pay a past due account at the college before the account is referred for collection. At that point, the account will not be viewable on Self-Service. Once an account is referred for collection, the amount owed will increase due to collection, interest, and other related charges assessed by the Ohio Attorney General's Office or their assigned third-party collectors. Questions regarding an account in collection should initially be directed to the Office of the Ohio Attorney General at 1-888-301-8885.

If you owe a balance beyond the Fee Payment Deadline Date, a restriction may be placed on your account. If a restriction is placed, you will not be able to register for any classes until the balance is paid. Past fees due restrictions are reviewed and periodically ended for accounts that are paid in full. Students may request that their restriction be ended by contacting Cashiers and Student Accounting if their account is paid in full. The office recommends that students initiate this request when they need to register in advance of the college receiving payment in full from the Attorney General's Office, which may take up to 10 days for processing.

THIRD PARTY SPONSORS

Vouchers from a third-party sponsor who pays a student's fees must be received before the fee payment deadline to ensure that the college can process the payment by the stated deadline. Vouchers, payments or other paperwork should be submitted through the portal, **cscc.edu/academics/tuition-and-fees/third-party.shtml** or emailed to **acctsrecv@cscc.edu**.

Be sure that you have completely filled in your voucher, including signature and student ID number. Students need to be aware of their agency's requirements for class completion and grades. The student will be billed for any costs not paid by the sponsor, and any denied or unapproved sponsored charges will be returned to the student for payment. Students who fail to pay the fees not covered by your agency will be restricted from using Third Party funding and will be subject to the college's collection process.

Students who expect that their paperwork may not be received by the college on time should make other arrangements to pay their fees by the stated deadline and arrange for reimbursement from the sponsor.

Student Record and Program of Study Updates

cscc.edu/services/student-forms/change-of-information.shtml

To make sure a student's record is accurate and up to date, it is important for students to submit any updates to their personal and contact information, or program of study.

Address and telephone number updates can be submitted through Self-Service, by calling 614-287-5353, or in person at Student Central in Madison Hall (Columbus Campus) or Moeller Hall (Delaware Campus).

Each student is responsible for complying with any official communication sent to the last reported address.

Program of study updates can be made with an academic advisor, by calling the Telephone Information Center at 614-287-5353, in person at the student service areas listed above, or through the form on the following webpage: cscc.edu/services/student-forms/change-of-information.shtml.

Changes or corrections to name, date of birth, or Social Security Number require submission of a change of information form and any official documentation specified on webpage listed above. Students wanting to submit documentation in person can visit the student service areas listed above.

Counseling Services

Location: Nestor Hall, room 010

Hours of Operation:

Monday – Thursday	9 a.m. – 4 p.m.
Friday	10 a.m. – 3 p.m.

Students seeking Counseling Services should visit the website or call 614-287-2818. Counseling Services is located in Nestor Hall Room 010 (lower level). Walk-in appointments are not available.

PERSONAL COUNSELING

The Columbus State Counseling Center provides a safe and confidential environment where students can explore personal concerns in efforts to increase life balance as established through satisfying relationships, improving academic performance, setting personal goals, gaining self-awareness, and making effective and satisfying life choices. Our trained, licensed mental health professionals are able to provide you with help working through an array of mental health and substance abuse issues.

WORKSHOPS

Our Clinical Mental Health Professionals are available to faculty and staff to provide training to the Columbus State community. Some of our trainings include, but are not limited to:

- Time Management
- Stress Management
- Test Anxiety
- Student Behavior in the Classroom

Staff are available to provide a presentation on mental health related topics. Requests should be made by emailing counselingservices@cscc.edu.

CONSULTATION

Services for faculty and staff include consultation, in-class workshops on specific mental health topics, and information about community resources. All requests for consultation should be made via email to: counselingservices@cscc.edu.

Counseling services are available to students and are free. For more information, visit our website: cscc.edu/counseling or call 614-287-2818.

Accessibility Services

Location: Eibling Hall, room 101

Telephone: 614-287-2570

Email: disability@cscc.edu

Website: www.cscc.edu/disability

Hours of Operation:

Monday, Tuesday, Thursday	8 a.m. – 5 p.m.
Wednesday	8 a.m. – 7 p.m.
Friday	9 a.m. – 4:30 p.m.

Please refer to College Testing Services' website for Testing Center hours:
www.cscc.edu/services/testingcenter

Columbus State Community College offers a wide range of support services. Columbus State values diverse identities and experiences, and honors disability as an important aspect of human diversity. Through Accessibility Services, support services are made available to qualified students with a documented disability. Determination of eligibility for support services is based on disability documentation provided to

Accessibility Services, by the student, from appropriate medical, educational, and psychological sources. These support services include, but are not limited to, testing accommodations, production of print materials in alternate formats, note taker notebooks, captioning and ASL interpreting, and advocacy. Assistive technology software is also available on campus.

Accessibility Services partners with students, faculty, staff, and guests of the college to facilitate accessibility and reduce barriers on campus to improve access for disabled people through:

- Consulting on strategies to provide access and inclusion
- Determining and implementing reasonable academic accommodations

Partnering with campus offices to support meaningful physical and technological access.

Financial Aid Resources

Financial Aid Office

COLUMBUS CAMPUS

Location:
Student Central, Madison Hall, Upper Level

Telephone: 614-287-5353

DELAWARE CAMPUS

Location: Student Services, Moeller Hall

Telephone: 740-203-8345

FINANCIAL AID & SCHOLARSHIPS

The Financial Aid Department at Columbus State Community College handles administering student aid to help eligible students pay for college. Each year, thousands of dollars are left on the table because families do not complete the Free Application for Federal Student Aid (FAFSA). The FAFSA is useful as it helps to determine what type of aid a student can receive. We encourage all students to complete a FAFSA when the application becomes available to ensure you can maximize your aid opportunities. The new aid year FAFSA is scheduled to be available each year beginning October 1. It is quick and easy to apply. To complete your FAFSA, visit fafsa.gov to have your FAFSA results sent to Columbus State, enter our federal school code: 006867.

Once Columbus State receives your FAFSA, we will package aid based on your eligibility. If there are needed corrections, we will let you know via email of next steps. You can view and manage your aid items 24/7 from any computer by accessing your Columbus State Self-Service account, then select Financial Aid. An interactive checklist provides all the steps, in proper sequence, necessary to complete required items. Additionally, you can view, print, and accept and/or decline portions of your aid offer, such as student loans.

PRIMARY SOURCES OF FINANCIAL AID

There are various types of aid available to students. Primary sources of aid include:

Grants: Federal grants, such as Pell and SEOG, are awarded to students with the greatest financial need. The Pell Grant is an entitlement, so if you are eligible, your aid package will include Pell. SEOG is available to Pell eligible students who demonstrate the greatest financial need. Priority consideration for packaging SEOG is for students with a Student Aid Index (SAI) of $0 to $-1500. SEOG is a campus-based fund that is packaged on a first-come, first-serve basis, so complete your FAFSA as soon as you can.

Scholarships: Columbus State coordinates institutional scholarships in conjunction with the Columbus State Development Foundation. Scholarships are awarded based on a wide variety of criteria. Generally scholarships do not need to be repaid; however, under certain circumstances, repayment might be necessary. To view our current scholarship opportunities and application deadlines, please visit: cscc.edu/scholarships. You may also search for external scholarships to help pay for college.

Federal Work Study (FWS): FWS is a student employment aid opportunity for students who demonstrate financial need as determined by the FAFSA. Students must apply for available part-time opportunities which includes flexible job schedules, on and off campus, to help students pay direct or indirect educational costs.

Student Loans: Eligible students may receive subsidized and/or unsubsidized federal student loans. There is a limit to the amount you can borrow which is primarily based on your student level in college at Columbus State. You must be enrolled with at least six Title IV credit hours to receive federal student loans. Student loans must be repaid. For information on smart borrowing practices, please visit: Responsible Borrowing.

ELIGIBILITY REQUIREMENTS FOR FEDERAL STUDENT AID

Basic eligibility requirements to receive federal student aid at Columbus State include:

- Demonstrate financial need for need-based federal programs;
- Be a U.S. citizen or an eligible non-citizen;
- Have a valid Social Security Number (SSN);
- Be enrolled as a regular student in an eligible degree or certificate program and taking courses required for your eligible program;
- Provide consent and approval to have your federal tax information transferred directly into your FAFSA;
- Sign the FAFSA certification statement stating you are not in default on a federal student loan, you do not owe money on a federal student grant, and you will only use federal student aid for educational purposes;
- Show you are qualified to obtain a college or career school education which includes having a High School Diploma (HSD) or General Educational Development (GED); and,
- Maintain Satisfactory Academic Progress (SAP). To view the Columbus State SAP policy, please visit: cscc.edu/financialaid and select "Maintaining Financial Aid Eligibility."

FINANCIAL AID DISBURSEMENTS

Columbus State processes eligible aid disbursements toward tuition and fees beginning 10 days before the start of each semester. Excess funds are processed five weeks from the start of the payment period after class participation is confirmed. The status of your financial aid payments can be viewed on Student Finance within your Columbus State Self-Service account.

Special notes about federal student loans:

First-time borrowers must complete Loan Entrance Counseling at studentaid.gov. Additionally, first-time borrowers (or if it has been over 10 years) must complete a Master Promissory Note (MPN). Notification of this requirement will be listed on Financial Aid Self-Service in your Columbus State Self-Service Account. For more information on disbursements, using your excess financial aid at the Columbus State Bookstore, signing up for Direct Deposit, and more, please visit: cscc.edu/ academics/tuition-and-fees/disbursement.shtml.

FREEZE DATES

Columbus State uses a freeze date each term to determine a student's enrollment status for disbursing financial aid. The number of credit hours in which you are enrolled on the freeze date is used to calculate the amount of financial aid you will receive. This means that if you add or drop classes before the freeze date, the amount of financial aid you are eligible for will be affected. If classes are added or dropped after the freeze date, the financial aid package will not change except in some circumstances that we may have to update based on federal regulations. For example, if you drop below half-time, you will no longer have eligibility for federal student loan disbursements within that payment period.

RETURN OF TITLE IV FUNDS POLICY

Financial aid students who completely withdraw or are reported by faculty as not attending or participating in all classes during a given semester may be subject to having to return a part or all aid received back to the U.S. Department of Education because of the Return to Title IV (R2TIV) process. Certain funding from the State of Ohio may also need to be returned. The policy says a student must attend/participate in classes through the 60 percent point of the semester to earn all federal student aid. Students who receive financial aid over and above the cost of tuition and fees (i.e., a cash (check) disbursement) and withdraw from classes during the refund period may have to return all or part of the cash disbursement. For more information on this policy, please see "Maintaining Financial Aid Eligibility (SAP)" at cscc.edu/financialaid and view the menu item 'Consequences Of Withdrawing From All Classes'

VERIFICATION

If your FAFSA is selected for the verification process, you must submit additional documentation to confirm the information provided on your application. To help you expedite this process, electronic forms are available to complete. Once you have completed all required steps, we will make necessary updates to your FAFSA and provide you with a financial aid package. Please remember that you can track your financial aid process through Financial Aid Financial Aid Self-Service.

NEED HELP IN COMPLETING THE FAFSA OR HAVE QUESTIONS?

Columbus State offers a variety of short financial aid videos that answers various question about the financial aid process. For more information, visit our video library at: cscc.financialaidtv.com.

If you would like to speak with a representative, or visit in person, our Student Central Financial Aid Advising team is available to assist you.

IT Support Services

Phone: 614-287-5050

Email: helpdesk@cscc.edu

Website: cscc.edu/ithelp

The IT Support Center provides technology resources and support for students, faculty, and staff. To report an issue or get personalized assistance, you can call, email, submit an online request, or stop by for in-person support.

PHONE SUPPORT

Call 614-287-5050 for technical support.

Hours of Operation:

Monday – Friday	7:30 a.m. – 10 p.m.
Saturday	9 a.m. – 6 p.m.
Sunday	1 p.m. – 9 p.m.

IN-PERSON SUPPORT

Stop by one of our campus locations for in-person support.

COLUMBUS CAMPUS

Location:
Cyber Café (TL Lobby) and/or Computer Commons Lab (TL 116) in the Center for Technology and Learning (TL)

Hours of Operation:

Monday – Friday	7 a.m. – 10 p.m
Saturday	8 a.m. – 9 p.m.
Sunday	9 a.m. – 6 p.m.

Break hours:

Monday – Friday	8 a.m. – 6 p.m.

DELAWARE CAMPUS

Location:
Learning Center in Moeller Hall

Hours of Operation:

Monday – Thursday	7 a.m. – 8 p.m
Friday- Saturday	8 a.m. – 1 p.m.

Hours may vary during breaks and campus closures.

To access online resources and learn more about our services, check out our website at cscc.edu/ithelp.

Library and Delaware Learning Center

The Library (Columbus Hall) connects the Columbus State community to quality services and resources that support teaching, learning, and student success. Reference and instruction librarians are available to help students with their research and information needs. In addition to face-to-face research help, students have the option to "Book a Librarian" for web meetings, use the "Ask the Library!" chat service, call, or email. Librarians also teach on-site or virtual library instruction, often customized to the needs of the assignment, and in-person or virtual workshops.

Through the library website, library.cscc.edu, students can access diverse online resources, including research databases, eBooks, streaming media, library research guides, YouTube tutorials, and handouts on popular topics, such as APA and MLA citations. Students can also book a study room or a recording session in one of the Library's whisper rooms. While visiting the Library, students can stop by the Circulation Desk (1st floor) to check out materials, including graphing calculators, textbooks on course reserve, anatomy models, and laptops for in-library use. All they need is a photo ID or their Cougar ID. They can also visit the Multimedia Support Center for help on multimedia projects, such as PowerPoints, audio recordings, and scanning. The Media Studio often hosts fun events, stress relief and coffee breaks, and club meetings.

Students can find reference and research assistance (2nd floor) and learn how to locate quality research materials, create citations, and navigate the catalog or numerous research databases, many with full-text articles from journals, magazines, and newspapers. Librarians from both campuses and the Dublin regional learning center can show students how to request items through OhioLINK, a consortium of college and university libraries throughout Ohio that provides access to over 38 million books and other library materials. The 3rd floor houses the Library's physical book, magazine, audiovisual, and legal reference collections, and the library's instruction lab. Throughout the building, students will find helpful staff, many computer stations, vibrant displays, and various areas for quiet study, group work, relaxation, or reading a popular book.

DELAWARE CAMPUS LEARNING CENTER

The Learning Center (Moeller Hall) is a unique area where the library, IT frontliners, and tutoring services are collocated. Throughout this space, students will

find a variety of zones including campus computers, quiet study space, monthly library displays, comfy chairs for pleasure reading or studying, and friendly staff to help them with their needs. Librarians are available to help students conduct research for their class assignments and use electronic materials. The Learning Center has reference and circulating collections and course reserves. Students can check out graphing and basic calculators with an active Cougar ID. Librarians also teach on-site or virtual library instruction, often customized to the needs of the assignment, and in-person or virtual workshops.

Through a partnership between the Columbus State Library and Delaware County District Library (DCDL) students can sign up for a DCDL library card and check out and request DCDL materials at the Learning Center.

For more information about library services on the Delaware Campus: 740-203-8183.

Military and Veteran Services

VETERANS RESOURCE CENTER

Location:
Union Hall, Room 056

Hours:

Monday - Thursday	8 a.m. – 5 p.m.
Friday	10 a.m. – 4:30p.m.

Phone: 614-287-2644

Toll Free: 1-800-621-6407

email: militaryveteransservices@cscc.edu

The Columbus State Community College Military & Veterans Services Department is committed to providing our student veterans and family members receiving VA Education Benefits with the guidance needed for you to successfully complete your education here at Columbus State. It is our mission to facilitate the transition of veterans and their families from military to college life.

Our department serves more than 700 student veterans and their families receiving educational benefits through various GI Bill® programs and other military tuition assistance programs. Columbus State offers a variety of associate degree and certificate programs that prepare students for the next level of academic achievement and/or career attainment. Military and Veteran Services supports student veterans in achieving academic goals so they can move easily and effectively into the competitive workforce.

In compliance with Ohio Revised Code §3345.422, and in support of our student veterans and military service members, Columbus State Community College will open a Priority Registration Period for student veterans and military service members beginning one week prior to the opening of registration to the general student population. During the priority registration timeframe, veterans and currently serving military service members may register for classes. We would recommend that veterans and currently serving military service members register as soon as possible so that any issues encountered can be brought to the attention of campus staff.

Columbus State Community College will not impose any penalty, including the assessment of late fees, denial of access to classes, libraries, or other institutional facilities, or the requirement that a **Chapter 31** or **Chapter 33** recipient borrow additional funds to cover the individual's inability to meet their financial obligations to the institution due to the delayed disbursement of a payment by the U.S. Department of Veterans Affairs.

A covered individual is any individual who is entitled to educational assistance under Chapter 31, Vocational Rehabilitation, or Chapter 33, Post 9/11 GI Bill® benefits. Additionally, this requirement is limited to the portion of funds paid by the U.S. Department of Veterans Affairs.

NOTE: A covered individual may attend or participate in the course of education during the period beginning on the date on which the individual provides to the educational institution a Certificate of Eligibility for entitlement to educational assistance under **Chapter 31** or **Chapter 33** and ending on the earlier of the following dates:

- The date on which payment from the U.S. Department of Veterans Affairs is made to the institution.
- 90 days after the date the institution certified tuition and fees following the receipt of the Certificate of Eligibility

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government Web site at www.benefits.va.gov/gibill.

MILITARY SCIENCE (ROTC)

Columbus State Community College students interested in obtaining a commission as an officer in the United States Army may enroll in Reserve Officers' Training Corps (ROTC) classes through a cooperative agreement with Capital University's Army ROTC program.

Army ROTC focuses on leadership development problem solving, strategic planning and professional ethics. Army ROTC offers many scholarships to both current high school students and students currently enrolled in college. Minimum qualifications include a 2.5 GPA, 19 ACT or 1000 SAT score and meeting program requirements.

The Army ROTC scholarship may provide up to:

- Full tuition and fees
- $1,200 per year for books
- $420 per month for living expenses

To learn more about ROTC, to make an appointment, or if you have any questions about the program please use the following contact information below:

Department of Military Science and Leadership
Capital University Army ROTC
1 College Avenue
Bexley, OH 43209

Telephone: 614-236-6808

E-mail: joinrotc@capital.edu

Visit the Capital University Army ROTC website at: **www.capital.edu/academics/majors-and-minors/rotc/**

Columbus State Police Department

COLUMBUS CAMPUS

Location: Delaware Hall 047

Telephone: 614-287-2525
Toll-Free: 1-800-433-3804
Emergencies: Dial 911

Available: 24 hours a day, 7 days a week

POLICE DEPARTMENT AND ADMINISTRATIVE SERVICES

Layers of security blanketing the Columbus Campus include Columbus police officers and the Discovery Special Improvement District patrol units. The latter patrol units are the result of the college's participation in a unique Discovery District neighborhood security partnership.

POLICE DEPARTMENT STAFFING

The College's Police Department is staffed by Columbus State Police Officers, Communications Technicians, and Administrative Personnel.

POLICE UNIT

The uniformed police unit is the largest unit in the police department. This section consists of uniformed State of Ohio-certified police officers and patrol vehicles. The officers provide response to emergency calls, regular patrol, traffic enforcement, accident investigation, crime reporting, and investigation of crimes within the boundaries of Columbus State Community College.

In addition to heavily emphasized foot patrol, the police unit utilizes both motor vehicles and bicycles to actively patrol the campus. The police department operates on a 24-hour basis with officers assigned to geographic zones, called districts, in which they are responsible for calls for service and patrol. All officers are expected to work collaboratively with members of the campus community, as well as with local, state, and federal law enforcement agencies.

Columbus State police officers are trained as Crisis Intervention Team (CIT) officers and receive 40 hours of training in the area of mental health response from the Columbus Police Department's Crisis Intervention Team and NetCare Services. The team primarily assists in situations where a person is suffering from a personal crisis and is in need of rapid, on-scene assistance. Should a major crime occur on campus, it may

be investigated by the Columbus Police Department or other law enforcement agency, with the assistance of the Columbus State Police.

COMMUNICATIONS UNIT

The communications unit is staffed by non-sworn members of the police department. Some of the duties performed by the communications section include, but are not limited to:

1. Central monitoring of campus alarm systems
2. Customer service
3. Answering telephone calls for service
4. Dispatching appropriate resources
5. Vehicle registration checks
6. Operator license checks
7. Wanted persons checks through the Law Enforcement Automated Data System (LEADS).

Members of the communications unit receive advanced training for emergency dispatching through the Association of Public Safety Communications Officials (APCO) and other related courses throughout the year.

ADMINISTRATIVE UNIT

The administrative personnel handle a myriad of functions. The administrative unit consists of the four specialty areas:

1. Environmental Health and Safety
2. Accreditation and Compliance
3. Emergency Management
4. Administrative Support

CAMPUS HOURS

Columbus Campus general hours:

Monday – Friday	7 a.m. – 11 p.m.

There are varying class hours on weekends and some holidays. **Buildings generally close at 6 p.m. on weekends** except for special events. Classes may be delayed or canceled, so check the college website, your Columbus State student e-mail, and local media for changes due to weather or emergencies. In addition, Rave text alerts will also be sent to students and employees who have registered their cell phones.

Delaware Campus normal operating hours:

Monday –Thursday	7 a.m. – 10 p.m.
Friday	7 a.m. – 4:30 p.m.
Saturday	7 a.m. – Noon
Sunday	Closed

The Delaware Campus is supported by Columbus State Police Department personnel during the hours of operation.

STUDENT HOUSING

Columbus State is a nonresidential college.

CLERY ANNUAL SECURITY REPORT

The Annual Security Report (ASR) is assigned to the Police Department but is completed in collaboration with college Clery compliance stakeholders. The Columbus State Police Department is responsible for preparing and distributing the final report to the Columbus State college community. We encourage our college community to use this report as a guide for safe practices on and off college property.

Clery crime statistics, annual security report, crime alerts, crime logs, and emergency information, are available online at cscc.edu/police. However, if you prefer a printed copy of the annual security report, you may obtain one at the Police Department located on the Columbus Campus in Delaware Hall, Room 047, or on the Delaware Campus, in the Administration Building.

CLERY TIMELY CRIME WARNING

To promote safety and prevent additional crimes, the police department will issue a timely warning of crimes that represent a serious and continuing danger to the campus community. These crimes are outlined by the Jeanne Clery Act and include: 1) murder, 2) negligent manslaughter, 3) non-negligent manslaughter 4) forcible rape, 5) forcible sodomy, 6) sexual assault, 7) forcible fondling-with an object, 8) incest, 9) non-forcible statutory rape, 10) domestic violence, 11) dating violence, 12) stalking, 13) robbery, 14) aggravated assault, 15) burglary, 16) motor vehicle theft, 17) arson, and 18) hate crimes.

Issuing timely warnings is decided by the police department on a case-by-case basis after considering all the facts surrounding the crime. Some of these considerations include: 1) nature of the crime, 2) continuing danger to the campus community, 3) Clery criteria, and 4) possible risk of compromising a law enforcement investigation. Once the known facts are assessed, a timely warning may be issued through email, texts, media, or other appropriate message systems. The RAVE emergency notification system is the primary mode for alerts for the Columbus Campus, Delaware Campus, and all Regional Learning Centers.

EMERGENCY NOTIFICATION

The purpose of an emergency notification is to warn the campus community about a significant critical incident that represents a sustained and impending threat to life or property to the campus community. The police department's administration, communication technicians, Emergency Preparedness Coordinator,

college president, senior vice president of administration, and general counsel, are authorized to initiate emergency notifications without an unreasonable delay so the campus can take immediate precautions. Emergency notifications can be issued through the public address (PA) systems, e-mail, media, and the Rave emergency notification system.

RAVE GUARDIAN

Columbus State students, faculty and staff are automatically enrolled in RAVE text alerts by the College IT Department. Once you log in using your Columbus State login and password you can update your profile to receive Columbus State emergency messages and other important information impacting college operations through text message and email. Once registered, you can opt out of text messages at any time by texting STOP to 67283 or 22678. Rave does not charge subscribers to send or receive text messages, but standard messaging charges may apply depending upon your wireless carrier.

In addition, a cell phone app called Rave Guardian is available by searching in the Apple or Android app store under "Rave Mobile Guardian." This application allows a crime tip or information about suspicious activity to be sent to the police department through a text message.

For more information on receiving Rave text alerts and Rave Guardian **cscc.edu/rave**. You may contact our Emergency Management Coordinator, at 614-287-2525.

REPORTING A CRIME, ACCIDENT, FIRE, OR EMERGENCY

If an emergency exists, immediately call 911, then the police department at 614-287-2525.

Criminal acts, accidents, medical emergencies, suspicious behaviors, or other emergencies must be reported to the police department. You can call the Columbus State Police Department at 614-287-2525, visit in person on the Columbus Campus at Delaware Hall, Room 047, use an emergency phone, or contact the local police by calling 911. When calling the police, please be prepared to give the communications center the following information:

- The nature of the emergency: fire, personal injury, illness, etc.
- Your name and phone number.
- Exact location of the emergency.
- Description of suspicious activity or emergency.

SAFETY AND SECURITY SYSTEMS

Security cameras operate in a limited number of public spaces for the potential preservation of criminal evidence in the event of a crime. These camera systems are not routinely monitored. The Police, Information Technology, and Facility Management departments are responsible for the operation, maintenance and support of safety, fire, and security systems.

FIRE SAFETY, MONITORING, AND SUPPRESSION

Columbus State, a non-residential college, has had **no loss of life and no major building structure fires**. Designated employees receive annual fire prevention training through the college, including the proper use of a fire extinguisher. Columbus State's Police Department conducts monthly fire drills in designated areas, in accordance with the Ohio Revised Code. The college's **fire suppression and alarms systems are monitored 24 hours a day, 7 days a week** by a third party vendor and by the Columbus State Police Department Communications Center. These systems are designed to prevent or lessen the potential loss of life and property, and to quicken the response of the fire department and first responders.

EMERGENCY MANAGEMENT INFORMATION

During an emergency, each of us must take responsibility for our own safety and assist those around us, especially helping people with disabilities. For more information, go to the Columbus State Police Department website located at: **cscc.edu/police**.

The police department emergency preparedness coordinator maintains the College Emergency Action Plan (CEAP) and assists other departments with emergency response guidelines and annual drills. The college emergency action plan can be found at: **cscc.edu/services/police/pdf/emergency-action-plan.pdf**.

EMERGENCY EVACUATION OF PEOPLE WITH DISABILITIES

People with disabilities capable of exiting a building by using the stairs should familiarize themselves with at least two (2) exits from any classroom, building, or facility on campus. Evacuation maps indicating exits are clearly posted in campus buildings. Stairwells are the point of rescue for people with disabilities. They will be assisted in evacuating the building by emergency responders.

At the first indication of a building evacuation, people with disabilities should go to the stairways, and emergency responders will assist with evacuations. DO

NOT enter the elevators during an emergency unless assisted by uniformed officers.

Faculty should note the presence of students with disabilities and discuss evacuation procedures:

- During power outages, buildings have evacuation exit lighting with limited backup batteries.
- Be alert for the possibility of fire, smoke, explosions, or other threats. If detected, pull the fire alarm and evacuate the building.
- Exit immediately to the nearest emergency fire exit. If inaccessible, use an alternate emergency exit. If assistance is needed you should proceed to the nearest stairwell and wait for emergency responders to assist you. DO NOT use the elevators unless assisted by emergency responders.
- Notify police personnel of anyone who is unable to evacuate.
- Evacuate a distance of 500 feet away from the building which allows others to exit quickly and provides access for emergency equipment and personnel. Take personal items such as keys, bags, cell phone, and medications with you. DO NOT re-enter the building unless directed to do so by emergency responders. Classes may be delayed or canceled so check the college website, e-mail, social media and local media for information.

CRIME PREVENTION TIPS

It is everyone's responsibility to maintain control over their book bags, books, laptops, electronics, and other personal property during leisure and meal times, and in the classroom. Do your part to ensure your college experience is a safe and rewarding venture. Items to consider:

- Take a moment to determine what you actually need throughout the day and limit what you bring to campus.
- If you need to leave an item with someone, make sure you know and trust the person with your property.
- Please record all serial numbers and photograph your belongings to make identification easier if it is stolen.
- To keep yourself and your property safe, always be aware of your surroundings.
- Always feel free to contact the police department at 614-287-2525 if you have any safety concerns.
- Secure valuables in your vehicle's trunk so they can't be seen by others.
- For more crime prevention tips view our informational videos at: **cscc.edu/services/police/safety-tips.shtml**.
- Like and follow the Columbus State Police Department on Facebook and Twitter.
- For crime prevention presentations, contact Tracy Anderson, Lieutenant of Police at 614-287-2166.

IF YOU ARE THE VICTIM OF A CRIME

Crime victims are provided certain rights detailed in the **Ohio Constitution Article I, Section 10(a) and Chapter 2930** of the Ohio Revised Code, often called "Marsy's Law" or the Ohio Crime Victims' Bill of Rights.

If you have become the victim of a crime on campus or in a campus-controlled facility, please take the following steps:

- Immediately report the crime to the police department at 614-287-2525 (or the local police agency). If possible, don't leave the area until you have spoken with a police officer about the incident. Leaving consumes valuable investigative time. Your safety is the primary concern so if you feel safer leaving the area, do so and call the police as soon as you can.
- Try to get a description of the suspect, noting gender, race, and clothing.
- If the suspect enters a vehicle, get a description of the vehicle, license plate number, and direction of travel.
- Preserve evidence; do not touch or move anything. In case of a sexual assault, do not launder clothing or take a shower. There may be valuable transfer evidence on your clothing or body.
- For more crime information on crime victims right and services view information at **cscc.edu/services/police/crime-victims.shtml.**

EMERGENCY PHONE LOCATIONS

Emergency phones are strategically located in buildings, elevators, and interior corridors. These emergency phones are connected into the college 911 system and notify our Police Department Communications Center of the location of the activated phone.

MISSING PERSONS

In the event a person should become missing from campus, the police department should be notified immediately. A police officer will respond, gather information, and relay it to other police personnel. An on-campus search for the missing person will begin and the local police agency will be notified for assistance. If there is reason to believe the missing person

was last seen off campus, the case will be referred to the jurisdictional police agency and the missing person's family will be advised to contact that agency as well. The Columbus State Police Department will assist the investigating agency as requested by the agency.

NOTIFICATION ABOUT SEX OFFENDERS

Ohio's Electronic Sex Offender Registration and Notification system is known as **eSORN**. Please find this database at the Ohio Attorney General's website.

MOU DISCLOSURE FOR CRIMINAL INVESTIGATION

The Columbus Division of Police, the Delaware County Sheriff's Office, the Ohio State Highway Patrol, the Ohio Bureau of Criminal Identification and Investigation (BCI), the Federal Bureau of Investigation (FBI), or other appropriate agencies will assist our police with selected investigations, such as sexual assaults, homicides, arson related offenses, missing persons, or other offenses that would require specialized equipment or training to properly investigate.

The Columbus State Community College, The Ohio State University, and the Delaware County Sheriff's Office have signed agreements that permit mutual assistance and use of their respective resources, including personnel and equipment in situations where one department needs and requests the assistance of the other.

The Columbus State Community College, the Ohio-Health Sexual Assault Response Network of Central Ohio (SARNCO), the Franklin County Prosecutor's Office Victim's Assistance Unit and the Columbus Division of Police have signed an agreement to build and strengthen relationships necessary to support a successful strategy to prevent and respond to sexual assaults and other crimes of violence. It reflects a collective understanding that all parties are necessary partners in the creation of comprehensive and effective prevention planning and response to allegations of sexual violence on college campuses. This MOU served as a pilot project for the State of Ohio.

COLLEGE SAFETY COUNCIL

In July 2012, the Columbus State Community College created the College Safety Council to elevate the importance of campus safety at Columbus State. The Safety Council is represented from Departments across the College. Some of these departments include:

Police Department: Sean Asbury, Chief of Police (Co-Chair)

Automotive: David Foor, Faculty (Co-Chair)

Veterinary Technology: Carla Mayer-Bletsch, Faculty

Enrollment Services Operations: Doreece Dandridge, Assistant Director

Biological/Physical Sciences: Naava Schottenstein, Faculty

CSEA Labor Union: Jack McCoy, Faculty

Delaware Campus: Lucas Gorz, Administrative Assistant

Human Resources: Erica Russell-Averette, Business Partner

Information Technology: Ben Dalton, Director

Legal Office: Ian King, Associate Counsel

Legal Office: Nate Faubel-Ravely, Paralegal

Police Department: VACANT, Director of Health and Safety

Facilities Management: Uriah Coleman, Facilities Supervisor

Delaware Campus and Regional Learning Centers: Tim Davis, Supervisor

Staff Advisory Council: Kienee Aloysius, Staff

Records and Registration: Jessica Tomasek, Program Coordinator

Police Department: Renée Hill, Senior Accreditation and Compliance Officer

Columbus State Student: VACANT

Student Conduct: Richard Kane, Director

Police Department: VACANT, Emergency Management Coordinator

The Council is committed to creating a safe, secure learning and work environment by:

- Understanding the college's safety programs, and each person's responsibility as a member of the college community to advance a safe and secure environment;
- Identifying issues of key concern;
- Providing feedback on programs, policies and procedures related to college safety, including emergency preparedness, crime prevention, education and training, safe and secure computing environment, and communication;
- Serving as a key communicator about college safety within the college community

Campus safety information can be forwarded to the Safety Council by contacting any of the appointed

representatives or emailing the safety council at: safetycouncil@cscc.edu.

CHILDREN ON CAMPUS

Columbus State Community College Policy 13-11(c) governs children on campus and states:

- Children 14 years of age and under must be accompanied and attended by an adult while on the campus unless enrolled or seeking enrollment in a Columbus State Community College program per Ohio Department of Education regulations. Children are not to be taken into classrooms unless authorized by the instructor. This policy applies to the Columbus Campus, Delaware Campus, and all Regional Learning Centers.
- Additional guidance includes children not being left unattended in automobiles. Adults who bring children to campus must control their actions and may be asked to remove them from the campus if they create a disturbance or otherwise impact the college's operations. Children are not to be taken to classrooms, laboratories, or clinical sessions unless they are to take part in the educational program. Children cannot be left unattended while parents are in class, in hallways, computer labs, vehicles, the testing center, or other areas on campus. If children are left alone, parents will be contacted in class and asked to remove their children from campus.

ANIMALS ON CAMPUS

Columbus State Community College Policy 13-03 governs animals on campus. Non-service animals are permitted on campus with the approval of the attending veterinarian in the Veterinary Technology Department. Therefore, to bring non-service animals on campus, a Miscellaneous Animals on Campus form must be completed and can be found online at: cscc.edu/police/forms. Return the completed form and documentation to the Veterinary Technology Department, VT Room 201, at least three (3) weeks prior to the date you want to bring the animal on campus. If approved to bring a non-service animal on campus, the owner/handler must have the form with them whenever on campus.

LOST AND FOUND ITEMS

In accordance with Columbus State Community College Procedure No. 13-11 (E), the collection and disposal of lost and found items of value is the responsibility of the police department. An item of value is defined as any item with an estimated value of $100 or more, including driver's licenses, personal identification documents, laptops, cell phones, electronics, checkbooks, credit cards, and cash. These items will be placed in the secured cabinet for safe keeping. Other accepted items including backpacks containing valuables, prescription medications, textbooks, and other items deemed appropriate by a supervisor, may be stored as well. For sanitary reasons, **clothing items, food, and drinks** are not accepted into Lost and Found. Property at the Delaware Campus will remain there for approximately sixty (60) days and will then be brought to the Columbus Campus. The property will be delivered to the communication center and added to the lost and found inventory and will be retained in accordance with the Ohio Revised Code and departmental procedures. Property not claimed within ninety (90) days will be disposed of in accordance with the Ohio Revised Code and departmental procedures. A current list of lost and found items can be found on the Police Department website: cscc.edu/services/police/lost-and-found.shtml.

CLAIMING LOST PROPERTY

Columbus Campus: This property can be claimed in the Police Department, Delaware Hall, room 047 during normal campus open hours.

Delaware Campus: This property can be claimed in the police department located in the Administration Building, room 133 Monday – Friday, 7 a.m. to 4 p.m. Property not claimed within sixty (60) days will be transferred to the Police Department property room located on the Columbus Campus and disposed of through the court system.

To claim property, a Cougar ID, driver's license, or government issued ID must be presented to verify the identity of the owner.

STUDENT FINGERPRINTING

All student fingerprinting is facilitated through College program areas.

CRISIS INTERVENTION TEAM (CIT)

Columbus State police officers and security specialists are trained as Crisis Intervention Team (CIT) officers and receive forty (40) hours of training in the area of mental health response from the Columbus Police Department's Crisis Intervention Team and Net Care Services. The team primarily assists in situations where a person is suffering from a personal crisis and is in need of rapid, on-scene assistance. Should a major crime occur on campus, it may be investigated by the Columbus Police Department or other law enforcement agency, with the assistance of the Columbus State Police Department.

THREAT ASSESSMENT AND BEHAVIORAL INTERVENTION TEAMS

The Columbus State Threat Assessment and Behavioral Intervention Teams are multi-disciplinary assessment teams that responds to severely disruptive, threatening, or distressed students on campus. The primary goal of these teams are to monitor and assess student behavior to determine whether a student poses a serious risk of harm to themselves or the campus community. The team is comprised of representatives from Student Life, Student Conduct, Counseling Services, Accessibility Services, Compliance Office, and the Police Department. If you experience any concerning student behavior, please contact Student Conduct at 614-287-2117. If it is an emergency and you need help immediately, call 911 and then the Columbus State Police, at 614-287-2525.

Reserve Officers Training Corps (ROTC)

Qualified students interested in obtaining an officer's commission in the United States Military: Active Duty, National Guard, or the Reserves may enroll in ROTC classes through the respective ROTC programs at our partners at The Ohio State University. Their respective websites are as follows:

nrotc.osu.edu

afrotc.osu.edu

arotc.osu.edu

In addition, our partners at Capital University offer Army ROTC. Their website is **www.capital.edu/rotc.**

Freshman and sophomore students may enroll in the four-year program consisting of the two-year general military course and the two-year professional officer course. There is no military obligation for students in the first two years of the program.

Students with a minimum 2.50 cumulative grade point average may apply for ROTC scholarships. Applications for scholarships are normally made during the fall term and must be completed by January 30. Additional information may be obtained through the websites listed above.

Students may register for ROTC classes through the Higher Education Council of Columbus Cross-Registration Program (HECC). Information about the HECC program is available at: **cscc.edu/services/student-forms/hecc.shtml.**

Student Central

Location:
Madison Hall, Upper Level
Columbus Campus

Phone: 614-287-5353

cscc.edu/studentcentral

Students may visit this one location for all of the following:

- Course registration assistance.
- Student record updates and related issues.
- Financial Aid information, help with FAFSA, and submission of documents. More information about financial aid can be found in the Financial Aid Resources section.
- Ohio residency information and assistance with application submission. More information about residency can be found in the Tuition and Fees section.
- Assistance with **Self-Service** and the other online tools regarding the business of being a Columbus State student.
- General student service guidance and direction.
- Workshops for new and returning students.
- ID cards for students and employees.

Student Email

Columbus State Community College offers a free email account to each currently enrolled student. Student Mail is accessible at the website **www.outlook.com/student.cscc.edu**.

Currently enrolled, first-semester students will receive notification of their account and instructions. Information and instruction booklets are available at the IT Support Center and at the Student Mail website.

The email user name and password also can be used to access **Blackboard** courses and to log in to campus labs.

Students can receive walk-up support with college-owned applications and computers in the Cyber Cafe, TL building (for hours, see the IT Support Services section.)

The IT Support Center can be reached at 614-287-5050. On the Delaware Campus, students with questions concerning email or student email accounts can inquire at the Learning Center in Moeller Hall.

Student ID Cards

ID cards are made in Student Central in the lower-level of Madison Hall. To obtain a student ID card, student fees must be paid in full, and the student must have a driver's license or other government issued photo ID card with them at the time that they are requesting their Cougar ID card be created. Replacement ID cards are $4 and can be paid for in the Cashiers and Student Accounting Office in Rhodes Hall, upper level. Students must have their receipt to request a replacement. .Please check cscc.edu/services/cougar-id-cards for current hours, as they vary based on the time in semester

Telephone Information Center

Phone: 614-287-5353

Hours of Operation:

Mon., Tues., Thurs.	8 a.m. – 5 p.m.
Wednesday	8 a.m. – 7 p.m.
Friday	9:30 a.m. – 4:30 p.m.
Last Sat. of Month	9:00 a.m. – noon

(Extended TIC hours two weeks prior to semester start and during first week.)

Telephone Information Center (TIC) representatives assist callers with services and questions related to many campus departments such as Admissions, Advising, Bookstore, Cashiers and Student Accounting, Enrollment Services, and Financial Aid.

They also can provide callers with general information about the college and specific information for contacting academic program offices, faculty, staff, and department offices at Columbus State. The TIC also houses the main college switchboard. When you need information about the college, the TIC is the place to call.

College Testing Services

Academic Testing Centers

Columbus Campus:
Phone: 614-287-2478
cscc.edu/testingcenter

Delaware Campus:
Phone: 740-203-8390
cscc.edu/delaware

Dublin Regional Learning Center:
Phone: 614-287-7062
cscc.edu/dublin

The mission of Columbus State Testing Centers is to meet the testing needs of the campus community. The Testing Center provides a facility in which tests can be administered accurately and securely according to instructor and department guidelines. The center offers distance learning testing, departmentalized testing, and classroom make-ups. The Testing Center maintains a partnership among learners, faculty, the community, and the center's staff.

Tests may be taken anytime between the opening and closing times of the Testing Centers. Tests will not be administered two hours prior to closing; all exams must be finished by closing time and all tests are collected at closing. An extension of testing time is not provided; therefore, participants should plan sufficient time for taking tests.

In an effort to provide a distraction-free testing environment, children, food, beverages and cell phones are not permitted in the Testing Centers. A picture ID and Student ID are required to take a test at any of the locations.

The **Columbus Campus Testing Center** is located in the Center for Workforce Development Building, 2nd Floor, Room 223

The **Delaware Campus Testing Center** is located on the main floor of Moeller Hall, Room 157.

The **Dublin Testing Center** is located in Room 311 of the Dublin Regional Learning Center.

Visit **cscc.edu/testingcenter** for more information and for hours of operation.

The Columbus Promise

cscc.edu/go/columbus-promise/

What has Columbus promised the 2022, 2023, and 2024 graduates of Columbus City Schools? If you promise to work hard, graduate from high school, and complete the FAFSA, we promise you can complete six semesters of college at Columbus State for free. And because we know there's more to affording college than tuition, we'll give you $500 per semester to help you pay for books, technology, or other life expenses.

The Columbus Promise is a joint initiative of the City of Columbus, Columbus City Schools, I Know I Can, and Columbus State Community College to boost college-going, student success, and social mobility for area students. We believe that without the worry of paying for tuition, and with your own dedicated advisor to help you access academic advising, career counseling, social and wellness opportunities, and essential support services, you can thrive in college and succeed in a well-paying, in-demand career of your choice.

Columbus Promise Advising Hours:

Mon., Tues., Thurs.	8 a.m. – 5 p.m.
Wednesday	8 a.m. – 7 p.m.
Friday	8 a.m. – 4:30 p.m. (virtual)
Last Sat. of Month	9 a.m. – Noon (virtual)

All in-person advising appointments and drop-ins will be in Advising Central, located in Aquinas Hall, Room 116.

Compliance Office (Discrimination/ Harassment Policies & Title IX), Student Conduct, and Campus Security Information.

Student Rights and Responsibilities

STUDENT CONDUCT

The aim of Columbus State Community College student conduct policies and procedures is to educate students on their rights and responsibilities as college community members and to promote a college environment that is conducive to student success. Students are expected to perform all work honestly, maintain prescribed academic standards, pay all debts to the college, and respect the property and rights of others. This includes any activity, on- or off-campus, that negatively impacts the college or its students or staff.

Any student violating Columbus State Community College policies or rules may be subject to sanctions under the Student Code of Conduct, up to and including expulsion from the college. Concerns involving allegations or violations of student civil rights by employees are addressed by Human Resources.

In technologies that include internship employment or clinical experiences, good standing with the cooperating employer or clinical affiliate is expected and is essential to continuation in the program. A copy of the Student Code of Conduct and related procedures is published in the Student Handbook and available on the college website. For more information, contact the Dean of Student Life Office, Eibling Hall, room 201, 614-287-5299 or the Office of Student Conduct at 614-287-2815.

STUDENT HANDBOOK

The Student Handbook is a useful guide to many of the college resources available to students. It also provides information on student rights and responsibilities, policies, procedures, activities, services, and extracurricular opportunities at Columbus State. The Student Handbook is available through many student services offices including Advising Services (Aquinas Hall 116), Counseling Services (Nestor Hall 010), and Student Engagement and Leadership (Nestor Hall 116). It also can be found on the college website at www.cscc.edu/

services/student-handbook.shtml. Student Services on the Delaware Campus also has copies.

COMPLIANCE OFFICE

The Compliance Office oversees the college's policies, procedures and initiatives related to sexual harassment (which includes domestic violence, dating violence, stalking and sexual assault), reasonable modifications for pregnancy and pregnancy-related conditions pertaining to students, lactation support for employees and students, discrimination and harassment based on a protected class and specific types of retaliation to support a healthy, welcoming and respectful learning environment for all members of our college community.

For additional information about policies, procedures, resources, other supports related to sexual harassment, discrimination, the types of retaliation Compliance addresses and reporting requirements, please see **cscc.edu/services/title-ix**.

You also may contact a representative of the Compliance Office via the contact information listed at **cscc.edu/about/equity-compliance**.

Concerns or reports regarding discrimination based on a protected class, sexual harassment and retaliation may be submitted via the secure online form at: **cscc.edu/complianceconcern**.

Requests for reasonable modifications related to pregnancy and pregnancy-related conditions for students and requests for lactation supports for students or employees may be sent to: **TitleIXCoordinator@cscc.edu**.

TITLE IX NOTICE OF NON-DISCRIMINATION

Columbus State Community College prohibits sex discrimination in any education program or activity that it operates, as required by Title IX and its regulations, including in admissions and employment. Inquiries about Title IX may be referred to Columbus State's Title IX Coordinator, the **U.S. Department of Education's Office for Civil Rights** or both.

Columbus State's Title IX Coordinator is Joan Cook.

Mailing Address: 550 E. Spring St. Columbus, OH 43215

Email: **jcook60@cscc.edu** and **TitleIXCoordinator@cscc.edu**

Phone number: 614-287-2636.

(Meetings can be arranged in-person across multiple Columbus State locations.)

Columbus State's discrimination policies and procedures are located at: **cscc.edu/services/title-ix/policies.shtml**.

To report information about conduct that may constitute sex discrimination or make a complaint of sex discrimination under Title IX, please refer to the policy and procedure linked above and complete the secure online form at: **cscc.edu/complianceconcern**.

WORKPLACE/COLLEGE VIOLENCE (REF. POLICY 3-45)

cscc.edu/about/policies-procedures/3-45.pdf

Columbus State Community College is committed to maintaining an environment that is safe, secure and free from threats, intimidation, and violence for all faculty, staff, and students. This includes providing a supportive workplace and educational environment in which to discuss workplace/college violence and seek assistance with these concerns.

Workplace/college violence is defined as any act or conduct against a person or property that is sufficiently severe and objectively offensive and/or intimidating to cause actual harm or to create an abusive or intimidating workplace or educational environment. This includes, but is not limited to: assault; psychological intimidation or bullying; threats; isolation; name-calling or verbal, physical, or emotional abuse.

VIOLATIONS OF COLLEGE NON-DISCRIMINATION, SEXUAL MISCONDUCT AND WORKPLACE/COLLEGE VIOLENCE POLICIES

Recommended violations of these policies will be referred to the Office of Student Conduct for appropriate action. Violation of college polices may result in sanctions up to and including expulsion from the college. For more information on student rights, responsibilities and support resources, students are encouraged to contact the **Office of Student Conduct, Center for Workforce Development room 1099, 614-287-2104, studentconduct@cscc.edu**.

STUDENT PROBLEM RESOLUTION

Columbus State Community College encourages student communication with the administration, faculty, and staff regarding college operations and procedures and encourages students to use existing policies, personnel, and departmental offices to express specific concerns. Should a student deem that the existing policies, personnel, and departmental offices cannot address his/her specific concern or complaint, Columbus State Community College, in accordance with federal regulations, accepts and

maintains records of formal written complaints filed with the Vice President of Student Affairs. A copy of the Columbus State Community College Written Student Complaints process is published in the Columbus State Student Handbook. The Student Handbook is available through many student services offices including Advising Services (Aquinas Hall 116), Counseling Services (Nestor Hall 010), Student Engagement and Belonging (Nestor Hall 116), and the Dean of Student Life, Eibling Hall 201. Delaware Campus students can ask for a Student Handbook at Student Services in Moeller Hall.

CRIME AWARENESS AND CAMPUS SECURITY ACT

Federal legislation requires Columbus State Community College to maintain data on the types and number of crimes on college property as well as policies dealing with campus security. The Annual Security Report is distributed to the campus community by October 1 of each year, and copies are available at the Columbus State Police Department. To obtain additional information, contact the Columbus State Police Department, Delaware Hall, Room 047, 614-287-2525, or access **www.cscc.edu/police**.

TRIO Programs

Location: Franklin Hall 223

Telephone: 614-287-5777

The Federal TRIO Programs (TRIO) are five year grants awarded through the U.S. Department of Education. During 2023-2024, the programs received the following: Educational Talent Search $288,470, Student Support Services $306,514, Student Support Services STEM $272,364, and Upward Bound $306,514. The objective is to provide outreach and student services to those from disadvantaged back- grounds. TRIO programs serve and assist low-income individuals, and/or (potential) first-generation college students as they progress through the academic pipe- line from middle school through college.

TRIO: EDUCATIONAL TALENT SEARCH

Educational Talent Search (ETS) is a pre-college access program for income eligible and/or potential first generation potential college students in select Columbus City schools including Briggs and Walnut Ridge High Schools and Hilltonia, Wedgewood, Johnson Park and Sherwood Middle Schools. Qualifying GED students may also receive services from the Educational Talent Search program. ETS is designed to motivate students to develop the skills and persistence necessary for success in education beyond high school. ETS services include mentoring, student workshops, field trips to college campuses, assistance with financial aid applications, and more. Most services are provided to students at their home school; however, occasional evening, weekend, and summer opportunities offered.

TRIO: STUDENT SUPPORT SERVICES AND STUDENT SUPPORT SERVICES STEM

Student Support Services (SSS) is a program serving income eligible and first-generation college students at Columbus State, which provides comprehensive academic support services to enhance students' productivity and academic success. Eligible students regularly receive personalized one-on-one academic advising, tutorial services, related academic support services, and assistance with the financial aid process. The SSS program may also provide grant aid to currently enrolled participants who are receiving Federal Pell Grants for the current award year.

SSS offers tutoring for developmental courses, math courses and academic support for other subjects. The program offers workshops in financial literacy, study skills and personal development, as well as

opportunities for students to develop leadership skills and attend cultural events. SSS assists participants with the transfer process and provides assistance and support with overall adjustment to community college life.

Student Support Services STEM provides the same services as SSS, but with services that are STEM focused.

TRIO: UPWARD BOUND

Upward Bound (UB) is a pre-college program designed to motivate students and assist in the development of academic skills and resilience necessary for persistence and success in education beyond high school. The expected outcome of the program is that participants will be in a position to successfully choose and complete a college preparatory curriculum leading to enrollment and achievement in a college, university or other post-secondary institution. This is accomplished through a well-rounded, year-long program designed to address the multiple needs of program participants. To that end, Upward Bound has both summer and academic year components.

Upward Bound During the Academic Year

Weekly academic enrichment and tutoring sessions assist students with English, mathematics, science and foreign language studies. Upward Bound also provides individual academic, career and personal advising and organizes monthly Saturday Seminars focused on college readiness activities such as college tours, standardized test preparation, financial aid sessions, and social and cultural activities.

Upward Bound During the Summer

A six-week, non-residential academic program is offered. Students receive instruction in core subject areas such as English, mathematics, science and foreign language. They also participate in project-based learning activities and cultural, social, and recreational activities. In addition, participants who recently graduated from high school are given the opportunity to take a college class to help bridge the transition to college.

Tutoring Services

Columbus State offers tutoring services for all students in most academic subject areas by drop-in and appointment. There is no additional charge to students for tutoring. Tutoring is provided by adjunct faculty members, professional tutors, peer tutors, and online through NetTutor. Supplemental Instruction (SI), which is a peer-led study group using collaborative learning techniques, is also available in many courses. Students are urged to attempt all homework and assignments prior to attending tutoring and to bring all necessary information with them to tutoring sessions (e.g., syllabus, textbook, assignment, etc.).

The most current information about tutoring services can be found at **cscc.edu/services/tutoring.shtml**.

COLUMBUS CAMPUS

Tutoring Center:

Location: Columbus Hall 103 — Library, 1st floor

Phone: 614-287-3952

Website: cscc.edu/tutoring

The Tutoring Center on the Columbus campus offers support for many subjects, including Mathematics, Biological and Physical Sciences, Nursing, Economics, Accounting, and many more.

Communication Center:
(Comm Center)
Union Hall, Room 052 | 614-287-5391
commcenter@cscc.edu

Tutors are available to help students understand coursework in all communication classes. The Communication Center is open Monday through Saturday, beginning the second full week of the semester through finals week. The Communication Center houses a tutorial service for both students and faculty seeking help with presentations and business communication. Tutors can assist with topic selection, research strategies, outlining, coping with anxiety and overall delivery. Students can record presentations for online and classroom presentations.

To make an appointment or cancel an existing appointment, log into **Blackboard** select “Tools” from the left-hand navigation menu, and click on the “Tutoring: In-Person (CSCC)” link. Students can make both in-person and virtual appointments for the Communication Center through this link. You will be asked to confirm your appointment by then going to your student e-mail account for verification. If you would like to talk to a speech tutor or if

you would like additional information, you may call 614-287-5391

Writing Center:
Columbus Hall, Room 102 | 614-287-5717
writingcenter@cscc.edu.

The Writing Centers, located in Columbus, Delaware, and Dublin, provide one-on-one tutoring services for Columbus State students, faculty, staff, and members of the Columbus community. Our Learning Support Specialists and Academic Support Leads work with writers on a variety of writing projects, such as essays, research projects, reviews, résumés, personal correspondence, academic appeals, scholarship applications, formal business letters, lab reports, case studies, creative pieces, and job applications. They can help with any stage of the writing process, from generating ideas to revising and polishing. They do not, however, write papers, serve as proofreaders, or discuss grades, but they do help writers improve organization, development, grammar, and other skills related to writing, based on the guidelines of the project.

Please check our webpage for hours of service each semester and for information on how to schedule an appointment: **cscc.edu/academics/departments/english/writing-center.shtml**.

Supplemental Instruction (SI) Program:

Supplemental Instruction (SI), involves the selecting and hiring (by the college) of a student to help peers learn to study and manage their studies more effectively. While the program is linked with a specific course and uses course content to drive this process, the Supplemental Instruction Leader is trained in group dynamics as well as provided access to a variety of support options to use with the group. Students who regularly attend SI have earned higher grades than classmates who do not attend and they master the material in a much shorter time frame. The SI study group is scheduled subsequent to a survey conducted in class on the first day. This program is offered at no additional cost to students and is for anyone who wants to improve the grade for exams and the course. For more iformation about SI, contact the Tutoring Center (CO 103, 614-287-3952), ask the course instructor, or visit the **Tutoring website** and scroll to Supplemental Instruction at the bottom page.

DELAWARE CAMPUS AND REGIONAL LEARNING CENTERS

Tutoring is available on the Delaware campus in Moeller Hall, next to the Library, for drop-ins and by appointment.

To see hours and current subjects available please visit the **Tutoring website** and select the campus or RLC next to the subject in which you are seeking support.

Supplemental Instruction (SI) Program:

Supplemental Instruction (SI), involves the selecting and hiring (by the college) of a student to help peers learn to study and manage their studies more effectively. While the program is linked with a specific course and uses course content to drive this process, the Supplemental Instruction Leader is trained in group dynamics as well as provided access to a variety of support options to use with the group. Students who regularly attend SI have earned higher grades than classmates who do not attend and they master the material in a much shorter time frame. The SI study group is scheduled subsequent to a survey conducted in class on the first day. This program is offered at no additional cost to students and is for anyone who wants to improve the grade for exams and the course. For more iformation about SI, contact the Tutoring Center on the Columbus campus (CO 103, 614-287-3952), ask the course instructor, or visit the **Tutoring website** and scroll to Supplemental Instruction at the bottom page.

ONLINE TUTORING THROUGH NETTUTOR

NetTutor provides online tutoring at no additional charge to students in many academic subjects. Tutoring through NetTutor is available 24 hours a day for Mathematics and Writing, and at various open and scheduled times throughout the week, including evenings and weekends, for other subjecs. You can reach NetTutor through your Blackboard Account.

1. Log in to **Blackboard** with your Columbus State username and password.
2. Select “Tools” from the vertical menu on the left side of the Blackboard homepage.
3. Click on the box that reads “Tutoring: Virtual (NetTutor)” with the green “n.”
4. Choose the subject in which you are seeking tutoring.

University Transfer Center

Location:
Aquinas Hall, Room 126

General Hours:

Monday – Thursday	9 a.m. - 5 p.m.
Friday	Closed

The University Transfer Center is open to all students at Columbus State to assist them in connecting with colleges and universities offering bachelor's degrees.

The University Transfer Center offers visits by admissions representatives and advisors from bachelor's degree institutions to speak with our students about admission, transfer application, scholarship opportunities, and academic planning. Students are encouraged to use these meetings to learn more about their transfer options at convenient times without leaving campus. Visit schedules of university advisors and admissions representatives are available online at the University Transfer Center website: **cscc.edu/academics/transfer/meet-university-advisors.shtml**

The University Transfer Center also organizes fairs, programs, and other activities to provide further information on transfer and related student issues. Computers and a small, printed resource library are available to students for their use in completing transfer admissions applications and relevant research. Individual college/university programs, both virtual and in person, are presented by the center staff and university representatives to give students more information on partner institutions and the transfer experience. Students can read our Transfer FAQ, view recorded workshops, and learn more about center programs at: cscc.edu/academics/transfer/university-transfer-center.shtml.

The University Transfer Center coordinates the articulation agreements and transfer pathways with nearly 40 different colleges and universities; public and private, in state and out. Pathways or transfer guides exist for all Columbus State degrees. Students may search for the pathways related to their majors and/or professional goals at this link: **cscc.edu/academics/transfer/degrees.shtml.**

Questions about the center or its offerings should be directed to **transferinfo@cscc.edu**. Interested students seeking information on Columbus State course work or programs are encouraged to meet with their Columbus State academic advisor.

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Telephone: 727-210-2350

MEDICAL IMAGING
Joint Review Committee on Education in Radiologic Technology (JRCERT)
20 North Wacker Drive, Suite 2850
Chicago, IL 60606-3182
Telephone: 312-704-5300

VETERINARY TECHNOLOGY
American Veterinary Medical Association Committee on Veterinary Technician Education and Activities
1931 North Meacham Road, Suite 100
Schaumburg, IL 60173-4360
Telephone: 847-925-8070

ACADEMIC ASSESSMENT

Academic assessment is the process for ongoing improvement of student learning and success. The assessment program at Columbus State Community College has four specific and interrelated purposes:

1. To improve student learning
2. To improve teaching strategies
3. To document successes and identify opportunities for improvement
4. To provide evidence for institutional effectiveness.

Columbus State's assessment program is mission-driven and faculty owned. It includes assessment of courses and programs in the following academic divisions:

- Arts and Sciences
- Business and Engineering Technologies
- Health and Human Services
- Information Systems Technology

CURRICULUM

Please note the following is a static version of our Academic Catalog, last updated 04/29/2025. For the most accurate/current version of program requirements and course information, refer to https://catalog.cscc.edu

Programs - Degrees and Certificates

Associate of Arts - AA Degree

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

Associate of Arts Degree Graduation Requirements:

1. All students must satisfactorily complete at least 61 credit hours of approved courses, a minimum of 20 hours of which must be completed at Columbus State. Approved courses are designated below. Satisfactory completion requires a final grade of A, B, C, or D. Transfer credit may be awarded for courses in which a "C" or better has been earned at other accredited institutions, or a "D" or better from public Ohio institutions, if the course level equivalencies have been approved by the Dean of Arts and Sciences. Courses listed in the "Transfer Module" or "Transfer Assurance Guides" of an Ohio college have been pre-approved for credit toward a Columbus State degree. Credits by examination, proficiency credit, non-traditional credit, and transfer credit do not apply toward meeting residency credit hour requirements.

2. All students must attain an overall grade point average of 2.0 or better for all college level courses completed at Columbus State. Grade point averages are calculated on the following scale: A=4, B=3, C=2, D=1, E=0. Number equivalencies are not assigned for grades other than these.

3. All students must complete the following 30 hours of General Education Requirements, as well as 31 hours of additional coursework as specified on the following pages.

4. All students must file a completed "Petition to Graduate" form with Office of the Registrar by the published deadline date for the intended semester of graduation.

Resources for Success:

1. Arts and Sciences Advising
Aquinas Hall, Room 116
For walk-in hours and online appointment scheduling, visit www.cscc.edu/services/advising/asadvisors.shtml.

2. Degree Audit (available through CougarWeb)
This online tool helps students monitor progress toward degree completion. The Degree Audit contains the following information: courses in progress, courses completed, courses transferred from another college, courses needed, number of credits completed, number of credits needed, and grade point average.

3. Transferology, www.transferology.com
This free, web-based resource allows transfer students to plan the best path to achieving academic and career goals based
on reliable transfer information provided by participating Transferology colleges and universities. Set up a free account and find out how Columbus State courses transfer and apply to programs at select colleges and universities.

Associate of Arts Degree Requirements

PLEASE NOTE: Students are responsible for knowing and following all prerequisites. Use the CSCC catalog to identify prerequisites for all courses. Self selection of courses or other changes to the approved degree program could adversely affect graduation, transfer to a 4-year institution and financial aid.

+ indicates Ohio Transfer 36 Module (OT36) course
^ indicates Transfer Assurance Guide (TAG) course
See last page for OT36/TAG explanation.

First Year Experience **Units:** 1

COLS 1100	First Year Experience Seminar	1
OR		
COLS 1101	College Success Skills	1

English (Ohio Transfer 36) **Units:** 3-6

Take one, based on placement:

ENGL 1100	Composition I+	3
OR		
ENGL 1101	Composition I Plus+	6

Intermediate Composition **Units:** 3

Choose one:

ENGL 2367	Composition II+	3
OR		
ENGL 2467	COMP II: Writing About U.S. Race & Ethnicity	3
OR		
ENGL 2567	Comp II Writing about Gender & Identity+	3
OR		
ENGL 2667	Comp II American Working-Class Identity+	3
OR		
ENGL 2767	Comp II Writing About Science/Technology+	3

Mathematics (Ohio Transfer 36) **Units:** 3

Choose one:

MATH 1120	Precalculus with Review I+	5
OR		
MATH 1121	Precalculus with Review II+	5
OR		
MATH 1122	Foundations of Quantitative Reasoning+	5
OR		
MATH 1123	Quantitative Reasoning+	3
OR		
MATH 1130	Business Algebra+	5
OR		
MATH 1146	College Algebra Plus+	4
OR		
MATH 1148	College Algebra+	4
OR		
PHIL 1150	Introduction to Logic+	3
OR		

Math for Primary & Middle School Teachers:*

MATH 1125	Conceptual Mathematics for Teachers I	5
AND		
MATH 1126	Conceptual Mathematics for Teachers II	5

*Math 1125 & 1126 must be completed to fulfill the math requirement. If the following math courses are required, they must be completed before taking a math course that applies to the degree requirements: MATH 0114 (4 hrs) or MATH 1099 (3 hrs)→ MATH 1050 (5 hrs) or MATH 1099 (3 hrs)→ MATH 1075 (5 hrs) or MATH 1099 (3 hrs)

Historical Study (Ohio Transfer 36) **Units:** 3

HIST 1111	European History to 1648+ ^	3
HIST 1112	European History Since 1648+ ^	3
HIST 1151	American History to 1877+ ^	3
HIST 1152	American History Since 1877+ ^	3
HIST 1181	World Civ I Non Western to 1500+	3
HIST 1182	World Civ II Non Western Since 1500+	3
HIST 2223	African-American History I Before 1877+	3
HIST 2224	African-Amer History II Since 1877+	3
HIST 2715	History of Western Medicine, Disease and Public Health I+	3
HIST 2716	History of Western Medicine, Disease and Public Health II+	3

Social & Behavioral Sciences (Ohio Transfer 36) **Units:** 6

Choose courses from two different subjects:

Anthropology **Units:** 0

ANTH 2201	World Prehistory+ ^	3
ANTH 2202	Peoples & Culture+ ^	3

Economics **Units:** 0

ECON 1110	Intro to Economics+	3
ECON 2200	Principles of Microeconomics+ ^	3
ECON 2201	Principles of Macroeconomics+ ^	3

Geography **Units:** 0

GEOG 2400	Economic & Social Geography+ ^	3
GEOG 2750	World Regional Geography+ ^	3

Political Science **Units:** 0

POLS 1100	Introduction to American Government+ ^	3
POLS 1200	Comparative Politics+ ^	3
POLS 1250	State & Local Government+ ^	3
POLS 1300	International Relations+ ^	3

Psychology **Units:** 0

PSY 1100	Introduction to Psychology+ ^	3
PSY 2200	Educational Psychology+ ^	3
PSY 2261	Child Development+ ^	3
PSY 2325	Social Psychology+ ^	3
PSY 2331	Psychopathology+ ^	3
PSY 2340	Human Growth and Development Over the Life Span+ ^	3
PSY 2551	Adolescent Psychology+ ^	3

Sociology **Units:** 0

SOC 1101	Introduction to Sociology+ ^	3
OR		
SOC 1500	Intro to Rural Sociology+	3
SOC 2202	Social Problems+ ^	3
SOC 2210	Sociology of Deviance+ ^	3
SOC 2309	Law and Society+ ^	3
SOC 2330	Marriage and Family Relations+ ^	3
SOC 2380	American Race & Ethnic Relations+ ^	3
SOC 2410	Criminology+ ^	3

Literature, Cultures & Ideas, Visual/Performing Arts (Ohio Transfer 36) **Units:** 3

Literature **Units:** 0

CLAS 1222	Classical Mythology+	3
ENGL 2201	British Literature Medieval to 1800+ ^	3
ENGL 2202	British Literature 1800 to Present+ ^	3
ENGL 2220	Introduction to Shakespeare+	3
ENGL 2240	Introduction to Science Fiction+	3
ENGL 2260	Introduction to Poetry+	3
ENGL 2274	Introduction to Multicultural Literature+	3
ENGL 2276	Women in Literature+	3
ENGL 2280	The English Bible As Literature+	3
ENGL 2281	African American Literature+	3
ENGL 2290	Colonial and U.S. Literature to 1865+ ^	3
ENGL 2291	U.S. Literature 1865 to Present+ ^	3
HUM 1100	Introduction to Humanities+	3
THEA 2230	Intro Dramatic Literature+	3

Cultures & Ideas **Units:** 0

CLAS 1224	Classical Civilization: Greece+	3
CLAS 1225	Classical Civilization: Rome+	3
CLAS 1226	Classical Civilization: Byzantium+	3
ENGL 2270	Introduction to Folklore+	3
PHIL 1101	Intro to Philosophy+ ^	3
HUM 1100	Introduction to Humanities+	3
PHIL 1130	Ethics+ ^	3
HUM 1270	Comparative Religions+	3
PHIL 2270	Philosophy of Religion+ ^	3

Visual/Performing Arts **Units:** 0

HART 1201	Ancient and Medieval Art Histories + ^	3
HART 1202	Renaissance to Contemporary Art Histories + ^	3
HART 1260	World Cinema+	3
HUM 1100	Introduction to Humanities+	3
HUM 1160	Music & Art Since 1945+	3
MUS 1251	Survey of Music History+	3

THEA 1100	Introduction to Theatre[+]	3

Exploration (Ohio Transfer 36) **Units:** 9

Choose 3 additional courses from Social & Behavioral Sciences, or Historical Study, or Literature, Culture & Ideas, Visual/Performing Arts

Natural Sciences (Ohio Transfer 36) **Units:** 7

Choose two. One course must have a lab ([N] = no lab)

Biological Sciences **Units:** 0

ANTH 2200	Introduction to Biological Anthropology[N + ^]	4
BIO 1101	Fundamentals Human Anatomy & Physiology[N +]	3
BIO 1107	Human Biology[+]	4
BIO 1111	Intro to Biology[+]	4
BIO 1113	Biological Sciences I[+ ^]	4
BIO 1114	Biological Sciences II[+ ^]	4
BIO 1125	Plant Biology[+]	4
BIO 1127	Introduction to Environmental Science[+]	4
BIO 2215	Microbiology[+]	4
BIO 2301	Human Physiology[+]	4

Physical Sciences **Units:** 0

ASTR 1141	Life in the Universe[N +]	3
ASTR 1161	The Solar System[N +]	3
ASTR 1162	Stars and Galaxies[N +]	3
ASTR 1400	Astronomy Laboratory[+]	1
CHEM 1100	Chemistry and Society[N]	5
CHEM 1111	Elementary Chemistry I[+]	4
CHEM 1112	Elementary Chemistry II[+]	4
CHEM 1171	General Chemistry I[+ ^]	5
CHEM 1172	General Chemistry II[+ ^]	5
CHEM 1200	Intro to General & Organic Chemistry[+]	5
GEOG 1900	Introduction to Weather & Climate[+]	4
GEOG 2300	Introduction to Physical Geography[N + ^]	3
GEOL 1101	Introduction to Earth Science[+]	4
GEOL 1105	Geology and the National Parks[N +]	3
GEOL 1121	Physical Geology[+ ^]	4
GEOL 1122	Historical Geology[+ ^]	4
GEOL 1151	Natural Disasters[N +]	3
PHYS 1103	World of Energy[N +]	3
PHYS 1200	Algebra-Based Physics I[+ ^]	5
PHYS 1201	Algebra-Based Physics II[+ ^]	5
PHYS 1250	Calculus-Based Physics I[+ ^]	5
PHYS 1251	Calculus-Based Phys II[+ ^]	5

Additional Requirements to Complete Degree **Units:** 23

To complete the Associate of Arts degree, take additional credits (minimum of 23) to meet the 61 semester hours requirement . Choose from the following or additional courses from the previous page. Utilize Degree Audit (accessible through CougarWeb) to determine how many additional credits are needed to achieve the overall 61 semester hours required. If you are uncertain about course selection, consult an Arts and Sciences Advisor for suggestions. **Recommended Elective: ASC 1190 Critical Thinking for Arts & Sciences (1 hr)**

Accounting **Units:** 0

ACCT 1211	Financial Accounting[^]	3
ACCT 1212	Managerial Accounting[^]	3

Anthropology **Units:** 0

ANTH 2235	Introduction to Forensic Anthropology	3

Art **Units:** 0

ARCH 2100	History of Architecture[+]	3
ART 2221	Life Drawing[^]	3
ART 2230	Color Theory	3
ART 1205	Beginning Drawing	3
ART 1206	Two-Dimensional Design	3
ART 1207	Three-Dimensional Design	3
ART 2275	Beginning Painting	3

Biology **Units:** 0

BIO 1101	Fundamentals Human Anatomy & Physiology[N +]	3
BIO 1121	Anatomy and Physiology I	4
BIO 1122	Anatomy & Physiology II	4
BIO2050 - Intro to Biotechnology		4
BIO2216 - Mechanisms of Microbial Disease		3
BIO 2300	Human Anatomy[+]	4

BIO 2302	Human Pathophysiology+ ^	3
BIO 2500	General Genetics	3

Computer Science **Units:** 0

CSCI 2467	Java Programming I	3

Business Related **Units:** 0

BMGT 2200	Management & Organizational Behavior	3
FMGT 1101	Personal Finance	3
LEGL 2064	Legal Environment of Business^	3
MKTG 1110	Marketing Principles^	3

Dance **Units:** 0

DANC 1110	Dance Appreciation	2
DANC 1131	Beginning Jazz I	1
DANC 1132	Beginning Jazz II	1
DANC 1140	Modern Dance I	2
DANC 1201	Classical Ballet I	2
DANC 1202	Classical Ballet II	2
DANC 1203	Beginning Tap I	1
DANC 1204	Beginning Tap II	1

Chemistry **Units:** 0

CHEM 1113	Elements of Organic/ Biochemistry+	4
CHEM 2251	Organic Chemistry I^	5
CHEM 2252	Organic Chemistry II^	5
CHEM 2254	Organic Chemistry Lab I^	3
CHEM 2255	Organic Chemistry Lab II^	3
CHEM 2261	General Biochemistry^	4

Education **Units:** 0

EDUC 2210	Introduction to Education^	3
EDUC 2220	Educational Technology	3

Communication **Units:** 0

COMM 1105	Oral Communication^	3
COMM 1110	Small Group Communication	3
COMM 1150	Video Art Production	3
COMM 2200	Business Communication^	3
COMM 2201	Intro to Commmunication Theory^	3
COMM 2208	Communications for the Mass Media	3
COMM 2220	Introduction to Mass Communication^	3
COMM 2232	Interpersonal Communication	3
COMM 2241	News Writing & Editing	3
COMM 2268	Intercultural Communication	3
LING 2000	Introduction to Linguistics	3
COMM 2245	Introduction to Film	3
LING 2000	Introduction to Linguistics	3

Engineering **Units:** 0

ENGR 1181	Fundamentals of Engineering I^	3
ENGR 1182	Fundamentals of Engineering II	3
ENGR 2030	Dynamics	4
ENGR 2040	Statics & Intro Mechanics of Materials	4
ENGR 2350	Engineering Thermal Sciences	4

English **Units:** 0

ENGL 2267	Creative Writing	3
ENGL 2215	Magazine Publication I	2
ENGL 2216	Magazine Publication II	2
ENGL 2217	Writing to Publish	3
ENGL 2240	Introduction to Science Fiction	3
ENGL 2261	Introduction to Fiction	3
ENGL 2265	Writing Fiction	3
ENGL 2266	Writing Poetry	3
ENGL 2268	Writing Creative Non Fiction	3
ENGL 2261	Introduction to Fiction	3

Foreign Languages **Units:** 0

ASL 1101	Beginning ASL I	3
ASL 1102	Beginning ASL II	3
ASL 1103	Intermediate American Sign Language I	3
ASL 1104	Intermediate American Sign Language II	2
ARAB 1101	Beginning Arabic I	4
ARAB 1102	Beginning Arabic II	4
CHIN 1101	Beginning Chinese I	4
CHIN 1102	Beginning Chinese II	4
CHIN 1103	Beginning Chinese III	4
FREN 1101	Beginning French I	4
FREN 1102	Beginning French II	4
FREN 1103	Intermediate French	4
GERM 1101	Beginning German I^	4
GERM 1102	Beginning German II^	4
GERM 1103	Intermediate German^	4
ITAL 1101	Beginning Italian I	4
ITAL 1102	Beginning Italian II	4
ITAL 1103	Intermediate Italian	4
JAPN 1101	Beginning Japanese I	4
JAPN 1102	Beginning Japanese II	4
JAPN 1103	Intermediate Japanese	4
LATN 1101	Beginning Latin I	4
LATN 1102	Beginning Latin II	4
LATN 1103	Intermediate Latin	4
SPAN 1101	Beginning Spanish I^	4
SPAN 1102	Beginning Spanish II^	4
SPAN 1103	Intermediate Spanish	4
SPAN 1105	Spanish Conversation & Composition	1

Geography **Units:** 0

GEOG 2900	Elements of Cartography^	3
GIS 1100	Introduction to GIS	3

Mathematics **Units:** 0

MATH 1131	Calculus for Business+	6
MATH 1149	Trigonometry+	4
MATH 1150	Precalculus+	6
MATH 1151	Calculus I+	5
MATH 1152	Calculus II+	5
MATH 1172	Engineering Mathematics A	5
Any MATH 2XXX course		4-5

Music **Units:** 0

MUS 1101	Introduction to Vocal Techniques I	1
MUS 1102	Introduction to Vocal Techniques II	1
MUS 1103	Class Piano I^	2
MUS 1104	Class Piano II^	2
MUS 1120	Introduction to Electronic Music	3
MUS 1121	Fundamentals of Music Theory	3
MUS 1122	Beginning Musical Composition	3
MUS 1203	Vocal Ensemble^	1
MUS 1204	Concert Band^	1
MUS 1205	Small Instrumental Ensemble	1
MUS 1206	Gospel Vocal Ensemble	1
MUS 1208	Electronic Music Ensemble	1
MUS 1221	Musicianship I	4
MUS 1222	Musicianship II	4
MUS1231 - Contemp Jazz Theory		4
MUS1240 - Music History I		3
MUS1241 - Music History II		3
MUS1250 - World Music		3
MUS1252 - History Popular Music		2
MUS1253 - Intro to Jazz		2
MUS 1271	Business of Music	3
MUS 2221	Audio Productions I	3
MUS 2222	Audio Production II	3

Nutrition **Units:** 0

HNTR 1153	Nutrition for a Healthy Lifestyle^	3
NUTR 2310	Fund Human Nutrition & Metabolism	3

Other Sciences **Units:** 0

ESSH 1101	Intro to Environ Science, Safety, Health^N+	3
HORT 1130	Plant Sciences+	3

Philosophy **Units:** 0

PHIL 1150	Introduction to Logic	3
PHIL 2250	Symbolic Logic	3

Physics **Units:** 0

PHYS 2300	Dynamics of Particles & Waves I	4
PHYS 2301	Dynamics of Particles & Waves II	4

Psychology **Units:** 0

PSY 2245	Children With Exceptionalities^	3
PSY 2530	Psychology of Personality^	3

Sociology **Units:** 0

SOC 2209	Sociology of Criminal Justice System	3

Speech **Units:** 0

SHS 2230	Introduction to Communication Disorders	3

Statistics **Units:** 0

STAT 1350	Elementary Statistics	3
STAT 1450	The Practice of Statistics+	4
STAT 2430	Business Statistics+ ^	4
Any STAT 2XXX course		4-5

Theatre **Units:** 0

THEA 1115	Oral Interpretation	3
THEA 1180	Theatre Practicum^	3
THEA 2205	Technical Production Practicum^	2
THEA 2210	Technical Production: Stage Lighting	2
THEA 2231	Literature for Theatre I	3
THEA 2232	Literature for the Theatre II	3
THEA 2280	Fundamentals of Acting^	3
THEA 2281	Adv Acting: Styles of Performance	3
THEA 2283	Writing Plays	3
THEA 2215	Fund Script Analysis	3

Ohio Transfer 36 (OT36 +) **Units:** 0

The Ohio Transfer 36 represents a body of knowledge and academic skills common across Ohio colleges and universities. Ohio Transfer 36 approved courses are general education courses and are guaranteed to transfer and apply toward related general education subject areas at Ohio's public colleges and universities. Students completing the Associate of Arts or Associate of Science degree have also completed the Ohio Transfer 36. For more information, visit: http://www.ohiohighered.org/Ohio-Transfer-36.

Transfer Assurance Guides (TAG^) **Units:** 0

In addition to completing general education courses at any Ohio public college or university, students can also complete courses in their degree/major that have been pre-identified by the Ohio Board of Regents for transfer. These courses are described in the Transfer Assurance Guides (TAG) for many major/degree programs. TAG courses are guaranteed to transfer and apply directly to the major. For more information, visit: http://www.ohiohighered.org/transfer/tag.

Total: 61-64

AA - Anthropology

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Anthropology transfer pathway is the study of what makes us human. Anthropologists take a broad approach to understanding the many different aspects of the human experience. They consider the past, what makes up our biological bodies and genetics, comparisons with other animals, and interaction of people in social relationships. When trying to understand economic, health, education, law, and policy issues, they keep in mind what they know about biology, culture, types of communication, and how humans lived in the past.

The Associate of Arts, Anthropology is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester **Units:** 13-16

ANTH 2202	Peoples & Culture	3
ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
MATH-XXXX	MATH 1120 or Higher (MATH 1122 or 1123 Perferred)	3
OR		
PHIL 1150	Introduction to Logic	3
XXXX-XXXX	Historical Study course *	3
COLS 1100	First Year Experience Seminar	1

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 15

ANTH 2200	Introduction to Biological Anthropology	4
XXXX-XXXX	Natural Science course, with lab *	4
XXXX-XXXX	Intermediate Composition course *	3
XXXX-XXXX	Foreign Language course series * or AA elective *	4

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for eligible major scholarships for next AU term.

Third Semester **Units:** 7

XXXX-XXXX	AA Elective course *	3
XXXX-XXXX	Literature, Culture & Ideas, Visual/Performing Arts course*	3
ASC 1190	Critical Thinking in Arts & Sciences	1

Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.A. degree!

Fourth Semester **Units:** 13

ANTH 2201	World Prehistory	3
XXXX-XXXX	Foreign Language course Series * or AA elective *	4
XXXX-XXXX	Natural Science course, no lab *	3
XXXX-XXXX	Exploration (Ohio Transfer 36) course*	3

Milestones/Progress Check: Re-connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit Graduation Application.

Fifth Semester **Units:** 16-17

STAT 1350	Elementary Statistics	3
OR		
STAT 1450	The Practice of Statistics	4
XXXX-XXXX	Foreign Language course Series * or AA elective *	4
SOC 1101	Introduction to Sociology*	3
OR		
XXXX-XXXX	Other Social & Behavioral Science course *	3
XXXX-XXXX	Exploration (Ohio Transfer 36) course*	3
XXXX-XXXX	AA Elective Course *	3

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 64-68

AA - Art History

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Art History transfer pathway is the historical study of the creation and reception of visual art within its cultural contexts. This study emphasizes critical analysis and visual literacy. The major focuses on art from the origins of civilization to the present.

The Associate of Arts, Art History is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester **Units:** 13-16

HUM 1270	Comparative Religions	3
ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
HIST 1111	European History to 1648	3
OR		
HIST 1181	World Civ I Non Western to 1500	3
COLS 1100	First Year Experience Seminar	1
CLAS 1222	Classical Mythology	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 12

HART 1201	Ancient and Medieval Art Histories	3
MATH-XXXX MATH 1120 or Higher (MATH 1122 or 1123 Perferred)		3
OR		
PHIL 1150	Introduction to Logic	3
HIST 1112	European History Since 1648	3
OR		
HIST 1182	World Civ II Non Western Since 1500	3
XXXX-XXXX Intermediate Composition course *		3

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for eligible major scholarships for next AU term.

Third Semester **Units:** 10

HART 1202	Renaissance to Contemporary Art Histories	3
XXXX-XXXX Social & Behavioral Science course *		3
XXXX-XXXX Foreign Language course series * or AA elective *		4

Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.A. degree!

Fourth Semester **Units:** 13

ART 1205	Beginning Drawing	3
OR		
ART 1206	Two-Dimensional Design	3
XXXX-XXXX Natural Science course, no lab *		3
XXXX-XXXX Social & Behavioral Science course *		3
XXXX-XXXX Foreign Language course series * or AA elective *		4

Milestones/Progress Check: Re-connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit Graduation Application.

Fifth Semester **Units:** 13

ART 1206	Two-Dimensional Design	3
OR		
ART 1207	Three-Dimensional Design	3
OR		
ART 2221	Life Drawing	3
XXXX-XXXX Exploration (Ohio Transfer 36) course*		3
XXXX-XXXX Natural Science course, with lab *		4
COMM 1105	Oral Communication	3
OR		
XXXX-XXXX AA elective *		3

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 61-64

AA - Business

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Business transfer pathway is intended to provide students with the first two years of a four year Bachelor of Science in Business Administration degree. In addition to general education requirements and an emphasis on mathematics and statistics, a broad set of foundational business courses in economics, marketing, accounting, business law, and business communication is included.

The Associate of Arts, Business is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester **Units:** 14-18

COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
MATH 1130	Business Algebra	5
OR		
MATH 1146	College Algebra Plus	4
ECON 2200	Principles of Microeconomics	3
XXXX-XXXX	Historical Study course *	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 12

XXXX-XXXX	Intermediate Composition course *	3
MATH 1131	Calculus for Business	6
ECON 2201	Principles of Macroeconomics	3

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for eligible major scholarships for next AU term.

Third Semester **Units:** 9

LEGL 2064	Legal Environment of Business	3
XXXX-XXXX	Social & Behavioral Science (other than ECON)*	3
XXXX-XXXX	Literature, Culture & Ideas, Visual/Performing Arts course *	3

Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.A. degree!

Fourth Semester **Units:** 14-15

STAT 2430	Business Statistics	4
ACCT 1211	Financial Accounting	3
MKTG 1110	Marketing Principles	3

XXXX-XXXX Natural Science course, with lab *		4-5
Milestones/Progress Check: Re-connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit Graduation Application.		

Fifth Semester **Units:** 12

ACCT 1212	Managerial Accounting	3
COMM 2200	Business Communication	3
BMGT 2200	Management & Organizational Behavior	3
XXXX-XXXX Natural Science course, no lab *		3
Milestone/Progress Check: Ready for Graduation!		

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 61-66

AA - Communication

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Communication transfer pathway includes instruction in writing and speaking concisely and effectively, evaluating the media critically, and learning about forces shaping human communication.

The Associate of Arts, Communication is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester **Units:** 11-19

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
XXXX-XXXX Historical Study course *		3
COLS 1100	First Year Experience Seminar	1
XXXX-XXXX Foreign Language course series * or AA elective *		4
MATH 1122	Foundations of Quantitative Reasoning	5
OR		
MATH 1123	Quantitative Reasoning	3
OR		
XXXX-XXXX higher level MATH		
OR		
PHIL 1150	Introduction to Logic	3
Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.		

Second Semester **Units:** 13

COMM 1105	Oral Communication	3
XXXX-XXXX Foreign Language course series * or AA elective *		4
XXXX-XXXX Intermediate Composition course *		3
COMM 1110	Small Group Communication	3
Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for eligible major		

scholarships for next autumn semester. Halfway point to A.A. degree!

Third Semester **Units:** 6

XXXX-XXXX	Exploration (Ohio Transfer 36) course *	3
XXXX-XXXX	Social & Behavioral Science course *	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Fourth Semester **Units:** 15

COMM 1101	Introduction to Mass Communication	3
COMM 1100	Introduction to Communication Theory	3
XXXX-XXXX	Exploration (Ohio Transfer 36) course *	3
COMM 2232	Interpersonal Communication	3
XXXX-XXXX	Natural Science course, no lab *	3

Milestones/Progress Check: Submit Graduation Application. Reconnect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit transfer admission application.

Fifth Semester **Units:** 16

COMM 2268	Intercultural Communication	3
XXXX-XXXX	Natural Science course, with lab *	4
XXXX-XXXX	Social & Behavioral Science course *	3
XXXX-XXXX	Literature, Culture & Ideas, Visual/Performing Arts course *	3
XXXX-XXXX	Exploration (Ohio Transfer 36) course *	3

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 61-69

AA - Criminology

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Criminology transfer pathway includes instruction that focuses on the causes and consequences of crime in society. Criminologists seek to understand and explain why crime rates differ across time, culture, and place; why some individuals are more prone to crime than others; why crime rates vary across different ages, genders, and groups; why some acts are considered criminal and others are not; and what we can do to prevent crime.

First Semester **Units:** 13-18

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
XXXX-XXXX	Historical Study course *	3
COLS 1100	First Year Experience Seminar	1
SOC 1101	Introduction to Sociology	3
MATH 1122	Foundations of Quantitative Reasoning	5
OR		
MATH 1123	Quantitative Reasoning	3
OR		
XXXX-XXXX	higher level MATH	3
OR		
PHIL 1150	Introduction to Logic	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 16

SOC 2410	Criminology	3
XXXX-XXXX	Foreign Language course series * or AA elective *	4
XXXX-XXXX	Intermediate Composition course *	3
XXXX-XXXX	Natural Science course, no lab *	3
XXXX-XXXX	Social & Behavioral Science course * (other than SOC)	3

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester. Halfway point to A.A. degree!

Third Semester **Units:** 6

XXXX-XXXX	Exploration (Ohio Transfer 36) course *	3
XXXX-XXXX	AA Elective course *	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Fourth Semester **Units:** 14

SOC 2209	Sociology of Criminal Justice System	3
XXXX-XXXX	Natural Science course, with lab *	4
XXXX-XXXX	Foreign Language course series * or AA elective *	4
XXXX-XXXX	Exploration (Ohio Transfer 36) course *	3

Milestones/Progress Check: Submit Graduation Application. Reconnect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit transfer admission application.

Fifth Semester **Units:** 13

SOC 2309	Law and Society	3
XXXX-XXXX	Foreign Language course series * or AA elective *	4
XXXX-XXXX	AA Elective course *	3
XXXX-XXXX	Literature, Culture & Ideas, Visual/Performing Arts course *	3

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 62-67

AA - Early Childhood Education

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Early Childhood Education transfer major is intended to provide the first two years of a bachelor's degree for students who plan to complete a teacher licensure program for teaching in pre-kindergarten through fifth grade settings.

First Semester **Units:** 15

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition 1W: Composition Workshop	3
PSY 1100	Introduction to Psychology	3
COLS 1100	First Year Experience Seminar	1
EDUC 2210	Introduction to Education	3
MATH 1125	Conceptual Mathematics for Teachers I	5

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 14

PSY 2200	Educational Psychology	3
XXXX-XXXX	Intermediate Composition course *	3
HIST 1111	European History to 1648	3
OR		
HIST 1112	European History Since 1648	3
OR		
HIST 1151	American History to 1877	3
OR		
HIST 1152	American History Since 1877	3
MATH 1126	Conceptual Mathematics for Teachers II	5

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester.

Third Semester **Units:** 6

COMM 1105	Oral Communication	3

Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Passed the halfway point to A.A. degree!

XXXX-XXXX	Exploration (Ohio Transfer 36) course *	3

Fourth Semester **Units:** 13-14

EDUC 2220	Educational Technology	3
PSY 2261	Child Development	3
XXXX-XXXX	Literature, Culture & Ideas, Visual/Performing Arts course * (PHIL 1130 recommended)	3
CHEM 1100	Chemistry and Society	5
OR		
XXXX-XXXX	other Natural Science course *	4-5

Milestones/Progress Check: Submit Graduation Application. Reconnect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit transfer admission application.

Fifth Semester **Units:** 13

PSY 2245	Children With Exceptionalities	3
BIO 1111	Intro to Biology	4
OR		
XXXX-XXXX	other Natural Science course w/lab *	4

Milestone/Progress Check: Ready for Graduation!

	Exploration (Ohio Transfer 36) course *	3
XXXX-XXXX	Social & Behavioral Science course * (subject other than PSY; GEOG 2750 recommended)	3

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 61-62

AA - Economics

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Economics transfer pathway includes the study of human behavior and the choices we make as we attempt to allocate our scarce resources. Economics is divided into two large branches: micro and macro. Microeconomics examines the building blocks of the economy and the individual participants, such as consumers and individual firms or producers. Macroeconomics deals with the economy as a whole. For example, we examine the federal budget and national debt, international finance and exchange rates, government spending and taxes, and monetary policy.

First Semester		**Units:** 14-18
ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
XXXX-XXXX	Historical Study course *	3
COLS 1100	First Year Experience Seminar	1
ECON 2200	Principles of Microeconomics	3
MATH 1130	Business Algebra	5
OR		
MATH 1146	College Algebra Plus	4
OR		
MATH 1148	College Algebra	4
Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.		

Second Semester		**Units:** 14
ECON 2201	Principles of Macroeconomics	3
XXXX-XXXX	Intermediate Composition course *	3
STAT 1450	The Practice of Statistics	4
XXXX-XXXX	Foreign Language course series * or AA elective *	4
Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester.		

Third Semester		**Units:** 6
XXXX-XXXX	Exploration (Ohio Transfer 36) course *	3
XXXX-XXXX	Social & Behavioral Science course (subject other than ECON) *	3
Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Passed the halfway point to A.A. degree!		

Fourth Semester		**Units:** 13
XXXX-XXXX	Exploration (Ohio Transfer 36) course *	3
XXXX-XXXX	Foreign Language course series * or AA elective *	4
XXXX-XXXX	Literature, Culture & Ideas course *	3
OR		
XXXX-XXXX	Visual/Performing Arts course *	3
XXXX-XXXX	Natural Science course, no lab *	3
Milestones/Progress Check: Submit Graduation Application. Reconnect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit transfer admission application.		

Fifth Semester		**Units:** 14-15
XXXX-XXXX	Foreign Language course series * or AA elective *	4
XXXX-XXXX	Natural Science course, with lab *	4-5
XXXX-XXXX	AA Elective course *	3
XXXX-XXXX	AA Elective course *	3
Milestone/Progress Check: Ready for Graduation!		

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 61-66

AA - English

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, English transfer pathway offers the study of multiple forms of literacy to provide quality instruction in the areas of composition, creative writing, and literature. Coursework covers a wide range of social and cultural interests to prepare students for further study in a variety of fields.

The Associate of Arts, English is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester **Units:** 14-19

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
XXXX-XXXX Historical Study course *		3
COLS 1100	First Year Experience Seminar	1
XXXX-XXXX Foreign Language course series * or AA elective *		4
MATH 1122	Foundations of Quantitative Reasoning	5
OR		
MATH 1123	Quantitative Reasoning	3
OR		
XXXX-XXXX higher level MATH		3
OR		
PHIL 1150	Introduction to Logic	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 17

XXXX-XXXX Foreign Language course series * or AA elective *	4
XXXX-XXXX Intermediate Composition course *	3
XXXX-XXXX Natural Science course, with lab *	4
XXXX-XXXX Social & Behavioral Science course *	3
XXXX-XXXX Exploration (Ohio Transfer 36) course *CLAS 1222 Recommended	3

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester.

Third Semester **Units:** 6

Visual/Performing Arts course *	3
XXXX-XXXX Social & Behavioral Science course *	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Fourth Semester **Units:** 13

ENGL 2290	Colonial and U.S. Literature to 1865	3
OR		
ENGL 2291	U.S. Literature 1865 to Present	3
XXXX-XXXX Literature or Creative Writing Elective course *		3
XXXX-XXXX Foreign Language course series * or AA elective *		4
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3

Milestones/Progress Check: Submit Graduation Application. Re-connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit transfer admission application.

Fifth Semester **Units:** 12

ENGL 2201	British Literature Medieval to 1800	3
OR		
ENGL 2202	British Literature 1800 to Present	3
XXXX-XXXX Literature or Creative Writing Elective course *		3
XXXX-XXXX Natural Science course, with no lab *		3
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Literature or Creative Writing Options		**Units:** 0
Literature:		**Units:** 0
ENGL 2201	British Literature Medieval to 1800	3
ENGL 2202	British Literature 1800 to Present	3
ENGL 2220	Introduction to Shakespeare	3
ENGL 2240	Introduction to Science Fiction	3
ENGL 2260	Introduction to Poetry	3
ENGL 2261	Introduction to Fiction	3
ENGL 2270	Introduction to Folklore	3
ENGL 2274	Introduction to Multicultural Literature	3
ENGL 2276	Women in Literature	3
ENGL 2280	The English Bible As Literature	3
ENGL 2281	African American Literature	3
ENGL 2290	Colonial and U.S. Literature to 1865	3
ENGL 2291	U.S. Literature 1865 to Present	3
Creative Writing:		**Units:** 0
ENGL 2215	Magazine Publication I	2
ENGL 2216	Magazine Publication II	2
ENGL 2217	Writing to Publish	3
ENGL 2265	Writing Fiction	3
ENGL 2266	Writing Poetry	3
ENGL 2267	Creative Writing	3
ENGL 2268	Writing Creative Non Fiction	3
		Total: 62-67

AA - Geography

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Geography transfer pathway is the study of Geography – a rich, diverse, and integrative discipline that concerns itself with both the physical environment and the human dimensions of the world. In studying various phenomena within these two realms, geographers seek to not only understand the physical processes that shape the Earth's surface and the behavioral dynamics of human activity (as currently exhibited or over time), but also the spatial patterns of these phenomena as manifested throughout the world, the inter-relationship between people and environments, and the connection between people and places.

The Associate of Arts, Geography is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester		**Units:** 13-18
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
Recommended Course		
MATH 1122	Foundations of Quantitative Reasoning	5
OR		
MATH 1123	Quantitative Reasoning	3
OR		
XXXX-XXXX higher level MATH		3
OR		
PHIL 1150	Introduction to Logic	3
GEOG 2750	World Regional Geography	3
XXXX-XXXX Historical Study course *		3
Milestone/Progress Check: Consult with an Arts and Sciences Academic Advisor early		

on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 13-14

GEOG 2300	Introduction to Physical Geography	3
XXXX-XXXX	Intermediate Composition course *	3
STAT 1350	Elementary Statistics	3
OR		
STAT 1450	The Practice of Statistics	4
Foreign Language course series * or A.A. elective *		4

Milestones/Progress Check: Connect with appropriate University advisor at the CSCC Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester.

Third Semester **Units:** 9

GEOG 2400	Economic & Social Geography	3
GIS 1100	Introduction to GIS	3
XXXX-XXXX	A.A. Elective course *	3

Milestones/Progress Check: Consult with an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.A. degree!

Fourth Semester **Units:** 14

GEOG 1900	Introduction to Weather & Climate	4
XXXX-XXXX	Exploration (Ohio Transfer 36) course *	3
Foreign Language course series * or A.A. Elective *		4
XXXX-XXXX	Social and Behavioral Science course (other than GEOG) *	3

Milestones/Progress Check: Submit Graduation Application. Reconnect with University advisor at the CSCC Transfer Center; visit transfer campus. Submit transfer admission application.

Fifth Semester **Units:** 13

GEOG 2900	Elements of Cartography	3
XXXX-XXXX	Literature, Culture & Ideas, Visual/Performing Arts course *	3
XXXX-XXXX	Exploration (Ohio Transfer 36) course *	3
Foreign Language course series * or A.A. elective *		4

Milestone/Progress Check: Ready for Graduation!!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 62-68

AA - Health Communication

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Health Communication transfer pathway is intended to provide students with the first two years of a bachelor's degree in Health Communication. This plan was designed to align with a Bachelor of Arts degree in Health Communication at Otterbein University and can also be transferred to other college and universities. A degree in Health Communication prepares students for opportunities in the growing field of communications in health care and other fields of human services. It opens possible careers in hospital care, marketing and advertising, public relations, lobbying, education, health departments, and other health-related organizations.

First Semester **Units:** 13-18

COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
MATH 1122	Foundations of Quantitative Reasoning	5
OR		
MATH 1123	Quantitative Reasoning	3
OR		
MATH 1130	Business Algebra	5
XXXX-XXXX Historical Study course * Recommended HIST 1181 World Civilization I to 1500 or HIST 1182 World Civilization II since 1500		3
XXXX-XXXX Social and Behavioral Science course *		3
Milestone/Progress Check: Consult with an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.		

Second semester **Units:** 14

XXXX-XXXX Intermediate Composition course * Recommended ENGL 2767 Composition II: Writing about Science & Technology		3
XXXX-XXXX Foreign language course series *		4
XXXX-XXXX Natural Science course, with lab * Recommended BIO 1127 Intro to Environmental Science		4
COMM 1105	Oral Communication	3
Milestones/Progress Check: Connect with appropriate University advisor at the CSCC Transfer Center; visit transfer campus. Apply for eligible major scholarships for next autumn semester.		

Summer Semester **Units:** 6

COMM 1100	Introduction to Communication Theory	3
XXXX-XXXX Literature or Visual/Performing Arts course * Recommended ENGL 2274, 2276, 2280, 2281, HUM 1100 or HUM 1160		3
Milestones/Progress Check: Consult with an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to AA degree!		

Fourth Semester **Units:** 13-15

COMM 2232	Interpersonal Communication	3
XXXX-XXXX Natural Science course, no lab * Recommended CHEM 1100 Chemistry and Society		3-5
XXXX-XXXX Foreign Language series *		4
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
Milestones/Progress Check: Submit Graduation Application. Re-connect with appropriate University advisor at the CSCC Transfer Center; visit transfer campus. Submit transfer admission application.		

Fifth Semester **Units:** 15

COMM 2268	Intercultural Communication	3
PHIL 1130	Ethics	3
OR		
PHIL 2270	Philosophy of Religion	3
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
XXXX-XXXX Social and Behavioral Science course *		3
Milestone/Progress Check: Ready for Graduation!!		
XXXX-XXXX A.A. Elective *		3

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 61-68

AA - History

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the

Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, History transfer pathway includes the opportunity to study history from a variety of regions and time periods, analyzing history through social, cultural, political, economic and philosophical perspectives.

The Associate of Arts, History is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester **Units:** 14-19

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
HIST 1111	European History to 1648	3
COLS 1100	First Year Experience Seminar	1
XXXX-XXXX Foreign Language course series * or AA elective *		4
MATH 1122	Foundations of Quantitative Reasoning	5
OR		
MATH 1123	Quantitative Reasoning	3
OR		
XXXX-XXXX higher level MATH		3
OR		
PHIL 1150	Introduction to Logic	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 13

HIST 1112	European History Since 1648	3
XXXX-XXXX Intermediate Composition course *		3
STAT 1350	Elementary Statistics	3
OR		
XXXX-XXXX AA elective *		3
XXXX-XXXX Foreign Language course series * or AA elective *		4

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester.

Third Semester **Units:** 7

XXXX-XXXX Visual/Performing Arts course *		3
XXXX-XXXX Social & Behavioral Science course *		3
ASC 1190	Critical Thinking in Arts & Sciences	1

Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Passed the halfway point to A.A. degree!

Fourth Semester **Units:** 14

HIST 1151	American History to 1877	3
XXXX-XXXX Foreign Language course series * or AA elective *		4
XXXX-XXXX Exploration (Ohio Transfer 36) Course *		3
XXXX-XXXX Natural Science course, with lab*		4

Milestones/Progress Check: Submit Graduation Application. Reconnect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit transfer admission application.

Fifth Semester **Units:** 13

XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
XXXX-XXXX Social & Behavioral Science course *		3
XXXX-XXXX Natural Science course, with lab *		4
HIST 1152	American History Since 1877	3

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 61-66

AA - Human Development and Family Science

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Human Development and Family Science transfer pathway provides the first two years of a bachelor's degree focused on the history, theories and latest research on child, family and human development across a lifespan.

First Semester **Units:** 10-16

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
MATH-XXXX MATH 1120 or Higher (MATH 1122 or MATH 1123 Preferred)		
OR		
PHIL 1150	Introduction to Logic	3
COLS 1100	First Year Experience Seminar	1
XXXX-XXXX Historical Study course *		3
Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.		
PSY 1100	Introduction to Psychology	3

Second Semester **Units:** 12

XXXX-XXXX Intermediate Composition course * ENGL 2567 Writing about Gender and Identity (recommended)		3
PSY 2261	Child Development	3
HNTR 1153	Nutrition for a Healthy Lifestyle	3
PHIL 1150	Introduction to Logic	3
OR		
XXXX-XXXX AA elective *		3
Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for eligible major scholarships for next AU term.		

Third Semester **Units:** 9

XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
XXXX-XXXX Literature, Culture & Ideas, Visual/Performing Arts course *		3
SOC 1101	Introduction to Sociology	3
OR		
SOC 1500	Intro to Rural Sociology	3
Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.A. degree!		

Fourth Semester **Units:** 13-15

PSY 2551	Adolescent Psychology	3
XXXX-XXXX Natural Science course, with lab *		4-5
STAT 1350	Elementary Statistics	3
OR		
STAT 1450	The Practice of Statistics	4
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
Milestones/Progress Check: Reconnect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit Graduation Application.		

Fifth Semester **Units:** 13

EDUC 2210	Introduction to Education	3
SOC 2330	Marriage and Family Relations	3
XXXX-XXXX Natural Science course, no lab *		3
XXXX-XXXX AA Elective *		3

ASC 1190	Critical Thinking in Arts & Sciences	1

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 57-65

AA - Humanities

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Humanities transfer pathway includes the study of the arts, history, and philosophy, together with a full range of critical thought about these subjects.

First Semester **Units:** 13-18

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
COLS 1100	First Year Experience Seminar	1
MATH 1122	Foundations of Quantitative Reasoning	5
OR		
MATH 1123	Quantitative Reasoning	3
OR		
XXXX-XXXX higher level MATH		3
OR		
PHIL 1150	Introduction to Logic	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 12

HUM 1100	Introduction to Humanities	3
XXXX-XXXX Historical Study course *		3
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
XXXX-XXXX Intermediate Composition *		3

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for eligible major scholarships for next AU term.

Third Semester **Units:** 10

XXXX-XXXX Literature, Culture & Ideas course *	3
OR	
XXXX-XXXX Visual/Performing Arts course *	3
XXXX-XXXX Social & Behavioral Science course *	3
XXXX-XXXX Foreign Language course series * or AA elective *	4

Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.A. degree!

Fourth Semester **Units:** 13

XXXX-XXXX Exploration (Ohio Transfer 36) course *	3
XXXX-XXXX Natural Science course, no lab *	3
XXXX-XXXX Literature *	3
OR	
XXXX-XXXX Culture & Ideas course *	3
XXXX-XXXX Foreign Language course series * or AA elective *	4

Milestones/Progress Check: Reconnect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit Graduation Application.	

Fifth Semester **Units:** 14

XXXX-XXXX Literature, Culture & Ideas, Visual/Performing Arts or Historical Study	3
XXXX-XXXX Social & Behavioral Science course *	3
XXXX-XXXX Natural Science course, with lab *	4
XXXX-XXXX Foreign Language course series * or AA elective *	4
Milestone/Progress Check: Ready for Graduation!	

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 62-67

AA - International Studies

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, International Studies transfer pathway includes instruction that focuses on various regions of the world and topics of concern to the global community, providing the first two years of a bachelor's degree designed to produce informed leaders and practitioners on world issues, promote proficiency in a foreign language, and prepare students with advanced writing, critical-thinking, and public-speaking skills.

First Semester **Units:** 13-18

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
ECON 2200	Principles of Microeconomics	3
COLS 1100	First Year Experience Seminar	1
XXXX-XXXX Historical Study course *		3
MATH 1122	Foundations of Quantitative Reasoning	5
OR		
MATH 1123	Quantitative Reasoning	3
OR		
XXXX-XXXX higher level MATH		3
OR		
PHIL 1150	Introduction to Logic	3
Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.		

Second Semester **Units:** 13

ECON 2201	Principles of Macroeconomics	3
XXXX-XXXX Foreign Language course series * or AA elective *		4
XXXX-XXXX Intermediate Composition course *		3
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester.		

Third Semester **Units:** 9

ANTH 2202	Peoples & Culture	3
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
XXXX-XXXX AA Elective *		3
Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to		

help you select courses required by your transfer institution of choice. Beyond the halfway point to A.A. degree!

Fourth Semester **Units:** 14

GEOG 2400	Economic & Social Geography	3
XXXX-XXXX	Natural Science course, with lab *	4
XXXX-XXXX	Foreign Language course series * or AA elective *	4
XXXX-XXXX	Literature, Cultures & Ideas, Visual/Performing Arts course *	3

Milestones/Progress Check: Submit Graduation Application. Reconnect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit transfer admission application.

Fifth Semester **Units:** 13

POLS 1300	International Relations	3
XXXX-XXXX	Foreign Language course series * or AA elective *	4
XXXX-XXXX	Natural Science course, no lab *	3
XXXX-XXXX	AA Elective *	3

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 62-67

AA - Philosophy

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Philosophy transfer major includes the reflective study of core texts and ideas developed over 2,500 years of philosophical tradition, linking philosophical thinking and human excellence to a better society.

The Associate of Arts, Philosophy is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester **Units:** 13-16

PHIL 1150	Introduction to Logic	3
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
XXXX-XXXX	Social & Behavioral Science course *	3
XXXX-XXXX	Historical Study course *	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 13

PHIL 1101	Intro to Philosophy	3
XXXX-XXXX	Exploration (Ohio Transfer 36) course *	3
XXXX-XXXX	Intermediate Composition course *	3
XXXX-XXXX	Foreign Language course series * or AA elective *	4

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for eligible major scholarships for next AU term.

Third Semester **Units:** 10

XXXX-XXXX	Social & Behavioral Science course *	3
XXXX-XXXX	Natural Science, no lab *	3
XXXX-XXXX	Foreign Language course series * or AA elective *	4

Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.A. degree!

Fourth Semester **Units:** 13

PHIL 1130	Ethics	3
XXXX-XXXX	Literature, Culture & Ideas, Visual/Performing Arts course *	3
XXXX-XXXX	Exploration (Ohio Transfer 36) course *	3
XXXX-XXXX	Foreign Language course series * or AA elective *	4

Milestones/Progress Check: Re-connect with appropriate advisor at the Columbus State Transfer Center; visit transfer campus. Submit Graduation Application.

Fifth Semester **Units:** 13

PHIL 2270	Philosophy of Religion	3
XXXX-XXXX	Natural Science, with lab *	4
XXXX-XXXX	Exploration (Ohio Transfer 36) course *	3
PHIL 2250	Symbolic Logic	3

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 62-65

AA - Political Science

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Political Science transfer major includes the study of political institutions, power, principles, organizations, methods of government, the public-policy making process and human political behavior: what people think about political issues, their political ideologies, how they act, and why they vote and participate in the political process.

First Semester **Units:** 13-17

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition 1W: Composition Workshop	3
HIST 1151	American History to 1877	3
OR		
HIST 1152	American History Since 1877	3
POLS 1100	Introduction to American Government	3
MATH 1122	Foundations of Quantitative Reasoning	5
OR		
COLS 1100	First Year Experience Seminar	1
MATH 1123	Quantitative Reasoning	3
OR		
XXXX-XXXX	higher level MATH	3
OR		
PHIL 1150	Introduction to Logic	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 16-20

POLS 1200	Comparative Politics	3
XXXX-XXXX	Foreign Language course series * or AA elective *	4

XXXX-XXXX Intermediate Composition course *		3
STAT 1350	Elementary Statistics	3
OR		
STAT 1450	The Practice of Statistics	4
OR		
XXXX-XXXX AA elective course *		3
ECON 2200	Principles of Microeconomics	3
OR		
ENGL 2268	Writing Creative Non Fiction	3
OR		
Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester. Halfway point to A.A. degree!		
XXXX-XXXX AA elective course *		3

Third Semester **Units:** 6

XXXX-XXXX Exploration (Ohio Transfer 36) course * (THEA 1100 recommended)		3
ANTH 2200	Introduction to Biological Anthropology	3
OR		
XXXX-XXXX Natural Science course, no lab *		3
Milestone/Progress Check: Consult with and Arts and Sciences Completion Advisor for suggestions for transfer institution of choice.		

Fourth Semester **Units:** 13

POLS 1300	International Relations	3
SOC 1101	Introduction to Sociology	3
OR		
XXXX-XXXX Social & Behavioral Science course *		3
XXXX-XXXX Foreign Language course series * or AA elective *		4
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
Milestones/Progress Check: Submit Graduation Application. Re-connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit transfer admission application.		

Fifth Semester **Units:** 14

POLS 1250	State & Local Government	3
XXXX-XXXX Foreign Language course series * or AA elective *		4
BIO 1111	Intro to Biology	4
OR		
XXXX-XXXX Natural Science course, with lab *		4
XXXX-XXXX Literature, Culture & Ideas, Visual/Performing Arts course *		3
Milestone/Progress Check: Ready for Graduation!		

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 62-70

AA - Psychology

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Psychology transfer pathway includes the study of behavior and mental processes. The field of psychology helps us understand who we are, what we think, how we feel, and why we behave the way we do. Coursework is available in the many sub- fields of psychology, including abnormal, developmental, social, and personality.

The Associate of Arts, Psychology is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester **Units:** 14-17

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
XXXX-XXXX	Historical Study course *	3
COLS 1100	First Year Experience Seminar	1
PSY 1100	Introduction to Psychology	3
MATH 1146	College Algebra Plus	4
OR		
MATH 1148	College Algebra	4
OR		
STAT 1450	The Practice of Statistics	4

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 16

PSY 2325	Social Psychology	3
PSY 2530	Psychology of Personality	3
XXXX-XXXX	Foreign Language course series * or AA elective *	4
XXXX-XXXX	Intermediate Composition course *	3
XXXX-XXXX	Natural Science course, no lab *	3

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester. Halfway point to A.A. degree!

Third Semester **Units:** 6

XXXX-XXXX	Exploration (Ohio Transfer 36) course *	3
XXXX-XXXX	Social & Behavioral Science course (other than PSY) *	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Fourth Semester **Units:** 12

PSY 2331	Psychopathology	3
XXXX-XXXX	Natural Science course, with lab *	4
XXXX-XXXX	Foreign Language course series * or AA elective *	4
ASC 1190	Critical Thinking in Arts & Sciences	1

Milestones/Progress Check: Submit Graduation Application. Re-connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit transfer admission application.

Fifth Semester **Units:** 13

PSY 2261	Child Development	3
OR		
PSY 2340	Human Growth and Development Over the Life Span	3
OR		
PSY 2551	Adolescent Psychology	3
XXXX-XXXX	Foreign Language course series * or AA elective *	4
XXXX-XXXX	Exploration (Ohio Transfer 36) course *	3
XXXX-XXXX	Literature, Culture & Ideas, Visual/Performing Arts course *	3

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 61-64

AA - Religious Studies

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Religious Studies transfer pathway includes the reflective study of history, practices, ideas,

core texts, spirituality, and moral norms developed by diverse cultures over 3,000 years in search of the Sacred.

First Semester **Units:** 13-18

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
CLAS 1222	Classical Mythology	3
XXXX-XXXX Historical Study course *		3
COLS 1100	First Year Experience Seminar	1
MATH 1122	Foundations of Quantitative Reasoning	5
OR		
MATH 1123	Quantitative Reasoning	3
OR		
XXXX-XXXX higher level MATH		3
OR		
PHIL 1150	Introduction to Logic	3
Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.		

Second Semester **Units:** 12

HUM 1270	Comparative Religions	3
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
ANTH 2202	Peoples & Culture	3
XXXX-XXXX Intermediate Composition course *		3
Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for scholarships for next AU term.		

Third Semester **Units:** 10

ENGL 2280	The English Bible As Literature	3
XXXX-XXXX Social & Behavioral Science course *		3
XXXX-XXXX Foreign Language course series * or AA elective *		4
Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.A. degree!		

Fourth Semester **Units:** 13

PHIL 1101	Intro to Philosophy	3
OR		
PHIL 1130	Ethics	3
OR		
PHIL 1150	Introduction to Logic	3
XXXX-XXXX Natural Science course, no lab *		3
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
XXXX-XXXX Foreign Language course series * or AA elective *		4
Milestones/Progress Check: Re-connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit Graduation Application.		

Fifth Semester **Units:** 14

PHIL 2270	Philosophy of Religion	3
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
XXXX-XXXX Natural Science course, with lab *		4
XXXX-XXXX Foreign Language course series * or AA elective *		4
Milestone/Progress Check: Ready for Graduation!		

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 62-67

AA - Social Work

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Social Work transfer pathway is intended to provide students with the first two years of a Bachelor of Science in Social Work degree.In addition to general education requirements, the Social Work transfer major includes introductory coursework in psychology, sociology, social work/mental health, and social welfare and policy. Additional education after the Associate degree is required since the completion of a bachelor's degree in social work is one of the qualifications to become a Licensed Social Worker (LSW).

The Associate of Arts, Social Work is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester		**Units:** 13-18
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
SAHS 1111	Introduction Social Work & Mental Health	3
PSY 1100	Introduction to Psychology	3
MATH 1122	Foundations of Quantitative Reasoning	5
OR		
MATH 1123	Quantitative Reasoning	3
OR		
XXXX-XXXX higher level MATH		3
OR		
PHIL 1150	Introduction to Logic	3
Milestone/Progress Check: Consult with an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.		

Second Semester		**Units:** 16-17
SAHS 2251	Social Welfare & Policy	3
XXXX-XXXX Intermediate Composition course *		3
PSY 2340	Human Growth and Development Over the Life Span	3
STAT 1350	Elementary Statistics	3
OR		
STAT 1450	The Practice of Statistics	4
OR		
XXXX-XXXX A.A. Elective course *		3-4
BIO 1107	Human Biology	4
OR		
XXXX-XXXX Natural Science course (with lab)		4
Milestones/Progress Check: Connect with appropriate University advisor at the CSCC Transfer Center; visit transfer campus. Apply for eligible major scholarships for next autumn semester.		

Third Semester		**Units:** 6
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
SOC 1101	Introduction to Sociology	3
Milestones/Progress Check: Consult with an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.A. degree!		

Fourth Semester		**Units:** 15
SOC 2330	Marriage and Family Relations	3
XXXX-XXXX Historical Study course *		3
XXXX-XXXX Natural Science course, no lab *		3
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
Milestones/Progress Check: Submit Graduation Application. Re-connect with appropriate University advisor at the CSCC Transfer Center; visit transfer campus. Submit transfer admission application.		

XXXX-XXXX A.A. Elective *		3

Fifth Semester **Units:** 12

SOC 2202	Social Problems	3
POLS 1100	Introduction to American Government	3
XXXX-XXXX Literature, Culture & Ideas, or Visual/Performing Arts course *		3
COMM 1105	Oral Communication	3
OR		
XXXX-XXXX A.A. Elective course *		3

Milestone/Progress Check: Ready for Graduation!!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 62-68

AA - Sociology

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Sociology transfer pathway includes coursework in the scientific study of society, with a focus on human interaction which occurs between two or more individuals, groups, or institutions. Topics such as conformity and deviance; crime; delinquency; racial, ethnic, and gender relations; the implications of social class; marriage and family life; education, religion, the health care system; the law and the legal system; and economic, political, and social change are addressed.

The Associate of Arts, Sociology is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester **Units:** 13-18

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
COLS 1100	First Year Experience Seminar	1
SOC 1101	Introduction to Sociology	3
MATH 1122	Foundations of Quantitative Reasoning	5
OR		
MATH 1123	Quantitative Reasoning	3
OR		
XXXX-XXXX higher level MATH		3
OR		
PHIL 1150	Introduction to Logic	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 15

SOC 2210	Sociology of Deviance	3
XXXX-XXXX Foreign Language course series * or AA elective *		4
XXXX-XXXX Intermediate Composition course *		3
ASC 1190	Critical Thinking in Arts & Sciences	1
XXXX-XXXX Natural Science course, with lab *		4

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit

transfer campus. Apply for scholarships for next autumn semester.

Third Semester **Units:** 6

XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
XXXX-XXXX Social & Behavioral Science course (other than SOC course) *		3
Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.A. degree!		

Fourth Semester **Units:** 16-17

SOC 2380	American Race & Ethnic Relations	3
XXXX-XXXX Natural Science course, no lab *		3
XXXX-XXXX Foreign Language course series * or AA elective *		4
SOC 2330	Marriage and Family Relations	3
STAT 1350	Elementary Statistics	3
OR		
STAT 1450	The Practice of Statistics	4
OR		
XXXX-XXXX AA Elective course *		3
Milestones/Progress Check: Submit Graduation Application. Re-connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit transfer admission application.		

Fifth Semester **Units:** 13

SOC 2202	Social Problems	3
XXXX-XXXX Foreign Language course series * or AA elective *		4
XXXX-XXXX Historical Study course *		3
XXXX-XXXX Literature, Culture & Ideas, Visual/Performing Arts course *		3
Milestone/Progress Check: Ready for Graduation!		

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 63-69

AA - Spanish

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Spanish transfer pathway is intended to provide students with the first two years of a college Spanish education through the Intermediate Spanish level. It offers students a strong foundation in communications skills as well as cultural competencies that are needed when building citizenship in a globalized world. Content-based courses and a critical cultural perspective pave the way for future academic success in the field.

Students with knowledge of the Spanish language can take a Spanish placement test at Columbus State to determine where to start in our sequence of classes. To graduate with the Associate of Arts, Spanish transfer major, students must complete Intermediate Spanish (SPAN 1103) at Columbus State, even if placement shows a higher level of proficiency.

First Semester **Units:** 14-19

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
XXXX-XXXX Historical Study course *		3
COLS 1100	First Year Experience Seminar	1
SPAN 1101	Beginning Spanish I	4

MATH 1122	Foundations of Quantitative Reasoning	5
OR		
MATH 1123	Quantitative Reasoning	3
OR		
XXXX-XXXX higher level MATH		3
OR		
PHIL 1150	Introduction to Logic	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 14

SPAN 1102	Beginning Spanish II	4
XXXX-XXXX Intermediate Composition course *		3
STAT 1350	Elementary Statistics	3
XXXX-XXXX Natural Science course, with lab *		4

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for eligible major scholarships for next AU term.

Third Semester **Units:** 7

XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
XXXX-XXXX Social & Behavioral Science course *		3
ASC 1190	Critical Thinking in Arts & Sciences	1

Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.A. degree!

Fourth Semester **Units:** 13

SPAN 1103	Intermediate Spanish	4
XXXX-XXXX Natural Science, no lab *		3
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
XXXX-XXXX AA Elective *		3

Milestones/Progress Check: Re-connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit Graduation Application.

Fifth Semester **Units:** 13

SPAN 1105	Spanish Conversation & Composition	1
XXXX-XXXX Social & Behavioral Science course *		3
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
XXXX-XXXX AA Elective *		3
XXXX-XXXX Literature, Culture & Ideas, Visual/Performing Arts course *		3

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 61-66

AA - Studio Art

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Studio Art transfer pathway guides students in the cultivation of visual communication skills through the creation and analysis of works of art. Emphasis is placed on the creation of a portfolio as it is integral to the application process for most Bachelor of Fine Arts programs.

Learning Outcome(s):

1. 1. Demonstrate a proficiency in observational drawing. This includes a focus on perspective and the visual organization of line, shape, value, texture, and space.

2. 2. Demonstrate a command of the basic principles of color theory, composition, and design in both 2D and 3D surfaces.
3. 3. Employ critical thinking skills to solve visual problems and communicate concepts within a variety of materials and processes.
4. 4. Create and design of a body of original works of art.
5. 5. Demonstrate written and oral communication skills, critical and creative thinking skills, and visual literacy skills by objectively analyzing and critiquing works of art in formal, cultural, historical, and iconographic contexts.
6. 6. Curate original works of art into a portfolio.
7. 7. Learn how to prepare and launch an art exhibition.
8. 8. Understand the practices and methods of marketing and promoting one's art and oneself as an artist. This includes the creation of an artist's statement and a Curriculum Vitae.

First Semester **Units:** 13-18

ART 1205	Beginning Drawing	3
HART 1201	Ancient and Medieval Art Histories	3
ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
MATH 1122	Foundations of Quantitative Reasoning	5
OR		
MATH 1123	Quantitative Reasoning	3
OR		
XXXX-XXXX higher level MATH		3
OR		
PHIL 1150	Introduction to Logic	3
COLS 1100	First Year Experience Seminar	1

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 12

ART 1206	Two-Dimensional Design	3
HART 1202	Renaissance to Contemporary Art Histories	3
ART 2221	Life Drawing	3
XXXX-XXXX Intermediate Composition *		3

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for eligible major scholarships for next AU term.

Third Semester **Units:** 9

ART 2275	Beginning Painting	3
XXXX-XXXX Natural Science, no lab *		3
XXXX-XXXX Social & Behavioral Science course *		3

Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.A. degree!

Fourth Semester **Units:** 13

COMM 1105	Oral Communication	3
XXXX-XXXX Natural Science, with lab *		4
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
XXXX-XXXX Historical Study course *		3

Milestones/Progress Check: Re-connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit Graduation Application.

Fifth Semester **Units:** 15

ART 1207	Three-Dimensional Design	3
ART 2230	Color Theory	3
ART 2295	Portfolio Development and Exhibition	3
XXXX-XXXX Social & Behavioral Science course *		3
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 62-67

AA - Theatre

The Associate of Arts degree is designed to satisfy the first two years of a bachelor's degree in majors that don't require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Arts degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Arts, Theatre transfer pathway includes instruction in theatre history, analysis and criticism, performance and technical fundamentals, physical and vocal techniques for the stage, and practical application through performance and design practicums.

First Semester **Units:** 13-18

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
THEA 2280	Fundamentals of Acting	3
XXXX-XXXX Social & Behavioral Science (PSY 1100 recommended)		3
COLS 1100	First Year Experience Seminar	1
MATH 1122	Foundations of Quantitative Reasoning	5
OR		
MATH 1123	Quantitative Reasoning	3
OR		
XXXX-XXXX higher level MATH		3
OR		
PHIL 1150	Introduction to Logic	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 13

THEA 1100	Introduction to Theatre	3
XXXX-XXXX Intermediate Composition course * (ENGL 2567 Gender and Identity recommended)		3
XXXX-XXXX Foreign Language course series * or AA elective *		4
XXXX-XXXX Social & Behavioral Science (SOC 1101 or ANTH 2202 recommended)		3

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for eligible major scholarships for next AU term.

Third Semester **Units:** 6

HIST 1111	European History to 1648	3
OR		
HIST 1151	American History to 1877	3
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3

Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.A. degree!

Fourth Semester **Units:** 17

THEA 1180	Theatre Practicum	3
XXXX-XXXX Foreign Language course series * or AA elective *		4
Theatre Elective, select from: THEA 1115 or THEA 2215 or THEA 2281		3
XXXX-XXXX Exploration (Ohio Transfer 36) course *		3
BIO 1107	Human Biology	4

Milestones/Progress Check: Re-connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit Graduation Application.

Fifth Semester **Units:** 15

Theatre Elective, select from: THEA 1115 or THEA 2215 or THEA 2281		3
XXXX-XXXX Foreign Language course series * or AA elective *		4
XXXX-XXXX Natural Science, no lab * (ASTR 1141 Life in the Universe recommended)		3
THEA 2230	Intro Dramatic Literature	3
THEA 2205	Technical Production Practicum	2

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 64-69

Associate of Science - AS Degree

The Associate of Science degree is designed to satisfy the first two years of a bachelor's degree in majors that require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Science degree program at Columbus State to transfer and apply to a bachelor's degree.

Associate of Science Degree Graduation Requirements:

1. All students must satisfactorily complete at least 61 credit hours of approved courses, a minimum of 20 hours of which must be completed at Columbus State. Approved courses are designated below. Satisfactory completion requires a final grade of A, B, C, or D. Transfer credit may be awarded for courses in which a "C" or better has been earned at other accredited institutions, or a "D" or better from public Ohio institutions, if the course level equivalencies have been approved
by the Dean of Arts and Sciences. Courses listed in the "Ohio Transfer 36" or "Transfer Assurance Guides" of an Ohio college have been pre-approved for credit toward a Columbus State degree. Credits by examination, proficiency credit, non-traditional credit, and transfer credit do not apply toward meeting residency credit hour requirements.

2. All students must attain an overall grade point average of 2.0 or better for all college level courses completed at Columbus State. Grade point averages are calculated on the following scale: A=4, B=3, C=2, D=1, E=0. Number equivalencies are not assigned for grades other than these.

3. All students must complete the following 30 hours of General Education Requirements, as well as 31 hours of additional coursework as specified on the following pages.

4. All students must file a completed "Petition to Graduate" form with the Office of the Registrar by the published deadline date for the intended semester of graduation.

Resources for Success:

1. Arts and Sciences Advising
Aquinas Hall, Room 116
For walk-in hours and online appointment scheduling, visit www.cscc.edu/services/advising/asadvisors.shtml.

2. Degree Audit (available through CougarWeb)
This online tool helps students monitor progress toward degree completion. The Degree Audit contains the following information: courses in progress, courses completed, courses transferred from another college, courses needed, number of credits completed, number of credits needed, and grade point average.

3. Transferology, www.transferology.com
This free, web-based resource allows transfer students to plan the best path to achieving academic and career goals based
on reliable transfer information provided by participating Transferology colleges and universities. Set up a free account and find out how Columbus State courses transfer and apply to programs at select colleges and universities.

Associate of Science Degree Requirements

PLEASE NOTE: Students are responsible for knowing and following all prerequisites. Use the CSCC catalog to identify prerequisites for all courses. Self selection of courses or other changes to the approved degree program could adversely affect graduation, transfer to a 4-year institution and financial aid.

+ indicates Ohio Transfer 36 Module (OT 36) course
^ indicates Transfer Assurance Guide (TAG) course
See last page for OT 36/TAG explanation.

First Year Experience **Units:** 1

COLS 1100	First Year Experience Seminar	1

OR		
COLS 1101	College Success Skills	1

English (Ohio Transfer 36) **Units:** 3

Take one, based on placement:

ENGL 1100	Composition I+	3
OR		
ENGL 1101	Composition 1W: Composition Workshop+	3

Intermediate Composition **Units:** 3

Choose one:

ENGL 2367	Composition II+	3
OR		
ENGL 2567	Comp II Writing about Gender & Identity+	3
OR		
ENGL 2667	Comp II American Working-Class Identity+	3
OR		
ENGL 2767	Comp II Writing About Science/Technology+	3

Social & Behavioral Sciences (Ohio Transfer 36) **Units:** 6

Choose courses from two different subjects:

Anthropology **Units:** 0

ANTH 2201	World Prehistory+ ^	3
ANTH 2202	Peoples & Culture+ ^	3

Economics **Units:** 0

ECON 1110	Intro to Economics+	3
ECON 2200	Principles of Microeconomics+ ^	3
ECON 2201	Principles of Macroeconomics+ ^	3

Geography **Units:** 0

GEOG 2400	Economic & Social Geography+ ^	3
GEOG 2750	World Regional Geography+ ^	3

Political Science **Units:** 0

POLS 1100	Introduction to American Government+ ^	3
POLS 1200	Comparative Politics+ ^	3
POLS 1250	State & Local Government+ ^	3
POLS 1300	International Relations+ ^	3

Psychology **Units:** 0

PSY 1100	Introduction to Psychology+ ^	3
PSY 2200	Educational Psychology+ ^	3
PSY 2261	Child Development+ ^	3
PSY 2325	Social Psychology+ ^	3
PSY 2331	Psychopathology+ ^	3
PSY 2340	Human Growth and Development Over the Life Span+ ^	3
PSY 2551	Adolescent Psychology+ ^	3

Sociology **Units:** 0

SOC 1101	Introduction to Sociology+ ^	3
OR		
SOC 1500	Intro to Rural Sociology+	3
SOC 2202	Social Problems+ ^	3
SOC 2210	Sociology of Deviance+ ^	3
SOC 2309	Law and Society+	3
SOC 2330	Marriage and Family Relations+ ^	3
SOC 2380	American Race & Ethnic Relations+ ^	3
SOC 2410	Criminology+ ^	3

Historical Study (Ohio Transfer 36) **Units:** 3

HIST 1111	European History to 1648+ ^	3
HIST 1112	European History Since 1648+ ^	3
HIST 1151	American History to 1877+ ^	3
HIST 1152	American History Since 1877+ ^	3
HIST 1181	World Civ I Non Western to 1500+	3
HIST 1182	World Civ II Non Western Since 1500+	3
HIST 2223	African-American History I Before 1877+	3
HIST 2224	African-Amer History II Since 1877+	3
HIST 2715	History of Western Medicine, Disease and Public Health I+	3

HIST 2716	History of Western Medicine, Disease and Public Health II+	3

Literature, Cultures & Ideas, Visual/Performing Arts (Ohio Transfer 36) **Units:** 3

Choose one course from the following:

Literature **Units:** 0

CLAS 1222	Classical Mythology+	3
ENGL 2201	British Literature Medieval to 1800+ ^	3
ENGL 2202	British Literature 1800 to Present+ ^	3
ENGL 2220	Introduction to Shakespeare+	3
ENGL 2240	Introduction to Science Fiction+	3
ENGL 2260	Introduction to Poetry+	3
ENGL 2274	Introduction to Multicultural Literature+	3
ENGL 2276	Women in Literature+	3
ENGL 2280	The English Bible As Literature+	3
ENGL 2281	African American Literature+	3
ENGL 2290	Colonial and U.S. Literature to 1865+ ^	3
ENGL 2291	U.S. Literature 1865 to Present+ ^	3
HUM 1100	Introduction to Humanities+	3
THEA 2230	Intro Dramatic Literature+	3

Cultures & Ideas **Units:** 0

CLAS 1224	Classical Civilization: Greece+	3
CLAS 1225	Classical Civilization: Rome+	3
CLAS 1226	Classical Civilization: Byzantium+	3
ENGL 2270	Introduction to Folklore+	3
HUM 1270	Comparative Religions+	3
PHIL 1101	Intro to Philosophy+ ^	3
PHIL 1130	Ethics+ ^	3
PHIL 2270	Philosophy of Religion+	3

Visual/Performing Arts **Units:** 0

HART 1201	Ancient and Medieval Art Histories + ^	3
HART 1202	Renaissance to Contemporary Art Histories + ^	3
HART 1260	World Cinema+	3
HUM 1100	Introduction to Humanities+	3
HUM 1160	Music & Art Since 1945+	3
MUS 1251	Survey of Music History+	3
THEA 1100	Introduction to Theatre+	3

Mathematics/Statistics **Units:** 4

Choose One

Mathematics (Ohio Transfer 36) **Units:** 0

MATH 1151	Calculus I+	5

Statistics **Units:** 0

STAT 1450	The Practice of Statistics+	4

Natural Sciences (Ohio Transfer 36) **Units:** 10

Two courses must have a lab (N = no lab)

Biological Sciences **Units:** 0

ANTH 2200	Introduction to Biological AnthropologyN + ^	3
BIO 1113	Biological Sciences I+ ^	4
BIO 1114	Biological Sciences II+ ^	4
BIO 1127	Introduction to Environmental Science+	4
BIO 2215	Introduction to Microbiology+	4
BIO 2301	Human Physiology+	4

Physical Sciences **Units:** 0

CHEM 1111	Elementary Chemistry I+	4
CHEM 1112	Elementary Chemistry II+	4
CHEM 1171	General Chemistry I+ ^	5
CHEM 1172	General Chemistry II+ ^	5
CHEM 1200	Intro to General & Organic Chemistry+	5
GEOG 1900	Introduction to Weather & Climate+	4
GEOL 1121	Physical Geology+ ^	4
GEOL 1122	Historical Geology+ ^	4
PHYS 1200	Algebra-Based Physics I+ ^	5
PHYS 1201	Algebra-Based Physics II+ ^	5
PHYS 1250	Calculus-Based Physics I+ ^	5
PHYS 1251	Calculus-Based Phys II+ ^	5

Additional Math or Science (Ohio Transfer 36) **Units:** 4

Take one additional course Choose from previously listed Ohio Transfer 36 (+) courses in the following subjects: Biology (BIO) Chemistry (CHEM) Geology (GEOL) Math (MATH) Physics (PHYS) Statistics (STAT) Or one of the following:

Biological Sciences **Units:** 0

BIO 1107	Human Biology[+]	4
BIO 1111	Intro to Biology[+]	4
BIO 1125	Plant Biology[+]	4
BIO 2300	Human Anatomy[+]	4

Physical Sciences **Units:** 0

CHEM 1113	Elements of Organic/ Biochemistry[+]	4
GEOL 1101	Introduction to Earth Science[+]	4

Additional Requirements to Complete Degree **Units:** 24

To complete the Associate of Science degree, take additional credits to meet the 61 semester hours requirement. Choose from the following or additional courses from the previous page. Utilize Degree Audit (accessible through CougarWeb) to determine how many additional credits are needed to achieve the overall 61 semester hours required. If you are uncertain about course selection, consult an Arts and Sciences Advisor for suggestions.
Recommended Elective: ASC 1190 Critical Thinking for Arts & Sciences (1 hr)

Accounting **Units:** 0

ACCT 2211	Cost Accounting[^]	3
ACCT 1212	Managerial Accounting[^]	3

Anthropology **Units:** 0

ANTH 2235	Introduction to Forensic Anthropology	3

Art **Units:** 0

ARCH 2100	History of Architecture[+]	3
ART 1205	Beginning Drawing[^]	3
ART 1206	Two-Dimensional Design[^]	3
ART 1207	Three-Dimensional Design[^]	3
ART 2221	Life Drawing[^]	3
ART 2230	Color Theory	3
ART 2275	Beginning Painting	3

Astronomy **Units:** 0

ASTR 1400	Astronomy Laboratory	1
ASTR 1141	Life in the Universe[N +]	3
ASTR 1161	The Solar System[N +]	3
ASTR 1162	Stars and Galaxies[N +]	3

Biology **Units:** 0

BIO 1101	Fundamentals Human Anatomy & Physiology[N +]	3
BIO 1121	Anatomy and Physiology I	4
BIO 1122	Anatomy & Physiology II	4
BIO2050 - Intro to Biotechnology		4
BIO2216 - Mechanism of Microbial Disease		3
BIO 2302	Human Pathophysiology[+ ^]	3
BIO 2500	General Genetics	3

Business Related **Units:** 0

BMGT 2200	Management & Organizational Behavior	3
FMGT 1101	Personal Finance	3
LEGL 2064	Legal Environment of Business[^]	3
MKTG 1110	Marketing Principles[^]	3
MATH 1130	Business Algebra[+]	5
MATH 1131	Calculus for Business[+]	6
STAT 2430	Business Statistics[+ ^]	4

Chemistry **Units:** 0

CHEM 1100	Chemistry and Society[N]	5
CHEM 2251	Organic Chemistry I[^]	5
CHEM 2252	Organic Chemistry II[^]	5
CHEM 2254	Organic Chemistry Lab I[^]	3
CHEM 2255	Organic Chemistry Lab II[^]	3
CHEM 2261	General Biochemistry	4

Communication **Units:** 0

COMM 1105	Oral Communication[^]	3

COMM 1110	Small Group Communication	3
COMM 1150	Video Art Production	3
COMM 2200	Business Communication^	3
COMM 2201	Intro to Commmunication Theory^	3
COMM 2208	Communications for the Mass Media	3
COMM 2220	Introduction to Mass Communication^	3
COMM 2232	Interpersonal Communication	3
COMM 2241	News Writing & Editing	3
COMM 2245	Introduction to Film	3
COMM 2268	Intercultural Communication	3
LING 2000	Introduction to Linguistics	3

Computer Science **Units:** 0

CSCI 2467	Java Programming I	3

Dance **Units:** 0

DANC 1110	Dance Appreciation	2
DANC 1131	Beginning Jazz I	1
DANC 1132	Beginning Jazz II	1
DANC 1140	Modern Dance I	2
DANC 1201	Classical Ballet I	2
DANC 1202	Classical Ballet II	2
DANC 1203	Beginning Tap I	1
DANC 1204	Beginning Tap II	1

Education **Units:** 0

EDUC 2210	Introduction to Education^	3
EDUC 2220	Educational Technology	3
MATH 1125	Conceptual Mathematics for Teachers I+	5
MATH 1126	Conceptual Mathematics for Teachers II+	5

Engineering **Units:** 0

ENGR 1181	Fundamentals of Engineering I^	3
ENGR 1182	Fundamentals of Engineering II	3
ENGR 2030	Dynamics	4
ENGR 2040	Statics & Intro Mechanics of Materials	4
ENGR 2350	Engineering Thermal Sciences	4

English **Units:** 0

ENGL 2267	Creative Writing	3
ENGL 2215	Magazine Publication I	2
ENGL 2216	Magazine Publication II	2
ENGL 2217	Writing to Publish	3
ENGL 2261	Introduction to Fiction	3
ENGL 2265	Writing Fiction	3
ENGL 2266	Writing Poetry	3
ENGL 2268	Writing Creative Non Fiction	3

Foreign Languages **Units:** 0

ASL 1101	Beginning ASL I	3
ASL 1102	Beginning ASL II	3
ASL 1103	Intermediate American Sign Language I	3
ASL 1104	Intermediate American Sign Language II	2
ARAB 1101	Beginning Arabic I	4
ARAB 1102	Beginning Arabic II	4
CHIN 1101	Beginning Chinese I	4
CHIN 1102	Beginning Chinese II	4
CHIN 1103	Beginning Chinese III	4
FREN 1101	Beginning French I	4
FREN 1102	Beginning French II	4
FREN 1103	Intermediate French	4
GERM 1101	Beginning German I^	4
GERM 1102	Beginning German II^	4
GERM 1103	Intermediate German^	4
ITAL 1101	Beginning Italian I	4
ITAL 1102	Beginning Italian II	4
ITAL 1103	Intermediate Italian	4
JAPN 1101	Beginning Japanese I	4
JAPN 1102	Beginning Japanese II	4
JAPN 1103	Intermediate Japanese	4
LATN 1101	Beginning Latin I	4
LATN 1102	Beginning Latin II	4
LATN 1103	Intermediate Latin	4
SPAN 1101	Beginning Spanish I^	4
SPAN 1102	Beginning Spanish II^	4

SPAN 1103	Intermediate Spanish	4
SPAN 1105	Spanish Conversation & Composition	1

Geography **Units:** 0

GEOG 2300	Introduction to Physical Geography[N + ^]	3
GEOG 2900	Elements of Cartography[^]	3
GIS 1100	Introduction to GIS	3

Geology **Units:** 0

GEOL 1105	Geology and the National Parks[N +]	3
GEOL 1151	Natural Disasters[N +]	3

Mathematics (Pre-Calculus) **Units:** 0

MATH 1120	Precalculus with Review I	5
MATH 1121	Precalculus with Review II	5
MATH 1146	College Algebra Plus[+]	5
MATH 1148	College Algebra[+]	4
MATH 1149	Trigonometry[+]	4
MATH 1150	Precalculus[+]	6

Mathematics/Statistics (STEM Majors) **Units:** 0

MATH 1152	Calculus II[+]	5
MATH 1172	Engineering Mathematics A	5
MATH 2153	Calculus III[+ ^]	5
MATH 2173	Engineering Mathematics B	5
MATH 2174	Linear Algebra & Diff Equations for Eng	5
MATH 2177	Mathematical Topics for Engineering	6
MATH 2255	Elementary Differential Equations[+ ^]	4
MATH 2366	Discrete Math Structures	5
MATH 2415	Ordinary Partial Differential Equations	4
MATH 2568	Elementary Linear Algebra[+ ^]	4
STAT 2450	Introduction to Statistical Analysis	4
STAT 2470	Intro Probability Statistics Eng & Sci[^]	4

Music **Units:** 0

MUS 1101	Introduction to Vocal Techniques I	1
MUS 1102	Introduction to Vocal Techniques II	1
MUS 1103	Class Piano I[^]	2
MUS 1104	Class Piano II[^]	2
MUS 1120	Introduction to Electronic Music	3
MUS 1121	Fundamentals of Music Theory	3
MUS 1122	Beginning Musical Composition	3
MUS 1203	Vocal Ensemble[^]	1
MUS 1204	Concert Band[^]	1
MUS 1205	Small Instrumental Ensemble	1
MUS 1206	Gospel Vocal Ensemble	1
MUS 1208	Electronic Music Ensemble	1
MUS 1221	Musicianship I	4
MUS 1222	Musicianship II	4
MUS1231 - Contemp Jazz Theory		4
MUS1240 - Music History I		3
MUS1241 - Music History II		3
MUS1250 - World Music		3
MUS1252 - History Popular Music		2
MUS1253 - Intro to Jazz		2
MUS 1271	Business of Music	3
MUS 2221	Audio Productions I	3
MUS 2222	Audio Production II	3

Nutrition **Units:** 0

HNTR 1153	Nutrition for a Healthy Lifestyle[^]	3
NUTR 2310	Fund Human Nutrition & Metabolism	3

Other Sciences **Units:** 0

ESSH 1101	Intro to Environ Science, Safety, Health[N+]	3
HORT 1130	Plant Sciences[+]	3

Philosophy **Units:** 0

PHIL 1150	Introduction to Logic	3
PHIL 2250	Symbolic Logic	3

Physics **Units:** 0

PHYS 1103	World of Energy[N +]	3
PHYS 2300	Dynamics of Particles & Waves I	4
PHYS 2301	Dynamics of Particles & Waves II	4

Psychology **Units:** 0

PSY 2245	Children With Exceptionalities[^]	3
PSY 2530	Psychology of Personality[^]	3

Sociology **Units:** 0

SOC 2209	Sociology of Criminal Justice System[^]	3

Speech & Hearing Science **Units:** 0

SHS 2230	Introduction to Communication Disorders	3

Statistics **Units:** 0

STAT 1350	Elementary Statistics	3

Theatre **Units:** 0

THEA 1115	Oral Interpretation	3
THEA 1180	Theatre Practicum[^]	3
THEA 2205	Technical Production Practicum[^]	2
THEA 2210	Technical Production: Stage Lighting	2
THEA 2215	Fund Script Analysis	3
THEA 2231	Literature for Theatre I	3
THEA 2232	Literature for the Theatre II	3
THEA 2280	Fundamentals of Acting[^]	3
THEA 2281	Adv Acting: Styles of Performance	3
THEA 2283	Writing Plays	3

Ohio Transfer 36 (OT36 +) **Units:** 0

The Ohio Transfer 36 represents a body of knowledge and academic skills common across Ohio colleges and universities. Ohio Transfer 36 approved courses are general education courses and are guaranteed to transfer and apply toward related general education subject areas at Ohio's public colleges and universities. Students completing the Associate of Arts or Associate of Science degree have also completed the Ohio Transfer 36. For more information, visit: http://www.ohiohighered.org/Ohio-Transfer-36.

Transfer Assurance Guides (TAG^) **Units:** 0

In addition to completing general education courses at any Ohio public college or university, students can also complete courses in their degree/major that have been pre-identified by the Ohio Board of Regents for transfer. These courses are described in the Transfer Assurance Guides (TAG) for many major/degree programs. TAG courses are guaranteed to transfer and apply directly to the major. For more information, visit: http://www.ohiohighered.org/transfer/tag.

Total: 61

AS - Anthropological Sciences

The Associate of Science degree is designed to satisfy the first two years of a bachelor's degree in majors that require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Science degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Science, Anthropological Science transfer pathway is the study of what makes us human. Anthropologists take a broad approach to understanding the many different aspects of the human experience. They consider the past, what makes up our biological bodies and genetics, comparisons with other animals, and interaction of people in social relationships. When trying to understand economic, health, education, law, and policy issues, they keep in mind what they know about biology, culture, types of communication, and how humans lived in the past.

The Associate of Science, Anthropological Science is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester **Units:** 12-15

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
MATH 1151	Calculus I	5
ANTH 2201	World Prehistory	3
COLS 1100	First Year Experience Seminar	1

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 15

XXXX-XXXX	Intermediate Composition * (ENGL 2767 Writing about Science/Tech recommended)	3
CHEM 1171	General Chemistry I	5
XXXX-XXXX	Foreign Language course series * or AS elective *	4

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for eligible major scholarships for next AU term.

XXXX-XXXX	Historical Study course *	3

Third Semester **Units:** 6

XXXX-XXXX	Social & Behavioral Science course *	3
XXXX-XXXX	Literature or Visual/Performing Arts course *	3

Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.S. degree!

Fourth Semester **Units:** 15

XXXX-XXXX	A.S. Elective *	3
BIO 1113	Biological Sciences I	4
ANTH 2200	Introduction to Biological Anthropology	4
XXXX-XXXX	Foreign Language course series * or AS elective *	4

Milestones/Progress Check: Re-connect with appropriate advisor at the Columbus State Transfer Center; visit transfer campus. Submit Graduation Application.

Fifth Semester **Units:** 14

ANTH 2202	Peoples & Culture	3
BIO 1114	Biological Sciences II	4
XXXX-XXXX	Foreign Language course series * or AS elective *	4
ANTH 2235	Introduction to Forensic Anthropology	3

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 62-65

AS - Biology

The Associate of Science degree is designed to satisfy the first two years of a bachelor's degree in majors that require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Science degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Science, Biology transfer pathway is the study of life and living organisms and is a popular pathway to health professional programs (dentistry, medicine, optometry, occupational therapy, pharmaceutical sciences, pharmacy, physical therapy, veterinary medicine) since some required pre-professional courses are embedded in this major.

The Associate of Science, Biology is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester **Units:** 18-21

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
CHEM 1171	General Chemistry I	5
COLS 1100	First Year Experience Seminar	1
BIO 1113	Biological Sciences I	4
MATH 1151	Calculus I	5

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 12

CHEM 1172	General Chemistry II	5
BIO 1114	Biological Sciences II	4
ENGL 2767	Comp II Writing About Science/Technology	3
OR		
XXXX-XXXX other Intermediate Composition course *		3

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for eligible major scholarships for next AU term. Halfway point to A.S. degree!

Third Semester **Units:** 6

XXXX-XXXX Social & Behavioral Science course *	3
XXXX-XXXX Historical Study course *	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Fourth Semester **Units:** 14

CHEM 2251	Organic Chemistry I	5
CHEM 2254	Organic Chemistry Lab I	3
XXXX-XXXX Literature, Culture & Ideas, Visual/Performing Arts course *		3
XXXX-XXXX Social & Behavioral Science course *		3

Milestones/Progress Check: Submit Graduation Application. Re-connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit transfer admission application.

Fifth Semester **Units:** 12-13

CHEM 2252	Organic Chemistry II	5
CHEM 2255	Organic Chemistry Lab II	3
XXXX-XXXX Science Elective - Choose from BIO 2215, BIO 2300 or PHYS 1200		4-5

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 62-66

AS - Biotechnology

The Associate of Science degree is designed to satisfy the first two years of a bachelor's degree in majors that require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Science degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Science, Biotechnology transfer pathway provides students with the

education and laboratory skills required for entry-level employment as technicians in biotechnology industries. Biotechnology uses biological systems or living organisms to create or modify products intended to improve human health and society.

The Associate of Science, Biotechnology transfer pathway offers a comprehensive curriculum designed to prepare students for entry-level roles in the biotechnology field. Students acquire foundational knowledge in areas such as the historical development of biotechnology, bioethics, safety, and a range of lab techniques, including reagent preparation, cell culture, protein purification, microbiology, molecular biology (DNA), and bioinformatics. As the biotechnology industry expands into sectors like human diagnostics, agriculture, veterinary medicine, food production, and environmental cleanup, graduates are well-positioned for entry-level technician roles in fields such as forensic science, medical science, food science and technology, and bioinformatics.

Program outcomes include the ability to effectively communicate scientific information, mastery of biological principles and biotechnology techniques, proficiency in laboratory skills, and adherence to ethical and professional standards. Students will identify industry sectors and career paths in biotechnology, explain the scientific principles behind modern applications, and demonstrate an understanding of regulations, Good Laboratory Practices (GLP), Good Manufacturing Practices (GMP), and quality documentation. Additionally, students will become proficient in lab techniques like tissue culture and protein purification, maintain and calibrate standard laboratory equipment, perform basic laboratory measurements and statistical analyses, and use computer technology for data analysis and display. Workplace skills such as safety, ethical behavior, teamwork, time management, and effective communication will also be emphasized throughout the program.

Learning Outcome(s):

1. Identify industry sectors and career paths in biotechnology.
2. Explain the scientific principles underpinning modern applications of biotechnology.
3. Demonstrate understanding of the role of regulations, Good Laboratory Practices, Good Manufacturing Practices and Quality practices and documentation in biotechnology.
4. Demonstrate proficiency with current biotechnology laboratory techniques including tissue culture and protein purification.
5. Demonstrate proficiency in using, calibrating, and maintaining standard laboratory equipment.
6. Perform basic laboratory measurements, calculations, and statistical analyses of data.
7. Analyze and display data using computer technology.
8. Demonstrate biotechnology laboratory workplace skills, including safety skills, scientific accountability and ethical behavior, and appropriate workplace behavior.
9. Exhibit appropriate workplace behaviors including teamwork, time management, and effective oral and written communication skills.

First Semester **Units:** 16-19

COLS 1100	First Year Experience Seminar	1
OR		
COLS 1101	College Success Skills	1
OR		
COLS 1102	Navigating College in the U.S.	1
ENGL 1100	Composition I	3

OR		
ENGL 1101	Composition I Plus	6
CHEM 1171	General Chemistry I	5
STAT 1450	The Practice of Statistics	4
BTN 1101	Introduction to Biotechnology	3

Second Semester **Units:** 15

ENGL 2767	Comp II Writing About Science/Technology	3
OR		
XXXX-XXXX any Composition II course from ENGL 2367, 2467, 2567, or 2667 (ENGL 2767 recommended)		3
CHEM 1172	General Chemistry II	5
BIO 1113	Biological Sciences I	4
BISI 1202	Biotechnology Safety and Measurements	3

Third Semester **Units:** 15

BIO 2215	Microbiology	4
XXXX-XXXX Social & Behavioral Science course *		3
XXXX-XXXX Literature, Culture & Ideas, Visual/Performing Arts course *		3
BISI 1203	Biotechnology: Tissue Culture Techniques	5

Fourth Semester **Units:** 16

XXXX-XXXX Social & Behavioral Science course *		3
XXXX-XXXX Historical Study course *		3
BISI 1204	Biotechnology: Protein Purification Techniques	4
BTN 2099	Research Design and Clinical Applications	1
CHEM 2251	Organic Chemistry I	5

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 62-65

AS - Chemistry

The Associate of Science degree is designed to satisfy the first two years of a bachelor's degree in majors that require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Science degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Science, Chemistry transfer pathway is intended to provide students with the first two years of college chemistry education through the organic chemistry level. Chemistry is a popular pathway to health professional programs (dentistry, medicine, optometry, occupational therapy, pharmaceutical sciences, pharmacy, physical therapy, veterinary medicine) since some required pre-professional courses are embedded in this major.

The Associate of Science, Chemistry is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester **Units:** 17-20

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
CHEM 1171	General Chemistry I	5
COLS 1100	First Year Experience Seminar	1
XXXX-XXXX Historical Study course *		3

MATH 1151	Calculus I	5

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 16

CHEM 1172	General Chemistry II	5
XXXX-XXXX	Social & Behavioral Science course *	3
ENGL 2767	Comp II Writing About Science/Technology	3
OR		
XXXX-XXXX	other Intermediate Composition course *	3
MATH 1152	Calculus II	5
OR		
MATH 1172	Engineering Mathematics A	5

MATH 1172 applies to the CSCC Associate of Science degree, but is not part of the statewide transfer plan. Students who select MATH 1172 will not have the Ohio Guaranteed Transfer Pathway noted on their transcript.
Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester. Halfway point to A.S. degree!

Third Semester **Units:** 6

XXXX-XXXX	Visual/Performing Arts course *	3
XXXX-XXXX	Social & Behavioral Science course *	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Fourth Semester **Units:** 18-19

MATH 2153	Calculus III**	5
OR		
MATH 2177	Mathematical Topics for Engineering**	6
CHEM 2251	Organic Chemistry I	5
CHEM 2254	Organic Chemistry Lab I	3
PHYS 1250	Calculus-Based Physics I	5

Milestones/Progress Check: Submit Graduation Application. Reconnect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit transfer admission application.

Fifth Semester **Units:** 13

PHYS 1251	Calculus-Based Phys II	5
CHEM 2252	Organic Chemistry II	5
CHEM 2255	Organic Chemistry Lab II	3

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml **Chemistry majors typically take MATH 2153 or MATH 2177 during the second year of their program. Even though the required 61 credits for the Associate of Science degree can be achieved without MATH 2153 or MATH 2177, it is highly recommended to complete the additional math course in preparation for taking physical chemistry in the third year.

Total: 70-74

AS - Computer and Information Science

The Associate of Science degree is designed to satisfy the first two years of a bachelor's degree in majors that require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Science degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Science, Computer and Information Science transfer major is designed for students who are planning to transfer to a four-year college or university

with the goal of completing a bachelor's degree in Computer and Information Science. Students are exposed to a solid general education curriculum with emphasis on mathematics, calculus-based physics and statistics. Technical coursework includes introduction to computer programming logic and software development.

First Semester **Units:** 15

COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition 1W: Composition Workshop	3
MATH 1151	Calculus I	5
Historical Study course *		3
Social and Behavioral Science course*		3

Recommended: ECON 2200 Principles of Microeconomics
Milestone/Progress Check: Consult with an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 14-16

Intermediate Composition course *		3
Recommended: ENGL 2767 Composition II: Writing about Science & Technology		
MATH 1152	Calculus II	5
OR		
XXXX-XXXX A.S. Elective		5
CSCI 1103	Intro to Programming Logic	3
Natural Science course *		3-5

Milestones/Progress Check: Connect with appropriate University advisor at the CSCC Transfer Center; visit transfer campus. Apply for eligible major scholarships for next autumn semester.

Summer Semester **Units:** 6

Social and Behavioral Science course*	3
Literature, Culture & Ideas, or Visual/ Performing Arts course * Recommended: PHIL 1130 Ethics	3

Milestones/Progress Check: Consult with an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to AA degree!

Fourth Semester **Units:** 12

STAT 2470	Intro Probability Statistics Eng & Sci	4
OR		
A.S. Elective *		4
CSCI 2467	Java Programming I	3
Natural Science course, with lab *		5

Recommended: PHYS 1250 Calculus-Based Physics I
Milestones/Progress Check: Submit Graduation Application. Re-connect with appropriate University advisor at the CSCC Transfer Center; visit transfer campus. Submit transfer admission application.

Fifth Semester **Units:** 14

A.S. Elective *		3
CSCI 2469	Java Programming II	3
OR		
CSCI 1511	Python Programming	3
Natural Science, with lab *		5
COMM 1105	Oral Communication	3
OR		
COMM 1110	Small Group Communication	3
OR		
A.S. Elective *		3

Milestone/Progress Check: Ready for Graduation!!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 61-63

AS- Economics

The Associate of Science degree is designed to satisfy the first two years of a bachelor's degree in majors that require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Science degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Science, Economics transfer pathway includes the study of human behavior and the choices we make as we attempt to allocate our scarce resources. Economics is divided into two large branches: micro and macro. Microeconomics examines the building blocks of the economy and the individual participants, such as consumers and individual firms or producers. Macroeconomics deals with the economy as a whole. For example, we examine the federal budget and national debt, international finance and exchange rates, government spending and taxes, and monetary policy.

The Associate of Science, Economics is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester		**Units:** 15-18
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
MATH 1151	Calculus I	5
XXXX-XXXX Historical Study course *		3
ECON 2200	Principles of Microeconomics	3
Milestone/Progress Check: Consult with an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.		

Second Semester		**Units:** 13
ENGL 2767	Comp II Writing About Science/Technology	3
OR		
XXXX-XXXX Intermediate Composition course *		3
ECON 2201	Principles of Macroeconomics	3
Foreign Language series course * or A.S. Elective course *		4
Milestones/Progress Check: Connect with appropriate University advisor at the CSCC Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester. Halfway point to A.S. degree!		
XXXX-XXXX A.S. Elective		3

Third Semester		**Units:** 7-8
XXXX-XXXX Literature, Culture & Ideas or Visual/Performing Arts course *		3
XXXX-XXXX Natural Science course, with lab *		4-5
Milestone/Progress Check: Consult with an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.		

Fourth Semester		**Units:** 12-14
ASC 1190	Critical Thinking in Arts & Sciences	1
STAT 1450	The Practice of Statistics	4
ANTH 2200	Introduction to Biological Anthropology	4
OR		
XXXX-XXXX Natural Science course *		3-5
XXXX-XXXX Foreign Language series course * or A.S. Elective course *		4
Milestones/Progress Check: Submit Graduation Application. Reconnect with University advisor at the CSCC Transfer Center; visit transfer campus. Submit transfer admission application.		

Fifth Semester		**Units:** 14-15
XXXX-XXXX Natural Science course, with lab *		4-5
XXXX-XXXX Foreign Language series course * or A.S. Elective course *		4
COMM 1105	Oral Communication	3

OR		
XXXX-XXXX A.S. Elective course *		3
XXXX-XXXX Social & Behavioral Science course (other than ECON) *		3
Milestone/Progress Check: Ready for Graduation!!		

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 61-68

AS - Geography

The Associate of Science degree is designed to satisfy the first two years of a bachelor's degree in majors that require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Science degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Science, Geography Bachelor's Degree transfer pathway is the study of Geography – a rich, diverse, and integrative discipline that concerns itself with both the physical environment and the human dimensions of the world. In studying various phenomena within these two realms, geographers seek to not only understand the physical processes that shape the Earth's surface and the behavioral dynamics of human activity (as currently exhibited or over time), but also the spatial patterns of these phenomena as manifested throughout the world, the inter-relationship between people and environments, and the connection between people and places.

The Associate of Science, Geography is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester		**Units:** 15-18
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
MATH 1151	Calculus I	5
GEOG 2300	Introduction to Physical Geography	3
XXXX-XXXX Social and Behavioral Science course (other than GEOG) *		3
Milestone/Progress Check: Consult with an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.		

Second Semester		**Units:** 16
XXXX-XXXX Intermediate Composition course *		3
GEOG 1900	Introduction to Weather & Climate	4
XXXX-XXXX Foreign Language course series or AS elective course *		4
MATH 1152	Calculus II	5
Milestones/Progress Check: Connect with appropriate University advisor at the CSCC Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester.		

Third Semester		**Units:** 6
GEOG 2750	World Regional Geography	3
GIS 1100	Introduction to GIS	3
Milestones/Progress Check: Consult with an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.S. degree!		

Fourth Semester		**Units:** 14
XXXX-XXXX	Historical Studies course *	3
XXXX-XXXX	Foreign Language course series or AS Elective course *	4
BIO 1127	Introduction to Environmental Science	4
OR		
XXXX-XXXX	Natural Science course *	4
GEOG 2400	Economic & Social Geography	3
Milestones/Progress Check: Submit Graduation Application. Reconnect with University advisor at the CSCC Transfer Center; visit transfer campus. Submit transfer admission application.		

Fifth Semester		**Units:** 14
GEOG 2900	Elements of Cartography	3
XXXX-XXXX	A.S. Elective course *	3
XXXX-XXXX	Literature or Visual/Performing Arts course *	3
PHYS 1250	Calculus-Based Physics I	5
OR		
XXXX-XXXX	Natural Science course *	5
Milestone/Progress Check: Ready for Graduation!!		

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 65-68

AS - Geology

The Associate of Science degree is designed to satisfy the first two years of a bachelor's degree in majors that require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Science degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Science, Geology transfer major is intended to provide students with the first two years of a bachelor's degree in Geology, including two courses of college geology education through the historical geology level. Geology is a popular pathway to environmental jobs, including ground water testing and soil sampling, all aspects of the energy section, climate science, and even environmental law studies.

The Associate of Science - Geology is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester		**Units:** 14-17
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
MATH 1151	Calculus I	5
CHEM 1171	General Chemistry I	5

Second Semester		**Units:** 14
ENGL 2767	Comp II Writing About Science/Technology	3
OR		
XXXX-XXXX	Intermediate Composition course *	3
GEOG 2300	Introduction to Physical Geography	3
OR		
GIS 1100	Introduction to GIS	3
OR		
XXXX-XXXX	A.S. Elective course *	3
ANTH 2201	World Prehistory	3
OR		
XXXX-XXXX	Social & Behavioral Science course *	3
CHEM 1172	General Chemistry II	5

Third Semester **Units:** 7

HIST 1181	World Civ I Non Western to 1500	3
OR		
HIST 1182	World Civ II Non Western Since 1500	3
OR		
XXXX-XXXX Historical Study course *		3
XXXX-XXXX Foreign Language series course * or A.S. Elective course *		4
Milestone/Progress Check: Consult with an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.		

Fourth Semester **Units:** 13

GEOL 1121	Physical Geology	4
XXXX-XXXX Foreign Language series course * or A. S. Elective course *		4
PHYS 1200	Algebra-Based Physics I	5
OR		
PHYS 1250	Calculus-Based Physics I	5
OR		
XXXX-XXXX A.S. Elective *		5
Milestones/Progress Check: Submit Graduation Application. Reconnect with University advisor at the CSCC Transfer Center; visit transfer campus. Submit transfer admission application.		

Fifth Semester **Units:** 13

GEOL 1122	Historical Geology	4
XXXX-XXXX A.S. Elective course *		3
XXXX-XXXX Literature, Culture & Ideas or Visual/Performing Arts course *		3
XXXX-XXXX Social & Behavioral Science course *		3
Milestone/Progress Check: Ready for Graduation!!		

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 61-64

AS - Integrated Science Education

The Associate of Science degree is designed to satisfy the first two years of a bachelor's degree in majors that require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Science degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Science, Integrated Science Education transfer pathway is intended to provide the first two years of a bachelor's degree for students that plan to complete a teacher licensure program for teaching biology, chemistry, earth/environmental science and physics in grades 7-12.

First Semester **Units:** 14-17

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
CHEM 1171	General Chemistry I	5
COLS 1100	First Year Experience Seminar	1
MATH 1151	Calculus I	5
Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.		

Second Semester **Units:** 17

CHEM 1172	General Chemistry II	5
BIO 1113	Biological Sciences I	4
ENGL 2767	Comp II Writing About Science/Technology	3
OR		
XXXX-XXXX other Intermediate Composition course *		3

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester. Halfway point to A.S. degree!

XXXX-XXXX	A.S. Elective *	5

Third Semester **Units:** 6

PSY 1100	Introduction to Psychology	3
XXXX-XXXX	Historical Study course *	3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Fourth Semester **Units:** 12

BIO 1114	Biological Sciences II	4
XXXX-XXXX	A.S. Elective *	5
PHIL 1130	Ethics	3
OR		
XXXX-XXXX	other Cultures & Ideas course *	3

Milestones/Progress Check: Submit Graduation Application. Reconnect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit transfer admission application.

Fifth Semester **Units:** 12-13

GEOL 1121	Physical Geology	4
OR		
XXXX-XXXX	other Natural Science course, with lab *	4-5
ASC 1190	Critical Thinking in Arts & Sciences	1
SOC 1101	Introduction to Sociology	3
BIO 1127	Introduction to Environmental Science	4

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 61-65

AS - Mathematics

The Associate of Science degree is designed to satisfy the first two years of a bachelor's degree in majors that require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Science degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Science, Mathematics transfer pathway is intended to provide students with the first two years of college mathematics education through Calculus III, Differential Equations and Linear Algebra.

The Associate of Science, Mathematics is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester **Units:** 16-19

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
XXXX-XXXX	Visual/Performing Arts course *	3
COLS 1100	First Year Experience Seminar	1
XXXX-XXXX	Foreign Language course series * or AS elective *	4
MATH 1151	Calculus I	5

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 17

XXXX-XXXX Foreign Language course series * or AS elective *		4
ENGL 2767	Comp II Writing About Science/Technology	3
OR		
XXXX-XXXX other Intermediate Composition course *		3
MATH 1152	Calculus II	5
PHYS 1250	Calculus-Based Physics I	5

Physics 1250 is required for students transferring into a Bachelor of Science math degree. Additional science options exist for students transferring into a Bachelor of Arts math degree; see your Academic Advisor for more information.
Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester. Halfway point to A.S. degree!

Third Semester **Units:** 6

XXXX-XXXX Social & Behavioral Science course *		3
XXXX-XXXX Historical Study course *		3

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Fourth Semester **Units:** 12-13

MATH 2153	Calculus III	5
PHYS 1251	Calculus-Based Phys II	5
OR		
XXXX-XXXX other Natural Science course, with lab *		4-5
ECON 2200	Principles of Microeconomics	3
OR		
XXXX-XXXX Social & Behavioral Science course *		3

Milestones/Progress Check: Submit Graduation Application. Re-connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit transfer admission application.

Fifth Semester **Units:** 11-13

MATH 2255	Elementary Differential Equations	4
MATH 2568	Elementary Linear Algebra	4
ANTH 2200	Introduction to Biological Anthropology	4
OR		
XXXX-XXXX other Natural Science course *		3-5

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 62-68

AS - Middle Childhood Math and Science Education

The Associate of Science degree is designed to satisfy the first two years of a bachelor's degree in majors that require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Science degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Science, Middle Childhood Math and Science Education transfer pathway is intended to provide the first two years of a bachelor's degree for students that plan to complete a teacher licensure program for teaching math and science in grades 4-9.

First Semester **Units:** 15-19

COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
PSY 1100	Introduction to Psychology	3
STAT 1450	The Practice of Statistics	4
OR		
MATH 1151	Calculus I	5
GEOL 1121	Physical Geology	4

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 14

XXXX-XXXX	Intermediate Composition * (ENGL 2767 Writing about Science/Tech. recommended)	3
XXXX-XXXX	A.S. Elective *	3
CHEM 1171	General Chemistry I	5
OR		
CHEM 1200	Intro to General & Organic Chemistry	5
EDUC 2210	Introduction to Education	3

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester.

Third Semester **Units:** 6

HUM 1160	Music & Art Since 1945	3
OR		
THEA 1100	Introduction to Theatre	3
XXXX-XXXX	Social & Behavioral Science course * (ECON 2200 Principles of Microeconomics recommended)	3

Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.S. degree!

Fourth Semester **Units:** 13

XXXX-XXXX	A.S. Elective *	3
GEOL 1122	Historical Geology	4
PSY 2200	Educational Psychology	3
PSY 2261	Child Development	3

Milestones/Progress Check: Re-connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit Graduation Application.

Fifth Semester **Units:** 13

BIO 1111	Intro to Biology	4
OR		
BIO 1113	Biological Sciences I	4
PSY 2245	Children With Exceptionalities	3
PHIL 1130	Ethics	3
XXXX-XXXX	Historical Study course *	3

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 61-65

AS - Physics

The Associate of Science degree is designed to satisfy the first two years of a bachelor's degree in majors that require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Science degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Science, Physics transfer pathway is the study of the science that examines the fundamental properties and interactions of matter and energy, in areas ranging from the tiniest particles to the structure of the entire universe. The study of physics involves applications of theory, hands-on experimentation and data analysis, technical writing, and computer programming. Physicists commonly work in fields such as engineering, computer hardware and software, research, and teaching.

The Associate of Science, Physics is an Ohio Guaranteed Transfer Pathway. The Ohio Guaranteed Transfer Pathways (OGTP) provide a clear path to associate degree completion and then to bachelor's degree completion

in a related major at any Ohio public university with a related major. By following an OGTP, you can ensure that you are taking coursework that will not only transfer but apply to your desired degree.

First Semester **Units:** 14-17

COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
MATH 1151	Calculus I	5
CHEM 1171	General Chemistry I	5
Milestone/Progress Check: Consult with an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.		

Second Semester **Units:** 16

ENGL 2767	Comp II Writing About Science/Technology	3
OR		
XXXX-XXXX Intermediate Composition course *		3
MATH 1152	Calculus II	5
CHEM 1172	General Chemistry II	5
XXXX-XXXX Historical Study course *		3
Milestones/Progress Check: Connect with appropriate University advisor at the CSCC Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester. Halfway point to A.S. degree!		

Third Semester **Units:** 6

XXXX-XXXX Social and Behavioral Science course *		3
XXXX-XXXX Literature, Culture & Ideas or Visual/Performing Arts course *		3
Milestone/Progress Check: Consult with an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.		

Fourth Semester **Units:** 13

PHYS 1250	Calculus-Based Physics I	5
MATH 2153	Calculus III	5
XXXX-XXXX Social and Behavioral Science course *		3
Milestones/Progress Check: Submit Graduation Application. Reconnect with University advisor at the CSCC Transfer Center; visit transfer campus. Submit transfer admission application.		

Fifth Semester **Units:** 13

PHYS 1251	Calculus-Based Phys II	5
MATH 2255	Elementary Differential Equations	4
MATH 2568	Elementary Linear Algebra	4
Milestone/Progress Check: Ready for Graduation!!		

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 62-65

AS - Psychology

The Associate of Science degree is designed to satisfy the first two years of a bachelor's degree in majors that require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Science degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Science, Psychology transfer pathway includes the study of behavior and mental processes. The field of psychology helps us understand who we are, what we think, how we feel, and why we behave the way we do. Coursework is available in the many sub-fields of psychology, including abnormal, developmental, social, and personality.

First Semester **Units:** 15-18

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
XXXX-XXXX Social & Behavioral Science course * (other than PSY)		3
MATH 1151	Calculus I	5
PSY 1100	Introduction to Psychology	3
COLS 1100	First Year Experience Seminar	1

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 16

CHEM 1171	General Chemistry I	5
XXXX-XXXX Foreign Language course series * or AS elective *		4
PSY 2331	Psychopathology	3

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester.

STAT 1450	The Practice of Statistics	4

Third Semester **Units:** 6

XXXX-XXXX Historical Study course *	3
XXXX-XXXX Intermediate Composition *	3

Milestones/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice. Beyond the halfway point to A.A. degree!

Fourth Semester **Units:** 12

XXXX-XXXX Psychology elective, select from: PSY 2261 Child Development or PSY 2340 Human Growth and Development or PSY 2551 Adolescent Psychology		3
XXXX-XXXX Foreign Language course series * or AS elective *		4
CHEM 1172	General Chemistry II	5

Milestones/Progress Check: Re-connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit Graduation Application.

Fifth Semester **Units:** 13

PSY 2325	Social Psychology	3
XXXX-XXXX Foreign Language course series * or AS elective *		4
XXXX-XXXX Literature, Culture & Ideas, Visual/Performing Arts course *		3

Milestone/Progress Check: Ready for Graduation!

PSY 2530	Psychology of Personality	3

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 62-65

AS - Systems Engineering

The Associate of Science degree is designed to satisfy the first two years of a bachelor's degree in majors that require advanced math or science. Formal agreements have been made with colleges and universities which allow for coursework taken in the Associate of Science degree program at Columbus State to transfer and apply to a bachelor's degree.

The Associate of Science, Systems Engineering transfer major is intended to provide students with the first two years of required coursework for Otterbein University's Bachelor of Science degree in Systems Engineering. Systems Engineering is the study of a combination of mechanical, electrical, and industrial engineering concepts.

All students must satisfactorily complete at least 61 credit hours of approved courses (a minimum of 20 credit hours must be completed at Columbus State) with an overall grade point average of 2.0 or better for all college-level courses completed at Columbus State. Consult with an Arts and Sciences Academic Advisor for

Columbus State degree and graduation planning, assistance with developing and achieving academic goals, and information about transfer resources. Students should research program and admission requirements for their specific intended four-year institution and major early in their college career.

Learning Outcome(s):

1. Upon successful completion of this program, students will be able to: 1. Apply Engineering tools such as computer programming, computer aided design, data synthesis, structural analysis and design.
2. 2. Analyze complex engineering problems using principles of engineering, science, mathematics and critical thinking to develop the needed solutions for business and communities.
3. 3. Create collaborative teams that build inclusive environments, establish goals, and plan tasks to meet objectives utilizing technical skills.

First Semester **Units:** 17-20

ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition I Plus	6
ENGR 1181	Fundamentals of Engineering I	3
COLS 1100	First Year Experience Seminar	1
PHYS 1250	Calculus-Based Physics I	5
MATH 1151	Calculus I	5

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Second Semester **Units:** 16

ENGR 1182	Fundamentals of Engineering II	3
PHYS 1251	Calculus-Based Phys II	5
ENGL 2767	Comp II Writing About Science/Technology	3
OR		
XXXX-XXXX other Intermediate Composition course *		3
MATH 1172	Engineering Mathematics A	5

Milestones/Progress Check: Connect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Apply for scholarships for next autumn semester. Halfway point to A.S. degree!

Third Semester **Units:** 6

MATH 2173	Engineering Mathematics B	5
ASC 1190	Critical Thinking in Arts & Sciences	1

Milestone/Progress Check: Consult an Arts and Sciences Academic Advisor early on to help you select courses required by your transfer institution of choice.

Fourth Semester **Units:** 12

ENGR 2040	Statics & Intro Mechanics of Materials	4
GEOG 2400	Economic & Social Geography	3
MATH 2174	Linear Algebra & Diff Equations for Eng	5

Milestones/Progress Check: Submit petition to graduate. Reconnect with appropriate University advisor at the Columbus State Transfer Center; visit transfer campus. Submit transfer admission application.

Fifth Semester **Units:** 13

HUM 1160	Music & Art Since 1945	3
ENGR 2030	Dynamics	4
XXXX-XXXX Historical Study course *		3
SOC 1101	Introduction to Sociology	3
OR		
XXXX-XXXX other Social & Behavioral Science course *		3

Milestone/Progress Check: Ready for Graduation!

*Full list of course options: https://www.cscc.edu/academics/transfer/degrees.shtml

Total: 64-67

Accounting AAS Degree

Accountants, and the theoretical principles they use in their work, stand at the very center of our financial and economic activities. Economists, investors, business executives, labor leaders, bankers, and government officials all rely upon financial statements and other reports prepared by accountants to summarize and interpret the multitude of financial transactions that comprise day-to-day economic activity. The true value of an accountant is measured by his or her ability to develop and present understandable, reliable analyses of financial positions and the results of operations upon which business decisions are based.

The Accounting Associate Degree program prepares graduates for employment as accountants in business, industry, and government. Many experienced accountants become owners/operators of their own public accounting firms. The program emphasizes the use of personal computers along with manual procedures of accounting. The Accounting Associate Degree program is ideally suited to the needs of those who wish to take the Ohio CPA Examination with qualifying examinations upon graduation.

The Accounting program is accredited the Accreditation Council for Business Schools and Programs (ACBSP), demonstrating it has met standards of business education that promote teaching excellence.

Learning Outcome(s):

1. Apply generally accepted accounting principles to measure, process, and communicate financial information about a business entity.
2. Apply relevant technology to input, compile, manage, and interpret financial information.
3. Apply theory and practical applications to budgeting, break-even analysis, product costing, profit planning, and cost analysis for decision making purposes.
4. Apply audit and internal control standards and regulations to generate and analyze reports from the engagement planning stage through completion of the audit in accordance with Audit and Assurance Services standards and apply rules of the AICPA Code of Professional Conduct.
5. Use financial statements for decision making purposes; make comparisons and interpret the results of financial statement analysis.
6. Describe the structure of the federal tax system and apply the Internal Revenue Code in the calculation and reporting of the taxable income and income tax liabilities.

First Semester **Units:** 15

ACCT 1211	Financial Accounting	3
BOA 1102	Excel I	2
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
HUM-XXXX (select from approved GE-HUM list)		3
STAT 1400	Statistical Concepts for Business	3

Second Semester **Units:** 15

ACCT 1212	Managerial Accounting	3
COMM 2200	Business Communication	3
ECON 2200	Principles of Microeconomics	3
FMGT 2201	Corporate Finance	3
MKTG 1110	Marketing Principles	3

Third Semester **Units:** 15

ACCT 2211	Cost Accounting	3
ACCT 2232	Federal Taxation I	3
ACCT 2250	Intermediate Accounting I	4
ACCT-XXXX (Technical Elelctive)		3
BMGT 1102	Interpersonal Skills	2

Fourth Semester **Units:** 15

ACCT 2241	Auditing	4
ACCT 2252	Intermediate Accounting II	4

ACCT 2299	Accounting Capstone	3
BOA 1117	Payroll	1
LEGL 2064	Legal Environment of Business	3

Technical Electives - 3 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

ACCT 1400	Accounting Systems	3
ACCT 2231	State and Local Taxation	3
ACCT 2236	Federal Taxation II	3
ACCT 2240	Tax Practice	3
ACCT 2258	Advanced Accounting	3
ACCT 2266	Public Administration/Fund Accounting	3
ACCT 2901	Accounting Practicum & Seminar	3
BOA 1122	QuickBooks	2

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

Total: 60

Accounting Concentration (CPA Preparation) Certificate

The Certificate of Accounting Concentration is intended for individuals who possess a bachelor's, master's, or doctoral degree in an area other than accounting and want to qualify under Ohio law to sit for the Ohio CPA exam. The 39 hours of course work recommended would provide candidates with the broadest possible knowledge of all four parts of the exam. The Certificate of Accounting Concentration is exclusively for the student with a bachelor's, master's, or doctoral degree from a U.S. college or university (or foreign degree evaluation that has been accepted by the Ohio Accountancy Board) in an area other than accounting. The plan of study is to prepare that student to meet the accounting course requirements under Ohio law to sit for the Ohio CPA exam.

Accountancy academic requirements are subject to change. Be sure to check the Accountancy Board's website at https://acc.ohio.gov/ periodically for up-to-date information and for non-accounting academic requirement.

First Semester **Units:** 9

ACCT 1211	Financial Accounting	3
ACCT 1212	Managerial Accounting	3
LEGL 2064	Legal Environment of Business	3

Second Semester **Units:** 10

ACCT 1400	Accounting Systems	3
ACCT 2211	Cost Accounting	3
ACCT 2250	Intermediate Accounting I	4

Third Semester **Units:** 7

ACCT 2232	Federal Taxation I	3

ACCT 2252	Intermediate Accounting II	4

Fourth Semester **Units:** 7

ACCT 2236	Federal Taxation II	3
ACCT 2241	Auditing	4

Fifth Semester **Units:** 6

ACCT 2258	Advanced Accounting	3
ACCT 2266	Public Administration/Fund Accounting	3

Total: 39

Architecture AAS Degree

Architecture graduates assist architects and others in preparing design and working drawings, specifications, as-built drawings and much more. Many also work for builders and contractors, land developers, remodelers, facility and property managers, and with building product manufacturers and retailers. Historically, the central Ohio market for architecture graduates has been very strong and improvements in the economy and in construction are being reflected in the architectural field.

Columbus State's Associate Degree program in Architecture involves manual and CAD drafting, Building Information Modeling, detailing, product selection and specification, design, the study of architectural history, code evaluation and other skills used daily in the occupation. Students in the program share common courses in materials, structures, blueprint reading and other programs in the Construction Sciences and Engineering Technology Department. This provides architecture students with a strong foundation of technical skills and a sense of the teamwork required in the construction industry.

The Architecture program provides students with a solid educational background in communication skills, math, computer literacy, arts/humanties, natural/physical sciences, and social/behavioral sciences.

Learning Outcome(s):

1. Use traditional manual drafting and drawing methods to express relevant ideas graphically, including orthographic projection, one-point and two-point perspective, isometric and axonometric drawing generation.
2. Use current CAD (Computer Aided Drafting) and 3D modeling software to prepare architectural drawings and other applicable graphics.
3. Understand, interpret, organize, and generate architectural drawings.
4. Understand and be familiar with the relationship and coordination implications between architectural and engineering drawings (site, structural, electrical, lighting, mechanical and plumbing).
5. Research materials, consult with industry experts, and use CSI (Construction Specification Institute) standards relevant to the preparation of architectural drawings and specifications.
6. Use applicable building and zoning codes relevant to the preparation of architectural drawings and specifications.
7. Understand the basic principles of detailing building structures utilizing wood, steel, and concrete manuals and handbooks.
8. Understand and be familiar with project coordination, total project development, and professional practice.
9. Understand and be familiar with the basic principles and materials of sustainable architecture, the primary organizations that are promoting and encouraging sustainability in architecture, and LEED standards and scoring.
10. Understand and demonstrate an ability to work with the building design process as a problem solving approach to devise a building to meet client needs.

First Semester **Units:** 15-16

MATH 1101 OR	Math Construction Sciences/ Applied Tech	3
MATH 1148	College Algebra	4
ARCH 1100	Basic Manual Drafting	1
ARCH 1120	Basic CAD Drafting	1
ARCH 1276	SketchUp	3

CIVL 1120	Construction Materials Science	3
CMGT 1121	Construction Drawings	3
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 16

ARCH 1130	AutoCAD 2D	3
ARCH 1232	Building Codes	2
ARCH 1250	Enclosure Materials	2
ARCH 1200	Architectural Drawing	3
ENGL 1100	Composition I	3
ESSH 1101	Intro to Environ Science, Safety, Health	3

Third Semester **Units:** 19

ARCH 1274	Revit I	3
ARCH 2221	Design Studio	3
ARCH 2230	MEP Systems	2
ARCH 2237	Structures	3
PSY 1100	Introduction to Psychology	3
OR		
GEOG 2400	Economic & Social Geography	3
DDG 1100	Introduction to Computer Design	3
ESSH 2282	Sustainable Bldg Strategies	2

Fourth Semester **Units:** 15

ARCH 2266	Construction Documents	3
ARCH 2270	Professional Practice	3
ARCH 2275	Revit II	2
ARCH-XXXX (Technical Elective)		1
ARCH 2100	History of Architecture	3
CMGT 1153	Residential Construction Management	3

Technical Electives - 1 credit hour minimum **Units:** 0

The following course are approved for technical elective requirements:

ARCH 1115	MicroStation 2D	2
ARCH 2240	AutoCAD 3D	2
ARCH 2242	Autodesk 3ds Max	3
ARCH 2243	Autodesk Maya	3
ARCH 2282	Sustainable Design	2
ARCH 2283	Sustainable Energy	2
ARCH 2291	ARCH Field Experience	1-3

Total: 65-66

Architectural 3-D Visualization Certificate

This certificate program will provide students with advanced coursework in 3D modeling, rendering and animation and is geared towards professionals and students with prior experience in architecture, interior design, graphic design, or other related fields. Prerequisites for entering this certificate program: completion of 30 or more credit hours within a related field of study or permission from a faculty member.

Learning Outcome(s):

1. Use current CAD (Computer Aided Drafting) and 3D modeling software to prepare architectural drawings and other applicable graphics.

First Semester **Units:** 2

ARCH 2240	AutoCAD 3D	2

Second Semester **Units:** 3

ARCH 2242	Autodesk 3ds Max	3

Third Semester **Units:** 3

ARCH 2243	Autodesk Maya	3

Total: 8

Architectural CAD Drafting Certificate

Over the past couple of decades CAD drafting has become a necessary tool for architects, engineers and other related professions. The courses in this certificate will provide students with training in the two most popular CAD programs in use today, AutoCAD and MicroStation. Upon completion of these courses, the student will have a functional understanding of how to use each program.

However, it should be emphasized that if the student wishes to have a greater understanding of architecture or engineering, additional coursework in the desired field should be pursued. A greater understanding of what one is drafting will be necessary for those seeking CAD drafting positions in today's job market. Therefore, this certificate is best suited for those individuals who already have an understanding of manual drafting or already have experience in a related field.

First Semester		**Units:** 1
ARCH 1120	Basic CAD Drafting	1
Second Semester		**Units:** 3
ARCH 1130	AutoCAD 2D	3
Third Semester		**Units:** 2
ARCH 1115	MicroStation 2D	2
		Total: 6

Automotive Technology AAS Degree

The Automotive Technology program prepares students for successful careers as service technicians in the rapidly growing automotive repair industry. By providing students with exposure and hands-on experience on a variety of domestic and import vehicles, this broad-based curriculum prepares graduates for a wide range of job opportunities in new car dealerships, independent repair shops, or fleet repair facilities.

Classes are designed for beginners or those with some experience. Students may earn an associate degree, complete a number of certificates, or take individual courses to meet their educational and career goals. The Associate Degree program in Automotive Technology provides instruction in all aspects of the automobile, including the latest electronic systems. Students master the skills needed to diagnose and repair automobiles while working in the college's well-equipped auto lab. The experienced faculty work closely with students to prepare them for a career and to become certified A.S.E. (National Institute for Automotive Service Excellence) Master Automotive Technicians.

The program is accredited through NATEF. To receive this certification, the program is evaluated against industry standards of quality every five years by a team of external evaluators. The certification process ensures that the curriculum includes all of the appropriate competencies needed to properly prepare entry-level technicians and is delivered by A.S.E. certified faculty on current technology equipment and vehicles. All automotive faculty are A.S.E. Master Certified technicians with extensive industry repair experience.

Learning Outcome(s):

1. Identify the major systems of the automobile and correctly assess a system for proper operation.
2. Synthesize a customer's symptom into a set of possible system malfunctions and then into a subset of possible system component malfunctions.
3. Select the correct type and source of automotive information and then employ that information to devise a repair strategy.
4. Evaluate components and identify the failed component and the root cause of failure.
5. Present the prescribed solution and justify the cost of the solution to address a repair concern including presenting alternatives and explaining why the recommendation is the best choice.
6. Determine the correct procedure for the repair and then correctly perform the procedure.
7. Apply proper ethical consideration when recommending needed repairs and managing the employer's resources when conducting such repairs.
8. Employ self-teaching techniques mastered during the program in order to remain abreast of advancements in technology.

9. Apply good customer relations skills in all interactions with service customers.

First Semester **Units:** 16

AUTO 1101	Basic Auto Systems	2
AUTO 1106	Auto Shop Orientation and Service	2
AUTO 1160	Electrical Syst: Theory and Operation I	2
AUTO 1140	Suspension and Steering: Theory and Oper	2
AUTO 1150	Brake and Systems: Theory and Operation	2
AUTO 1170	Heating & Air Condition Theory & Oper	2
COLS 1100	First Year Experience Seminar	1
MATH 1101	Math Construction Sciences/ Applied Tech	3

Second Semester **Units:** 13

AUTO 1240	Suspension & Steering Diagnosis & Repair*	2
OR		
FORD 1240	Steering & Suspension: Diag & Repair*	2
AUTO 1250	Brake Systems: Diagnosis & Repair*	2
OR		
FORD 1250	Brake Systems: Diagnosis & Repair*	2
AUTO 1260	Electrical Systems Theory & Operation II*	2
OR		
FORD 1260	Electrical Systems: Diagnosis & Repair*	2
AUTO 1180	Engine Performance: Theory and Ops I	2
AUTO 2399	Maint & Light Repair Shop Experience	2
ENGL 1100	Composition I	3

Milestone/Progress Check: • Upon Completion of the second semester the student may be eligible for the MLR Certificate.

*Students must choose either AUTO 1240, 1250 and 1260 or FORD 1240, 1250 and 1260 as a group.

Third Semester **Units:** 9

AUTO 2270	Heat & Air Condition Diagnosis & Repair	2
BMGT-XXXX (Business Elective)		3
NAT-XXXX (select from approved GE-NAT list)		4

Milestone/Progress Check: • Upon completion of the summer/third semester the student may be eligible for the AST Certificate.

Fourth Semester **Units:** 14

AUTO 1110	Engines: Theory and Operations	2
AUTO 1210	Powertrain Systems Service	2
AUTO 2280	Engine Performance Theory & Operation II	2
AUTO 2120	Auto Transmissions: Theory & Operations	2
COMM-XXXX 1105, 1110, 2200, or 2204		3
CSCI 1101	Computer Concepts & Apps	3

Fifth Semester **Units:** 13

AUTO 2130	Manual Trans: Theory and Operation	2
AUTO-XXXX (Advanced Studies)		5
HUM-XXXX (select from approved GE-HUM list)		3
SBS-XXXX (select from approved GE-SBS list)		3

Advanced Studies - 5 credit hours minimum **Units:** 0

The following courses are approved for advanced studies requirements:

AUTO 2220	Automatic Trans: Diagnosis & Car Repair	2
AUTO 2230	Manual Trans: Diagnosis & In-Car Repair	2
AUTO 2360	Adv Electrical System Diagnosis & Repair	3
AUTO 2380	Adv Engine Perform Diagnosis & Repair	3
AUTO 2310	Engines: Diagnosis & In-Car Repair	2

AUTO 2190	Hybrid Vehicles: Theory and Operation	1
AUTO 2101	Auto Business Management	2
AUTO 2193	Ind Studies in Automotive Technology	1
AUTO 2293	Independent Studies in Auto Technology	2
AUTO 2393	Independent Studies: Auto Technology	3

Business Electives - 3 credit hours minimum **Units:** 0

The following courses are approved for business elective requirements:

BMGT 1101	Principles of Business	3
FMGT 1101	Personal Finance	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences Requirement - 4 credit hours minimum **Units:** 0

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology	3

Total: 65

Automotive Technology - FORD ASSET Program AAS Degree

ASSET is a partnership between Ford Motor Company, Ford and Lincoln dealers and Columbus State Community College. The program provides students with an opportunity to become highly trained technicians employed by Ford and Lincoln dealerships. The program:

• Trains students to diagnose, service, and maintain Ford vehicles using Ford recommended procedures, special tools, and service publications.
• Ensures that ASSET-trained technicians can easily become familiar with new systems and components as they are introduced.
• Provides paid work experience during the program to reinforce what is being taught in the classroom.
• Allows ASSET-trained students to earn an Associate Degree in Automotive Technology, ASE Certifications, and most importantly, Ford Certifications.

ASSET is an associate degree program divided into two parts:
1. The Maintenance and Light Repair Certificate program is completed first;
2. Then Ford-specific instruction begins with Ford Certification Classes and Cooperative Work Experience. The student must be employed by a Ford or Lincoln dealership by the first Cooperative Work Experience Class (1st Summer Semester). The student must be accepted into the program before registering for Ford ASSET classes.

First Semester **Units:** 13

AUTO 1101	Basic Auto Systems	2
AUTO 1106	Auto Shop Orientation and Service	2
AUTO 1160	Electrical Syst: Theory and Operation I	2
AUTO 1140	Suspension and Steering: Theory and Oper	2
AUTO 1150	Brake and Systems: Theory and Operation	2
AUTO 1170	Heating & Air Condition Theory & Oper	2
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 14

FORD 1240	Steering & Suspension: Diag & Repair	2
FORD 1250	Brake Systems: Diagnosis & Repair	2
FORD 1260	Electrical Systems: Diagnosis & Repair	2
FORD 1270	Heating & AC: Diagnosis & Repair	2
FORD 1360	Electronic Systems: Diagnosis & Repair	3
ENGL 1100	Composition I	3

Third Semester **Units:** 6

FORD 1110	Engines: Diagnosis & Repair	3
FORD 2951	Cooperative Work Experience/Seminar I	2
ESSH 1170	OSHA 10Hr Gen Ind Safety & Health	1

Fourth Semester **Units:** 14

FORD 2180	Engine Performance: Ops & Diagnosis	3
FORD 2130	Man Trans/Driveline: Diag & Repair	3
FORD 2952	Cooperative Work Experience/Seminar II	2
COMM-XXXX (select from list) 1105, 1110, 2220, or 2204		3
MATH 1101	Math Construction Sciences/ Applied Tech	3
OR		
MATH 1104	Mathematical Concepts for Business	3

Fifth Semester **Units:** 14

FORD 2120	Automatic Trans: Diagnosis & Repair	3
FORD 2280	Adv Eng Performance: Diagnosis & Testing	2
FORD 2953	Coop Work Exp/Seminar III Cooperative Work Experience/Seminar III	2
NAT-XXXX (select from approved GE-NAT list)		4
SBS-XXXX (select from approved GE-SBS list)		3

Sixth Semester **Units:** 4

FORD 2380	Diesel Engine Perf: Diagnosis & Repair	2

FORD 2954	Cooperative Work Experience/Seminar IV	2

NAT GE-Natural/Physical Sciences Requirement - 4 credit hours minimum **Units:** 0

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology	3

Total: 65

Alternative Energy Automotive Technician Certificate

The Alternative Energy Automotive Technician Certificate will provide students with the skills and competencies to diagnosis and repair the growing number of alternative energy vehicles on the road. Courses in the certificate will cover theory, safety, repair and diagnostic techniques for the following types of vehicles: hybrid, fully electric, hydrogen, compressed natural gas, propane, bi-fuel and other emerging technologies. Students completing the certificate should be prepared to sit for both the Light Duty Hybrid/Electric Vehicle Specialist Certification Test (L3) and Alternate Fuels Certification Test (F1) Automotive Service Excellence (ASE) exams.

Learning Outcome(s):

1. Evaluate components and identify the failed component and the root cause of failure
2. Present the prescribed solution and justify the cost of the solution to address a repair concern including presenting alternatives and explaining why the recommendation is the best choice
3. Determine the correct procedure for the repair and then correctly perform the procedure
4. Employ self-teaching techniques mastered during the program in order to remain abreast of advancements in technology

First Semester **Units:** 7

AUTO 2360	Adv Electrical System Diagnosis & Repair	3
AUTO 2380	Adv Engine Perform Diagnosis & Repair	3
AUTO 2190	Hybrid Vehicles: Theory and Operation	1

Second Semester **Units:** 4

AUTO 2390	Advanced Hybrid Vehicles: Diagnosis and Repair	2
AUTO 2391	Advanced Alternative Fueled Vehicles: Diagnosis and Repair	2

Total: 11

Automotive Service Technician (AST) Certificate

The Automotive Department offers three levels of certificates which allow students to gain the technical training required to achieve A.S.E Master Technician Certification in steps. Each level of these stackable certificates provides the training and knowledge required to prepare for up to three areas of A.S.E. Certification. The Maintenance and Light Repair Certificate (MLR) can be completed in six to nine months and gives students the knowledge and skills necessary to enter the automotive repair industry quickly. The Automotive Service Technician Certificate (AST) allows the student who has completed the MLR Certificate to expand their training and prepare for additional A.S.E. Certifications. The Master Automotive Service Technician Certificate (MAST) provides an additional certificate for the student who has completed the AST Certificate and is seeking the training and knowledge necessary to prepare for the remaining A.S.E. certifications required for Master Certification status and Advanced Engine Performance Certification. Students may be able to begin the next level certificate as they are finishing the previous level. Since these certificates are part of the Automotive Technology
Degree program, certificate completers can continue their education in the college degree program at any time.

First Semester **Units:** 12

AUTO 1110	Engines: Theory and Operations	2
AUTO 1210	Powertrain Systems Service	2
AUTO 2120	Auto Transmissions: Theory & Operations	2
AUTO 2130	Manual Trans: Theory and Operation	2
AUTO 2270	Heat & Air Condition Diagnosis & Repair	2
AUTO 2280	Engine Performance Theory & Operation II	2

Total: 12

FORD Maintenance and Light Repair Certificate

The Automotive Department offers three levels of certificates which allow students to gain the technical training required to achieve A.S.E Master Technician Certification in steps. Each level of these stackable certificates provides the training and knowledge required to prepare for up to three areas of A.S.E. Certification. The Maintenance and Light Repair Certificate (MLR) can be completed in six to nine months and gives students the knowledge and skills necessary to enter the automotive repair industry quickly. The Automotive Service Technician Certificate (AST) allows the student who has completed the MLR Certificate to expand their training and prepare for additional A.S.E. Certifications. The Master Automotive Service Technician Certificate (MAST) provides an additional certificate for the student who has completed the AST Certificate and is seeking the training and knowledge necessary to prepare for the remaining A.S.E. certifications required for Master Certification status and Advanced Engine Performance Certification. Students may be able to begin the next level certificate as they are finishing the previous level. Since these certificates are part of the Automotive Technology Degree program, certificate

completers can continue their education in the college degree program at any time.

(This certificate is completed as part of the requirements to qualify for FORD ASSET. After completing this certificate, the student also has the option of completing the AST Certificate or Associate Degree.)

First Semester **Units:** 12

AUTO 1101	Basic Auto Systems	2
AUTO 1106	Auto Shop Orientation and Service	2
AUTO 1160	Electrical Syst: Theory and Operation I	2
AUTO 1140	Suspension and Steering: Theory and Oper	2
AUTO 1150	Brake and Systems: Theory and Operation	2
AUTO 1170	Heating & Air Condition Theory & Oper	2

Second Semester **Units:** 11

FORD 1240	Steering & Suspension: Diag & Repair	2
FORD 1250	Brake Systems: Diagnosis & Repair	2
FORD 1260	Electrical Systems: Diagnosis & Repair	2
FORD 1360	Electronic Systems: Diagnosis & Repair	3
FORD 1270	Heating & AC: Diagnosis & Repair	2

Milestone/Progress Check: • Upon completion of the MLR Certificate, the student may be eligible for the ASSET Program.

Total: 23

Maintenance and Light Repair Certificate

The Automotive Department offers three levels of certificates which allow students to gain the technical training required to achieve A.S.E Master Technician Certification in steps. Each level of these stackable certificates provides the training and knowledge required to prepare for up to three areas of A.S.E. Certification. The Maintenance and Light Repair Certificate (MLR) can be completed in six to nine months and gives students the knowledge and skills necessary to enter the automotive repair industry quickly. The Automotive Service Technician Certificate (AST) allows the student who has completed the MLR Certificate to expand their training and prepare for additional A.S.E. Certifications. The Master Automotive Service Technician Certificate (MAST) provides an additional certificate for the student who has completed the AST Certificate and is seeking the training and knowledge necessary to prepare for the remaining A.S.E. certifications required for Master Certification status and Advanced Engine Performance Certification. Students may be able to begin the next level certificate as they are finishing the previous level. Since these certificates are part of the Automotive Technology Degree program, certificate completers can continue their education in the college degree program at any time.

(This certificate serves as a starting point for all other certificates and/or degrees. It is the first certificate in a series of three certificates.)

First Semester **Units:** 12

AUTO 1101	Basic Auto Systems	2
AUTO 1106	Auto Shop Orientation and Service	2
AUTO 1140	Suspension and Steering: Theory and Oper	2
AUTO 1150	Brake and Systems: Theory and Operation	2
AUTO 1160	Electrical Syst: Theory and Operation I	2
AUTO 1170	Heating & Air Condition Theory & Oper	2

Second Semester **Units:** 10

AUTO 1180	Engine Performance: Theory and Ops I	2
AUTO 1240	Suspension & Steering Diagnosis & Repair	2
AUTO 1250	Brake Systems: Diagnosis & Repair	2
AUTO 1260	Electrical Systems Theory & Operation II	2
AUTO 2399	Maint & Light Repair Shop Experience	2

Milestone/Progress Check: • Upon completion of the MLR Certificate, the student may be eligible for the Tech-Link Program.

Total: 22

Master Automotive Service Technician (MAST) Certificate

The Automotive Department offers three levels of certificates which allow students to gain the technical training required to achieve A.S.E Master Technician Certification in steps. Each level of these stackable certificates provides the training and knowledge required to prepare for up to three areas of A.S.E. Certification. The Maintenance and Light Repair Certificate (MLR) can be completed in six to nine months and gives students the knowledge and skills necessary to enter the automotive repair industry quickly. The Automotive Service Technician Certificate (AST) allows the student who has completed the MLR Certificate to expand their training and prepare for additional A.S.E. Certifications. The Master Automotive Service Technician Certificate (MAST) provides an additional certificate for the student who has completed the AST Certificate and is seeking the training and knowledge necessary to prepare for the remaining A.S.E. certifications required for Master Certification status and Advanced Engine Performance Certification. Students may be able to begin the next level certificate as they are finishing the previous level. Since these certificates are part of the Automotive Technology Degree program, certificate completers can continue their education in the college degree program at any time.

(This certificate is intended for students who have already completed the Auto Service Technician Certificate (AST) or the Auto Technology Associate's Degree. It is the third certificate in a series of three certificates.)

First Semester **Units:** 13

AUTO 2190	Hybrid Vehicles: Theory and Operation	1
AUTO 2220	Automatic Trans: Diagnosis & Car Repair	2
AUTO 2230	Manual Trans: Diagnosis & In-Car Repair	2
AUTO 2360	Adv Electrical System Diagnosis & Repair	3
AUTO 2380	Adv Engine Perform Diagnosis & Repair	3
AUTO-XXXX (Technical Elective) (select from list)		2

Advanced Electives - 2 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

AUTO 2101	Auto Business Management	2
AUTO 2201	Service Advising	2
AUTO 2301	Auto Service Management	2
AUTO 2310	Engines: Diagnosis & In-Car Repair	2
AUTO 2401	Auto Parts: Management	2
AUTO 2193	Ind Studies in Automotive Technology	1
AUTO 2293	Independent Studies in Auto Technology	2
AUTO 2393	Independent Studies: Auto Technology	3

Total: 13

Aviation Maintenance Technology AAS Degree

Aviation Maintenance Technicians are a vital component of the fast-paced and exciting aviation/aerospace industry. Aerospace industry growth creates a continual demand for newly trained AMTs and interesting job locations abound. Due to the unique skills of the aviation maintenance technician, there are many career opportunities within the aviation maintenance field as well as in non-aviation industries.

Students in the Aviation Maintenance Technology program may pursue technical training for the Airframe and Powerplant Certificate or the Associate of Applied Science Degree. The Airframe and Powerplant Certificate program covers all the essential subject areas necessary for successful completion of the Federal Aviation Administration (FAA) certification process for the mechanic ratings. Students who complete the certificate program may take additional course work in English, mathematics, physics, and other electives to receive an Associate of Applied Science Degree. The certificate and associate degree can be completed in six semesters.

An Airframe and Powerplant Mechanic Certificate issued by the Federal Aviation Administration (FAA), under Title 14 of the Code of Federal Regulations Part 65 (14CFR65), is required for employment as an Aviation Maintenance Technician.

The Aviation Maintenance facility is located at the Columbus State Southwest Center at Bolton Field Airport (KTZR), southwest of Columbus. The 10,000 square foot hangar houses the college's fleet of single and multi-engine, reciprocating and turbine-powered aircraft. Well-equipped classrooms and laboratories provide students with an enjoyable setting for learning and a unique hands-on experience in an airport environment.

The Aviation Maintenance Technology program is approved by the Federal Aviation Administration (FAA Certificate No. DL9T090R) and meets the requirements of FAA Regulation Part 147. Students successfully completing the appropriate technical studies are qualified to take the exams for the FAA Airframe and Powerplant Certificate rating.

Learning Outcome(s):

1. Service, inspect, and complete repairs and alterations on airframes, engines, propellers, and associated systems (including environmental, electrical, fuel, hydraulic, and pneumatic systems)
2. Utilize the regulations and technical manuals to complete inspections, repairs, and alterations of aircraft safely and to complete the required maintenance entries after finishing inspection, repair and/or alteration
3. Properly use precision measuring equipment for the accuracy demanded by the aviation industry

First Semester **Units:** 17

AMT 1101	Introduction to Aviation	2
AMT 1102	Aircraft Weight & Balance	2
AMT 1103	Aircraft Materials	4
AMT 1104	AMT Regulation and Inspection	3
AMT 1105	Ground Operation and Servicing	2
ENGL 1100	Composition I	3
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 21

AMT 1106	Basic Electricity for the AMT	6
AMT 2101	Aircraft Metallic Structures	6
AMT 2102	Aircraft Electrical Systems	6
MATH 1101	Math Construction Sciences/ Applied Tech	3

Milestone/Progress Check: • FAA General Subject Areas Completed

Third Semester **Units:** 17

AMT 2103	Aircraft Instruments and Fire Protection	4
AMT 2104	Aircraft Fuel Systems	2
AMT 2105	Aircraft Non-Metallic Structures	5
ENGT 1115	Engineering Graphics	3
SBS XXXX Social and Behavioral Science (Select from List)		3

Fourth Semester **Units:** 20

AMT 2106	Communications and Navigation Systems	2
AMT 2107	Aircraft Environmental Controls	2

AMT 2108	Aircraft Landing Gear & Fluid Power	4
AMT 2109	Airframe Inspection	6
XXXX XXXX Basic Related Elective (Select from List)		3
HUM XXXX (Select from List)		3
Milestone/Progress Check: • Completion of General and Airframe program • Eligible to test for FAA Airframe Mechanic certification		

Fifth Semester **Units:** 22

AMT 2201	Turbine Engine Maintenance I	5
AMT 2202	Turbine Engine Maintenance II	5
AMT 2203	Reciprocating Engine Maintenance I	5
XXX XXXX Natural Science (Select from List)		4
XXXX XXXX Basic Related Elective (Select from List)		3

Sixth Semester **Units:** 16

AMT 2204	Reciprocating Engine Maintenance II	5
AMT 2205	Propellers	2
AMT 2206	Powerplant Inspection	4
XXXX XXXX Basic Related Elective (Select from List)		3
XXXX XXXX Basic Related Elective (Select from List)		2
Milestone/Progress Check: • Completion of Powerplant program • Eligible to test for FAA Powerplant Mechanic certification.		

Basic Elective Courses - 11 credit hours minimum **Units:** 0

BMGT 2200	Management & Organizational Behavior	3
EET 1115	Basic Digital Systems	3
ESSH 1101	Intro to Environ Science, Safety, Health	3
ESSH 2111	Hazardous Materials Management	3
ITST 1101	IT Fundamentals +	2
ITST 1102	Industrial Network Communications	2
ITST 1123	A + Cert, Managing/ Troubleshooting PCs	3
MECH 1150	Engineering Materials	3
MECH 1240	Machine Tools	3

GE-Social Behavioral Science Requirement - 3 credit hours minimum **Units:** 0

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

HUM - XXXX Arts and Humanities Requirement - 3 credit hours minimum **Units:** 0

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

Natural And Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1107	Human Biology	4
BIO 1111	Intro to Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4

BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

Total: 113

Aviation Maintenance Technician Airframe Certificate

Aviation Maintenance Technicians are a vital component of the fast-paced and exciting aviation industry. Aerospace industry growth creates a continual demand for newly trained AMTs and interesting job locations abound. Due to the unique skills of the aviation maintenance technician, there are many career opportunities within the aviation maintenance field as well as in non-aviation industries.

Aviation organizations mostly require mechanics to hold both an Airframe and Powerplant rating; therefore, the Airframe Certificate program is a good fit for those students who already hold a Powerplant rating. The Airframe Certificate program covers all the essential subject areas necessary for successful completion of the Federal Aviation Administration (FAA) Airframe certification process for the mechanic ratings.

The Aviation Maintenance Technology program is approved by the Federal Aviation Administration (FAA Certificate No. DL9T090R) and meets the requirements of FAA Regulation Part 147. Students successfully completing the appropriate technical studies are qualified to take the Airframe exam for the FAA Airframe Certificate rating.

First Semester **Units:** 13

AMT 1101	Introduction to Aviation	2
AMT 1102	Aircraft Weight & Balance	2
AMT 1103	Aircraft Materials	4
AMT 1104	AMT Regulation and Inspection	3
AMT 1105	Ground Operation and Servicing	2

Second Semester **Units:** 18

AMT 1106	Basic Electricity for the AMT	6
AMT 2101	Aircraft Metallic Structures	6
AMT 2102	Aircraft Electrical Systems	6

Milestone/Progress Check: FAA general subject areas completed.

Third Semester **Units:** 11

AMT 2103	Aircraft Instruments and Fire Protection	4
AMT 2104	Aircraft Fuel Systems	2
AMT 2105	Aircraft Non-Metallic Structures	5

Fourth Semester **Units:** 14

AMT 2106	Communications and Navigation Systems	2
AMT 2107	Aircraft Environmental Controls	2
AMT 2108	Aircraft Landing Gear & Fluid Power	4
AMT 2109	Airframe Inspection	6

Milestones/Progress Check: Completion of General and Airframe program. Eligible to test for FAA Airframe Mechanic certification.

Total: 56

Aviation Maintenance Technician Powerplant Certificate

Aviation Maintenance Technicians are a vital component of the fast-paced and exciting aviation industry. Aerospace industry growth creates a continual demand for newly trained AMTs and interesting job locations abound. Due to the unique skills of the aviation maintenance technician, there are many career opportunities within the aviation maintenance field as well as in non-aviation industries.

Aviation organizations mostly require mechanics to hold both an Airframe and Powerplant rating; therefore, the Powerplant Certificate program is a good fit for those students who already hold an Airframe rating. The Powerplant Certificate program covers all the essential subject areas necessary for successful completion of the Federal Aviation Administration (FAA) Powerplant certification process for the mechanic ratings.

The Aviation Maintenance Technology program is approved by the Federal Aviation Administration (FAA Certificate No. DL9T090R) and meets the requirements of FAA Regulation Part 147. Students successfully completing the appropriate technical studies are qualified to take the Powerplant exam for the FAA Powerplant Certificate rating.

First Semester **Units:** 13

AMT 1101	Introduction to Aviation	2
AMT 1102	Aircraft Weight & Balance	2
AMT 1103	Aircraft Materials	4
AMT 1104	AMT Regulation and Inspection	3
AMT 1105	Ground Operation and Servicing	2

Second Semester **Units:** 12

AMT 1106	Basic Electricity for the AMT	6
AMT 2102	Aircraft Electrical Systems	6

Milestone/Progress Check: FAA General Subject Areas Completed

Third Semester **Units:** 9

AMT 2103	Aircraft Instruments and Fire Protection	4
AMT 2201	Turbine Engine Maintenance I	5

Fourth Semester **Units:** 15

AMT 2202	Turbine Engine Maintenance II	5
AMT 2203	Reciprocating Engine Maintenance I	5
AMT 2204	Reciprocating Engine Maintenance II	5

Fifth Semester **Units:** 6

AMT 2205	Propellers	2
AMT 2206	Powerplant Inspection	4

Milestone/Progress Check: Completion of Powerplant program and Eligible to test for FAA Powerplant Mechanic certification

Total: 55

Business Management AAS Degree

Columbus State's Business Management Programs is dedicated to developing well rounded management and entrepreneurial candidates that can compete and add value to a variety of industries. Students who pursue the Associate Degree of Applied Science will complete a core curriculum with emphasis on developing strong interpersonal, communication, analytical, and decision-making skills. Additionally, the Business Management Program offers opportunities for students to focus their skill development on growth oriented specialties such as

Project Management, Operations, Nonprofit Management, and a host of specialty service areas in Entrepreneurship. Throughout the program students will focus on developing skills as a practitioner using the most current techniques and technologies which will allow them to excel with their current employer, begin a new professional career, or transfer to a Bachelor's program with our four-year college partners.

The Business Management program has achieved voluntary accreditation from the Accreditation Council for Business Schools and Programs (ACBSP) demonstrating it has met standards of business education that promote teaching excellence.

Learning Outcome(s):

1. Demonstrate knowledge of the management functions and skills within an organizational system as they interact in a dynamic and diverse global environment.
2. Demonstrate a working knowledge of current legal, ethical, social, financial, and economic environmental factors as they apply to business.
3. Prepare and present effective written and oral business related reports.
4. Work effectively as a member of a team.
5. Use appropriate technology and other resources to research, analyze and integrate both quantitative and qualitative data to solve business problems.
6. Appropriately apply the management functions both departmentally and to the organization as a whole.
7. Assess and develop individual communication, leadership and team building styles.
8. Recognize and adapt to the communication, leadership and team building styles of others.

First Semester **Units:** 16

BMGT 1101	Principles of Business	3
COLS 1100	First Year Experience Seminar	1
BMGT 1102	Interpersonal Skills	2
ENGL 1100	Composition I	3
FMGT 1101	Personal Finance	3
BOA 1102	Excel I	2
AND		
BOA 1172	Excel II	2

Milestones/Progress Check: • English satisfies general education requirements and are Transfer Assurance Guide (TAG) Courses eligible for seamless transfer to any Ohio institution. • Upon completion of the first semester, students will earn the Foundations of Business Certificate. • Upon completion of Excel I & II, eligible to become certified in Microsoft Excel by passing certification exam.

Second Semester **Units:** 14

ACCT 1211	Financial Accounting	3
COMM 2200	Business Communication	3
STAT 1400	Statistical Concepts for Business	3
BOA 1300	Business Applications	2
BMGTXXXX-	Technical Elective	3

Milestones/Progress Check: • Statistics & Business Communication satisfy general education requirements. • Business Communications & Financial Accounting are Transfer Assurance Guide (TAG) Courses eligible for seamless transfer to any Ohio institution. • Upon completion of the first & second semesters, students will earn the Advanced Foundations of Business Certificate.

Third Semester **Units:** 15

BMGT-XXXX (Technical Elective)		3
BMGT 2258	Operations Management	3
HRM 1121	Human Resources Management	3
MKTG 1110	Marketing Principles	3
ECON 2200	Principles of Microeconomics	3

Milestone/Progress Check: • ECON 2200 and MKTG 1110 are Transfer Assurance Guide (TAG) Courses eligible for seamless transfer to any Ohio institution.

Fourth Semester **Units:** 15

BMGT 2299	Case Studies in Strategic Management	3
BMGT 2200	Management & Organizational Behavior	3
FMGT 2201	Corporate Finance	3
ACCT 1212	Managerial Accounting	3
ESSH 1101	Intro to Environ Science, Safety, Health	3
OR		
Any Humanities Course from the Prefixes: ARCH, HART, HIST, HUM, MUS, or PHIL.		3

Milestones/Progress Check: • ACCT 1212 and BMGT 2200 are Transfer Assurance Guide (TAG) Courses eligible for seamless transfer to any Ohio institution. • General Education Elective satisfy general education requirements. • General Education course choices are either Transfer Assurance Guide (TAG) Courses or part of the Ohio Transfer Module (OTM).

General Education Elective - 3 credit hours minimum **Units:** 0

(Select One)

ESSH 1101	Intro to Environ Science, Safety, Health	3
ARCHXXXX		3
HARTXXXX		3
OR		
HISTXXXX		3
OR		
HUMXXXX		3
OR		
MUSXXXX		3
OR		
PHILXXXX		3
OR		

Technical Electives - 6 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

BMGT 1008	21st Century Workplace Skills	2
BMGT 1210	21st Century Supervision	3
BMGT 1798	Study Abroad Global Business Mgt	3
BMGT 2216	Business Ethics	3
BMGT 2231	Fundamentals of Entrepreneurship	3
BMGT 2232	Entrepreneurship: Business Plan Develop	3
BMGT 2245	Introduction to Non-Profit Management	3
BMGT 2250	Project Management Principles	3
BMGT 2251	Project Management Techniques	3
BMGT 2254	Negotiation	3
BMGT 2280	Professional Development	1
BMGT 2599	Project Management Capstone	3
BMGT 2901	Business Seminar/Practicum	3
BOA 1111	Bookkeeping	3
BOA 1117	Payroll	1
BOA 1122	QuickBooks	2
FMGT 2232	Principles of Insurance	3
LEGL 2064	Legal Environment of Business	3
MKTG 1230	Customer Service & Sales	3
MKTG 1125	Introduction to Social Media	3
SCM 1100	Supply Chain Mgmt Principles	3

Total: 60

Business Management - Entrepreneurship Major AAS Degree

The Associate of Applied Science in Entrepreneurship is a foundational degree in business that offers a strong overview of business functions with a focus in owning and operating a small business.

In addition to the Business Management core outcomes, a student pursuing the Entrepreneurship associate degree will be able to demonstrate knowledge of the skills needed to start a new business. The graduate should be able to demonstrate knowledge of the

research methods and skills needed to start, expand or purchase a business.

The graduate will be able to develop a business plan and be able to list and explain the major factors influencing the success or failure of a small business. (S)he will be able to demonstrate knowledge of the functional and interpersonal management skills needed to operate a small business.

Learning Outcome(s):

1. Demonstrate knowledge of the skills needed to start a new business.
2. Demonstrate knowledge of the research methods and skills needed to start, expand, or purchase a business.
3. List and explain the major factors influencing the success or failure of a small business.
4. Develop a business plan.
5. Demonstrate knowledge of the functional and interpersonal management skills needed to operate a small business.

First Semester **Units:** 12

BMGT 1102	Interpersonal Skills	2
COLS 1100	First Year Experience Seminar	1
CSCI 1101	Computer Concepts & Apps	3
ENGL 1100	Composition I	3
STAT 1400	Statistical Concepts for Business	3

Milestone/Progress Check: • English & Computer Applications satisfy general education requirements and are Transfer Assurance Guide (TAG) Courses eligible for seamless transfer to any Ohio institution.

Second Semester **Units:** 15

GE Elective (See list below)		3
ACCT 1211	Financial Accounting	3
COMM 2207	Writing for the Web	3
ECON 1110	Intro to Economics	3
OR		
ECON 2200	Principles of Microeconomics	3
BMGT 1210	21st Century Supervision	3
OR		
BMGT 2200	Management & Organizational Behavior	3

Milestones/Progress Check: • COMM 2200, ACCT 1211, BMGT 2200 & ECON 2200 are Transfer Assurance Guide (TAG) courses eligible for seamless transfer to any Ohio institution. • General Education Elective satisfy general education requirements.

Third Semester **Units:** 6

BMGT 2254	Negotiation	3
MKTG 1125	Introduction to Social Media	3

Fourth Semester **Units:** 15

BMGT-XXXX (Technical Elective)		3
BMGT 2231	Fundamentals of Entrepreneurship	3
BMGT 2280	Professional Development	1
BOA 1122	QuickBooks	2
FMGT 2201	Corporate Finance	3
MKTG 2200	Digital Marketing	3

Fifth Semester **Units:** 12

BMGT 2232	Entrepreneurship: Business Plan Develop	3
BMGT 2258	Operations Management	3
BMGT 2901	Business Seminar/Practicum	3
BMGT-XXXX (Technical Elective)		3

Technical Electives - 6 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

ACCT 1212	Managerial Accounting	3
BMGT 1101	Principles of Business	3
BMGT 2216	Business Ethics	3

BMGT 2245	Introduction to Non-Profit Management	3
BMGT 2250	Project Management Principles	3
BMGT 2251	Project Management Techniques	3
BMGT 2299	Business Strategy	3
BMGT 2599	Project Management Capstone	3
BOA 1111	Bookkeeping	3
DDG 1100	Introduction to Computer Design	3
FMGT 1101	Personal Finance	3
FMGT 2232	Principles of Insurance	3
HRM 1121	Human Resources Management	3
LEGL 2064	Legal Environment of Business	3
MKTG 1110	Marketing Principles	3
MKTG 1230	Customer Service & Sales	3

GE (General Education) Electives - 3 credit hours minimum **Units:** 0

(Select One)

ESSH 1101	Intro to Environ Science, Safety, Health	3

OR
Choose any Humanities Course with Prefixes: ARCH XXXX HART XXXX HIST XXXX HUM XXXX MUS XXXX PHIL XXXX

Total: 60

Business Management - Human Resources Management AAS Degree

Over the last several decades, the human resource function has devolved into an extremely complex profession requiring an understanding of how each facet of human resources management impacts another and the organization as a whole. The plethora of federal and state laws regulating all aspects of the employee/employer relationship, compounded by conflicting judicial interpretations, require professionals skilled in understanding and applying these laws to day-to-day management decisions. Wrong decisions, by any representative of the organization, in hiring, discipline, termination, or the way employees are treated, may result in a multimillion dollar lawsuit, costing thousands of dollars in legal fees, even if the company prevails legally.

Senior management has begun to recognize that human resource management professionals, skilled in human resource and labor law, labor relations, policy development and administration, compensation and benefits, and employee relations, make a positive impact on a firm's bottom line.

Columbus State's Human Resources Management program teaches human resources management skills in a hands-on learning environment that bridges academic theory with "real world" applications. Students receive a foundational background in the many legal issues impacting human resources management, and they learn how to apply their comprehensive knowledge to a wide spectrum of human resources management functions.

Learning Outcome(s):

1. Research and apply human resources laws, cases, and issues using the Internet and other resources.
2. Apply human resources laws impacting private sector employers' day-to-day business operations.
3. Interpret, and communicate legal human resources policies, procedures, and programs for an organization.
4. Administer origination, retention, and disposal of records to support the key tasks of the human resources department and meet the legislative requirements with which the organization must comply.
5. Conduct the various types of interviews used in business.
6. Administer compensation and benefits programs.
7. Administer a performance appraisal system.
8. Administer workplace safety programs.
9. Develop and present employee training programs on human resources issues using in-person and computer based presentation methods.
10. Provide assistance in the union organizing, negotiating, grieving, and arbitrating processes.

First Semester **Units:** 15

COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
BOA 1200	Business Language	2
CSCI 1101	Computer Concepts & Apps	3
LEGL 2064	Legal Environment of Business	3
HRM 1121	Human Resources Management	3

Second Semester **Units:** 14

HRM 1223	Human Resource Policy and Procedure	3
HRM 1224	Employee Training & Development	3
BOA 1300	Business Applications	2
STAT 1400	Statistical Concepts for Business	3
OR		
MATH 1104	Mathematical Concepts for Business	3
BMGT 2200	Management & Organizational Behavior	3

Third Semester **Units:** 6

ECON 2200	Principles of Microeconomics	3
OR		
ECON 1110	Intro to Economics	3
HUM-XXXX (select from approved GE-HUM list)		3

Fourth Semester **Units:** 13

BMGT 1102	Interpersonal Skills	2
HRM 1225	Employee & Labor Relations	3
HRM 1825	Compensation	3
HRM 1828	Benefits	3
HRM 2221	Staffing Under the Law	2

Fifth Semester **Units:** 12

HRM 2901	HR Mgmt Practicum & Seminar	3
OR		
BMGT 2299	Business Strategy	3
BMGT 2216	Business Ethics	3
SOC 2380	American Race & Ethnic Relations	3
SBS-XXXX (select from approved GE-SBS list)		3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2200	Introduction to Biological Anthropology	4
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 60

Business Operations Analysis Certificate

The Business Operations Analysis Certificate is comprised of a six (6) course sequence which may be embedded within the BMGT Associate Degree or completed as a standalone program. This certificate will provide value added skills to any management practitioner overseeing a business operation in either manufacturing or a service environment. The course work will enhance analytical skills with statistical methods and develop higher level presentation skills used to present data analysis and build stakeholder support. Certificate candidates will learn how to analyze income statements, develop forecasting and costing methodologies, analyze productivity and work methods, evaluate company value chains, and apply total quality management techniques. Completion will provide a solid foundation for analysis of business operations and a stepping stone for managers wishing to pursue Six Sigma or Lean Manufacturing certifications at some point in their career.

Learning Outcome(s):

1. Apply statistical concepts focused on business applications to solve operational problems within an organization.
2. Implement Excel software analysis, features and functions to solve business and accounting applications.
3. Describe the importance of supply chains, logistics techniques, and managing inventories, and its impact on an organization's strategic financial outcomes.
4. Solve business problems using computer software as a tool inclusing communication methods used in a business environment.
5. Compute and assess financial measurements, calculations, and reports used by an organization to make a variety of management decisions with emphasis on costing products and services, decision analysis, and budgeting.
6. Recommend solutions to common operational issues using data analysis, quality tool techniques, and business analysis within the context of the organizational environment

First Semester **Units:** 10

STAT 1400	Statistical Concepts for Business	3
BOA 1102	Excel I	2
AND		
BOA 1172	Excel II	2
SCM 1100	Supply Chain Mgmt Principles	3

Milestone/Progress Check: • Completion of BOA1102 Excel I & BOA1172 Excel II includes the option of earning the industry Microsoft Certification in Excel.

Second Semester **Units:** 8

ACCT 1212	Managerial Accounting	3
BMGT 2258	Operations Management	3
BOA 1300	Business Applications	2

Milestone/Progress Check: • Managerial Accounting is Transfer Assurance Guide (TAG) Course eligible for seamless transfer to any Ohio institution.

Total: 18

Entrepreneurship Certificate

The Entrepreneurship Certificate consists of seven (7) courses covering nineteen (19) credit hours and can be taken in as short as three (3) semesters. This certificate provides the developing small business student/ entrepreneur an expedient opportunity to gain specific knowledge of small business operations. Knowledge gained will include day to day operations, feasibility studies, market analysis, revenue identification, forecasting, and sources of financing. This seven (7) course certificate program is available to degree, as well as non-degree-seeking students.

Learning Outcome(s):

1. - Cultivate a working knowledge of current legal, ethical, social, financial, and economic environmental factors as they apply to business
2. - Analyze and integrate both quantitative and qualitative data to solve business problems using appropriate technology and other resources

First Semester **Units:** 8

BMGT 2231	Fundamentals of Entrepreneurship	3
BOA 1102	Excel I	2
MKTG 1110	Marketing Principles	3
OR		
MKTG 1125	Introduction to Social Media	3
OR		
MKTG 1230	Customer Service & Sales	3
OR		
MKTG 2200	Digital Marketing	3

Second Semester **Units:** 9

BMGT 2232	Entrepreneurship: Business Plan Develop	3
BOA 1111	Bookkeeping	3
FMGT 1101	Personal Finance	3

Third Semester **Units:** 2

BOA 1122	QuickBooks	2

Total: 19

Entrepreneurship Certificate - Automotive Technology

The Entrepreneurship Certificate focusing on Automotive Technology Management consists of nine (9) courses covering twenty-one (21) credit hours and can be taken in as short as three (3) semesters. This certificate will provide an entrepreneurial skill set to students that wish to open a small business in the automotive parts or automotive service field. Students will gain core knowledge in the foundation areas of Automotive Technology such as systems, shop orientation, management, and can specialize in parts or service. Entrepreneurial knowledge will center on market research, segmentation and analysis, product development, revenue identification, sales forecasting, and sources of financing.

This certificate is meant to benefit a wide range of end users. Current students in either the Entrepreneurship Major or Automotive Technology Major can benefit by taking the additional classes to enhance their chances of opening a business. Small business owners are able to earn a certificate while improving their operations of an existing business. Potential students can also utilize this certificate as continuing education in order to advance with their current employer in the automotive industry.

First Semester **Units:** 6

AUTO 1101	Basic Auto Systems	2
AUTO 1106	Auto Shop Orientation and Service	2
BOA 1102	Excel I	2

Second Semester **Units:** 8

AUTO 2101	Auto Business Management	2
BMGT 2231	Fundamentals of Entrepreneurship	3
BOA 1111	Bookkeeping	3

Third Semester **Units:** 7

AUTO 2201	Service Advising	2
AUTO 2301	Auto Service Management	2
OR		
AUTO 2401	Auto Parts: Management	2
BMGT 2232	Entrepreneurship: Business Plan Develop	3

Total: 21

Entrepreneurship Certificate - Hospitality

The Entrepreneurship Certificate focusing on Hospitality consists of nine (9) courses covering twenty four (24) credit hours and can be taken in as short as two (2) semesters. This certificate will provide an entrepreneurial skill set to students that wish to open a Hospitality related small business. Students will gain core knowledge in the foundation areas of Hospitality such as safety, marketing, and financial analysis. Entrepreneurial knowledge will center on market research, segmentation and analysis, product development, revenue identification, sales forecasting, and sources of financing.

This certificate is meant to benefit a wide range of end users. Current students in either the Entrepreneurship Major or Hospitality Major can benefit by taking the additional classes to enhance their chances of opening a business. Small business owners are able to earn a certificate while improving their operations of an existing business. Potential students can also utilize this certificate as continuing education in order to advance with their current employer in the hospitality industry.

First Semester **Units:** 12

BMGT 1102	Interpersonal Skills	2
BMGT 2231	Fundamentals of Entrepreneurship	3
BOA 1102	Excel I	2
HOSP 1122	Hospitality Facilities & Sanitation	2
BMGT 1210	21st Century Supervision	3

Second Semester **Units:** 10

BMGT 2232	Entrepreneurship: Business Plan Develop	3
BOA 1111	Bookkeeping	3
HOSP 2207	Hospitality Financial Analysis	2
HOSP 2246	Hospitality Sales and Marketing	2

Total: 22

Entrepreneurship Certificate - Real Estate Management

The Entrepreneurship Certificate focusing on Real Estate Management consists of six (6) courses covering sixteen (16) credit hours and can be taken in as short as two (2) semesters. This certificate will provide an entrepreneurial skill set to students that wish to open a small business in the real estate industry. Students will gain core knowledge in the foundation areas of Real Estate such as principles/practices, property management, investing, and repair. Entrepreneurial knowledge will center on market research, segmentation and analysis, product development, revenue identification, sales forecasting, and sources of financing.

This certificate is meant to benefit a wide range of end users. Current students in either the Entrepreneurship Major or Real Estate Major can benefit by taking the additional classes to enhance their chances of opening a business. Current real estate agents are able to earn a certificate while improving their operations of an existing business. Potential students can also utilize this certificate as continuing education in order to advance with their current employer in the real estate industry.

First Semester **Units:** 9

REAL 1011	Real Estate Principles and Practices	3
REAL 1012	Real Estate Law	3
BMGT 2231	Fundamentals of Entrepreneurship	3

Second Semester **Units:** 7

REAL 1013	Real Estate Finance	2
REAL 1014	Real Estate Appraisal	2
BMGT 2232	Entrepreneurship: Business Plan Develop	3

Total: 16

Entrepreneurship Certificate - Sport Management

The Entrepreneurship Certificate focusing on Sport Management consists of eight (8) courses covering twenty three (23) credit hours and can be taken in as short as two (2) semesters. This certificate will provide an entrepreneurial skill set to students that wish to open a small business in the sports or exercise field. Students will gain core knowledge in the foundation areas of Sports such as event management, law and marketing. Entrepreneurial knowledge will center on market research, segmentation and analysis, product development, revenue identification, sales forecasting, and sources of financing.

This certificate is meant to benefit a wide range of end users. Current students in either the Entrepreneurship Major or Sport and Exercise Major can benefit by taking the additional classes to enhance their success for opening a business. Potential students can also utilize this certificate as continuing education in order to advance with their current employer in the sport/exercise industry.

First Semester **Units:** 11

BMGT 2231	Fundamentals of Entrepreneurship	3
BOA 1102	Excel I	2
HOSP 2529	Sport & Event Management	3
BMGT 1210	21st Century Supervision	3

Second Semester **Units:** 12

BMGT 2232	Entrepreneurship: Business Plan Develop	3
BOA 1111	Bookkeeping	3
SES 2534	Sport Marketing	3
SES 2535	Sport Law	3

Total: 23

Foundations of Business Certificate

The Foundations of Business Certificate is a six (6) course certificate designed to recognize a student's achievement of the basic skills necessary for employability and entry level success in a business. The certificate places emphasis on writing and composition, an overview of business disciplines, technological literacy, managing personal finances, interpersonal development and awareness, and an overall understanding of how to succeed in a college environment. This certificate is a first step for students to enter college level work in the business field and progress toward eventual degree completion.

Learning Outcome(s):

1. Describe key elements of the business environment, such as accounting, marketing, finance, human resources and legal concepts used by contemporary businesses.
2. Develop essential business skills such as writing, communication, listening, team building and the ability to understand different interpersonal styles.
3. Demonstrate technological literacy of computer concepts and software programs.
4. Apply financial literacy concepts and create a personal financial plan.

First Semester **Units:** 16

BMGT 1101	Principles of Business	3
BMGT 1102	Interpersonal Skills	2
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
FMGT 1101	Personal Finance	3

Milestone/Progress Check: • Upon completion of the first semester, students will earn the Foundations of Business Certificate.

BOA 1102	Excel I	2
AND		
BOA 1172	Excel II	2

Total: 16

Advanced Foundations of Business Certificate

The Advanced Foundations of Business Certificate recognizes student achievement of broader skills important for entry to becoming a manager in the business world. Building upon the achievements of the Foundations of Business Certificate, this certificate adds five (5) more courses advancing to more specialized aspects of the business discipline. Students will study managing business operations, financial accounting processes, using data and statistics for business decisions, creating professional business documents, and learn about the role of the economy on business operations. In order to achieve the Advanced Certificate students must first successfully complete the Foundations of Business Certificate. Both certificates are fully embedded in the Business Management Associate Degree program and will lay the groundwork for eventual degree completion.

Second Semester **Units:** 14

ACCT 1211	Financial Accounting	3
STAT 1400	Statistical Concepts for Business	3
COMM 2200	Business Communication	3
BOA 1300	Business Applications	2
BMGT Technical Elective		3

Milestone/Progress Check: • Upon completion of the first and second semesters, students will earn the Advanced Foundations of Business Certificate.

NOTE: Must complete first semester of the Foundations of Business Certificate to be eligible for the Advanced Foundations of Business Certificate.

Total: 14

Human Resources Management Certificate

This certificate program is designed to introduce the essential functions of Human Resources to individualsconsidering a career in human resources or the beginning HR practitioner. In addition to acquiring a basic understanding of how business organizations function, students will be introduced to the following Human Resources Management functions:

Recruitment and Selection
Training and Development
Compensation and Benefits
Employee Relations
Performance Evaluation

First Semester **Units:** 8

BMGT 1102	Interpersonal Skills	2
BMGT 2200	Management & Organizational Behavior	3
HRM 1121	Human Resources Management	3

Second Semester **Units:** 12

LEGL 2064	Legal Environment of Business	3
HRM 1223	Human Resource Policy and Procedure	3
HRM 1224	Employee Training & Development	3
HRM 1225	Employee & Labor Relations	3

Third Semester **Units:** 8

HRM 1825	Compensation	3
HRM 1828	Benefits	3
HRM 2221	Staffing Under the Law	2

Total: 28

Managing Interpersonal Skills Certificate

The Managing Interpersonal Skills Certificate provides students with the knowledge and skills necessary to develop and maintain effective interpersonal relationships, both professionally and personally. Since more than two-thirds of the competencies desired of the average employee are interpersonal rather than technical in nature, this set of knowledge and skills is essential for effective job performance. This sequence of innovative, highly interactive courses provides students with the opportunity to learn about themselves as well as others. This five (5) course certificate program is available to degree and non-degree seeking students.

Learning Outcome(s):

1. Demonstrate processes for critically reading, writing, and responding to a variety of texts in order to compose clear, concise expository essays.
2. Develop essential business skills such as writing, communication, listening, team building and the ability to understand different interpersonal styles.
3. Conduct professional assessments of individual competencies to prepare for future career advancement.
4. Practice skills in problem solving, motivating, leading, and coaching employee associates.
5. Apply negotiation strategies to practical situations and work relationships to improve stakeholder outcomes.

First Semester **Units:** 5

BMGT 1102	Interpersonal Skills	2
ENGL 1100	Composition I	3

Second Semester **Units:** 9

BMGT 1210	21st Century Supervision	3
BMGT 2254	Negotiation	3
COMM 2200	Business Communication	3

Total: 14

Pre-MBA Certificate

The Pre-MBA Certificate The MBA (Master of Business Administration) is one of the most sought-after professional degrees not only by those currently working in business but also by many other professionals (such as physicians, attorneys, public-sector managers, and entrepreneurs) who are increasingly in need of these types of skills. The Pre-MBA Certificate is designed for individuals who have already completed a baccalaureate degree and wish to pursue an MBA, or for professionals in various fields who wish a basic grounding in business principles through an introduction to the basic business disciplines. All of the courses in this certificate can be completed online.

NOTE: We strongly recommend that you meet with an advisor from your target MBA college prior to beginning this certificate program, since admission requirements vary greatly.

First Semester **Units:** 18

MKTG 1110	Marketing Principles	3
BMGT 2200	Management & Organizational Behavior	3
ECON 2200	Principles of Microeconomics	3
STAT 1400	Statistical Concepts for Business	3
ACCT 1211	Financial Accounting	3
FMGT 2201	Corporate Finance	3

Total: 18

Project Management Certificate

The Project Management Certificate comprises 6 courses that include 3 courses specific to the profession covering aspects of the PMI TALENT TRIANGLE® and 3 ancillary courses. Students will gain a strong understanding of how to manage projects and key concepts from the Guide to the Project Management Body of Knowledge (PMBOK® Guide). The capstone course allows students to assume the role of a Project Manager in a simulation whereby students make decisions in a realistic environment to complete project milestones. This certificate will greatly enhance a student's credentials or assist with pursuing industry designations such as the Certified Associate in Project Management (CAPM)® or the Project Management Professional (PMP)®. As Project Managers are in high demand across all industries, employers will see the value of this skill set. Non-degree seeking students as well as Associate Degree candidates may pursue this valuable credential.

The PMI TALENT TRIANGLE, the Guide to the Project Management Body of Knowledge (PMBOK), the Certified Associate in Project Management (CAPM), and the Project Management Professional (PMP) are registered marks of the Project Management Institute, Inc.

Learning Outcome(s):

1. Describe project management concepts and how they are used to effectively manage the project life cycle in organizations.
2. Develop essential project leader skills such as writing, communication, listening, team building and the ability to understand different interpersonal styles.
3. Evaluate financial measurements, budgeting and costing methods for projects.
4. Characterize management and motivational techniques necessary to be successful in unique organizations
5. Formulate and implement project management decisions in a simulated project environment.

First Semester **Units:** 5

BMGT 1102	Interpersonal Skills	2
BMGT 2250	Project Management Principles	3

Second Semester **Units:** 6

BMGT 2251	Project Management Techniques	3
BMGT 2200	Management & Organizational Behavior	3

Third Semester **Units:** 6

ACCT 1212	Managerial Accounting	3
BMGT 2599	Project Management Capstone	3

Total: 17

Business Office Administration - Administrative Assistant AAS Degree

The Business Office Administration Technology offers an Associate Degree in Business Office Administration with an Administrative Assistant Major and a Medical Administrative Assistant Major that will enable students to acquire advanced software and keyboarding skills as well as management and team- building skills. Students will participate in office simulations and an office internship preparing them to become an integral part of any office management team. These skills will enable a graduate to assume responsibility without direct supervision, display initiative, exercise judgment, and prepare business communications documents.

Learning Outcome(s):

1. Utilize industry tools, resources, technology, and software to facilitate, create, access, report, and analyze business information.
2. Plan, implement, and manage business data and information by applying and adhering to standard office policies, procedures and practices.
3. Demonstrate effective and appropriate formal and informal communication (verbal and written) in diverse work environments. Employ critical thinking, analytical problem– solving skills, and ethical decision-making techniques to address work-related issues.
4. Research information using a variety of resources, to accomplish tasks in the workplace environment.
5. Work effectively and efficiently both independently and as part of a team.

First Semester **Units:** 13

BOA 1101	Word I	2
BOA 1102	Excel I	2
BOA 1131	Keyboarding & Document Formatting	2
BOA 1150	Office Procedures	3
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3

Second Semester **Units:** 13

BOA 1103	Powerpoint	2
BOA 1132	Advanced Document Formatting	2
BOA 1172	Excel II	2
BOA 1191	Word II	2
BMGT 1101	Principles of Business	3
BOA 1200	Business Language	2

Third Semester **Units:** 9

BMGT 2250	Project Management Principles	3
MATH 1104	Mathematical Concepts for Business	3
SBS-XXXX (select from approved GE-SBS list)		3

Fourth Semester **Units:** 13

BOA 1104	Access	2
BOA 1111	Bookkeeping	3
FMGT 1101	Personal Finance	3
NAT-XXXX (select from approved GE-NAT list)		3
BMGT 1102	Interpersonal Skills	2

Fifth Semester **Units:** 14

BOA 2950	BOA Practicum & Seminar	3
BOA 2999	BOA Capstone	3
BOA-XXXX (Technical Elective) (select from list)		2
BMGT 2216	Business Ethics	3
HUM-XXXX (select from approved GE-HUM list)		3

Milestones/Progress Check: • BOA 2999: Completion of professional portfolio and service-learning experience; simulated office environment; on-campus attendance required. • * Includes Microsoft® PowerPoint, Excel, and Word Certification Exams. • ** Elective courses listed on plan of study.

Technical Electives - 2 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

BOA 1117	Payroll	1
BOA 1122	QuickBooks	2
BOA 1300	Business Applications	2
FMGT 2232	Principles of Insurance	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Introduction to Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology	3

Total: 62

Business Office Administration - Medical Admin Assistant AAS Degree

The Medical Administrative Assistant Major also prepares students to work in medical settings such as hospitals, medical offices, clinics, dental offices, and insurance companies.

Learning Outcome(s):

1. Identify the structure and organization of current healthcare systems and environments.
2. Demonstrate a working knowledge of medical terminology.

First Semester **Units:** 13

BOA 1101	Word I	2
BOA 1103	Powerpoint	2
BOA 1131	Keyboarding & Document Formatting	2
BOA 1150	Office Procedures	3
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3

Second Semester **Units:** 12

BOA 1102	Excel I	2
BOA 1132	Advanced Document Formatting	2
BOA 1191	Word II	2
MLT 1100	Basic Concepts in Health Care	2
MULT 1110	Medical Terminology	2
BOA 1200	Business Language	2

Milestone/Progress Check: • MLT 1100 requires placement into No Reading Requirement.

Third Semester **Units:** 7

BOA 1104	Access	2
HIMT 1121	Advanced Medical Terminology	2
MATH 1104	Mathematical Concepts for Business	3

Fourth Semester **Units:** 14

BOA 1111	Bookkeeping	3
BOA 1172	Excel II	2
BOA-XXXX (Technical Elective)		2
HIMT 1135	Health Data Management	3
HIMT 1265	Medical Reimbursement	2
HIMT 1133	Legal Aspects of Health Information	2

Fifth Semester **Units:** 17

BOA 2950	BOA Practicum & Seminar	3
BOA 2999	BOA Capstone	3
HUM-XXXX (select from approved GE-HUM list)		3
SBS-XXXX (select from approved GE-SBS list)		3
Natural Science (Select from list)		3
HIMT 1274	Intro to Medical Coding & Reimbursement	2

Milestone/Progress Check: • BOA 2999: Completion of professional portfolio and service-learning related to the administrative field; includes simulated office environment; requires on-campus attendance.

Technical Electives - 2 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

BOA 1117	Payroll	1
BOA 1122	QuickBooks	2
BOA 1300	Business Applications	2
BMGT 1102	Interpersonal Skills	2
FMGT 2232	Principles of Insurance	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3

HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences Requirements - 3 credit hours minimum **Units:** 0

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Introduction to Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology	3

Total: 63

Bookkeeping Certificate

The Bookkeeping Certificate prepares students for a career in professional bookkeeping. This bookkeeping certificate prepares students for an entry-level bookkeeping position with a solid foundation of bookkeeping principles, electronic spreadsheets, and computerized accounting software as well as certification in Microsoft Excel and Intuit QuickBooks. This certificate consists of five courses and can be completed in two semesters. This certificate is also available as an online/distance learning option.

First Semester **Units:** 5

BOA 1102	Excel I	2
BOA 1111	Bookkeeping	3

Milestone/Progress Check: • Working knowledge of accounting procedures and Microsoft® Excel.

Second Semester **Units:** 5

BOA 1117	Payroll	1
BOA 1122	QuickBooks	2
BOA 1172	Excel II	2

Total: 10

Office Specialist Certificate

The Office Specialist Certificate prepares students for the globally-recognized Microsoft® Office Specialist certification. In today's workplace, more employers require that their employees are knowledgeable in all areas of Microsoft Offi software applications. Students develop skills in word processing, electronic spreadsheets, presentation graphics, database management, electronic mail and personal information management, and file and folder management. These skills prepare students to be more productive while using the most up-to-date technologies. This certificate is available as an online/distance learning option. All students completing an intermediate level of Word andExcel, and/ or the PowerPoint course will have the opportunity to take the Microsoft Office Specialist Exam.

First Semester **Units:** 6

BOA 1101	Word I	2
BOA 1102	Excel I	2
BOA 1103	Powerpoint	2

Second Semester **Units:** 6

BOA 1172	Excel II	2
BOA 1191	Word II	2
BOA 1104	Access	2

Total: 12

Civil Engineering Technology - Civil Track AAS Degree

The Associate of Applied Science Degree in Civil Engineering Technology provides a basis for entry-level careers in all phases of the construction continuum: planning, design, construction and operations. The Associate of Applied Science is designed as a terminal degree providing those skills necessary for immediate employment. Program graduates are prepared to work for either private or governmental segments of the construction industry requiring civil engineering technicians. Specific employment positions include manual or computer assisted (CAD) construction drawing and contract document preparation for commercial, heavy and industrial/institutional projects, construction inspection, survey crew operations, and construction material quality control and quality assurance.

In addition to providing entry-level positions, the degree provides opportunities for individuals seeking career changes, continuing education, and skills enhancement. The Civil Engineering Technology degree is preparation for immediate, productive employment.

Learning Outcome(s):

1. Prepare engineering drawings for public and private work projects utilizing computer aided drafting (CAD).
2. Perform standardized field and laboratory testing on civil engineering materials soils, aggregates, asphalt and Portland cement concrete, masonry, steel and wood in accordance with American Society of Testing Methods (ASTM) procedures and the Ohio Department of Transportation (ODOT) Construction Materials Specifications.
3. Correctly apply regulatory and industry standards to design public utility systems, including sanitary wastewater collection systems, stormwater management systems and water distribution systems.
4. Apply an integrated system of digital levels, total stations, data collectors/controllers, global positioning system equipment and associated software in surveying and construction related problem solving applications including building, utility and transportation systems.

5. Determine forces and stresses in elementary structural systems.
6. Apply ODOT, Federal Highway Administration (FHWA), and industry design standards to plan, design, and detail a simulated highway including drainage structures.
7. Apply subdivision regulations and surveying laws in the preparation of preliminary sketch, preliminary plat, and final plat for a major private platted land subdivision.
8. Perform preliminary site investigations, research infrastructure records, secure appropriate codes and regulations, and prepare a set of preliminary drawings of an urban redevelopment site.
9. Perform quantity takeoffs and estimates for heavy construction projects.

First Semester **Units:** 16

ARCH 1120	Basic CAD Drafting	1
CIVL 1120	Construction Materials Science	3
CIVL 1121	Highway Plan Reading	1
CMGT 1121	Construction Drawings	3
MATH 1148	College Algebra	4
SURV 1410	Introduction to Surveying	3
OR		
SURV 1410A	Introduction to Surveying I	1
AND		
SURV 1410B	Introduction to Surveying II	2
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 17

CIVL 1230	Heavy Construction Estimating	3
CIVL 1320	Statics and Strengths of Materials	3
CIVL 2430	Roadway Location & Design	3
CMGT 1105	Construction Documents	3
ENGL 1100	Composition I	3
SURV 1460	Computer Apps in Construction Science	2

Third Semester **Units:** 6

GIS 1102	Mapping for Everyone	2
MATH 1149	Trigonometry*	4

*With proper prerequisites MATH 1150 may be taken in place of MATH 1148 and MATH 1149.

Fourth Semester **Units:** 14

CIVL 2210	Principles of Hydraulics	2
CIVL 2440	Traffic Engineering & Safety	3
SURV 1420	Historical Surveying	2
SURV 2410	Engineering Surveying	4
OR		
SURV 2410A	Engineering Surveying I	2
AND		
SURV 2410B	Engineering Surveying II	2
NAT-XXXX (select from approved GE-NAT list)		3

Fifth Semester **Units:** 12

CIVL 2230	Public Utility Systems	2
SURV 2490	Land Development Systems	3
ESSH 1650	OSHA 30 Hr Construction Safety & Health	2
PSY 1100	Introduction to Psychology	3
OR		
SOC 1101	Introduction to Sociology	3
OR		
HUM-XXXX (select from approved GE-HUM list)		3
XXXX-XXXX (Technical Elective)		2

Technical Electives - 2 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

ARCH 2237	Structures	3
CIVL 2910	Field Experience	3
CIVL 2994	Special Topics in Civil Engineering	1-3
CMGT 1131	Quantity Survey	3
SURV 2450	Legal Principles in Surveying	3
SURV 2480	Geodetic Surveying	4
OR		

SURV 2480A	Geodetic Surveying I	2
AND		
SURV 2480B	Geodetic Surveying II	2
SURV 2495	UAS Remote Imagery/3D Scan	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One) ARCH 2100 Preferred

ARCH 2100	History of Architecture	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

HORT 1130 Preferred

ASTR 1161	The Solar System	3
BIO 1107	Human Biology	4
CHEM 1111	Elementary Chemistry I	4
ESSH 1101	Intro to Environ Science, Safety, Health	3
GEOL 1101	Introduction to Earth Science	4
HORT 1130	Plant Sciences	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5

Total: 65

Civil Engineering Technology - Survey Track AAS Degree

The Associate of Applied Science Degree in Civil Engineering Technology – Survey Track provides a basis for entry-level careers in all phases of the construction continuum: planning, design, construction. The Associate of Applied Science is designed as a terminal degree providing those skills necessary for immediate employment or continue education that leads to eligibility as a Professional License Surveyor (Pathway with Franklin University). Program graduates are prepared to work for either private or governmental segments of the construction industry requiring surveying technicians. Specific employment positions include computer assisted (CAD) construction drawing and contract document preparation for commercial, heavy and industrial/institutional projects, construction inspection, survey crew operations, and construction material quality control and quality assurance.

In addition to providing entry-level positions, the degree provides opportunities for individuals seeking career changes, continuing education, and skills enhancement. The Civil Engineering Technology- Survey Track degree is preparation for immediate, productive employment.

Learning Outcome(s):

1. Prepare engineering drawings for public and private work projects utilizing computer aided drafting (CAD).
2. Perform standardized field and laboratory testing on civil engineering materials soils, aggregates, asphalt and Portland cement concrete, masonry, steel and wood in accordance with American Society of Testing Methods (ASTM) procedures and the Ohio Department of Transportation (ODOT) Construction Materials Specifications.
3. Correctly apply regulatory and industry standards to design public utility systems, including sanitary wastewater collection systems, storm-water management systems and water distribution systems.
4. Apply an integrated system of digital levels, total stations, data collectors/controllers, global positioning system equipment and associated software in surveying and construction related problem solving applications including building, utility and transportation systems.
5. Determine forces and stresses in elementary structural systems.
6. Apply ODOT, Federal Highway Administration (FHWA), and industry design standards to plan, design, and detail a simulated highway including drainage structures.

7. Apply subdivision regulations and surveying laws in the preparation of preliminary sketch, preliminary plat, and final plat for a major private platted land subdivision.
8. Perform preliminary site investigations, research infrastructure records, secure appropriate codes and regulations, and prepare a set of preliminary drawings of an urban redevelopment site.
9. Perform quantity takeoffs and estimates for heavy construction projects.

First Semester **Units:** 16

ARCH 1120	Basic CAD Drafting	1
CIVL 1120	Construction Materials Science	3
CIVL 1121	Highway Plan Reading	1
CMGT 1105	Construction Documents	3
MATH 1148	College Algebra*	4
SURV 1410	Introduction to Surveying	3
OR		
SURV 1410A	Introduction to Surveying I	1
AND		
SURV 1410B	Introduction to Surveying II	2
COLS 1100	First Year Experience Seminar	1

*With proper prerequisites MATH 1150 may be taken in place of MATH 1148 and MATH 1149.

Second Semester **Units:** 16

CIVL 1230	Heavy Construction Estimating	3
SURV 2495	UAS Remote Imagery/3D Scan	3
ENGL 1100	Composition I	3
ESSH 1650	OSHA 30 Hr Construction Safety & Health	2
SURV 1460	Computer Apps in Construction Science	2
NAT-XXXX (select from approved GE-NAT list)		3

Third Semester **Units:** 6

GIS 1102	Mapping for Everyone	2
MATH 1149	Trigonometry*	4

*With proper prerequisites MATH 1150 may be taken in place of MATH 1148 and MATH 1149.

Fourth Semester **Units:** 13

SURV 1420	Historical Surveying	2
SURV 2410	Engineering Surveying	4
OR		
SURV 2410A	Engineering Surveying I	2
AND		
SURV 2410B	Engineering Surveying II	2
SURV 2480	Geodetic Surveying	4
OR		
SURV 2480A	Geodetic Surveying I	2
AND		
SURV 2480B	Geodetic Surveying II	2
HUM-XXXX (select from approved GE-HUM list)		3

Fifth Semester **Units:** 14

XXXX-XXXX (Technical Elective)		2
SURV 2450	Legal Principles in Surveying	3
CIVL 2430	Roadway Location & Design	3
SURV 2490	Land Development Systems	3
PSY 1100	Introduction to Psychology	3
OR		
SOC 1101	Introduction to Sociology	3

Technical Electives - 2 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

CIVL 1320	Statics and Strengths of Materials	3
CIVL 2210	Principles of Hydraulics	2
CIVL 2910	Field Experience	3
CMGT 1131	Quantity Survey	3
GIS 1200	GIS Software I	2
SURV 2994	Special Topics in Surveying	1-3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One) ARCH 2100 Preferred

ARCH 2100	History of Architecture	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

HORT 1130 Preferred

ASTR 1161	The Solar System	3
BIO 1107	Human Biology	4
CHEM 1111	Elementary Chemistry I	4
ESSH 1101	Intro to Environ Science, Safety, Health	3
GEOL 1101	Introduction to Earth Science	4
HORT 1130	Plant Sciences	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5

Total: 65

Land Surveying Certificate

The Land Surveying Certificate encompasses the required 16 semester hours of surveying courses, which, when coupled with a Bachelor of Science in Civil Engineering, fulfills the State of Ohio Board of Registration for Engineers and Surveyors Education Requirements toward registration as a Professional Surveyor.

First Semester **Units:** 10

SURV 1420	Historical Surveying	2
SURV 2410	Engineering Surveying*	4
SURV 2480	Geodetic Surveying	4

*SURV 1410 is a prerequisite to SURV 2410 if not completed in B.S. program.

Second Semester **Units:** 6

SURV 2450	Legal Principles in Surveying	3
SURV 2490	Land Development Systems	3

Total: 16

Surveying Certificate

The Civil Engineering Technology, Surveying Certificate is a four-semester program, when completed with a Bachelors of Science (B.S.) or Bachelors of Arts (B.A.) degree meets the Ohio State Board for Professional Engineers and Profession Surveyors education requirements. The certificate also provides students a basis for entry-level careers in survey field and office operations. The certificate is a directed focus program, which empowers students with those skills necessary for construction layout of buildings and roadways and, working under the direction of a Registered Surveyor, in land surveying and subdivision of land. Specific employment positions include instrument person, field crew chief, drafter/designer and with a B.S./B.A. Surveyor-in-Training (S.I.). To to be eligible to take the Fundamentals of Surveying (F.S.) exam from the Ohio State Board of Registration for Professional Engineers and Surveyors, certificate graduate must hold a BS or BA degree.

Learning Outcome(s):

1. Apply an integrated system of auto levels, total stations, data collectors/controllers, global positioning system (GPS) equipment.
2. Associated software in surveying and construction related problem solving applications including building, utility and transportation systems.
3. Data Analysis for Precision, Accuracy and Error Determination.
4. Downloading Data Global Navigation Satellite System and Terrestrial Survey Controller Systems into appropriate software Data Conversion.
5. Importing Survey Data into the most current version of Autodesk Civil 3-D.
6. Creation of Existing Surfaces including contours for a Topographic Survey Project.
7. Incorporation of Natural, Cultural Features and Cadastral Information in a Topographic Survey Project.
8. Development of a Site Plan for a Small Commercial Building including a Proposed Grading Plan.
9. Development of Transportation Systems - Imputing Transportation Centerline Data into Autodesk Civil 3-D, Route Design, Importing Topography and Development of the Existing Surface and Centerline Profile.
10. Development of Transportation Systems – Development the Proposed Profile, Creation of a Proposed Surface, Development of the Corridor and Determination of Earthwork Quantities.
11. Apply subdivision regulations and surveying laws in the preparation of preliminary sketch, preliminary plat and final plat for a major private land subdivision.
12. Perform preliminary site investigations, research infrastructure records, secure appropriate codes and regulations.
13. Prepare a set of development drawings in accordance with local subdivision regulations.
14. Prepare preliminary sketch, preliminary plat and final plat for a major private land subdivision.

First Semester		**Units:** 7
SURV 1420	Historical Surveying	2
GIS 1102	Mapping for Everyone	2
SURV 1410	Introduction to Surveying	3
OR		
SURV 1410A	Introduction to Surveying I	1
AND		
SURV 1410B	Introduction to Surveying II	2

Second Semester		**Units:** 15
SURV 1460	Computer Apps in Construction Science	2
SURV 2450	Legal Principles in Surveying	3
SURV 2490	Land Development Systems	3
GIS 1200	GIS Software I	2
GIS 1201	GIS Software II	2
SURV - XXXX Technical Elective (see Technical Elective list)		3

Third Semester		**Units:** 8
SURV 2410	Engineering Surveying	4
OR		
SURV 2410A	Engineering Surveying I	2
AND		
SURV 2410B	Engineering Surveying II	2
SURV 2480	Geodetic Surveying	4
OR		
SURV 2480A	Geodetic Surveying I	2
AND		
SURV 2480B	Geodetic Surveying II	2

SURV - XXXX Technical Elective Course List		**Units:**
3.0 Credit hours required		
SURV 2495	UAS Remote Imagery/3D Scan	3
OR		
SURV 2499	Surveying Capstone I	2
AND		
SURV 2599	Surveying Capstone II	1
		Total: 30

Bridge to Fundamental Surveying Certificate

This is intended as a Post Surveying.AAS program. The certificate when combined with a Bachelor of Science in Business, fulfills the State of Ohio Board of Registration for Engineers and Surveyors Education requirements toward registration as a Professional Surveyor.

First Semester		**Units:** 10
SURV 2499	Surveying Capstone I	2
MATH 1151	Calculus I	5
NAT-XXXX Course (select from list)		3
Second Semester		**Units:** 8
SURV 2599	Surveying Capstone II	1
GIS 1200	GIS Software I	2
GIS 1201	GIS Software II	2
NAT-XXXX Course (select from list)		3
NAT GE-Natural/Physical Science Requirement - 6 credit hours minimum needed		**Units:** 0
ASTR 1161	The Solar System	3
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
ESSH 1101	Intro to Environ Science, Safety, Health	3
GEOL 1101	Introduction to Earth Science	4
		Total: 18

Transportation Construction Inspection Level I Certificate

This program has been created to meet the new requirements by Ohio Department of Transportation (ODOT) as a Transportation Inspector for ODOT or private contractor. This program meets the education requirements set forth by ODOT and National Institute for Certification in Engineering Technologies (NICET) to become a Project Inspector on State and Federal funded projects. The courses in this certificate will help prepare the students to take the NICET Highway Construction Level I exam.

Learning Outcome(s):

1. Recognize the characteristics and qualities of structural construction materials.
2. Employ the testing methods to evaluate the properties of structural materials in accordance with applicable standards and testing criteria.
3. Utilize quality control standards for "on-the-job" evaluation and measurement to assure project adherence to code requirements and integrity of construction.
4. Read and interpret standards outlined in construction specifications and apply correct design, proportioning and testing methods to determine material acceptability.
5. Review and demonstrate accurate knowledge of construction drawings used in Site and Highway projects.
6. Review Standard reference drawings used in site and highway and relate them to the detailed construction drawings.
7. Identify the types, purposes and uses in construction drawings and specifications.
8. Explain the inter-relationship between drawings, specifications and standard reference material.
9. Demonstrate the proper use of civil engineering dimensioning systems.
10. Linear distance measurements by pacing and taping and building layout by taping.
11. Checking calibration and measuring angles using total stations.
12. Data collection and building construction layout using total stations and tapes.
13. Determining vertical distance and elevations by differential leveling.
14. Traverse measurements electronic distance measurement (total stations). Traverse closure calculations, error of closure determination and traverse adjustment. Coordinate systems and area determination by coordinates.

15. Mapping and site plan data acquisition by grid and by total station (radial) methods. Building layout by coordinates.
16. Acquire topographic data using total station with electronic data collection. Preparation of topographic site plan using most current available CAD Package.
17. Data acquisition, mapping and construction layout using Global Positioning System.

First Semester		**Units:** 13
CIVL 1120	Construction Materials Science	3
CIVL 1121	Highway Plan Reading	1
CMGT 1105	Construction Documents	3
SURV 1410	Introduction to Surveying	3
CMGT 1121	Construction Drawings	3

Second Semester		**Units:** 12
CIVL 1230	Heavy Construction Estimating	3
CIVL 2430	Roadway Location & Design	3
CMGT 1131	Quantity Survey	3
CMGT 1115	Construction Methods	3
		Total: 25

Transportation Construction Inspection Level II Certificate

This program has been created to meet the new requirements by Ohio Department of Transportation (ODOT) as a Transportation Inspector for ODOT or private contractor. This program meets the education requirements set forth by ODOT and National Institute for Certification in Engineering Technologies (NICET) to become a Project Inspector on State and Federal funded projects. The courses in this certificate will help prepare the students to take the NICET Highway Construction Level II exam.

Learning Outcome(s):

1. Linear distance measurements by taping a simple circular curve.
2. Linear distance measurements by taping of compound and reverse curves.
3. Linear distance measurements by taping of spiral curves.
4. Determining the access drive centerline by traverse measurements electronic distance measurement, (total station), Traverse closure calculations, error of closure calculations and traverse adjustment.
5. Determining the access drive centerline control monumentation by simple circular and spiral curve calculations.
6. Layout of access drive centerline control and linear distance measurements by taping of circular and spiral curves for topographic data using total station with electronic data collection.
7. Design of vertical alignment for access drive in Autodesk Civil 3D.
8. Design of a Typical Section with side ditches to be used in the calculations of earthwork volumes.
9. Calculations of offset points for layout of access drive using total station with electronic data controller.
10. Calculations of a proposed right-of-way for the access drive.
11. Demonstrate an understanding of the hydrologic cycle, identify watersheds, understand rainfall/runoff relationships, and contrast measurement techniques.
12. Calculate runoff both manually and utilizing different computer software.
13. Apply statistical methods to rainfall events.
14. Design storm and sanitary sewer systems utilizing regional standards.
15. Evaluate and develop specifications for channels, culverts and retention basins for different design storm events.
16. Integrate regional hydrologic data into design projects.
17. Create effective visual, tabular and analytical products such as maps, graphs, charts, statistics, databases, models and programs.
18. Prepare engineering drawings for public and private work projects manually or with the assistance of computer aided drafting (CAD).

First Semester **Units:** 13

CIVL 2230	Public Utility Systems	2
CMGT 2241	Planning and Scheduling	3
SURV 2410	Engineering Surveying	4
ESSH 1650	OSHA 30 Hr Construction Safety & Health	2
CIVL 2210	Principles of Hydraulics	2
		Total: 13

Computer Science - Cyber Security Track AAS Degree

The Cybersecurity AAS at Columbus State is designed in alignment with the National Initiative for Cybersecurity Education (NICE), Cybersecurity Workforce Framework in order to provide students with the foundational tools needed to successfully carry out functions for any organization. Students will be able to pursue four-year degree programs as they prepare for a variety of high-demand security-related fields including cybersecurity, computer information systems security, computer forensics, information assurance, information security engineering and information security analysis. Columbus State's Cybersecurity AAS prepares students for placement in the workforce and positions them for success in obtaining nationally recognized cyber related certificates. As threats that exploit vulnerabilities in our cyber infrastructure grow and evolve, an integrated cybersecurity workforce must be capable of designing, developing, implementing, and maintaining defensive and offensive cyber strategies.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware/software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning (DL) sections of a particular course. Check with the program advisor to discuss specific course needs and options.

NOTE: Some courses may have prerequisites; please make sure to fulfill required prerequisites or meet with your program advisor to discuss them.

Learning Outcome(s):

1. Participate in collaborative projects utilizing the Systems Development Life Cycle (SDLC).
2. Determine project requirements.
3. Create project documentation using computer based applications software.
4. Develop applications using programming languages.
5. Create a multiple-page, multiple presentation website.
6. Perform operating systems fundamentals for effective file management.
7. Identify and apply networking concepts. Identify and apply programming logic concepts.
8. Identify and apply relevant social networking applications.
9. Demonstrate team project skills using effective technical communication.

First Semester (Autumn) **Units:** 14

CSCI 1103	Intro to Programming Logic	3
CSCI 1320	Database Fundamentals	3
ITST 1101	IT Fundamentals +	2
ITST 1102	Industrial Network Communications	2
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3

Milestone/Progress Check: • ITST 1102 can be used to prepare for the Microsoft Certified Professional (MCP) Certificate.

Second Semester (Spring) **Units:** 15

HUM-XXXX (select from List)		3
CSCI 1152	Networking Concepts (Network+)	3
ITST 2238	Information Security Fundamentals	3
ITST 1136	Linux Essentials	3
CSCI 2781	Computer Security Ethical and Legal Foundations	3

Milestone/Progress Check: • ITST 2238 can be used to prepare students to take the CompTIA Network+ Certificate test.

Third Semester (Summer) **Units:** 11

CSCI 1772	Networking I	3
ITST 2252	Scripting Fundamentals	2
SBS - XXXX (Select from list)		3
NAT - XXXX (Select from list)		3

Fourth Semester (Autumn) **Units:** 15

CSCI 2776	Network Security Fundamentals	3
ITST 2258	Application Security	3
CSCI 2790	Linux Administration (Linux+)	3
STAT 1400	Statistical Concepts for Business	3
CSCI 2752	CISCO Switching, Routing & Wireless Essentials (SRWE)	3

Milestone/Progress Check: • CSCI 2790 can be used to prepare for the CompTIA Linux+ Certificate test.

Fifth Semester (Spring) **Units:** 9-10

CSCI 2783	Ethical Hacking & Systems Defense	3
CSCI 2780	Computer Forensics and Incident Response	3
CSCI 2802	CSCI Seminar	1
AND		
CSCI 2902	CSCI Practicum	3
OR		
CSCI 2999	CSCI Capstone	3

HUM GE-Arts/Humanities Requirements - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5

GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1251	Calculus-Based Phys II	5

Total: 64-65

Computer Science - Data Analytics, Analysis and Visualization AAS Degree

In today's world, data and our ability to store and process it has revolutionized our daily lives and decision-making. The Computer Science - Data Analytics, Analysis and Visualization program provides students with a working knowledge of data management and data analytics tools and techniques so that they are able to communicate their insights and support data-driven processes. Course topics provide exposure to the various types and sources of data, the design and use of databases, an overview of how data are stored, mined and analyzed for descriptive, predictive and prescriptive purposes, and how data are organized to make compelling and actionable recommendations, reports and visualizations. Students will learn how to source and process data, how to use current tools and techniques to derive insights from data, how to use data to communicate meaningful stories, and how to think critically about data including topics such as bias, data privacy, and ethical use. Related statistics and mathematics classes provide students with the analytical context and knowledge that, when used with information systems, make the vast amounts of data available in today's data-driven world a source of incredible value.

Software/Hardware Requirements:
Students taking courses in this curriculum may need to own or have access to hardware/software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning (DL) sections of a particular course. Check with the program adviser to discuss specific course needs and options.

Learning Outcome(s):

1. Participate in collaborative projects utilizing the Systems Development Life Cycle (SDLC) and other methodologies as appropriate.
2. Determine and document project requirements.
3. Demonstrate team project skills using effective technical communication.
4. Clean, transform and analyze data in diverse formats and structures using programming languages used in data analytics.
5. Produce and interpret numerical summaries and data visualizations to describe, explore and communicate insights from data.
6. Identify and apply programming logic concepts.
7. Manage data (extract, merge, transform, check for quality, etc.) using a relational database language and other programming languages as appropriate.
8. Identify and communicate the impacts of ethical and privacy related concerns that arise when sourcing, processing and analyzing data.

First Semester **Units:** 13

CSCI 1103	Intro to Programming Logic	3
STAT 1400	Statistical Concepts for Business	3
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
CSCI 1320	Database Fundamentals	3

Second Semester **Units:** 14

CSCI 1420	Analytical and Computational Foundations for Data Analytics I	2

CSCI 1421	Analytical and Computational Foundations for Data Analytics II	2
CSCI 1511	Python Programming	3
ITST 1130	Cloud Foundations for AWS Cloud Practitioner	3
MATH 1146	College Algebra Plus	4

Third Semester **Units:** 6

CSCI 1145	HTML	3
ECON 2200	Principles of Microeconomics	3

Fourth Semester **Units:** 13

CSCI 2420	Data Analysis I	2
CSCI 2421	Data Analysis II	2
Basic Related Elective (select 3 credits from approved basic related list)		3
HUM - XXXX (select from list)		3
NAT - XXXX (select from approved GE-NAT list)		3

Fifth Semester **Units:** 13-15

CSCI 2422	Data Visualization I	2
CSCI 2423	Data Visualization II	2
ENGL 2767	Comp II Writing About Science/Technology	3
OR		
COMM 2204	Technical Writing	3
CSCI 2802	CSCI Seminar	1
AND		
Technical Elective - select 3-4 hours from the approved list		3-4
CSCI 2902	CSCI Practicum	3
OR		
CSCI 2999	CSCI Capstone	3

NAT GE-Natural Science Requirement - 3 credit hours minimum **Units:** 0

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1107	Human Biology	4
BIO 1111	Intro to Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

Approved Basic Related Electives List - 3 credit hours minimum **Units:** 0

ACCT 1211	Financial Accounting	3
BMGT 1102	Interpersonal Skills	2
BMGT 2216	Business Ethics	3
BMGT 2250	Project Management Principles	3
BMGT 2258	Operations Management	3
GIS 1100	Introduction to GIS	3
GIS 1200	GIS Software I	2
IMM 1120	Fundamentals of Interactive Media	4
ITST 1101	IT Fundamentals +	2
ITST 2252	Scripting Fundamentals	2
SCM 1100	Supply Chain Mgmt Principles	3

Approved Technical Electives - select a minimum of 3 credit hours **Units:** 0

CSCI 1101	Computer Concepts & Apps	3
CSCI 1275	Business Analysis with Agile Development Frameworks	3

CSCI 1152	Networking Concepts (Network+)	3
CSCI 1630	C# Programming I	3
CSCI 2370	Database Systems Programming	3
CSCI 2371	Database Adminstration & Data Mining	4
CSCI 2447	JavaScript Fundamentals	3
CSCI 2467	Java Programming I	3
CSCI 2521	C++ Programming	3

Seminar and Practicum OR Capstone **Units:** 0

CSCI 2802	CSCI Seminar	1
AND		
CSCI 2902	CSCI Practicum	3
AND		
CSCI 2999	CSCI Capstone	3
OR		

Total: 59-61

Computer Science - Game Developer Track AAS Degree

The Game Developer AAS degree is created to teach students who are interested in game development, or plan to transfer to a four-year college to pursue a Bachelor's degree in Game Development. In this program students gain exposure in web, 2-D games, and 3-D games. Also, the student is introduced to multiple game engines and programming languages. Team building skills are used to simulate the game studio environment.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware/software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning (DL) sections of a particular course. Check with the program advisor to discuss specific course needs and options.

NOTE: Some courses may have prerequisites; please make sure to fulfill required prerequisites or meet with your program advisor to discuss them.

Learning Outcome(s):

1. Participate in collaborative projects utilizing the Systems Development Life Cycle (SDLC).
2. Determine project requirements.
3. Create project documentation using computer based applications software.
4. Develop applications using programming languages.
5. Create a multiple-page, multiple presentation website.
6. Perform operating systems fundamentals for effective file management.
7. Identify and apply networking concepts. Identify and apply programming logic concepts.
8. Identify and apply relevant social networking applications.
9. Demonstrate team project skills using effective technical communication.

First Semester **Units:** 16

CSCI 1101	Computer Concepts & Apps	3
CSCI 1103	Intro to Programming Logic	3
ENGL 1100	Composition I	3
MATH 1111	Discrete Mathematics for Computing	3
IMM 1115	Survey of Gaming Industry	3
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 12

CSCI 1511	Python Programming	3
CSCI 1145	HTML	3
CSCI 1152	Networking Concepts (Network+)	3
SBS-XXXX (select from approved GE-SBS list)		3

Third Semester **Units:** 9

COMM 2204	Technical Writing	3
CSCI 2447	JavaScript Fundamentals	3

CSCI 1551	Concepts of 3D Game Engines	3

Fourth Semester **Units:** 14

CSCI 2521	C++ Programming	3
CSCI 2551	Graphics in 3-D Game Engines	3
CSCI 2541	Foundations of 2-D Game Programming	3
IMM 1201	3D Modeling 1	3
IMM 1220	Digital Media Preparation	2

Fifth Semester **Units:** 12

CSCI 2556	3-D Game Project	3
IMM 1202	3D Modeling 2	3
HUM-XXXX (select from approved GE-HUM list) *		3
NAT-XXXX (select from approved GE-NAT list) *		3

Milestone/Progress Check: • *Select course that transfers if pursuing 4-year degree.

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 63

Computer Science - Information Technology Support Technician Track AAS Degree

Students interested in a computer technology systems career path should consider this Information Technology Support Technician major. This program prepares the student for career fields related to computer technology systems and support such as: Information Technology Technician, Field PC Technician, Enterprise Technician, IT Support, PC Support Specialist, Computer Technician, Help Desk Technician, Network Technician, Remote Support Technician, and Bench Technician.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware/software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning (DL) sections of a particular course. Check with the program advisor to discuss specific course needs and options.

NOTE: Some courses may have prerequisites; please make sure to fulfill required prerequisites or meet with your program advisor to discuss them.

First Semester **Units:** 14

ITST 1101	IT Fundamentals +	2
ITST 1102	Industrial Network Communications	2
MATH 1111	Discrete Mathematics for Computing	3
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
ESSH 1101	Intro to Environ Science, Safety, Health	3

Second Semester **Units:** 14

ITST 1123	A + Cert, Managing/ Troubleshooting PCs	3
CSCI 1152	Networking Concepts (Network+)	3
CSCI 1320	Database Fundamentals	3
CSCI 1103	Intro to Programming Logic	3
ITST 2252	Scripting Fundamentals	2

Third Semester **Units:** 17

CSCI 1145	HTML	3
PHIL 1130	Ethics	3
CSCI 2790	Linux Administration (Linux+)	3
BMGT 1102	Interpersonal Skills	2
ITST 2238	Information Security Fundamentals	3
ITST 1136	Linux Essentials	3

Fourth Semester **Units:** 15

CSCI 2999	CSCI Capstone	3
PSY 1100	Introduction to Psychology	3
CSCI 1275	Business Analysis with Agile Development Frameworks	3
CSCI 2776	Network Security Fundamentals	3
ITST 2258	Application Security	3

Total: 60

Computer Science - Management Information Systems Track AAS Degree

In addition to introducing students to core computer science concepts, the Management Information System program provides students with a foundational, working knowledge of project and data management. Courses topics include systems analysis, database design and usage, business intelligence, Agile methodologies, and other related business topics.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware/software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning (DL) sections of a particular course. Check with the program advisor to discuss specific course needs and options.

NOTE: Some courses may have prerequisites; please make sure to fulfill required prerequisites or meet with your program advisor to discuss them.

Learning Outcome(s):

1. Participate in collaborative projects utilizing the Systems Development Life Cycle (SDLC).
2. Determine project requirements.
3. Create project documentation using computer based applications software.
4. Develop applications using programming languages.
5. Create a multiple-page, multiple presentation website.
6. Perform operating systems fundamentals for effective file management.
7. Identify and apply networking concepts. Identify and apply programming logic concepts.
8. Identify and apply relevant social networking applications.
9. Demonstrate team project skills using effective technical communication.

First Semester **Units:** 13

CSCI 1101	Computer Concepts & Apps	3
CSCI 1103	Intro to Programming Logic	3
MATH 1111	Discrete Mathematics for Computing	3
ENGL 1100	Composition I	3
COLS 1100	First Year Experience Seminar	1

Milestone/Progress Check: • Upon completion of the first semester, students should meet with a program advisor to plan their schedule including the selection of appropriate electives.

Second Semester **Units:** 16

CSCI 1152	Networking Concepts (Network+)	3
CSCI 1275	Business Analysis with Agile Development Frameworks	3
CSCI 1320	Database Fundamentals	3
CSCI 2330	Project Mgt Fund & Case Studies	4
CSCI-XXXX (Programming Technical Elective)		3

Third Semester **Units:** 6

BMGT 1101	Principles of Business	3
XXXX-XXXX (Basic Elective)		3

Milestone/Progress Check: • Upon completion of the third semester, students should meet with a program advisor to develop a transfer plan including selection of appropriate electives.

Fourth Semester **Units:** 15-16

CSCI-XXXX (Database Technical Elective)		3
BMGT 2258	Operations Management	3
COMM 2200	Business Communication	3
SBS-XXXX (select from approved GE-SBS list)		3
CSCI 2380	Business Intelligence Fundamentals	3
OR		
CSCI 1420	Analytical and Computational Foundations for Data Analytics I	2
AND		
CSCI 1421	Analytical and Computational Foundations for Data Analytics II	2

Fifth Semester **Units:** 14-16

CSCI 2802	CSCI Seminar	1
AND		
CSCI 2902	CSCI Practicum	3
OR		
CSCI 2999	CSCI Capstone	3
HUM-XXXX (select from approved GE-HUM list)		3
NAT-XXXX (select from approved GE-NAT list)		3
XXXX-XXXX (Basic Elective)		3
Must have completed CSCI 2380		
CSCI 2385	Business Intelligence Reporting and Visualization	3

OR
Must have completed CSCI 1420 and CSCI 1422

CSCI 2422	Data Visualization I	2

Database Technical Electives - 3 credit hours minimum **Units:** 0

The following courses are approved for database technical elective requirements:

CSCI 2370	Database Systems Programming	3
CSCI 2371	Database Adminstration & Data Mining	4
CSCI 2412	Web Database Development	4
CSCI 2325	Expert Access	3

Programming Technical Elective - 3 credit hours minimum **Units:** 0

The following courses are approved for programming technical elective requirements:

CSCI 1511	Python Programming	3
CSCI 1620	Visual Basic I	3
CSCI 2467	Java Programming I	3

Basic Electives - 6 credit hours minimum **Units:** 0

(Select 2 from list)

ACCT 1211	Financial Accounting	3
FMGT 2201	Corporate Finance	3
FMGT 2202	Money and Banking	3
FMGT 2232	Principles of Insurance	3
HIMT 1135	Health Data Management	3
SCM 1100	Supply Chain Mgmt Principles	3
SCM 1190	International Commerce	3
REAL 1011	Real Estate Principles and Practices	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4

GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 64-67

Computer Science - Mobile Application Development AAS

The Mobile App Developer Associate degree program is designed for students
who wish to pursue a career as an application developer for mobile devices,
such as smart phones, tablets and iPads; or plan to transfer to a four year
institution to pursue a Bachelors degree in Computer Science. Featuring the two popular platforms of Android and iOS programming environments, the program also includes a curriculum in current design principles, user-interface design,
user experience and analytics.

Upon successful completion of the program, students will be able to:

- Develop applications for mobile devices on both iOS and Android platforms.
- Apply concepts of HTML 5 and JavaScript to network applications.
- Apply modern project management techniques using an Agile methodology.

Semester 1 **Units:** 13

CSCI 1103	Intro to Programming Logic	3
CSCI 1101	Computer Concepts & Apps	3
MATH 1111	Discrete Mathematics for Computing	3
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3

Semester 2 **Units:** 14

ITST 1101	IT Fundamentals +	2
IMM 1101	Mobile App Design I	3
SBS XXXX (select from approved GE-SBS list)		3
CSCI 1275	Business Analysis with Agile Development Frameworks	3
CSCI 1145	HTML	3

Semester 3 **Units:** 9

IMM 1210	Mobile User Interface Design	3
NAT XXXX (select from approved GE-NAT list)		3
HUM XXXX (select from approved GE-HUM list)		3

Semester 4 **Units:** 15

CSCI 1660	Programming Fundamentals for Android	3
CSCI 2660	Android Mobile Apps Development	3
CSCI 2221	Agile Software Development and Testing	3
CSCI 2447	JavaScript Fundamentals	3
IMM 2210	Mobile Analytics	3

Semester 5 **Units:** 12

CSCI 1650	Programming Fundamentals for iOS	3
CSCI 2650	iOS Mobile Apps Development	3
CSCI 2999	CSCI Capstone	3
IMM 2372	Hybrid App Development	3

HUM GE-Arts/Humanities **Units:** 0
Requirement - 3 credit hours minimum

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences **Units:** 0
Requirement - 3 credit hours minimum

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5
CHEM 1111	Elementary Chemistry I	4

SBS GE-Social/Behavioral Sciences **Units:** 0
Requirement - 3 credit hours minimum

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 63

Computer Science - Network Administrator Track AAS Degree

The Network Administrator degree track is designed to prepare students with 21st century skills necessary in the area of networking and system administration. The degree track teaches students a solid foundation in network theory, telecommunications, wireless technologies, cloud computing, virtualization, and network security. Students gain hands-on experience with installing and configuring desktop and servers in a virtualized environment. Students use various virtualization tools to complete networking and system administration. Learning and working with cloud services is integrated in the curriculum and students will work with cloud services to apply the concepts of cloud computing and cloud services. The Network

Administrator degree track prepares students for industry recognized network certifications for Network+, Microsoft, and Linux+. Students are encouraged to pursue coursework in CISCO which prepares students for the CCENT and CCNA certifications.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware/software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning (DL) sections of a particular course. Check with the program advisor to discuss specific course needs and options.

NOTE: Some courses may have prerequisites; please make sure to fulfill required prerequisites or meet with your program advisor to discuss them.

Learning Outcome(s):

1. Participate in collaborative projects utilizing the Systems Development Life Cycle (SDLC).
2. Determine project requirements.
3. Create project documentation using computer based applications software.
4. Develop applications using programming languages.
5. Create a multiple-page, multiple presentation website.
6. Perform operating systems fundamentals for effective file management.
7. Identify and apply networking concepts. Identify and apply programming logic concepts.
8. Identify and apply relevant social networking applications.
9. Demonstrate team project skills using effective technical communication.

First Semester **Units:** 14

CSCI 1101	Computer Concepts & Apps	3
CSCI 1152	Networking Concepts (Network+)	3
COLS 1100	First Year Experience Seminar	1
MATH 1148	College Algebra	4
ENGL 1100	Composition I	3

Milestones/Progress Check: • Upon completion of CSCI 1152 Networking Concepts, Network Administrator and Cybersecurity students are prepared and encouraged to study and complete the CompTIA Network+ certification exam. • Upon completion of CSCI 1152 Networking Concepts, Network Administrator students are encouraged to study and complete a Microsoft network certification exam.

Second Semester **Units:** 13

CSCI 1103	Intro to Programming Logic	3
CSCI 1772	Networking I	3
MATH 1149	Trigonometry	4
SBS-XXXX (select from approved GE-SBS list)		3

Milestone/Progress Check: • Upon completion of CSCI 1772, Network Administrator students are encouraged to study and complete a Microsoft network certification exam.

Third Semester **Units:** 8

CSCI 2770	Network Communication & TCP/IP	3
MATH 1151	Calculus I	5

Fourth Semester **Units:** 16

ACCT 1211	Financial Accounting	3
CSCI 1145	HTML	3
CSCI 1275	Business Analysis with Agile Development Frameworks	3
CSCI 2774	Networking II	3
CSCI 2790	Linux Administration (Linux+)	3
BMGT 2280	Professional Development	1

Milestones/Progress Check: • During this semester, Network Administrator students should contact the Division Internship Coordinator to secure an internship or register for the CSCI 2999 Capstone course. • Upon completion of CSCI 2790, students are encouraged to study and complete the Linux network certification exam.

Fifth Semester **Units:** 14-15

CRJ 2021	Introduction to Cyberlaw	3
NAT-XXXX (select from approved GE-NAT list)		3
CSCI 2778	Wireless, Voice, & Mobile Comm	3
CSCI 2792	Virtualization	2
CSCI 2802	CSCI Seminar	1
AND		
CSCI 2902	CSCI Practicum	3
OR		
CSCI 2999	CSCI Capstone	3

Milestones/Progress Check: • Students in CSCI 2778 work in groups to design, develop, complete and present Wireless Network Solution for a customer. • Upon completion of CSCI 2778, Network Administrator students are eligible to receive their Network Administrator Certificate.

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 65-66

Computer Science - Software Developer Track AAS Degree

The Software Developer AAS degree program is designed for students who wish to pursue a career as a software developer or plan to transfer to a four year institution to pursue a Bachelors degree in Computer Science. The program includes training in multiple computer languages, networking, web development fundamentals, and software development methodology, as well as business courses and soft skills required for success in a modern corporate environment.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware/software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning (DL) sections of a particular course. Check with the program advisor to discuss specific course needs and options.

NOTE: Some courses may have prerequisites; please make sure to fulfill required prerequisites or meet with your program advisor to discuss them.

Learning Outcome(s):

1. Participate in collaborative projects utilizing the Systems Development Life Cycle (SDLC).
2. Determine project requirements.
3. Create project documentation using computer based applications software.
4. Develop applications using programming languages.
5. Create a multiple-page, multiple presentation website.
6. Perform operating systems fundamentals for effective file management.
7. Identify and apply networking concepts. Identify and apply programming logic concepts.
8. Demonstrate team project skills using effective technical communication.
9. Demonstrate a working knowledge of Linux tools and command line usage.
10. Demonstrate knowledge of general cloud-computing concepts.

First Semester **Units:** 15

CSCI 1101	Computer Concepts & Apps	3
CSCI 1103	Intro to Programming Logic	3
MATH 1111	Discrete Mathematics for Computing	3
ENGL 1100	Composition I	3
ITST 1101	IT Fundamentals +	2
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 15

CSCI 1145	HTML	3
HUM XXXX - Arts and Humanities (refer to approved HUM course List)		3
CSCI 1152	Networking Concepts (Network+)	3
CSCI 2467	Java Programming I	3
OR		
CSCI 1630	C# Programming I	3
ITST 1130	Cloud Foundations for AWS Cloud Practitioner	3

Third Semester **Units:** 9

CSCI 1275	Business Analysis with Agile Development Frameworks	3
CSCI 1320	Database Fundamentals	3
ITST 1136	Linux Essentials	3

Fourth Semester **Units:** 12

ITST 2258	Application Security	3
COMM 2200	Business Communication	3
Technical Elective A (see list)		3
CSCI 2469	Java Programming II	3
OR		
CSCI 2630	C# Programming II	3

Fifth Semester **Units:** 12-13

CSCI 2802	CSCI Seminar	1
AND		
CSCI 2902	CSCI Practicum	3
OR		
CSCI 2999	CSCI Capstone	3
NAT XXXX Biological and Physical Sciences (refer to approved GE-NAT course list)		3
SBS XXX - Social and Behavioral Science (refer to approved SBS course list)		3
Technical Elective B (see list)		3

HUM XXXX GE-Arts/Humanities (3 credits required) **Units:** 0

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3

HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS XXXX GE-Social/Behavioral Sciences Requirement - 3 credits required **Units:** 0

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

NAT XXXX GE-Biological/Physical Sciences - 3 credits required **Units:** 0

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1107	Human Biology	4
BIO 1111	Intro to Biology	4
BIO 1113	Biological Sciences I	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1171	General Chemistry I	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3

Technical Elective A (3 credits required) **Units:** 0

CSCI 2447	JavaScript Fundamentals	3
CSCI 2221	Agile Software Development and Testing	3
CSCI 2370	Database Systems Programming	3
CSCI 2740	Data Structures and Algorithm Analysis	3

Technical Elective B (3 credits required) **Units:** 0

CSCI 2467	Java Programming I	3
CSCI 1630	C# Programming I	3
CSCI 1511	Python Programming	3
CSCI 2521	C++ Programming	3

Total: 63-64

Computer Science - Web Developer Track AAS Degree

The Web Developer program is designed to provide students with a strong base of technical skills required for working in Web Design. The degree has a diverse curriculum, which includes many computer science courses targeted at providing students with an understanding of multiple aspects in the Computer Science field, which include programming, troubleshooting, networking, and soft skills. There are also many basic and general courses to provide the student transfer options for similar courses at four year institutions. With that being said the skills learned in the Web Developer program could also translate to work opportunities in the field. In addition to educating web developers with entry-level training, the program provides opportunities for individuals seeking career changes, continuing education, and skills enhancement. HTML 5, CSS/CSS3, Javascript/Jquery, and web DB languages are taught in addition to Java and other languages that are a part of the base Computer Science degrees.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware/software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning (DL) sections of a particular course. Check with the program advisor to discuss specific course needs and options.

NOTE: Some courses may have prerequisites; please make sure to fulfill required prerequisites or meet with your program advisor to discuss them.

Learning Outcome(s):

1. Participate in collaborative projects utilizing the Systems Development Life Cycle (SDLC).
2. Determine project requirements.
3. Create project documentation using computer based applications software.
4. Develop applications using programming languages.
5. Create a multiple-page, multiple presentation website.
6. Perform operating systems fundamentals for effective file management.
7. Identify and apply networking concepts. Identify and apply programming logic concepts.
8. Identify and apply relevant social networking applications.
9. Demonstrate team project skills using effective technical communication.

First Semester **Units:** 13

CSCI 1101	Computer Concepts & Apps	3
CSCI 1103	Intro to Programming Logic	3
MATH 1111	Discrete Mathematics for Computing	3
ENGL 1100	Composition I	3
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 12

CSCI 1145	HTML	3
CSCI 1152	Networking Concepts (Network+)	3
ACCT 1211	Financial Accounting	3
ECON 2200	Principles of Microeconomics	3
OR		
SBS XXX - select from list		3

Third Semester **Units:** 8

CSCI 1275	Business Analysis with Agile Development Frameworks	3
HUM-XXXX (select from approved GE-HUM list)		3
GIS 1102	Mapping for Everyone	2

Fourth Semester **Units:** 16

CSCI 2412	Web Database Development	4
CSCI 2447	JavaScript Fundamentals	3
CSCI 2467	Java Programming I	3
COMM 2204	Technical Writing	3
IMM 1100	Principles of Interactive Design	3

Fifth Semester **Units:** 15-16

CSCI 2479	Advanced Web Programming	3
CSCI-XXXX (Technical Elective)		3
CSCI 2802	CSCI Seminar	1
AND		
CSCI 2902	CSCI Practicum	3
OR		
CSCI 2999	CSCI Capstone	3
NAT-XXXX (select from approved GE-NAT list)		3
MKTG 1110	Marketing Principles	3

Technical Electives - 3 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

CSCI 1102	Intermediate Excel and Access	3
CSCI 1143	Introduction to HTML	1
CSCI 1150	Networking Terminology	1
CSCI 1620	Visual Basic I	3
CSCI 1630	C# Programming I	3
CSCI 2370	Database Systems Programming	3
CSCI 2750	Introduction to CISCO Networks	3
CSCI 2754	Scaling CISCO Networks	3
CSCI 2756	Connecting CISCO Networks	3
CSCI 1650	Programming Fundamentals for iOS	3

CSCI 1660	Programming Fundamentals for Android	3
CSCI 2660	Android Mobile Apps Development	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	History of Art I	3
HART 1202	History of Art II	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Introduction to Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1171	General Chemistry I	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3

SBS GE-Social Behavioral Sciences Requirement - 3 credit hours minimum **Units:**

(Select One)

ANTH 2202	Peoples & Culture	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 64-65

CCNA Routing & Switching Certificate

The Cisco Certified Network Administrator, CCNAv7 Certificate is a 3-course CCNA curriculum that introduces architectures, models, protocols, security, and networking elements. Students will build simple local area networks (LANs), develop a working knowledge of IP addressing schemes, learn foundational network security, and perform basic configurations for routers and switches. After completing all three CCNA courses, you are ready to take the CCNA Certification.

First Semester **Units:** 3

Use this course if you are completing the CCNAv7 certificate only

CSCI 2750	Introduction to CISCO Networks	3

OR

Use this course if you are completing the CCNAv7 certificate and the Cyber Security degree.

CSCI 1152	Networking Concepts (Network+)	3

Second Semester **Units:** 6

CSCI 2752	CISCO Switching, Routing & Wireless Essentials (SRWE)	3
CSCI 2757	CISCO Enterprise Networking, Security & Automation (ENSA)	3

Total: 9

Computer Literacy Certificate

In working toward the Computer Literacy Certificate, the student will learn the fundamental components and terminology of personal computer hardware and software basic concepts. This certificate is designed for beginning computer users to develop computer literacy skills.

Learning Outcome(s):

1. Use the Windows operating system to manage files and folders, including creating, renaming, copying, deleting, and moving.
2. Demonstrate proficiency within the Blackboard environment.
3. Navigate and explore the Internet and the World Wide Web utilizing Microsoft Internet Explorer.
4. Utilize the Internet as an effective research tool.
5. Describe the basic elements and terminology of the Windows operating system.
6. Create and edit Word documents including a research paper, a resume, and a business letter.
7. Create and format an Excel worksheet with embedded charts, formulas, and functions.
8. Perform a What-if Analysis in Excel.
9. Create and use an Access database including tables, queries, and reports.
10. Create a slide show in PowerPoint.
11. Integrate Microsoft Office applications.

First Semester **Units:** 2

CSCI 1001	Computer Fundamentals	2

Second Semester **Units:** 3

CSCI 1101	Computer Concepts & Apps	3

Third Semester **Units:** 3

CSCI 1102	Intermediate Excel and Access	3

Total: 8

Data Analytics Certificate

In today's world, data and our ability to store and process it has revolutionized our daily lives and decision-making. The Data Analytics Certificate program provides students with a working knowledge of data management and data analytics tools and techniques so that they are able to communicate their insights and support data-driven processes. Course topics provide exposure to the various types and sources of data, an overview of how data are stored, mined and analyzed for descriptive, predictive and prescriptive purposes, and how data are organized to make compelling and actionable recommendations, reports and visualizations. Students will learn how to source and process data, how to use current tools and techniques to derive insights from data, how to use data to communicate meaningful stories, and how to think critically about data including topics such as bias, data privacy, and ethical use.

Software/Hardware Requirements:

Students taking courses in this curriculum may need to own or have access to hardware/software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning (DL) sections of a particular course. Check with the program adviser to discuss specific course needs and options.

Learning Outcome(s):

1. Clean, transform and analyze data in diverse formats and structures using programming languages used in data analytics.
2. Produce and interpret numerical summaries and data visualizations to describe, explore and communicate insights from data.
3. Manage data (extract, merge, transform, check for quality, etc.) using a relational database language and other programming languages as appropriate.
4. Identify and communicate the impacts of ethical and privacy related concerns that arise when sourcing, processing and analyzing data.
5. Determine and document project requirements.

First Semester		**Units:** 6
CSCI 1103	Intro to Programming Logic	3
CSCI 1320	Database Fundamentals	3
Second Semester		**Units:** 7
CSCI 1420	Analytical and Computational Foundations for Data Analytics I	2
CSCI 1421	Analytical and Computational Foundations for Data Analytics II	2
STAT 1400	Statistical Concepts for Business	3
Third Semester		**Units:** 8
CSCI 2420	Data Analysis I	2
CSCI 2421	Data Analysis II	2
CSCI 2422	Data Visualization I	2
CSCI 2423	Data Visualization II	2
		Total: 21

Linux Stackable Certificate

This certificate includes foundational skills and knowledge of Linux system administration. With Linux being the central operating system for much of the world's IT infrastructure, Linux+ is an essential credential for individuals working in IT. Course work also covers best practices in troubleshooting, operating systems, networks and security across a variety of devices for successful IT careers. Course curriculum's cover the domains of the following Professional Certifications: CompTIA A+, MS Exam 98-366, CompTIA Security +, CompTIA Network +, CompTIA Linux+ Powered by LPI Certificates.

First Semester		**Units:** 2
ITST 1101	IT Fundamentals +	2
Second Semester		**Units:** 5
ITST 1102	Industrial Network Communications	2
ITST 1123	A + Cert, Managing/Troubleshooting PCs	3
Third Semester		**Units:** 8
ITST 2238	Information Security Fundamentals	3
ITST 2252	Scripting Fundamentals	2
ITST 1136	Linux Essentials	3
Fourth Semester		**Units:** 3
CSCI 2790	Linux Administration (Linux+)	3
		Total: 18

IT Security Stackable Certificate

CompTIA Security+ is the certification globally trusted to validate foundational, vendor-neutral IT security knowledge and skills. As a benchmark for best practices in IT security, this certification covers the essential principles for network security and risk management – making it an important stepping stone of an IT security career. Course curriculum's cover the domains of the following Professional Certifications: MS Exam 98-366, CompTIA Security +, CompTIA Network +, Linux +

First Semester **Units:** 2

ITST 1101	IT Fundamentals +	2

Second Semester **Units:** 5

ITST 1102	Industrial Network Communications	2
ITST 1123	A + Cert, Managing/ Troubleshooting PCs	3

Total: 7

IT Support Stackable Certificate

Course work covers best practices in troubleshooting, networks and security across a variety of devices to set the stage for IT careers. Course curriculum's cover the domains of the following Professional Certifications: CompTIA A+, MS Exam 98-366, and

Learning Outcome(s):
1.

First Semester **Units:** 2

ITST 1101	IT Fundamentals +	2

Second Semester **Units:** 5

ITST 1102	Industrial Network Communications	2
ITST 1123	A + Cert, Managing/ Troubleshooting PCs	3

Total: 7

IT Technician Stackable Certificate

Course work covers best practices in troubleshooting, operating systems, networks and security across a variety of devices for successful IT careers. Course curriculum's cover the domains of the following Professional Certifications: CompTIA A+, MS Exam 98-366, CompTIA Security +, CompTIA Network +

Learning Outcome(s):
1.

First Semester **Units:** 5

ITST 1101	IT Fundamentals +	2
CSCI 1152	Networking Concepts (Network+)	3

Second Semester **Units:** 5

ITST 1102	Industrial Network Communications	2

ITST 1123	A + Cert, Managing/ Troubleshooting PCs	3
Third Semester		**Units:** 3
ITST 2238	Information Security Fundamentals	3
		Total: 13

Database Specialist Certificate

A graduate with a Database Specialist Certificate will be able to prepare a systems design utilizing a database management system, design and implement a relational database, perform basic database administration, apply data warehousing techniques, and interface with data using a programming language.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware/software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning (DL) sections of a particular course. Check with the program advisor to discuss specific course needs and options.

NOTE: Some courses may have prerequisites; please make sure to fulfill required prerequisites or meet with your program advisor to discuss them.

Learning Outcome(s):

1. Prepare a systems design utilizing a database management system.
2. Design and implement an Access, Oracle and Microsoft SQL server database.
3. Perform basic administration functions of a database management system.
4. Understand data warehousing systems.
5. Use the Visual Basic.NET language to interface with a database management system.

First Semester		**Units:** 6
CSCI 1275	Business Analysis with Agile Development Frameworks	3
CSCI 2325	Expert Access	3
Second Semester		**Units:** 7
CSCI 2370	Database Systems Programming	3
CSCI 2412	Web Database Development	4
Third Semester		**Units:** 7
CSCI 1620	Visual Basic I	3
CSCI 2371	Database Adminstration & Data Mining	4
		Total: 20

Data Center Technician Certificate

The Data Center Technician Certificate is a program designed to prepare students with the skills necessary to support the daily activities of data center operations.

The curriculum focuses on hardware support, server management, monitoring and maintaining network and data center processes, preventative maintenance, data protection, inventory management, as well as communication and technical writing skills.

Students will demonstrate hands-on skills working with various hardware and network equipment to perform diagnostics, as well as troubleshoot and resolve common problems that occur in data centers.

Upon completion of this certificate, students will have the knowledge to seek employment as a Data Center Technician along with a career in data center operations.

Learning Outcome(s):

1. Participate in collaborative projects utilizing the Systems Development Life Cycle (SDLC).
2. Determine project requirements.
3. Create project documentation using computer based applications software.
4. Demonstrate hands-on skills using CISCO switches, routers, fiber optic cabling, and server equipment.
5. Identify and apply networking concepts.
6. Identify and apply relevant social networking applications.
7. Demonstrate team project skills using effective technical communication.

FIRST SEMESTER		**Units:** 12
ITST 1101	IT Fundamentals +	2
CSCI 2750	Introduction to CISCO Networks	3
ENGL 1100	Composition I	3
CSCI 2330	Project Mgt Fund & Case Studies	4
SECOND SEMESTER		**Units:** 5
COMM 2204	Technical Writing	3
ITST 2252	Scripting Fundamentals	2
SUMMER SEMESTER		**Units:** 3
ITST 1123	A + Cert, Managing/ Troubleshooting PCs	3
THIRD SEMESTER		**Units:** 3
ITST 1136	Linux Essentials	3
FOURTH SEMESTER		**Units:** 3
CSCI 2790	Linux Administration (Linux+)	3
		Total: 26

Management Information Systems Certificate

A graduate with a Management Information Systems Certificate will be able to define project goals, create UML models of requirement and other IT-related concepts, determine task dependencies and schedules, measure and present results effectively, apply practical aspects learned in the classroom by managing or assisting in managing IT projects.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware/software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning (DL) sections of a particular course. Check with the program advisor to discuss specific course needs and options.

NOTE: Some courses may have prerequisites; please make sure to fulfill required prerequisites or meet with your program advisor to discuss them.

Learning Outcome(s):

1. Define project goals clearly.
2. Design and produce a UML requirement model.
3. Implement a UML design in IT Project.
4. Determine task dependencies and schedules.
5. Assign and optimize resources.
6. Produce the implementation plan.
7. Manage and respond to change.
8. Measure and present results effectively.
9. Apply practical aspects learned in the classroom by managing or assisting in managing IT projects.

First Semester		**Units:** 7
CSCI 1103	Intro to Programming Logic	3
CSCI 2330	Project Mgt Fund & Case Studies	4
Second Semester		**Units:** 6
CSCI 1275	Business Analysis with Agile Development Frameworks	3
CSCI 1610	Object Oriented Programming Fundamentals	3
		Total: 13

Mobile Game Apps Certificate

Mobile Game Apps certificate will introduce the skills necessary to developing games in a mobile environment. The use of 2-D games for promotional purposes has received a lot of attention in business web applications as a result more businesses are developing and utilizing simple games within their web advertising.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware/software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning (DL) sections of a particular course. Check with the program advisor to discuss specific course needs and options.

NOTE: Some courses may have prerequisites; please make sure to fulfill required prerequisites or meet with your program advisor to discuss them.

First Semester		**Units:** 6
CSCI 1103	Intro to Programming Logic	3
CSCI 1511	Python Programming	3
Second Semester		**Units:** 3
CSCI 1145	HTML	3
Third Semester		**Units:** 3
CSCI 2447	JavaScript Fundamentals	3
Fourth Semester		**Units:** 3
CSCI 2541	Foundations of 2-D Game Programming	3
		Total: 15

Network Administrator Certificate

A graduate with a Network Administrator Certificate will be able to describe the various types of distributed processing systems and operating systems. Design, create, and operate a distributed DBMS. Use at least one major LAN operating system. Design, create, and implement a distributed processing system to support the information processing requirements for a large information management organization to include installing a DBMS.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware/software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning (DL) sections of a particular course. Check with the program advisor to discuss specific course needs and options.

NOTE: Some courses may have prerequisites; please make sure to fulfill required prerequisites or meet with your program advisor to discuss them.

Learning Outcome(s):

1. Describe the various types of distributed processing systems and operating systems.
2. Design, create, and operate a distributed DBMS.
3. Use at least one major LAN operating system.
4. Design, create, and implement a distributed processing system to support the information processing requirements for a large information management organization to include installing a DBMS.

First Semester		**Units:** 6
CSCI 1772	Networking I	3
CSCI 2770	Network Communication & TCP/IP	3

Milestone/Progress Check: • Upon completion of CSCI 1772, Network Administrator students are encouraged to study and complete a Microsoft network certification exam.

Second Semester **Units:** 6

CSCI 2774	Networking II	3
CSCI 2790	Linux Administration (Linux+)	3

Milestones/Progress Check: • Upon completion of CSCI 2774, Network Administrator students are encouraged to study and complete a Microsoft network certification exam. • Upon completion of CSCI 2790, Network Administrator students are encouraged to study and complete the Linux network certification exam.

Third Semester **Units:** 5

CSCI 2792	Virtualization	2
CSCI 2778	Wireless, Voice, & Mobile Comm	3

Milestones/Progress Check: • Students in CSCI 2778 work in groups to design, develop, complete and present Wireless Network Solution for a customer. • Upon completion of CSCI 2778, Network Administrator students are eligible to receive their Network Administrator Certificate.

Total: 17

Software Developer Certificate

The Software Developer Certificate program is designed for practitioners in the IT field who wish to update their skill sets to include current programming languages, database programming, and web development fundamentals. The program culminates in a Columbus State awarded certificate.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware/software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning (DL) sections of a particular course. Check with the program advisor to discuss specific course needs and options.

NOTE: Some courses may have prerequisites; please make sure to fulfill required prerequisites or meet with your program advisor to discuss them.

Prerequisites

The curriculum for the software developer certificate requires CSCI-1103 Introduction to Programming Logic and Math 1111 Discrete Math for Computing as prerequisites. These prerequisites will be waived for anyone who has worked for a year or more as a professional software developer.

Learning Outcome(s):

1. Demonstrate techniques of object analysis and object design.
2. Design and code programs in Python, C# or Java.
3. Debug a Python, C# or Java program.
4. Develop Web front-end applications.
5. Utilize a database for a Web application.
6. Demonstrate a knowledge of cloud computing concepts.

Summer Semester **Units:** 6

CSCI 1103	Intro to Programming Logic	3
MATH 1111	Discrete Mathematics for Computing	3

First Semester **Units:** 9

CSCI 1145	HTML	3
CSCI 1320	Database Fundamentals	3
CSCI 2467	Java Programming I	3
OR		
CSCI 1630	C# Programming I	3

Second Semester **Units:** 9

CSCI 2469	Java Programming II	3
OR		
CSCI 2630	C# Programming II	3
ITST 1130	Cloud Foundations for AWS Cloud Practitioner	3
CSCI XXXX - Technical Elective		3

CSCI XXXX - Technical Electives (3 credits required) **Units:** 0

CSCI 2447	JavaScript Fundamentals	3

CSCI 2221	Agile Software Development and Testing	3
CSCI 1275	Business Analysis with Agile Development Frameworks	3
CSCI 2370	Database Systems Programming	3

Total: 24

Construction Management AAS Degree

The Construction Management program prepares graduates for entry-level employment with all types of construction companies. Students learn estimating, surveying, materials, project planning, scheduling, project management, OSHA construction regulations and more.

In addition to technical and management courses taught at the college, associate degree students have the opportunity to work directly with employers every semester through an internship program.

Students in the program share a course core curriculum with other programs in the Design, Construction and Trades Department. This core provides students with a strong foundation of technical skills as well as a sense of the teamwork needed in the construction field. Students also complete courses in communication skills, technical math, and technical literacy.

The program has been continuously accredited by the American Council for Construction Education (ACCE) since 2000, one of only eleven such programs in North America. In addition, this program has the only community college student Construction Specifications Institute (CSI) Chapter in the country. For more information, see cscc.edu/cmgt.

Learning Outcome(s):

1. Analyze and interpret all types of construction drawings and documents.
2. Develop conceptual programs and detail in order to calculate quantities of material, labor, and equipment needed for a project.
3. Analyze financial data relative to cost budget data of construction work in the field and office.
4. Apply data analysis to identify construction problems, specify goals, and execute projects including understanding risk management and safety loss prevention.
5. Utilize the critical path and Gantt bar chart methods to organize, track and update construction projects as necessary.
6. Identify, understand and apply the elements in construction employee relations and contract law.
7. Utilize industry standard software for estimating, planning, scheduling and cost control.
8. Understand the processes of construction disputes, claims and project documentation.
9. Obtain working knowledge of safety, health and environmental issues.

First Semester **Units:** 16

CMGT 1105	Construction Documents	3
CMGT 1115	Construction Methods	3
CMGT 1121	Construction Drawings	3
ENGL 1100	Composition I	3
COLS 1100	First Year Experience Seminar	1
CIVL 1120	Construction Materials Science	3

Milestone/Progress Check: • CIVL 1120 includes opportunity to earn the ACI Grade I Concrete Technician credential.

Second Semester **Units:** 17-18

CMGT 1131	Quantity Survey	3
CMGT 1135	Safety & Loss Prevention	2
MATH 1101 OR	Math Construction Sciences/ Applied Tech	3

MATH 1148	College Algebra	4
NOTE: Students planning to transfer to a related baccalaureate program at a four-year institution must take MATH 1148.		
NAT-XXXX (select from approved GE-NAT list)		3
HUM-XXXX (select from approved GE-HUM list)		3
PSY 1100	Introduction to Psychology	3
OR		
SOC 1101	Introduction to Sociology	3

Third Semester **Units:** 20

CMGT 1141	Construction Estimating	3
CMGT 2215	Intro to Bldg Information Modeling	3
CMGT 2241	Planning and Scheduling	3
ESSH 1650	OSHA 30 Hr Construction Safety & Health	2
SURV 1410	Introduction to Surveying	3
STAT 1350	Elementary Statistics	3
OR		
STAT 1400	Statistical Concepts for Business	3
COMM 2200	Business Communication	3
OR		
COMM 2204	Technical Writing	3
Milestone/Progress Check: • Successful completion of ESSH 1650 will result in receiving the OSHA 30-Hour Construction Safety & Health credential.		

Fourth Semester **Units:** 12

CMGT 2221	Management & Professional Development	3
CMGT 2231	Commerical Computer Estimating	3
OR		
CMGT 2281	Residential Computer Estimating	3
CMGT 2699	Project Management	3
XXX-XXXX Technical Elective (select from approved list)		3

Technical Electives - 3 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

ACCT 1211	Financial Accounting	3
ARCH 1274	Revit I	3
ARCH 1276	SketchUp	3
ARCH 2282	Sustainable Design	2
ARCH 2283	Sustainable Energy	2
BMGT 1102	Interpersonal Skills	2
CIVL 1230	Heavy Construction Estimating	3
CIVL 1320	Statics and Strengths of Materials	3
CMGT 1153	Residential Construction Management	3
CMGT 1171	Sustainability Management	3
CMGT 1173	Sustainability Applications	3
CMGT 2216	BIM Applications	3
CMGT 2231	Commerical Computer Estimating	3
CMGT 2281	Residential Computer Estimating	3
CMGT 2282	Sustainable Construction	2
CMGT 2910	Construction Field Experience	3
CMGT 2994	Special Topics in Construction Mgmt	1-4
ESSH 2282	Sustainable Bldg Strategies	2
ESSH 2520	Hlth/Safety Training for Haz Waste Ops	2
GIS 1100	Introduction to GIS	3
LAND 1590	Landscape Management I	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One) ARCH 2100 Preferred

ARCH 2100	History of Architecture	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HUM 1100	Introduction to Humanities	3

HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

ESSH 1101 Preferred

BIO 1127	Introduction to Environmental Science	4
CHEM 1171	General Chemistry I	5
ESSH 1101	Intro to Environ Science, Safety, Health	3
GEOL 1121	Physical Geology	4
HORT 1130	Plant Sciences	3

Total: 65-66

Building Information Modeling (BIM) Certificate

The BIM Certificate program is designed for new and experienced professionals seeking to enhance their knowledge and skills in Building Integration Modeling by creating and manipulating 3D models and related information during design, procurement, construction and facilities management phases. It is most beneficial to entry and intermediate level personnel who lack formal training and education in this field. All courses count towards the AAS Construction Management degree. Courses are taught in person evenings and Web-based.

Learning Outcome(s):

1. Help to establish databases and access 3-D models of new and existing buildings, processes and infrastructure
2. Prepare to use BIM to establish project scope, construction activities, and facilities management
3. Assist in utilization of models for crash detection, benchmarking and construction.

First Semester **Units:** 6

ARCH 1274	Revit I	3
CMGT 2215	Intro to Bldg Information Modeling	3

Second Semester **Units:** 5

ARCH 2275	Revit II	2
CMGT 2216	BIM Applications	3

Total: 11

Estimating/Procurement Certificate

The Estimating/Procurement Certificate program is designed for new and experienced professionals seeking to enhance their knowledge and skills in estimating and bidding by expanding their understanding of drawings, documents, methods, take-offs and estimating. It is most beneficial to entry and intermediate level personnel who lack formal training and education in this area. All courses count towards the AAS Construction Management degree. The program is offered day and night. Courses are taught in person. Successful certificate completion will result in earning the OSHA 30-Hour Construction Safety and Health credential and the opportunity to earn the Construction Specifications Institute (CSI) Construction Documents Technologist (CDT) credential.

First Semester **Units:** 9

CMGT 1105	Construction Documents	3
CMGT 1115	Construction Methods	3
CMGT 1121	Construction Drawings	3

Second Semester **Units:** 10

CMGT 1131	Quantity Survey	3
CMGT 1135	Safety & Loss Prevention	2
CMGT 2281	Residential Computer Estimating	3
ESSH 1650	OSHA 30 Hr Construction Safety & Health	2

Third Semester **Units:** 9

CMGT 1141	Construction Estimating	3
CMGT 2231	Commerical Computer Estimating	3
CMGT 2241	Planning and Scheduling	3

Total: 28

Facility Conservation and Energy Management Certificate

The Facility Conservation and Energy Management Certificate program is designed for new and experienced professionals seeking to enhance their knowledge and skills in new and existing facility energy conservation and management by expanding their understanding of design, construction, building automation systems and strategies to lower operational costs. All courses count towards the AAS Construction Management degree. The program is offered on demand with hands on construction included. Courses are taught in person. This certificate assists in the preparation for the Residential Energy Services Network (RESNET) Home Energy Rating System (HERS) Rater credential and the Leadership in Energy Efficiency & Design (LEED) Green Associate (GA) LEED-GA credential.

First Semester **Units:** 3

CMGT 1171	Sustainability Management	3

Second Semester **Units:** 3

CMGT 1173	Sustainability Applications	3

Total: 6

Field Supervision Certificate

The Field Supervision Certificate program is designed for new and experienced professionals seeking to enhance their knowledge and skills in supervision and management by expanding their understanding of leading teams, motivating personnel and managing projects. It is most beneficial to entry and intermediate level personnel with experience in the field. All courses count towards the AAS Construction Management degree. The program is offered day and night. Courses are taught in person. Successful certificate completion will result in earning the OSHA 30-Hour Construction Safety and Health credential and the opportunity to earn the Construction Specifications Institute (CSI) Construction Documents Technologist (CDT) credential.

First Semester **Units:** 11

CMGT 1105	Construction Documents	3
CMGT 1115	Construction Methods	3
CMGT 1121	Construction Drawings	3
CMGT 1135	Safety & Loss Prevention	2

Second Semester **Units:** 11

CMGT 1131	Quantity Survey	3
CMGT 2221	Management & Professional Development	3
CMGT 2241	Planning and Scheduling	3
ESSH 1650	OSHA 30 Hr Construction Safety & Health	2

Milestone/Progress Check: • The second semester builds upon first semester knowledge and begins development of applied supervisory skills.

Total: 22

Residential Construction Management Certificate

The Residential Construction Management Certificate program is designed for new and experienced professionals seeking to enhance their knowledge and skills in the residential construction market by expanding their understanding of financing, constructing and managing single home, multi-family apartment and condominium projects. All courses count towards the AAS Construction Management degree. The program is offered day and night with hands on construction included. Courses are taught in person. Successful certificate completion will result in earning the OSHA 30-Hour Construction Safety and Health credential and the opportunity to earn the Construction Specifications Institute (CSI) Construction Documents Technologist (CDT) credential.

First Semester **Units:** 14

CMGT 1105	Construction Documents	3
CMGT 1115	Construction Methods	3
CMGT 1121	Construction Drawings	3
CMGT 1135	Safety & Loss Prevention	2
CMGT 1153	Residential Construction Management	3

Second Semester **Units:** 14

CMGT 1131	Quantity Survey	3
CMGT 1141	Construction Estimating	3
CMGT 2221	Management & Professional Development	3
CMGT 2281	Residential Computer Estimating	3
ESSH 1650	OSHA 30 Hr Construction Safety & Health	2

Milestone/Progress Check: • Begin development of applied supervisory skills, in addition to the opportunity to earn the OSHA 30-Hour Construction Safety & Health and CSI CDT certifications.

Total: 28

Criminal Justice - Criminal Justice Major AAS Degree

The fast-paced field of Criminal Justice offers a wide variety of career paths for those interested in this area. Students may consider the fields of probation, parole, institutional corrections, victim's advocacy, crime prevention, and law enforcement at the state, local and federal level as their focus of study and training for future employment.

The Criminal Justice Major degree program prepares students for a variety of careers in federal, state or local criminal justice agencies. Groups of electives are designed to provide additional instruction in individual area of interest: Law Enforcement; Homeland Security; Corrections/Probation & Supervision.

This major is additionally designed for students to seamlessly transfer to a variety of four-year institutions for the purpose of attaining a bachelor's in criminal justice degree.

Learning Outcome(s):

1. Communicate effectively within all aspects of the Criminal Justice System, especially in the areas of enforcement, education, and community relations.
2. Gather, analyze, and interpret information for effective problem solving.
3. Demonstrate a working knowledge of legal, procedural, and theoretical fundamentals of the Criminal Justice System.
4. Comprehend and demonstrate understanding of how the inter-workings of the Criminal Justice System depend on limited resources, a diverse societal dynamic, and variations on the social-economic stratum.

First Semester **Units:** 12

COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
BMGT 1102	Interpersonal Skills	2
CRJ 1101	Introduction to Criminal Justice	3
CRJ 1110	Policing	3

Second Semester **Units:** 12

CSCI 1101	Computer Concepts & Apps	3
CRJ 1140	Corrections	3
CRJ 1150	Intro Homeland Security	3
STAT 1350	Elementary Statistics	3

Third Semester **Units:** 12

COMM 1105	Oral Communication	3
CRJ-XXXX Technical Elective - see list		3
CRJ XXXX Technical Elective - see list		3
SOC 2410	Criminology	3

Fourth Semester **Units:** 12

HUM-XXXX (select from approved GE-HUM list)		3
PSY 1100	Introduction to Psychology	3
CRJ 2020	Constitutional Law	3
CRJ 2006	Ethics in Criminal Justice	3

Fifth Semester **Units:** 12-14

NAT-XXXX (select from approved GE-NAT list)		3-5
ENGL 2367	Composition II	3
OR		
ENGL 2567	Comp II Writing about Gender & Identity	3
OR		
ENGL 2667	Comp II American Working-Class Identity	3
OR		
ENGL 2767	Comp II Writing About Science/Technology	3
CRJ 2030	Criminal Investigation	3
CRJ 2100	Foundations for Diversity & Equity in Criminal Justice	3

Technical Electives - 6 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

Homeland Security **Units:** 0

CRJ 1135	Terrorism	3

CRJ 1151	Intelligence Analysis & Security Mgmt	3
CRJ 1152	Transportation & Border Security	3
CRJ 2021	Introduction to Cyberlaw	3

Law Enforcement **Units:** 0

CRJ 1115	Criminal Procedure	3
CRJ 1116	Government and the Law	3
CRJ 1145	Juveniles and the CRJ System	3
CRJ 2008	Applied Leadership CRJ Professions	3
CRJ 2011	Crisis Intervention	3
CRJ 2024	Community Relations	3

Probation and Supervision **Units:** 0

CRJ 2041	Special Category of Offenders	3
CRJ 2042	Community Based Corrections	3
CRJ 2043	Institutional Corrections	3
CRJ 2044	Counseling: Probation & Parole	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

Total: 60-62

Criminal Justice - Probation and Supervision Major AAS Degree

The Probation and Supervision AAS degree program is available as an option for those interested in the fields of

diversion, probation, parole, and institutional corrections and focuses on the specialized requirements in those particular fields.

Learning Outcome(s):

1. Communicate effectively within all aspects of the Criminal Justice System, especially in the areas of enforcement, education, and community relations.
2. Gather, analyze, and interpret information for effective problem solving.
3. Demonstrate a working knowledge of legal, procedural, and theoretical fundamentals of the Criminal Justice System.
4. Comprehend and demonstrate understanding of how the inter- workings of the Criminal Justice System depend on limited resources, a diverse societal dynamic, and variations on the social-economic stratum.
5. Describe historical, legal, and policy practices of the corrections component of the criminal justice system.

First Semester **Units:** 12

CRJ 1101	Introduction to Criminal Justice	3
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
BMGT 1102	Interpersonal Skills	2
CRJ 1140	Corrections	3

Second Semester **Units:** 12

CRJ-XXXX Technical Elective - see list		3
HUM-XXXX (select from approved GE-HUM list)		3
CSCI 1101	Computer Concepts & Apps	3
STAT 1350	Elementary Statistics	3

Third Semester **Units:** 12

COMM 1105	Oral Communication	3
PSY 1100	Introduction to Psychology	3
CRJ 2006	Ethics in Criminal Justice	3
SOC 2410	Criminology	3

Fourth Semester **Units:** 12

ENGL 2367	Composition II	3
OR		
ENGL 2567	Comp II Writing about Gender & Identity	3
OR		
ENGL 2667	Comp II American Working-Class Identity	3
OR		
ENGL 2767	Comp II Writing About Science/Technology	3
CRJ 2030	Criminal Investigation	3
CRJ 2041	Special Category of Offenders	3
CRJ 2042	Community Based Corrections	3

Fifth Semester **Units:** 12-14

CRJ 2043	Institutional Corrections	3
CRJ 2044	Counseling: Probation & Parole	3
NAT-XXXX (select from approved GE-NAT list)		3-5
CRJ 2100	Foundations for Diversity & Equity in Criminal Justice	3

CRJ Technical Electives - 3 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

Homeland Security **Units:** 0

CRJ 1135	Terrorism	3
CRJ 1150	Intro Homeland Security	3
CRJ 1151	Intelligence Analysis & Security Mgmt	3
CRJ 1152	Transportation & Border Security	3
CRJ 2021	Introduction to Cyberlaw	3

Law Enforcement **Units:** 0

CRJ 1110	Policing	3
CRJ 1115	Criminal Procedure	3

CRJ 1145	Juveniles and the CRJ System	3
CRJ 2008	Applied Leadership CRJ Professions	3
CRJ 2011	Crisis Intervention	3
CRJ 2024	Community Relations	3
CRJ 1116	Government and the Law	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

Total: 60-62

Criminal Justice - Law Enforcement Major AAS Degree

The Law Enforcement AAS is intended for those students who are interested in immediately entering the field of certified, sworn law enforcement in the state of Ohio after completion of the program. Upon successful completion of all state and college program requirements, the student will have earned the Law Enforcement AAS degree as well as certification as a Peace Officer in the state of Ohio. The Academy Program contains requirements mandated by the Ohio Peace Officer Training Commission and The Columbus State Community College Police Academy that are different from the other Criminal Justice degree programs. These requirements include, but are not limited to:

• An entry interview by the Academy Commanders or panel, criminal history background check

• Completion of a minimum of 25 semester hours or their equivalent prior to the start of training

• Completion of all state and college mandated police academy paperwork

• Successful passing of a state required physical examination, drug screen, criminal background check

- Successful passing of state required physical fitness test

• The purchase of uniforms and related supplies such as ammunition for firearms training courses

• 100% attendance/compliance requirements throughout the academy training period

• Maintaining a valid Ohio Driver's License throughout the training

• No negative contacts with law enforcement agencies and officers during the academy training

• Other requirements as may be periodically determined.

Learning Outcome(s):

1. Communicate effectively within all aspects of the Criminal Justice System, especially in the areas of enforcement, education, and community relations
2. Gather, analyze, and interpret information for effective problem solving
3. Demonstrate a working knowledge of legal, procedural, and theoretical fundamentals of the Criminal Justice System
4. Comprehend and demonstrate understanding of how the interworkings of the Criminal Justice System depend on limited resources, a diverse societal dynamic, and variations on the social-economic stratum
5. Successfully complete the Peace Officer Basic Training Academy (POBT) as governed by the Ohio Peace Officer Training Commission.

First Semester **Units:** 12

CRJ 1101	Introduction to Criminal Justice	3
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
BMGT 1102	Interpersonal Skills	2
SES 1100	Personal Fitness Concepts	3

Milestone/Progress Check: Meet with program faculty to ensure readiness and eligibility for placement in the Academy Certification classes.

Second Semester **Units:** 12-14

CSCI 1101	Computer Concepts & Apps	3
NAT XXXX (Select from approved GE-NAT list)		3-5
COMM 1105	Oral Communication	3
STAT 1350	Elementary Statistics	3

Milestone/Progress Check: Declare formal interest to participate in the Academy Certification classes.

Third Semester **Units:** 12

HUM XXXX (Select from approved GE-HUM list)		3
PSY 1100	Introduction to Psychology	3
SOC 2410	Criminology	3
CRJ 2006	Ethics in Criminal Justice	3

Milestone/Progress Check: Meet the OPOTA & CSCC registration standards for placement in a POBT Academy (physical, pt test, drug screen, academic placement, etc.)

Fourth Semester **Units:** 12

CRJ 2075	Peace Officer Academy I	6
CRJ 2076	Peace Officer Academy II	6

Fifth Semester **Units:** 15

CRJ 2077	Peace Officer Academy III	6
CRJ 2078	Peace Officer Academy IV	6

Milestone/Progress Check: Successfully pass the OPOTA final physical fitness exam and final test for certification.

CRJ 2100	Foundations for Diversity & Equity in Criminal Justice	3

HUM GE-Art/Humanities Requirement - 3 credit hours minimum **Units:** 0

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3

HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences Requirement - Select One **Units:** 0

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1107	Human Biology	4
BIO 1111	Intro to Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

Total: 63-65

Basic Peace Officer Certificate

The Criminal Justice Law Enforcement program within the Justice, Safety & Legal Studies Department at Columbus State Community College is designed to prepare students and graduates for a career in state or local law enforcement. This degree includes the Ohio Peace Officer Training Academy (OPOTA) Basic Peace Officer Certification which is embedded within the second year of the program (last two semesters).

Students seeking the Basic Peace Officer Certificate will be required to meet proscribed eligibility standards to participate in the Peace Officer Academy certification courses per the State of Ohio Attorney General's Office, the Ohio Peace Officer Training Commission, and the Ohio Peace Officer Training Academy, all of which strictly govern the certification courses and related credentialing.

Academic eligibility considerations include completing all or close to all of the first year courses listed on the Law Enforcement Academy Track AAS plan of study. Eligibility considerations for the State of Ohio include criminal history, age considerations, drug screen, health data screen, background investigation, and a candidate's physical fitness level. Certification for the Peace Officer Basic Training is incumbent upon multiple OPOTA-based testing measures presented throughout the curriculum that students must meet or exceed as well as a final physical fitness test and written exam.

Learning Outcome(s):

1. Communicate effectively within all aspects of the Criminal Justice System, especially in the areas of enforcement, education, and community relations.

First Semester **Units:** 12

CRJ 2075	Peace Officer Academy I	6
CRJ 2076	Peace Officer Academy II	6

Second Semester **Units:** 12

CRJ 2077	Peace Officer Academy III	6
CRJ 2078	Peace Officer Academy IV	6

Milestone/Progress Check: • Eligible for the OPOTC Certification Exam.

Total: 24

Homeland Security Certificate

The Homeland Security Certificate offering is designed for professionals currently working in, or seeking to obtain a position in the private or public security field. The required courses within this certificate offer focus on a variety of related aspects including intelligence analysis and transportation/border security.

Learning Outcome(s):

1. Communicate effectively within all aspects of the Criminal Justice System, especially the areas of enforcement, education, and community relations
2. Demonstrate an understanding of the characteristics of national and international acts of terrorism
3. Identify characteristics, ideologies, motives and behaviors of various extremist and terrorist groups that foster and support terrorist, criminal activities
4. Demonstrate operational knowledge of intelligence gathering and analysis pertinent to homeland security and other threats facing government and private sectors
5. Demonstrate an understanding of how agencies, using various forms of intelligence, apply sound reasoning, formulate predictions and forecast terrorist activities
6. Identify general vulnerabilities and risks in transportation systems and border security systems
7. Demonstrate the roles, functions, and interdependency between local, federal, and international law enforcement and military agencies to foster border security

First Semester **Units:** 9

CRJ 1101	Introduction to Criminal Justice	3
CRJ 1110	Policing	3
CRJ 1150	Intro Homeland Security	3

Second Semester **Units:** 9

CRJ 1116	Government and the Law	3
CRJ 1135	Terrorism	3
CRJ 1151	Intelligence Analysis & Security Mgmt	3

Third Semester **Units:** 9

CRJ 1152	Transportation & Border Security	3
CRJ 2021	Introduction to Cyberlaw	3
CRJ 2030	Criminal Investigation	3

Total: 27

Dental Hygiene AAS Degree

The Dental Hygiene program at Columbus State Community College is designed to prepare graduates for successful entry into the oral health profession. The dental hygienist is a member of the dental health team and provides a variety of quality oral hygiene services including health education, prevention, and treatment of oral disease to a wide variety of patients.

The Columbus State Dental Hygiene program emphasizes the didactic and clinical skills required to meet ever-changing oral health care needs. Admission to the program is both limited and selective. Graduates of the program will be eligible to sit for the state, regional, and national examinations for licensure. The Ohio State Dental Board requires a full FBI background check within 6 months of initial application for licensure.

In Ohio, licensure from the Ohio State Dental Board is needed for employment.

This program is fully accredited by the American Dental Association's Commission on Dental Accreditation. The commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at 312-440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611.

Degree Completion Requirement: All basic and technical courses must be completed with a grade of "C" or higher.

Learning Outcome(s):

1. The Dental Hygiene graduate will possess the skills and knowledge to manage ethical and professional issues of dental hygiene practice.
2. The Dental Hygiene graduate must be able to acquire, evaluate and analyze information in a scientific and effective manner using critical thinking skills linking foundational knowledge to clinical patient care.
3. The Dental Hygiene graduate will be able to demonstrate written comprehensive, critical thinking, and skills for the application of assessment, dental hygiene analysis, planning, implementation, and evaluation related to the provision of optimal preventive, therapeutic, and educational dental hygiene services to individuals of diverse populations.
4. The Dental Hygiene graduate will be able to demonstrate knowledge of safe and effective patient care by adherence to proper infection control, HIPAA requirements and emergency protocol during the provision of client care.
5. The Dental Hygiene graduate will be able to initiate and assume responsibility for general health promotion and oral disease prevention through participation in community activities using appropriate interpersonal communication and educational strategies.
6. The Dental Hygiene graduate will be able to apply self-assessment skills in preparation for life-long learning.

First Semester **Units:** 18

DHY 1100	Introduction to Dental Hygiene	3
DHY 1130	Dental Radiography	3
DHY 1140	Dental Anatomy & Histology	3
DHY 1200	Dental Hygiene Pre-Clinic	3
DHY 1210	Preventive Concepts	1
DHY 1260	Periodontology I	1
BIO 2300	Human Anatomy	4

Milestones/Progress Check: • All DHY courses must be taken and completed, in sequence. • Students must demonstrate minimal competency on delivery of patient care to proceed.

Second Semester **Units:** 17

DHY 1250	Oral Pathology	1
DHY 1261	Periodontology II	1
DHY 1300	Community Health Concepts	1
DHY 1861	Clinic I	2
CHEM 1113	Elements of Organic/ Biochemistry	4
ENGL 1100	Composition I	3
BIO 2301	Human Physiology	4
COLS 1100	First Year Experience Seminar	1

Third Semester **Units:** 14.5

DHY 2200	Pain Management	1.5
DHY 2240	Dental Materials	1
DHY 2862	Clinic II	2
BIO 2302	Human Pathophysiology	3
BIO 2215	Introduction to Microbiology	4
HNTR 1153	Nutrition for a Healthy Lifestyle	3

Milestones/Progress Check: • Students receive Nitrous Oxide Administration Certificate. • Must complete 2 sealants. • Service Learning is a part of this semester.

Fourth Semester **Units:** 12

DHY 2300	Community Health	2
DHY 2400	Pharmacology for the Dental Hygienist	1.5
DHY 2863	Clinic III	2.5
STAT 1350	Elementary Statistics	3
PSY 1100	Introduction to Psychology	3

Milestones/Progress Check: • Table Clinic/ Poster presentation at ODHA annual session. • ADEX competency to prepare for clinical board exam.

Fifth Semester **Units:** 3.5

DHY 2275	Dental Hygiene Case & Concept Review	1
DHY 2864	Clinic IV	2.5
		Total: 65

Digital Design and Graphics AAS Degree

Digital Design and Graphics incorporates all of the processes and industries that create, develop, produce or disseminate ideas, concepts, and information utilizing words or images. Digital Design and Graphics is the interaction of advertising, graphic design, publishing, package design, marketing, interactive media and photography.

This program will prepare the student for various positions in the expanding field of visual communications or for transfer to a four-year institution. Students will prepare a portfolio that will show the work they created in this program, develop a strong visual and verbal resume, and practice the skills needed to effectively present their portfolio to prospective employers.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware or software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning sections of a particular course. Check with the program advisor to discuss specific course needs and options.

Learning Outcome(s):

1. Explain the Digital Design and Graphics business and be able to interact with clients, marketing, copy writers, Web designers, photographers and printing companies.
2. Utilize the most widely used industry software programs: Adobe Photoshop, Adobe Illustrator, Adobe InDesign, Corel Painter and be introduced to Muse, Dreamweaver and Animate.
3. Identify the management of color for print media, photography, and interactive media.
4. Recognize and interpret digital photography and how to implement in all creative areas.
5. Examine how an advertising agency organization works on projects for clients.
6. Explain and discuss how to work in a creative environment as an individual and as a team member.
7. Effectively prepare and present a creative portfolio.
8. Recognize the importance of good verbal and written communications.

First Semester **Units:** 13

ENGL 1100	Composition I	3
STAT 1350	Elementary Statistics	3
DDG 1101	Survey of Digital Design	3
DDG 1100	Introduction to Computer Design	3
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 16

DDG 1200	Color Mgt/Business of Design	3
DDG 1525	Storyboarding	3
MKTG 1120	Branding	3
DDG 1555	Adobe Photoshop I/A	3
IMM 1120	Fundamentals of Interactive Media	4

Third Semester **Units:** 12

NAT-XXXX (select from approved GE-NAT list)		3
DDG 1565	Adobe InDesign	3
DDG 2650	Digital Painting	3
HART 1201	Ancient and Medieval Art Histories	3

Fourth Semester **Units:** 12

DDG 2550	Typography/Advertising Design	3
DDG 2750	Adobe Illustrator I/A	3
IMM 2622	WordPress	3
FOTO 1140	Intro to Digital Photography	3

Fifth Semester **Units:** 12

DDG 2975	Ad Agency/Portfolio Development	3
SBS-XXXX (select from approved GE-SBS list)		3
DDG XXXX Technical Elective 3 Credit Hours		3
FOTO 1150	Digital Photography & Design	3

Students should request a program plan of study from their faculty advisor.

Technical Electives - 3 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

DDG 2802	Digital Design & Graphics Seminar	1
DDG 2902	Digital Design & Graphics Practicum	2
IMM 2620	Website Design Creation	3
BMGT 2200	Management & Organizational Behavior	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1113	Elements of Organic/ Biochemistry	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology	3

Total: 65

Digital Design Certificate

The Digital Design Certificate is for students and working professionals who want to enhance their skill sets focused on industry standards for page layout, image manipulation and computer illustration.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware or software to pursue this degree. This is particularly important for students

who are enrolled in online/distance learning sections of a particular course. Check with the program advisor to discuss specific course needs and options.

Learning Outcome(s):

1. Demonstrate how to apply design elements and principles.
2. Demonstrate file management techniques.
3. Create and apply paragraph, character, object, cell, and tables styles.
4. Demonstrate understanding of hierarchy through visual problem-solving tasks.

First Semester **Units:** 9

DDG 1100	Introduction to Computer Design	3
DDG 1101	Survey of Digital Design	3
DDG 2650	Digital Painting	3

Milestone/Progress Check: • Meets Technical requirements for DDG degree.

Second Semester **Units:** 6

DDG 1555	Adobe Photoshop I/A	3
DDG 1565	Adobe InDesign	3

Milestone/Progress Check: • Meets Technical requirements for DDG degree.

Third Semester **Units:** 9

DDG 2550	Typography/Advertising Design	3
DDG 2750	Adobe Illustrator I/A	3
DDG 2975	Ad Agency/Portfolio Development	3

Milestone/Progress Check: • Meets Technical requirements for DDG degree.

Total: 24

Digital Painting Certificate

The Digital Painting Certificate is for students and working professionals who want to enhance their skill sets focused on creating unique digitally painted imagery using the Wacom tablet.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware or software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning sections of a particular course. Check with the program advisor to discuss specific course needs and options.

Learning Outcome(s):

1. Demonstrate Wacom tablet use with stylus and set brush tracking.
2. Demonstrate sketching/painting and cloning techniques.
3. Use layers to segregate design elements.
4. Create selections and masks.
5. Combine multiple disparate media.

First Semester **Units:** 3

DDG 2650	Digital Painting	3

Total: 3

Digital Design - Adobe Photoshop Advanced Certificate

The Adobe Photoshop Advance Certificate is for students and working professionals who want to

enhance their skill sets focused on industry standards for image manipulation, blending modes, adjustment layers, and custom brushes.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware or software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning sections of a particular course. Check with the program advisor to discuss specific course needs and options.

Learning Outcome(s):

1. Explain and demonstrate how to make precise selections.
2. Explain and demonstrate Photoshop's blending modes.
3. Demonstrate Photoshop's adjustment layers.
4. Demonstrate knowledge of file management technique.

First Semester **Units:** 12

DDG 1100	Introduction to Computer Design**	3
DDG 1555	Adobe Photoshop I/A	3
IMM 1160	Media Graphics/ Optimization	3
FOTO 2120	Adv Photoshop for Photographers	3

**May be waived after review of Professional Portfolio

Total: 12

Digital Design - Adobe InDesign Advanced Certificate

The Adobe InDesign Advanced Certificate is for students and working professionals who want to enhance their skill sets focused on industry standards for page layout, text formatting, and creating paragraph, character, object, and table styles.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware or software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning sections of a particular course. Check with the program advisor to discuss specific course needs and options.

Learning Outcome(s):

1. Create and layout master pages.
2. Create complex frame shapes and convert frame shapes to other shapes.
3. Create and apply paragraph, character, object, cell, and table styles.
4. Confirm that an InDesign file and all of its elements are ready for printing.

First Semester **Units:** 6

DDG 1100	Introduction to Computer Design**	3
DDG 1565	Adobe InDesign	3

Milestone/Progress Check: • Meets Technical requirements for DDG degree.

**May be waived after review of Professional Portfolio

Total: 6

Digital Design - Adobe Illustrator Certificate

The Adobe Illustrator Certificate is for students and working professionals who want to enhance their skill sets focused on industry standards for vector illustrations and applying the elements and principles to vector illustrations.

Software/Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware or software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning sections of a particular course. Check with the program advisor to discuss specific course needs and options.

Learning Outcome(s):

1. Create basic to advanced vector shapes using Illustrator's drawing tools.
2. Adjust color and type digitally.
3. Apply the elements of design and design principles to vector illustrations.
4. Open, save, import, and export illustrations.

First Semester		**Units:** 9
DDG 1100	Introduction to Computer Design**	3
DDG 1555	Adobe Photoshop I/A	3
DDG 2750	Adobe Illustrator I/A	3
Milestone/Progress Check: • Meets Technical requirements for DDG degree.		

**May be waived after review of Professional Portfolio

Total: 9

Digital Photography AAS Degree

The Digital Photography program has been created to satisfy the growing need for qualified digital photographers by providing graduates the benefits of a comprehensive college education while building a strong foundation in digital design, marketing, communications and Web design. This multi-disciplinary approach reflects the needs of the professional digital photography industry.

The digital evolution has lowered the barriers to professional entry allowing many new people in related fields to pursue the craft of digital photography.

Graduates of this program will be prepared for careers in a variety of digital photography, digital services and imaging-related fields, be able to pursue self-employment options, or be prepared to continue their education at a four-year institution. The majority of the digital photography curriculum will revolve around digital capture, digital workflow, and digital image management. Students will develop a balance of technical and aesthetic skills that relate to digital photography, equipment, and related software that is complemented by coursework in digital design, website design,
interactive video/audio, and marketing/branding on the Web.

Students will need to own class-specific equipment to pursue this degree. For example, FOTO 1100 requires a student-provided, film-based SLR camera with manual exposure control. A digital point and shoot camera with a minimum of 10 meg. capture is required for FOTO 1140 and any other 1000 level FOTO course requiring a digital camera (phone cameras are not allowed). A digital SLR (DSLR) with a minimum of 12 meg. capture will be needed for FOTO 2100 and beyond. FOTO 1250 Night Photography requires a tripod. FOTO 2600 will require an external flash and other light modifiers. These are examples of the specific assets needed by students for each photography class. Large format film cameras will be provided for in-class projects and use in FOTO 2500. Check with the photography advisor to discuss specific course needs and options.

Software and/or Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware or software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning sections of a particular course. Check with the program advisor to discuss specific course needs and options.

Learning Outcome(s):

1. Demonstrate an understanding of the principles associated with the craft, scholarly theory, and profession of digital photography.
2. Recognize, evaluate, combine and utilize all appropriate skills and techniques of digital photography in relation to digital capture, digital equipment imaging needs, and digital workflow management.
3. Describe how digital photography is utilized in local and regional career applications and processes.
4. Demonstrate appropriate digital image-editing software and computer skills that directly support digital photography editing/enhancement and post-production workflow techniques.
5. Demonstrate aesthetic and technical problem-solving skills to determine the best visual solutions for different assignments and situations.
6. Demonstrate self-management, life-management and interpersonal skills.

First Semester **Units:** 13

FOTO 1120	Photoshop for Photographers	3
FOTO 1140	Intro to Digital Photography	3
ENGL 1100	Composition I	3
COLS 1100	First Year Experience Seminar	1
MKTG 1120	Branding	3
OR		
BMGT 2231	Fundamentals of Entrepreneurship	3

Second Semester **Units:** 15

DDG 1100	Introduction to Computer Design	3
FOTO 1150	Digital Photography & Design	3
FOTO 2100	Adv Digital Photography	3
FOTO 2120	Adv Photoshop for Photographers	3
HUM-XXXX (select from approved GE-HUM list)		3

Third Semester **Units:** 18

FOTO 2130	Photoshop for Retouching	3
FOTO 2600	Studio & Environmental Portraiture	3
FOTO 2960	Business Photography	2
FOTO-XXXX (Technical Elective)		2
FOTO 2994	Current Topics in FOTO	2
DDG 1555	Adobe Photoshop I/A	3
MATH 1104	Mathematical Concepts for Business	3

Fourth Semester **Units:** 17

FOTO 2200	Studio Lighting	3
FOTO 2975	Digital Portfolio Development	3
IMM 2622	WordPress	3
NAT-XXXX (select from approved GE-NAT list)		4
SBS-XXXX (select from approved GE-SBS list)		3
MKTG 2200	Digital Marketing	1

Technical Electives - 2 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

FOTO 1100	Black & White Photography	3
FOTO 1130	Corel Painter for Photographers	3
FOTO 1170	Digital Panoramic Photography	2
FOTO 1190	Digital Infrared Photography	2
FOTO 1200	Underwater Photography	3
FOTO 1210	HDR Photography	2
FOTO 1250	Night Photography	2
FOTO 1300	Macro & Close-Up Photography	2
FOTO 1500	Off-Camera Flash	2
FOTO 1600	Advanced Off-Camera Flash	2
FOTO 1780	Photo Lab*	1
FOTO 2140	Photoshop for Compositing	3
FOTO 2150	Photoshop for Video	2
FOTO 2500	View Camera	3
FOTO 2650	Photojournalism	3
FOTO 2802	Digital Photo Seminar	1
FOTO 2902	Digital Photo Practicum	3
FOTO 2970	FOTO Field Studies	1-4

* Will only count once toward the degree.

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Students should request a program plan of study from their faculty advisor.

Total: 63

Basic Digital Photography Certificate

This two course certificate has been designed to prepare and enrich student skill sets for beginning level understanding of digital capture and Photoshop post-production techniques. This certificate is stackable within the Intermediate and Advanced Digital Photography Certificates; as well as being embedded into the Digital

Photography Associate of Applied Science degree. To further enhance the development of beginning skills and competencies in the use of digital cameras and Photoshop software for the photography industry. This certificate can serve as a great "minor" to any creative "major".

Software and/or Hardware Requirements

Students taking courses in this curriculum may need to own or have access to hardware or software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning sections of a particular course. Check with the program advisor to discuss specific course needs and options.

First Semester		**Units:** 6
FOTO 1120	Photoshop for Photographers	3
FOTO 1140	Intro to Digital Photography	3
		Total: 6

Intermediate Digital Photography Certificate

This four-course certificate has been designed to prepare and enrich student skill sets for intermediate level understanding of digital capture and Photoshop post-production techniques. This certificate has the Basic Digital Photography certificate embedded in it and is stackable within the Advanced Digital Photography Certificate; as well as being embedded into the Digital Photography Associate of Applied Science degree. To further enhance the development of intermediate skills and competencies in the use of digital cameras and Photoshop software for the photography industry. This certificate can serve as a great "minor" to any creative "major".

Software and/or Hardware Requirements

Students taking courses in this curriculum may need to own or have access to hardware or software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning sections of a particular course. Check with the program advisor to discuss specific course needs and options.

First Semester		**Units:** 6
FOTO 1120	Photoshop for Photographers	3
FOTO 1140	Intro to Digital Photography	3
Second Semester		**Units:** 6
FOTO 1150	Digital Photography & Design	3
FOTO-XXXX (Technical Elective)		3
Technical Electives - 3 credit hours minimum		**Units:** 0
FOTO 1130	Corel Painter for Photographers	3
FOTO 1170	Digital Panoramic Photography	2
FOTO 1190	Digital Infrared Photography	2
FOTO 1200	Underwater Photography	3
FOTO 1210	HDR Photography	2
FOTO 1250	Night Photography	2
FOTO 1300	Macro & Close-Up Photography	2
FOTO 1500	Off-Camera Flash	2
FOTO 1600	Advanced Off-Camera Flash	2
FOTO 1780	Photo Lab*	1
FOTO 2130	Photoshop for Retouching	3
FOTO 2140	Photoshop for Compositing	3
FOTO 2150	Photoshop for Video	2
FOTO 2500	View Camera	3
FOTO 2650	Photojournalism	3
FOTO 2970	FOTO Field Studies	1-4

*Will only count once toward the degree.

Total: 12

Advanced Digital Photography Certificate

This nine-course certificate has been designed to prepare and enrich student skill sets for advanced level understanding of digital capture and Photoshop post-production techniques. This as well as being embedded into the Digital Photography Associate of Applied Science degree. To further enhance the development of advanced skills and competencies in the use of digital cameras and Photoshop software for the photography industry. This certificate can serve as a great "minor" to any creative "major". Since this certificate is over 16 credit hours, financial aid will cover the study of it and you can still earn the Basic and Intermediate certificates as stepping stone achievements while declaring/pursuing only the Advanced Digital Photography certificate.

Software and/or Hardware Requirements
Students taking courses in this curriculum may need to own or have access to hardware or software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning sections of a particular course. Check with the program advisor to discuss specific course needs and options.

First Semester		**Units:** 6
FOTO 1120	Photoshop for Photographers	3
FOTO 1140	Intro to Digital Photography	3
Second Semester		**Units:** 8
FOTO 1150	Digital Photography & Design	3
FOTO 2130	Photoshop for Retouching	3
FOTO-XXXX (Technical Elective)		2
Third Semester		**Units:** 4-6
FOTO 2100	Adv Digital Photography	3
FOTO 2994	Current Topics in FOTO	1-3
Fourth Semester		**Units:** 6
FOTO 2200	Studio Lighting	3
OR		
FOTO 2600	Studio & Environmental Portraiture	3
FOTO 2975	Digital Portfolio Development	3
Technical Elective - 2 credit hours minimum		**Units:** 0

The following courses are approved for technical elective requirements:

FOTO 1130	Corel Painter for Photographers	3
FOTO 1170	Digital Panoramic Photography	2
FOTO 1190	Digital Infrared Photography	2
FOTO 1200	Underwater Photography	3
FOTO 1210	HDR Photography	2
FOTO 1250	Night Photography	2
FOTO 1300	Macro & Close-Up Photography	2
FOTO 1500	Off-Camera Flash	2
FOTO 1600	Advanced Off-Camera Flash	2
FOTO 1780	Photo Lab*	1
FOTO 2130	Photoshop for Retouching	3
FOTO 2140	Photoshop for Compositing	3
FOTO 2150	Photoshop for Video	2
FOTO 2500	View Camera	3
FOTO 2650	Photojournalism	3
FOTO 2970	FOTO Field Studies	1-4

*Will only count once toward the degree.

Total: 24-26

Basic Photoshop for Photographers Certificate

This two course certificate has been designed to prepare and enrich student skill sets for beginning level understanding of Adobe Photoshop post-production techniques, skills and production workflows. This certificate is stackable within the Intermediate and Advanced Photoshop for Photography Certificates; as well as being embedded into the Digital Photography Associate of Applied Science degree. To further enhance the development of beginning skills and competencies in the use of Photoshop software for the photography

industry. This certificate can serve as a great “minor” to any creative “major”.

Software and/or Hardware Requirements

Students taking courses in this curriculum may need to own or have access to hardware or software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning sections of a particular course. Check with the program advisor to discuss specific course needs and options.

First Semester		**Units:** 3
FOTO 1120	Photoshop for Photographers	3
Second Semester		**Units:** 1-3
FOTO 2120	Adv Photoshop for Photographers	3
OR		
FOTO 2130	Photoshop for Retouching	3
OR		
FOTO 2140	Photoshop for Compositing	3
OR		
FOTO 2150	Photoshop for Video	2
OR		
FOTO 2994	Current Topics in FOTO	1-3

(Current topic subject must pertain to Photoshop.)

Total: 4-6

Intermediate Photoshop for Photographers Certificate

This four-course certificate has been designed to prepare and enrich student skill sets for intermediate level understanding of Adobe Photoshop post-production techniques, skills and production workflows. This certificate has the Basic Photoshop for Photography certificate embedded in it and is stackable within the Advanced Photoshop for Photography Certificate; as well as being embedded into the Digital Photography Associate of Applied Science degree. To further enhance the development of intermediate skills and competencies in the use Adobe Photoshop software for the photography industry. This certificate can serve as a great “minor” to any creative “major”.

Software and/or Hardware Requirements

Students taking courses in this curriculum may need to own or have access to hardware or software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning sections of a particular course. Check with the program advisor to discuss specific course needs and options.

First Semester		**Units:** 3
FOTO 1120	Photoshop for Photographers	3
Second Semester		**Units:** 9-12
FOTO 2120	Adv Photoshop for Photographers	3
FOTO 2130	Photoshop for Retouching	3
FOTO 2140	Photoshop for Compositing	3
OR		
FOTO 2150	Photoshop for Video	2
FOTO 2994	Current Topics in FOTO	1-3

Total: 12-15

Advanced Photoshop for Photographers Certificate

This five-course certificate has been designed to prepare and enrich student skill sets for an advanced level understanding of Adobe Photoshop post-production techniques, skills and production workflows. This certificate has the Basic Photoshop for Photography and the Advanced Photoshop for Photography Certificate; as well as being embedded into the Digital Photography Associate of Applied Science degree. To further enhance the development of advanced skills and competencies in the use Adobe Photoshop software for the photography industry. This certificate can serve as a great "minor" to any creative "major". Since this certificate is over 16 credit hours, financial aid will cover the study of it and you can still earn the Basic and Intermediate certificates as stepping stone achievements while declaring/pursuing only the Advanced Photoshop for Photography certificate.

Software and/or Hardware Requirements

Students taking courses in this curriculum may need to own or have access to hardware or software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning sections of a particular course. Check with the program advisor to discuss specific course needs and options.

First Semester		**Units:** 3
FOTO 1120	Photoshop for Photographers	3
Second Semester		**Units:** 6
FOTO 2120	Adv Photoshop for Photographers	3
FOTO 2130	Photoshop for Retouching	3
Third Semester		**Units:** 2-6
FOTO-XXXX (Technical Elective)		1-3
FOTO-XXXX (Technical Elective)		1-3

Technical Electives - 2 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

FOTO 2140	Photoshop for Compositing	3
FOTO 2150	Photoshop for Video	2
FOTO 2994	Current Topics in FOTO	1-3

(Current topic subject must pertain to Photoshop.)

Total: 11-15

Black and White Film Certificate

This two course certificate has been designed to prepare and enrich student skill sets related to the traditional film process. It focuses on the processes of shooting, processing and printing from traditional black and white film. The first course focuses on the use of 35mm camera work and the second course moves up to the 4"x5" view camera (school provided) shooting, processing and printing. This certificate can serve as a great "minor" to any creative "major" who wants to explore the original – traditional methods of photographic film/print image making.

Software and/or Hardware Requirements

Students taking courses in this curriculum may need to own or have access to hardware or software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning sections of a particular course. Check with the program advisor to discuss specific course needs and options.

First Semester		**Units:** 3
FOTO 1100	Black & White Photography	3
Second Semester		**Units:** 3
FOTO 2500	View Camera	3

Total: 6

Business of Photography Certificate

This one course certificate cover the business of photography from the standpoint of the retail and commercial photography. This certificate covers the American Society of Media Photographers approach to understanding photographers' rights and better business practices It is a great complement to any creative major who wants to better understand the business side of a creative craft and is embedded in the Digital Photography Associate of Applied Science degree.

Software and/or Hardware Requirements

Students taking courses in this curriculum may need to own or have access to hardware or software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning sections of a particular course. Check with the program advisor to discuss specific course needs and options.

First Semestere		**Units:** 2	Total: 2
FOTO 2960	Business Photography	2	

Off-Camera Flash Certificate

This two course certificate has been designed to prepare and enrich student skill sets for beginning to advanced level understanding of using off camera flash for still photography. It covers gear/equipment, various methods of triggering off camera flash, multiple flash setups, how to balance flash/ambient light, and get perfect exposures using manual mode. This is a great certificate for anyone who wants to bring their photography to the next level.

Software and/or Hardware Requirements

Students taking courses in this curriculum may need to own or have access to hardware or software to pursue this degree. This is particularly important for students who are enrolled in online/distance learning sections of a particular course. Check with the program advisor to discuss specific course needs and options.

First Semester		**Units:** 2	FOTO 1600	Advanced Off-Camera Flash	2
FOTO 1500	Off-Camera Flash	2			Total: 4
Second Semester		**Units:** 2			

Early Childhood Development and Education AAS Degree

The Early Childhood Development and Education (ECDE) program at Columbus State prepares today's professionals to work with children and families in a variety of settings. Whether you want to earn your CDA in our Gold Standard Preparation Program, complete a Certificate to become a Center Administrator, earn an industry-recognized Associates Degree that will help you gain immediate employment, or you are interested in transferring to a four-year institution to earn a Kindergarten through Grade 5 Teaching License, ECDE has convenient options that can meet your needs!

Our NAEYC-accredited program provides a top-notch education that includes hands-on practicum experiences in high-quality early childhood classrooms, as well as various

community settings, such as COSI, the Columbus Zoo, and the Columbus Metropolitan Library. Students will also be given the option to complete a practicum at EDCE's Step Up to Quality 5-Star rated lab school, Wonder School, which is a collaboration with Columbus Museum of Art and The Childhood League. ECDE meets the needs of our diverse student population with day and evening classes; web, blended, and face-to-face classes; and program options available at our Columbus and Delaware campuses.

Scholarships are available to help students with expenses! Funding is available for many qualified students to earn their CDA tuition-free. The Virginia Carey Early Childhood Development Memorial Scholarship awards $750 scholarships directly to ECDE students each year. If you are working at least 30 hours per week at a childcare center or licensed in-home program, you might be eligible for a T.E.A.C.H Scholarship. The Office of Financial Aid can give you more information and direct you to additional grant and scholarship opportunities.

Whether you are a recent high school graduate or career changer, a seasoned teacher looking to further your education, or a transient student from another college looking to take a couple classes, we welcome your interest in ECDE and we look forward to having you in class!

ECDE students must maintain a 2.0 GPA while taking their ECDE practicum courses (ECDE 2910, ECDE 2920, ECDE 2930 or ECDE 2932 or ECDE 2933).

Learning Outcome(s):

1. Promote child development and learning and create appropriate early learning environments, considering multiple interacting influences, including young children's unique characteristics and needs.
2. Build respectful, reciprocal, empowering family and community relationships, with an understanding of complex characteristics of these diverse families and communities.
3. Use appropriate tools of observing, documenting, and assessing, in partnership with families and other professionals, to positively influence the development of every child.
4. Use a wide array of developmentally effective approaches, instructional strategies, and tools to connect with children and families, while maintaining positive relationships and supportive interactions as the foundation of the early learning program.
5. Design, implement, and evaluate meaningful curriculum across content disciplines and domains that promotes comprehensive developmental and learning outcomes for each young child, considering the diverse background of each child.
6. Demonstrate professionalism in the field of early childhood by observing ethical guidelines, continuing to develop as an educated early childhood professional, and serving as informed advocates for sound educational practices and policies.
7. Reflect on knowledge, skills, and competencies gained through practicum experiences in multiple early childhood age groups and in a variety of early learning environments.

First Semester **Units:** 13

ECDE 1101	Early Childhood Curriculum	3
ECDE 1105	Social Emotional Dev Curriculum	3
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
PSY 1100	Introduction to Psychology	3

Second Semester **Units:** 15

ECDE 1108	Nurturing Creativity	3
ECDE 1109	Language & Literacy Experiences	3
ECDE 2010	Infant Toddler Curriculum	3
MATH 1104	Mathematical Concepts for Business	3
PSY 2261	Child Development	3

Third Semester **Units:** 11

ECDE 2014	Cognitive Curriculum	3
ECDE 2910	Seminar Practicum I: Infants & Toddlers	2
EDUC 2210	Introduction to Education	3
NAT-XXXX (select from approved GE-NAT list)		3

Fourth Semester **Units:** 14-15

ECDE 2920	Seminar/Practicum II: Preschool	2
ECDE 2012	Families, Communities & Schools	3
ECDE 2021	Org/Prof Leadership in EC Programs	3
ECDE 2016	Health, Safety, and Nutrition	2
ECDE-XXXX (Technical Elective)		1
EDUC 2220	Educational Technology	3
OR		
ARAB 1101	Beginning Arabic I	4
OR		
ASL 1101	Beginning ASL I	3
OR		
SPAN 1101	Beginning Spanish I	4

Fifth Semester **Units:** 12

ECDE 2930	Seminar/Practicum III: Preschool	2
OR		
ECDE 2932	Seminar/Practicum III: Administration	2
OR		
ECDE 2933	Seminar/Practicum III: Community Setting	2
ECDE 2099	ECDE Capstone	1
HUM-XXXX (select from approved GE-HUM list)		3
PSY 2200	Educational Psychology	3
PSY 2245	Children With Exceptionalities	3

Technical Electives - 1 credit hour minimum **Units:** 0

The following courses are approved for technical elective requirements:

ECDE 1100	Introduction to CDA	3
ECDE 2105	Best Practice Inclusive Early Childhood	1
ECDE 2107	Media Resources	1
ECDE 2109	Phonics & the Structure of Language	4
ECDE 2111	Playing with the Arts	1
ECDE 2294	ECDE Contemporary Issues	1-5
ECDE 2106	First Aid, Communicable Diseases, Child Abuse Recognition and Prevention	2

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2200	Introduction to Biological Anthropology	4
BIO 1111	Intro to Biology	4
GEOG 1900	Introduction to Weather & Climate	4
GEOG 2300	Introduction to Physical Geography	3
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1151	Natural Disasters	3

Basic Elective select one		Units:
EDUC 2220	Educational Technology	3
SPAN 1101	Beginning Spanish I	4
ARAB 1101	Beginning Arabic I	4
ASL 1101	Beginning ASL I	3

Total: 65-66

Early Childhood Education and Administration Certificate

Family needs and increased focus on high quality early education for all young children continue to drive the demand for qualified professionals in the filed of early childhood education. Early childhood educators are responsible for planning daily routines and curriculum and utilizing community resources to enrich programs and support the needs of children and their families. The ECDE graduate is employed as a pre-kindergarten teacher, Head Start teacher, preschool/child care administrator, nanny, infant/toddler caregiver, early childhood educator in a community setting or family childcare provider.

The Early Childhood Development and Education (ECDE) program is accredited by the National Association for the Education of Young Children and approved by the Ohio Department of Education to offer Pre-Kindergarten Associate Teaching license. This license qualifies holders for pre-kindergarten positions in a variety of early childhood settings, including Head Start, public school preschool as well as part day and full-day child care programs The ECDE graduate is employed as a pre-kindergarten teacher, Head Start teacher, preschool/child care administrator, nanny, infant/toddler caregiver, early childhood educator in a community setting or family childcare provider.

First Semester		Units: 6
ECDE 1101	Early Childhood Curriculum	3
ECDE 1105	Social Emotional Dev Curriculum	3
Second Semester		**Units:** 9
ECDE 1108	Nurturing Creativity	3
ECDE 1109	Language & Literacy Experiences	3
ECDE 2021	Org/Prof Leadership in EC Programs	3

Milestone/Progress Check: • With completion of 12 credit hours in ECDE, minimum qualifications to be a childcare administrator by Ohio Child Day Care Licensing Standards will have been met provided the candidate has two years work experience in group care of young children.

Total: 15

Early Childhood Aide Certificate

The Early Childhood Aide (ECA) Certificate is an 18-credit hour program for students who have a developmental disability and an interest in working with young children. The curriculum provides students the knowledge and skills necessary to work as an aide in an early childhood program, including child development basics, activity planning and implementation, positive guidance, and ways to supports early childhood literacy. Students participate in two semester-long practicums to gain hands-on experience in early childhood classrooms. While course work is adapted to meet the needs of the students, in order to enroll in the certificate program students must have a proven ability to participate appropriately in a classroom and/or professional work setting. An interview with the ECA Certificate Coordinator is required prior to acceptance into the program.

Learning Outcome(s):

1. Demonstrate knowledge of theories of child development and education
2. Plan appropriate learning experiences for individuals as well as groups of young children in inclusive settings
3. Demonstrate a competent, respectful, nurturing teaching style to meet children's needs
4. Develop appropriate educational practices for young children that foster the growth of skills in problem solving, decision-making, critical thinking, communication and emerging literacy
5. Use appropriate teaching strategies, including identification, selection and preparation of materials and methods to address children's individual differences in development and educational levels, culture and learning styles
6. Recognize and respect unique characteristics of children and families and demonstrate appropriate strategies to support diverse families within the community
7. Reflect and evaluate one's professional, interdisciplinary role as teacher, team member, life-long learner and advocate for children and families

First Semester **Units:** 4

SAHS 1120	Service Delivery & Ethics in Human Services & Social Work	2
ECDE 2106	First Aid, Communicable Diseases, Child Abuse Recognition and Prevention	2

Milestones/Progress Check: • Students must complete practicum application and other paperwork. • Students earn a Red Cross certificate for each of these three areas.

Second Semester **Units:** 7

ECDE 1103	Guidance & Curriculum for Early Childhood Aide	2
ECDE 1106	Language & Literacy Exp Early Childhood	1
ECDE 2840	Early Childhood Practicum & Seminar I	4

Milestone/Progress Check: • Students participate in the first community-based practicum.

Third Semester **Units:** 7

ECDE 1104	Soc Emotional Dev Early Childhood Aide	2
ECDE 2107	Media Resources	1
ECDE 2841	Early Childhood Practicum & Seminar II	4

Total: 18

Childhood Development Associate (CDA) Certificate

By completing three courses, students meet the credit requirements for a Child Development Associate Credential as well gain nine credits toward an associate degree in Early Childhood Development and Education at Columbus State.

The Columbus State CDA program also provides critical support as students start developing a professional resource file, writing competency statements, studying for the CDA examination, and preparing for the classroom observation and oral interview.

First Semester **Units:** 9

ECDE 1100	Introduction to CDA	3
ECDE 1101	Early Childhood Curriculum	3
ECDE 1105	Social Emotional Dev Curriculum	3

Total: 9

Electro-Mechanical Engineering Technology AAS Degree

The Electro-Mechanical program is a marriage of Columbus State's Mechanical and Electronics Engineering Technology programs with additional coursework focused on automation and process control. Electro-Mechanical Technicians, sometimes called Multi-craft Technicians, are "jacks of many trades". They perform both preventative and corrective maintenance on mechanical systems, electro-mechanical systems, hydraulic and pneumatic systems, and automated productions systems. They work in areas as diverse as manufacturing, environmental control, food and pharmaceutical production, and power plants. Some graduates assist in the design of new systems as well as provide technical expertise in sales related positions.

Electro-Mechanical Engineering Technicians are in great demand. Demand for them consistently cannot be met by supply. Any industry that uses electrical components and/or has any level of automation and process control needs – and will always need – technicians with their skill set.

Not only do opportunities abound for those with an Associate degree in this area, but with Columbus State's transfer opportunities, students can go on to pursue a Bachelor of Science in Engineering Technology, which opens up even more employment doors.

Learning Outcome(s):

1. Read and interpret engineering drawings.
2. Select an appropriate electric motor and control based on known functional requirements.
3. Identify and troubleshoot components in hydraulic and pneumatic systems.
4. Troubleshoot electric motors.
5. Identify and select electro-mechanical components for typical industrial requirements.
6. Select and use appropriate power control devices, timers, and sensors.
7. Identify closed-loop and open-loop systems and select the type of control required to achieve a given system response.
8. Demonstrate skill in applying programmable logic controllers to control simple processes.
9. Perform preventive and corrective maintenance on electro-mechanical systems.

First Semester **Units:** 14

COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
ITST 1101	IT Fundamentals +	2
MATH 1115	Mathematics for Engineering Technologies	4
OR		
MATH 1148	College Algebra	4
EMEC 1250	Motors and Control Logic	4

Milestone/Progress Check: • Students planning to continue into Miami University's bachelor's degree program (or other similar programs) should take MATH 1148 instead of MATH 1113. MATH 1148 satisfies both our A.A.S. degree requirement as well as the math pre-requisite for transferring into Miami's program.

Second Semester **Units:** 18

EET 1105	Basic DC Electronic Systems	3
EET 1115	Basic Digital Systems	3
ENGT 1115	Engineering Graphics	3
PHYS 1200	Algebra-Based Physics I	5
EMEC 1251	Control Logic and PLC's I	4

Third Semester **Units:** 15

EET 1125	Basic AC Electronic Systems	3
EET 2235	Data Acquisition Systems	3
MECH 1240	Machine Tools	3
MECH 2243	Robotics	2
EMEC 1252	Control Logic and PLC's II	4

Milestones/Progress Check: • Once students complete the first and second semester courses (plus Robotics (MECH 2243) and Welding (SKTR 1180)) they are eligible for the Modern Manufacturing ("Honda") Work Study Program. • Upon completing this semester and ESSH 1170 (OSHA 10 Hr. Safety and Health course), students meet the requirements for the Manufacturing Equipment Technician Certificate and should see the program coordinator to petition for it.

Fourth Semester **Units:** 14

COMM 2204	Technical Writing	3
MECH 1150	Engineering Materials	3
ENGT 2260	Basic Mechanisms and Drives	3
ITST 1102	Industrial Network Communications	2
OR		
SKTR 1180	Welding: Introduction to Stick	2
SBS-XXXX (select from approved GE-SBS list)		3

Milestone/Progress Check: • Students planning to continue into Miami University's bachelor's degree program (or other similar programs) should take ECON 2200 for their Social and Behavioral Science requirement. ECON 2200 satisfies both our SBS requirement as well as the SBS requirement at Miami and in the Ohio Transfer Module.

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 61

Manufacturing Equipment Technician Certificate

Electrical equipment and electronic equipment are two distinct types of industrial equipment, although much equipment contains both electrical and electronic components. In general, electrical portions provide the power for the equipment, while electronic components control the device, although many types of equipment still are controlled with electrical devices. Electronic sensors monitor the equipment and the manufacturing process, providing feedback to the programmable logic controller (PLC), which controls the equipment. The PLC processes the information provided by the sensors and makes adjustments to optimize output. To adjust the output, the PLC sends signals to the electrical, hydraulic, and pneumatic devices that power the machine—changing feed rates, pressures, and other variables in the manufacturing process. Many installers and repairers, known as field technicians, travel to factories (or other locations) to repair equipment or to perform preventive maintenance on a regular basis. Bench technicians work in repair shops located in factories and service centers, fixing components that cannot be repaired on the factory floor.

First Semester **Units:** 9

EMEC 1250	Motors and Control Logic	4
EET 1105	Basic DC Electronic Systems	3
ITST 1101	IT Fundamentals +	2

Second Semester **Units:** 5

MECH 2243	Robotics	2
ESSH 1170	OSHA 10Hr Gen Ind Safety & Health	1
SKTR 1180	Welding: Introduction to Stick	2

Milestone/Progress Check: • Certificate is achieved.

Total: 14

Semiconductor Fundamentals Certificate

The Semiconductor Fundamentals certificate program prepares students for entry-level work as semiconductor manufacturing technicians, performing preventative maintenance in the nano/micro-fabrication industry and related manufacturing industries. The courses in the certificate all apply to the Electro-Mechanical Engineering Technology AAS degree.

First Semester		**Units:** 12
ENGT 1101	Industrial Foundations	3
EET 1105	Basic DC Electronic Systems	3
ITST 1101	IT Fundamentals +	2
ENGT 1102	Micro-ElectroMechanical Systems Fabrication	4

Second Semester		**Units:** 9
ENGT 2201	Vacuum Systems	3
EET 1125	Basic AC Electronic Systems	3
ENGT 2260	Basic Mechanisms and Drives	3
		Total: 21

Electronic Engineering Technology AAS Degree

Graduates of Columbus State's Electronic Engineering Technology program support the design, installation, testing, operation, troubleshooting, maintenance, and repair of analog and digital electronics and embedded programmable microcontroller systems.

The program will produce graduates who:

- Possess the knowledge, skills and abilities necessary to be a productive employee in the field of electrical/electronic engineering technology.
- Apply professional ethics in the workplace.
- Function well in a globally diverse society.
- Pursue continuous lifelong learning.

The Associate Degree Program in Electronic Engineering Technology prepares students to assemble, troubleshoot, and repair electronic systems; to read and interpret complex instructions, technical literature, and engineering and schematic drawings; and to solve a variety of problems. Coursework includes basic DC and AC electronic and digital systems, data communication systems, advanced programmable digital systems, electronic amplifier and switching systems, data acquisition systems, instrumentation and process control systems, human machine interface systems, distributed control systems, and embedded microcontroller systems. Each topic is enhanced with corresponding hands-on labs.

Columbus State's Electronic Engineering Technology program is accredited by the Engineering Technology Commission of ABET, https://www.abet.org.

Graduates who wish to continue their education may transfer associate degree credits to a number of four-year institutions which offer baccalaureate degrees in Engineering Technology. These include Miami University's Bachelor of Science degree completion program. This degree completion option, offered via distance learning technology, uses live interactive video teleconferencing, available entirely on Columbus State's Downtown Campus.

Electronic Engineering Technology shares related coursework with the Electro-Mechanical Engineering Technology degree and the Information Technology Support Technician Major. For information, refer to those sections of the catalog.

Learning Outcome(s):

1. An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline.
2. An ability to design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline.
3. An ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature.
4. An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results.
5. An ability to function effectively as a member of a technical team.

6. The application of circuit analysis and design, computer programming, associated software, analog and digital electronics, and microcomputers, and engineering standards to the building, testing, operation, and maintenance of electrical/electronic(s) systems.
7. The application of natural sciences and mathematics at or above the level of algebra and trigonometry to the building, testing, operation, and maintenance of electrical/electronic systems.

First Semester **Units:** 12

EET 1105	Basic DC Electronic Systems	3
EET 1125	Basic AC Electronic Systems	3
ITST 1101	IT Fundamentals +	2
ENGL 1100	Composition I	3
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 13

EET 1135	Electronic Switching & Amplifier Systems	3
EET 1115	Basic Digital Systems	3
ITST 1123	A + Cert, Managing/ Troubleshooting PCs	3
MATH 1115	Mathematics for Engineering Technologies	4
OR		
MATH 1148	College Algebra*	4

*Students interested in pursuing the Miami University Bachelor of Science Degree Completion Program should opt for MATH 1148.

Third Semester **Units:** 9

EET 1145	Data Communication Systems	3
EET 2215	Adv Digital Systems (FPGA) Programming	3
HUM-XXXX (select from approved GE-HUM list)		3

Fourth Semester **Units:** 14

EET 2225	Embedded Microcontroller Systems	3
EET 2235	Data Acquisition Systems	3
PHYS 1200	Algebra-Based Physics I	5
SBS-XXXX (select from approved GE-SBS list)		3

Fifth Semester **Units:** 14

EET 2599	Capstone Experience in EET	3
PHYS 1201	Algebra-Based Physics II	5
COMM 2204	Technical Writing	3
COMM 1110	Small Group Communication	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3

POLS 1100	Introduction to American Government	3
SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology	3
		Total: 62

Emergency Medical Services Paramedic AAS Degree

Emergency Medical Technicians work under the direction of a physician to act as the primary pre-hospital care provider in the health care system. They must first make a comprehensive evaluation of the patient's condition and the overall situation. They may then need to provide immediate life-saving care. Technicians must demonstrate a high degree of technical skill, calmness, and professionalism, even under the most adverse conditions.

Columbus State's Associate Degree program in Emergency Medical Services exposes students to a wide variety of victim care situations, including direct patient care in local hospitals and on emergency vehicles. Instructors are highly experienced and active in the field of emergency medicine.

In addition to the associate degree, the Emergency Medical Services program offers the EMT Certificate and the Paramedic Certificate accredited by the Ohio Department of Public Safety, Division of EMS (certificate # 311). The Columbus State Community College Paramedic Certificate program is accredited by the Committee on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP # 600009).

Learning Outcome(s):

1. Demonstrate technical proficiency in all skills necessary to fulfill the role of entry level paramedic.
2. Exhibit behaviors consistent with professional standards and employer expectations.
3. Analyze legal, ethical and administrative concepts that influence EMS systems.
4. Develop community disaster preparedness, mitigation and response plans for natural and manmade events.

Firsts Semester **Units:** 14

COLS 1100	First Year Experience Seminar	1
EMS 1861	Paramedic I	6
EMS 1862	Paramedic II	3
EMS 1109	Emergency Pyschiatric Intervention	2
MULT 1110	Medical Terminology	2

Second Semester **Units:** 14

MATH 1109	Mathematics for Emergency Services	3
EMS 1863	Paramedic III	8
EMS 1864	Paramedic IV	3

Third Semester **Units:** 13

CSCI 1101	Computer Concepts & Apps	3
ENGL 1100	Composition I	3
EMS 1865	Paramedic V	7

Fourth Semester **Units:** 12

HUM-XXXX (select from approved GE-HUM list)		3
COMM 1105	Oral Communication	3
SES 1100	Personal Fitness Concepts	3
EMS 1899	Paramedic Capstone	3

Fifth Semester **Units:** 12

EMS-XXXX (Technical Elective)		2
FIRE 2006	Legal Aspects of Emergency Services	3
PSY 1100	Introduction to Psychology	3
BIO 1111	Intro to Biology	4

Technical Electives - 2 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

EMS 1107	Search & Rescue-Wilderness EMT	5
EMS 1108	Weapons Mass Destruct Emergency Services	2
EMS 1866	RN to Paramedic Bridge	6
EMS 2000	EMS Management	3
EMS 2001	Disaster Plan & Incident Comm System	2
EMS 2002	12 Lead EKG Interpret & Adv Cardiac	2
EMS 2004	Emergency Medical Tech Refresher	1
EMS 2005	Paramedic Refresher	2
EMS 2006	Pre-hospital Trauma Care	1
EMS 2007	Pre-hospital Cardiac Care	1
EMS 2101	Critical Care Transport	6
EMS 2102	Public Safety Service Instructor	5

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

Total: 65

Emergency Medical Technician (EMT) Certificate

Students in the EMT Certificate program must first complete the EMT course, and then pass the State/National EMT Certification written and practical exams. By state law, a student must be certified as an Ohio EMT before enrolling in the Paramedic Certificate program. In addition to the above, to be eligible for admission into the Paramedic Certificate program students must also complete a prerequisite course EMS 1002 (Paramedic Preparation Course) and a pretesting process, which includes the Health Education Systems, Inc. (HESI) Admission Assessment Exam.

Learning Outcome(s):

1. Meet requirements to successfully complete the certification process and achieve credentials to practice as an EMT.
2. Demonstrate personal behaviors consistent with professional and employer expectations of an entry level EMT.
3. Demonstrate technical proficiency in all skills necessary to fulfill the role of an entry level EMT.
4. Comprehend, evaluate and apply information relative to the role of an entry level EMT.

First Semester **Units:** 7

EMS 1860	Emergency Medical Technician (EMT)	7

Milestone/Progress Check: • Successful completion of this course allows for application to the Paramedic Certificate Program.

Total: 7

Paramedic Certificate

Paramedics work under the direction of a physician to act as the primary pre-hospital care providers in the health care system. They must first make a comprehensive evaluation of the patient's condition and the overall situation. They may then need to provide immediate life-saving care. Technicians must demonstrate a high degree of technical skill, calmness, and professionalism, even under the most adverse conditions.

Columbus State's Emergency Medical Services students are exposed to a wide variety of victim care situations, including direct patient care in local hospitals and on emergency vehicles. Instructors are highly experienced and active in the field of emergency medicine.

Students must first complete an EMT Certificate Program and then pass the State/National EMT Certification written and practical exams. By state law, a student must be certified as an Ohio EMT before enrolling in any Ohio Paramedic Certificate Program. In addition to the above, to be eligible for admission into the Paramedic Certificate program students must also complete a pre-requisite course EMS 1002 (Paramedic Preparation Course) and a pretesting process, which includes a FISDAP Entrance Exam.

The Emergency Medical Services program offers the Paramedic Certificate accredited by the Ohio Department of Public Safety, Division of EMS (certificate # 311). The Columbus State Community College Paramedic Certificate program is accredited by the Committee on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP # 600009).

Learning Outcome(s):

1. Meet the requirements to successfully complete the certification process and achieve credentials to practice as a paramedic.
2. Demonstrate personal behaviors consistent with professional and employer expectations of an entry level paramedic.
3. Demonstrate technical proficiency in all skills necessary to fulfill the role of an entry level paramedic.
4. Comprehend, evaluate and apply information relative to the role of an entry level paramedic.

First Semester		**Units:** 9
EMS 1861	Paramedic I	6
EMS 1862	Paramedic II	3
Second Semester		**Units:** 11
EMS 1863	Paramedic III	8
EMS 1864	Paramedic IV	3
Third Semester		**Units:** 7
EMS 1865	Paramedic V	7

NOTE: Prerequisite for EMS courses in this degree: EMT certificate (EMS 1860) OR equivalent State of Ohio EMT certification. Prerequisite for Paramedic I course in this degree: EMS 1002 Paramedic Preparation Course.

Fourth Semester		**Units:** 3
EMS 1899	Paramedic Capstone	3
		Total: 30

Computer Aided Drafting Technician Certificate

Drafters prepare technical drawings and plans used by production workers to build manufactured products. Drafters' drawings provide visual guidelines, show the technical details of the products, and specify dimensions, materials, and procedures. Drafters fill in technical details using drawings, rough sketches, specifications, codes, and calculations previously made by engineers or scientists. Some use their knowledge of engineering and manufacturing theory and standards to draw the parts of a machine to determine design elements, such as the numbers and kinds of fasteners needed to assemble the machine. Drafters use technical handbooks, tables, calculators, and computers to complete their work.

Traditionally, drafters sat at drawing boards and used pencils, pens, compasses, protractors, triangles, and other drafting devices to prepare a drawing manually. Most drafters now use Computer Aided Drafting and Design (CADD) systems to prepare drawings. Consequently, some drafters may be referred to as CADD operators. CADD systems employ computers to create and store drawings electronically that can then be viewed, printed, or programmed directly into automated manufacturing systems. These systems also permit drafters to prepare variations of a design quickly. Although drafters use CADD extensively, it is only a tool. Persons who produce technical drawings with CADD still function as drafters and need the knowledge of traditional drafters, in addition to CADD skills. Despite the nearly universal use of CADD systems, manual drafting and sketching still are used in certain applications.

First Semester		**Units:** 5
ENGT 1115	Engineering Graphics	3
ITST 1101	IT Fundamentals +	2
Milestone/Progress Check: • ENGT 1115 is a prerequisite for all CAD classes in the Mechanical Engineering Technology major.		
Second Semester		**Units:** 3
MECH 1145	CAD I	3
Third Semester		**Units:** 3
MECH 2215	Parametric CAD	3
Milestone/Progress Check: • Certificate is achieved.		
		Total: 11

CNC (Computer Numerical Controls) Engineering Technician Certificate

Computer Numerical Control (CNC) technicians use application-oriented principles of science, engineering, and mathematics to solve technical problems in research & development, and manufacturing operations. Careers in the CNC field are centered on the production parts, that are used everything around us, using automated machine tools. CNC equipment require extensive programing by CNC technicians to produce accurate parts efficiently.

Learning Outcome(s):

1. Demonstrate ability to operate CNC controllers.

First Semester		**Units:** 6
ENGT 1115	Engineering Graphics	3
MECH 1240	Machine Tools	3
Second Semester		**Units:** 9
MECH 1150	Engineering Materials	3
MECH 2253	Computer Numerical Control	2
MATH 1115	Mathematics for Engineering Technologies	4
		Total: 15

Environmental Science, Safety and Health Technology AAS Degree

Environmental, Science, Safety and Health technicians work in a wide variety of positions for environmental engineering consulting firms, environmental laboratories, wastewater and water treatment facilities, lead and asbestos abatement contractors, manufacturing facilities, governmental agencies, and

other organizations requiring individuals to work in environmental or safety-related positions. The demand for technicians capable of performing tasks such as sample collection, monitoring, data management, and instrumentation calibration, operation, and maintenance continues to increase. According to recent surveys and job placement rates, the job market for environmental and safety technicians in central Ohio is very strong.

Columbus State's Associate Degree Program in Environmental Science, Safety and Health has a diverse curriculum, which includes many basic science courses, as well as courses offered by other technologies. This curriculum provides students with a strong foundation of technical skills necessary for careers in the environmental industry or in occupational safety and health. An optional field experience program also offers students hands-on experience in a real work setting.

In addition to providing environmental technicians with entry- level training, the program provides opportunities for individuals seeking career changes, continuing education, and skills enhancement.

Learning Outcome(s):

1. Collect air, water, waste, and soil samples for routine monitoring as required by regulatory agencies and for operational control of remediation or treatment systems.
2. Conduct field investigations using environmental instrumentation.
3. Assist in the operation and maintenance of systems used to control pollution, remediate contaminated materials, or treat water as required by environmental laws.
4. Perform duties related to the management, treatment, storage, disposal, and emergency response to spills of hazardous materials and toxic substances in accordance with the EPA, OSHA and DOT.
5. Collect and compile data necessary for an environmental site assessment.
6. Utilize basic concepts of geology, hydrology, chemistry, and biology in the investigation of the occurrence, transport and remediation of environmental contaminants.
7. Demonstrate a knowledge of solid and hazardous waste management practices, including being able to evaluate hazardous waste data to provide information for compliance with environmental standards.
8. Describe components of risk assessment and toxic substances exposure analysis.
9. Identify duties requiring knowledge of safety regulations in the workplace and at construction sites.
10. Demonstrate a working knowledge of the regulatory aspects of industrial hygiene.

First Semester **Units:** 13-14

ENGL 1100	Composition I	3
STAT 1350	Elementary Statistics	3
OR		
MATH 1148	College Algebra	4
ESSH 1101	Intro to Environ Science, Safety, Health	3
ESSH 1130	Environmental Laws & Regulations	3
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 16

CHEM 1111	Elementary Chemistry I	4
GEOL 1101	Introduction to Earth Science	4
OR		
GEOL 1121	Physical Geology	4
ESSH 1140	Industrial/Municipal Pollution Control	3
ESSH 1580	Environmental Site Assessment	2
ESSH 2120	Environmental Aspects of Soil	3

Third Semester **Units:** 8

ESSH 2220	Drinking Water Treatment	2
OR		
ESSH 2230	Wastewater Treatment Techniques	2
ESSH 2520	Hlth/Safety Training for Haz Waste Ops	2
COMM 2204	Technical Writing	3
XXXX-XXXX	Basic Elective	1

Milestones/Progress Check: • Successful completion of ESSH 2520 meets HAZWOPER 40 Hour Certification. • Students completing ESSH 2220 or 2230 are recommended to take the Ohio EPA Class I Water or Wastewater Certification exam.

Fourth Semester **Units:** 16

HUM-XXXX (select from approved GE-HUM list)		3
ESSH 2111	Hazardous Materials Management	3
ESSH 2240	Environmental Hydrology	3
ESSH 2500	Environmental Sampling	3
CMGT 1135	Safety & Loss Prevention	2
ESSH 1650	OSHA 30 Hr Construction Safety & Health	2
OR		
ESSH 1700	OSHA 30 Hr General Ind Safety & Health	2

Milestone/Progress Check: • Successful completion of ESSH 1650 or 1700 fulfills the 30 hour OSHA Outreach Training credential.

Fifth Semester **Units:** 12

SBS-XXXX (select from approved GE-SBS list)		3
ESSH 2400	Environmental Analytical Methods	2
ESSH 2530	Applied Environmental Engineering	2
ESSH 2550	Air Pollution and Monitoring	3
XXXX-XXXX (Technical Elective)		2

Milestone/Progress Check: • 2900 Field Experience is an elective course providing students credit for employment or internship in the environmental or safety field.

Technical Electives - 2 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

ARCH 1100	Basic Manual Drafting	1
ARCH 1120	Basic CAD Drafting	1
ESSH 2282	Sustainable Bldg Strategies	2
ESSH 2283	Ecological Residential Construction	2
ESSH 2440	Environmental Chemistry	3
ESSH 2540	Environmental Restoration	3
ESSH 2560	Hazardous Materials Refresher Training	0.5
ESSH 2750	Industrial Hygiene	3
ESSH 2900	ESSH Field Experience	2
SURV 1410	Introduction to Surveying	3
CIVL 2210	Principles of Hydraulics	2
CIVL 2230	Public Utility Systems	2
GIS 1100	Introduction to GIS	3

Basic Electives - 1 credit hour minimum **Units:** 0

The following courses are approved for basic elective requirements:

CSCI 1100	Essential Computer Topics	1
CSCI 1101	Computer Concepts & Apps	3
ITST 1101	IT Fundamentals +	2
BOA 1102	Excel I	2
BOA 1104	Access	2

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One) ARCH 2100 or HIST 1152 Preferred

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One) GEOG 2400 or ECON 2200 Preferred

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 65-66

Health & Safety/Hazardous Waste Operations Certificate

OSHA requires this certification for employees working at contaminated properties and hazardous waste sites, and it is a good credential for those seeking employment in the environmental field.

In this certificate program, students learn the regulations and practices required for working safely in environmental occupations. OSHA requires this certification for employees working at contaminated and hazardous waste sites. For more information, see cscc.edu/essh.

First Semester **Units:** 2

ESSH 2520	Hlth/Safety Training for Haz Waste Ops	2

Total: 2

Occupational Health and Safety Certificate

The Occupational Health and Safety Certificate is designed to provide basic supervisory and regulatory skills to those who have, or may wish to have, a job responsible for the health and safety of the employees in the workplace. This certificate is set up primarily for those who already have a college degree, but are seeking additional training in this area.

First Semester **Units:** 8

ESSH 1101	Intro to Environ Science, Safety, Health	3
ESSH 1700	OSHA 30 Hr General Ind Safety & Health	2
ESSH 2111	Hazardous Materials Management	3

Milestone/Progress Check: • Successful completion of ESSH 1700 results in an OSHA credential.

Second Semester **Units:** 9

CMGT 1135	Safety & Loss Prevention	2
ESSH 1650	OSHA 30 Hr Construction Safety & Health	2
ESSH 2750	Industrial Hygiene	3
ESSH 2520	Hlth/Safety Training for Haz Waste Ops	2

Milestones/Progress Check: • Successful completion of ESSH 1650 results in an OSHA credential. • Successful completion of ESSH 2520 results in OSHA certification

allowing you to work on certain environmental projects.

Total: 17

Sustainable Building Certificate

The Sustainable Building Certificate is designed to provide information on sustainable design and construction to students of the Construction Sciences/ Engineering Technologies Department, and to provide a training opportunity for current professionals, e.g., architects, building managers, construction managers, and others.

First Semester **Units:** 4

ESSH 2282	Sustainable Bldg Strategies	2
CMGT 2282	Sustainable Construction	2

Second Semester **Units:** 4

ARCH 2282	Sustainable Design	2
ARCH 2283	Sustainable Energy	2

Milestone/Progress Check: • Upon completion of the program students may wish to apply to take a LEED credential exam.

Total: 8

Water/Wastewater Technology Certificate

The Water/Wastewater Technology Certificate is designed to serve the educational needs of employees that work in water and/or wastewater treatment, such as those employed with municipalities or industry. This certificate will also provide a strong educational foundation for those students who have an interest in entering an occupation in water or wastewater treatment. Individuals who complete the coursework in this program will be much better prepared to take the state water or wastewater treatment operator exams. Most courses in this certificate will also apply towards the Associate of Applied Science degree in Environmental Science, Safety and Health or Civil Engineering Technology.

First Semester **Units:** 16

ESSH 1101	Intro to Environ Science, Safety, Health	3
ESSH 2240	Environmental Hydrology	3
CHEM 0100	Intro to Chemistry	4
ENGL 1100	Composition I	3
MATH 1025	Quantitative Literacy	3

Second Semester **Units:** 11

CIVL 2210	Principles of Hydraulics	2
ESSH 1140	Industrial/Municipal Pollution Control	3
ESSH 1650	OSHA 30 Hr Construction Safety & Health	2
OR		
ESSH 1700	OSHA 30 Hr General Ind Safety & Health	2
OR		
ESSH 2520	Hlth/Safety Training for Haz Waste Ops	2
ESSH 2230	Wastewater Treatment Techniques	2
ESSH 2530	Applied Environmental Engineering	2

Milestone/Progress Check: • Successful completion of ESSH 1650, 1700 or 2520 results in an OSHA credential.

Third Semester **Units:** 6-7

ESSH 2220	Drinking Water Treatment	2
CIVL 2230	Public Utility Systems	2
ITST 1101	IT Fundamentals +	2
OR		
CSCI 1101	Computer Concepts & Apps	3

Total: 33-34

Finance AAS Degree

Today's banking, insurance, corporate finance, and consumer-finance industries offer outstanding career opportunities for community college graduates. The Associate Degree Program in Finance gives students the knowledge and skills they need to succeed in entry-level and management training positions. These may be in finance departments of corporations or government agencies, or various departments of banks, savings and loans, mortgage companies, and insurance companies. Examples of these positions include loan processor, financial planner, loan officer, financial analyst, customer service analyst, mortgage banking trainee, foreign currency trader, credit analyst, insurance analyst, stockbroker trainee.

Learning Outcome(s):

1. Explain the evolving role of finance in enterprise operations.
2. Explain operational methods, policies and regulations of various financial institutions including basics of different functional areas/departments.
3. Understand and analyze various financial instruments including their interrelationships and risks/returns as well as how they fit into asset allocation.
4. Understand the essential elements of personal finance including credit, taxes, major purchases, banking, insurance and financial planning.
5. Demonstrate the ability to use current tools and technology (including spreadsheets and the internet) to research, analyze and report on financial topics.
6. Apply Time Value of Money techniques for valuing financial instruments and capital expenditures projects.
7. Understand the role of ethics and personal integrity in business and finance.
8. Demonstrate a basic understanding of the opportunities and risks of International Finance.
9. Demonstrate an understanding of corporate finance including financial analysis and capital structure.
10. Demonstrate the ability to communicate financial and business concepts in written and oral form.

First Semester **Units:** 15

FMGT 1101	Personal Finance	3
ACCT 1211	Financial Accounting	3
BOA 1102	Excel I	2
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
STAT 1400	Statistical Concepts for Business	3

Milestone/Progress Check: • Transfer application preparation: Student should look at 4-year schools and transfer options.

Second Semester **Units:** 15

FMGT 1211	Investments	3
FMGT 2201	Corporate Finance	3
ACCT 1212	Managerial Accounting	3
ECON 2200	Principles of Microeconomics	3
BMGT 2200	Management & Organizational Behavior	3

Third Semester **Units:** 15

FMGT 2202	Money and Banking	3
ECON 2201	Principles of Macroeconomics	3
MKTG 1110	Marketing Principles	3
HUM XXXX - See Humanities List		3

FMGT 2200	Foundations of Banking	3
OR		
FMGT 2232	Principles of Insurance	3
Milestone/Progress Check: • Transfer application preparation: Student should start planning transfer to 4 year school.		

Fourth Semester **Units:** 15

FMGT 2242	International Finance	3
FMGT 2299	Finance Capstone	3
FMGT 2901	Finance Practicum/Seminar	3
OR		
BMGT 2299	Business Strategy	3
FMGT-XXXX (Technical Elective)		3
FMGT-XXXX (Technical Elective)		3
Milestone/Progress Check: • Transfer application preparation: Student decides on 4-year school (90+ percent start Bachelor's or 3+1 program immediately after completion).		

Technical Electives - 6 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

ACCT 2250	Intermediate Accounting I	4
BMGT 1102	Interpersonal Skills	2
BMGT 2216	Business Ethics	3
BOA 1300	Business Applications	2
COMM 2200	Business Communication	3
FMGT 2200	Foundations of Banking	3
BMGT 1101	Principles of Business	3
HRM 1121	Human Resources Management	3
LEGL 2064	Legal Environment of Business	3
MKTG 1230	Customer Service & Sales	3
SCM 1190	International Commerce	3

Humanities XXXX - Humanities List **Units:** 0

HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
PHIL 1101	Intro to Philosophy	3
HART 1201	Ancient and Medieval Art Histories	3
MUS 1251	Survey of Music History	3

Total: 60

Certificate of Banking Fundamentals

This certificate is designed to educate entry-level employees for commercial and community banks. Students will learn business, communications, and customer service basics to help bank customers. All content will be taught with an emphasis on ethics, finance, banking operation and financial strategies.

The certificate provide college level courses, positioning program completers with the necessary skills for a position in the banking industry and the ability to complete an associate or bachelor degree in the future.

First Semester **Units:** 16

BMGT 1101	Principles of Business	3
MKTG 1230	Customer Service & Sales	3
FMGT 1101	Personal Finance	3
COLS 1100	First Year Experience Seminar*	1
ENGL 1100	Composition I	3

MATH 1104	Mathematical Concepts for Business	3

*Required for students with less than 15 hours college credit.

Second Semester **Units:** 12

BMGT 2254	Negotiation	3
COMM 2232	Interpersonal Communication**	3
OR		
COMM 2200	Business Communication	3
BMGT 2216	Business Ethics	3
FMGT 2200	Foundations of Banking	3

**COMM 2232 is preferred.

Total: 28

Fire Science Professional AAS Degree

Technological advancements and increasing sophistication in firefighting and prevention have made the role of the professional in this field more complex, requiring advanced preparation. This program is designed for firefighters and professionals in related fields such as construction engineering, insurance investigation, and corporate safety.

The program emphasizes firefighting techniques, fire prevention, fire protection systems, and customer service. Combining these subjects with advanced hazardous material response, building construction, and hydraulics gives the student a firm foundation in fire protection and prevention.

The Fire Science Program is accredited by the Ohio Department of Public Safety, Division of EMS commonly referred to as the Fire Charter (Certificate # 311).

Learning Outcome(s):

1. Demonstrate effective communication and interpersonal skills with supervisors, peers, and the public.
2. Explain the history and basic principles of the fire service.
3. Recognize and respond to changing fire conditions and the potential for collapse in structures.
4. Demonstrate knowledge of the legal aspects of the fire service.
5. Demonstrate the duties and responsibilities of Incident Command.
6. Demonstrate necessary proficiencies with extinguishment hydraulics and fire protection systems.
7. Demonstrate a working knowledge of fire investigation principles.

First Semester **Units:** 16

FIRE 1121	Firefighter I	7
FIRE 1122	Firefighter II	5
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3

Milestone/Progress Check: • Successful completion of FIRE 1121 meets the eligibility requirements for State of Ohio Firefighter I certification testing. • Successful completion of FIRE 1122 meets the eligibility requirements for State of Ohio Firefighter II certification testing.

Second Semester **Units:** 16

FIRE 1105	Strategies and Tactics	3
EMS 1860	Emergency Medical Technician (EMT)	7
PSY 1100	Introduction to Psychology	3
SES 1100	Personal Fitness Concepts	3

Milestone/Progress Check: • Successful completion of EMS 1860 meets the

eligibility requirements for State of Ohio Emergency Medical Technician (EMT), also known as an EMT-Basic certification testing.

Third Semester **Units:** 12

FIRE 1112	Customer Service for Emergency Services	3
HUM-XXXX (select from approved GE-HUM list)		3
MATH 1109	Mathematics for Emergency Services	3
COMM 1105	Oral Communication	3

Milestone/Progress Check: • Successful completion of FIRE 2002 meets the eligibility requirements for State of Ohio Fire Safety Inspector certification testing.

Fourth Semester **Units:** 10

FIRE 2001	Fire Service Company Officer	3
FIRE 2003	Fire Cause and Origin Investigation	3
NAT-XXXX (select from approved GE-NAT list)		4

Fifth Semester **Units:** 6

FIRE 2006	Legal Aspects of Emergency Services	3
FIRE-XXXX (Technical Elective)		3

NOTE 1: Prior to enrolling in any Fire Science courses, student must complete one of the following: FIRE 1121 and FIRE 1122, or have documented Firefighter I and II certification. **NOTE 2:** Students with EMT, Firefighter I and II, and/or apprenticeship certification may qualify for other nontraditional credit ("N") which may apply toward the degree. Contact the Fire Science Technology coordinator at **fire@cscc.edu** for an advising appointment. **NOTE 3:** FIRE 2105 Construction/ Collapse for Experienced Firefighters is not open to students with credit for FIRE 1005. FIRE 2005 Incident Command is for Experienced Firefighters only. Contact the Fire Science Technology coordinator at **fire@cscc.edu** for an advising appointment.

Technical Electives - 3 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

FIRE 1102	Hazardous Material Awareness & Operation	3
FIRE 1103	Hazardous Materials Technician Level	3
FIRE 1104	Principles Fire & Emer Safety & Survival	2
FIRE 1106	Fire Behavior & Combustion	2
FIRE 1107	Fire Protection Hydraulics/ Water Supply	3
FIRE 1108	Fire Prevention	3
FIRE 1109	Bldg Construct Fire Service Protection	3
FIRE 1110	Fire Protection Systems	2
FIRE 1201	Introduction to Rescue	3
FIRE 2002	Fire Safety Inspector	3
FIRE 2003	Fire Cause and Origin Investigation	3
FIRE 2005	Principles of Fire Scene Command	3
FIRE 2094	SPT: Emergency Services	0.5-7
FIRE 2105	Adv Bldg Const/Collapse Prof Firefighter	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3

PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences Requirement - 4 credit hours minimum **Units:** 0

(Select from List)

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

Total: 60

Firefighter I Certificate

The Firefighter I Certificate is designed for the entry level firefighter candidate seeking to gain the requisite firefighter certification required by many volunteer and part-paid fire departments in Ohio of entry level candidates. After successful completion of the one-hundred-fifty-six (156) hour Ohio Firefighter I course, students will be certified as a "**Firefighter I**" as recognized in the Ohio Revised Code. The certification will be renewed after three years, provided the firefighter successfully completes the continuing education requirements. The Firefighter I course requirements meet or exceed the nationally recognized standard, NFPA 1001: Standard for Fire Service Professional Qualifications. An individual certified at the Firefighter I level will have demonstrated competency in the knowledge and practical skills required to perform at the Firefighter I level. This certificate will not automatically guarantee a fire department position, however it does meet Ohio Firefighter I job performance and certification requirements.

First Semester **Units:** 7

FIRE 1121	Firefighter I	7

Milestone/Progress Check: • Successful completion of FIRE 1121 meets the eligibility requirements for State of Ohio Firefighter I certification testing.

Total: 7

Firefighter II Certificate

The Firefighter II Certificate is designed for Ohio Firefighter I certification holders seeking to gain the requisite firefighter certification required by many full-time paid fire departments in Ohio. After successful

completion of the one-hundred-eight (260) hour Ohio Firefighter II course, students will be certified as a "**Firefighter II**" as recognized in the Ohio Revised Code. The certification will be renewed after three years, provided the firefighter successfully completes the continuing education requirements. The Firefighter II course requirements meet or exceed the nationally recognized standard, NFPA 1001: Standard for Fire Service Professional Qualifications. An individual certified at the Firefighter II level will have demonstrated competency in the knowledge and practical skills required to perform at the Firefighter II level. This certificate will not automatically guarantee a fire department position, however it does meet Ohio Firefighter II job performance and certification requirements.

First Semester **Units:** 5

FIRE 1122	Firefighter II	5

Milestone/Progress Check: • Successful completion of FIRE 1122 meets the eligibility requirements for State of Ohio Firefighter II certification testing.

Total: 5

Fire and Emergency Services Higher Education Certification

Completion of six core associates degree courses including FIRE 1100 Principles of Emergency Services, FIRE 1106 Fire Behavior and Combustion, FIRE 1008 Fire Prevention, FIRE 1109 Building Construction for Fire Protection, FIRE 1110 Fire Protection Systems, and FIRE 1104 Principles of Emergency Services Safety and Survival meet the standards for certification as established in the National Standard Curriculum by the US Fire Administration.

Learning Outcome(s):

1. Discuss culture, history, related functions of fire protection and emergency service organizations, and career opportunities in fire protection and related fields.
2. Identify the basic principles and history related to the National 16 Firefighter Life Safety Initiatives, and defend the need for cultural and behavior change.
3. Discuss the theories and fundamentals of how and why fires start, spread and are controlled.
4. Apply fundamental knowledge relating to the field of Fire Prevention and Fire Education in support of fire safety initiatives.
5. Apply the principles of building construction related to Firefighters and Life Safety.
6. Discuss the features of design and operation of fire alarms, fire sprinklers and special protection systems.
7. Apply the principles of fire and emergency scene strategy & tactics related to control of emergency scenes.
8. Explain the theoretical principles in use of water for fire protection.
9. Apply the technical and theoretical knowledge of fire cause and origin investigation I & II.
10. Discuss Federal, State and local laws that regulate emergency services, and national standards and regulations.

First Semester **Units:** 3

FIRE 1100	Principles of Emergency Services	3

Second Semester **Units:** 8

FIRE 1108	Fire Prevention	3
FIRE 1109	Bldg Construct Fire Service Protection	3
FIRE 1110	Fire Protection Systems	2

Third Semester **Units:** 2

FIRE 1104	Principles Fire & Emer Safety & Survival	2
FIRE 1106	Fire Behavior & Combustion	2

Total: 15

Fourth Semester **Units:** 2

Fire Inspector Certification

The Fire Inspector Certificate prepares the employed firefighter with current Ohio Firefighter II certification and NIMS 100 & 700 courses, but is not a prerequisite, to take the Fire Safety Inspector certification course chartered by the State of Ohio.

First Semester **Units:** 12

FIRE 1121	Firefighter I	7
FIRE 1122	Firefighter II	5

Milestones/Progress Check: • Successful completion of FIRE 1121 meets the eligibility requirements for State of Ohio Firefighter I certification testing. • Successful completion of FIRE 1121 meets the eligibility requirements for State of Ohio Firefighter II certification.

Second Semester **Units:** 5

FIRE 1108	Fire Prevention	3
FIRE 1110	Fire Protection Systems	2

Milestones/Progress Check: • Successful completion of FIRE 1108 meets the requirements to receive the Fire Prevention certificate from the U. S. Fire Administration- Fire and Emergency Services Higher Education (FESHE). • Successful completion of FIRE 1110 meets the requirements to receive the Fire Protection Systems certificate from the U. S. Fire Administration- Fire and Emergency Services Higher Education (FESHE).

Third Semester **Units:** 3

FIRE 2002	Fire Safety Inspector	3

Milestone/Progress Check: • Successful completion of FIRE 2002 meets the eligibility requirements for State of Ohio Fire Safety Inspector certification testing.

Total: 20

Red Cross Lifeguard and Waterfront Certificate

The American Red Cross (ARC) Lifeguarding course is designed for entry-level lifeguard participants with the knowledge and skills to prevent, recognize and respond to aquatic emergencies and to provide care for breathing and cardiac emergencies, injuries, and sudden illnesses until emergency medical services (EMS) personnel take over. The ARC Waterfront Skills module is designed to teach lifeguards the skills and knowledge needed to prevent and respond to emergencies in non-surf, open-water areas found at public parks, resorts, summer camps and campgrounds. Both the ARC Lifeguarding and Waterfront courses are embedded in FIRE 1203- Surface and Ice Rescue Technician and meet most employer lifeguarding and waterfront safety minimum certification requirements for entry level candidates.

First Semester **Units:** 2

FIRE 1203	Surface & Ice Rescue Technician	2

Total: 2

Rescue Technician Certificate

This six course sequence includes FIRE 1202 Rope Rescue Technician, FIRE 1203 Surface & Ice Rescue Technician, FIRE 1204 Swift Water Rescue Technician, FIRE 1205 Confined Space Rescue Technician, FIRE 1206 Trench Rescue Technician, and FIRE 1208 Vehicle & Machinery Rescue Technician. This sequence is intended to provide the professional rescuer the comprehensive knowledge and skill-set necessary to operate safely, efficiently and effectively in all weather and hazards by addressing the standards established in the National Fire Protection Association (NFPA) standards listed in NFPA 1006 *Standard for Rescue Technician Professional Qualifications,* NFPA 1670 *Standard on Operations and Training for Technical Search and Rescue Incidents, and* NFPA 1983, *Standard on Fire Service Life Safety Rope and Equipment for Emergency Services*. Rescue technician is a certification required by many fire departments in Ohio to meet requirements for either entry level or advancement opportunities.

First Semester		**Units:** 3
FIRE 1202	Rope Rescue Technician	3
Second Semester		**Units:** 4
FIRE 1203	Surface & Ice Rescue Technician	2
FIRE 1208	Vehicle and Machinery Rescue Technician	2
Third Semester		**Units:** 8
FIRE 1204	Swift Water Rescue Technician	2
FIRE 1205	Confined Space Rescue Technician	2
FIRE 1206	Trench Rescue Technician	2
FIRE 1207	Structural Collapse Rescue Technician	2

Total: 15

Geographic Information Systems AAS Degree

The Geographic Information Systems Associate Degree program provides the community with skilled professionals who use, edit, and make decisions using GIS systems. Graduates can work in diverse industries that use geographic information systems, including government agencies, health care, construction, banking, land-use planning, transportation mapping and analysis, and emergency response.

With the growth of decision-making using spatial data and geographic locations, many businesses are looking for individuals who have skills and knowledge in GIS. Such professionals can 1) analyze and match spatial data with geographic location and create maps using GIS software and 2) make decisions relevant to their industries thanks to their facility with GIS technology. GIS is expected to be a growth occupation in Ohio and the nation in the years to come.

The GIS Certificate program is designed for professionals seeking to enhance their knowledge and skills in Geographic Information Systems. It is most beneficial to entry and intermediate level GIS users who lack formal training and education in this field. There are no prerequisites, and no previous work experience in geographic information technologies is required. The program is an evening and/or weekend program. Courses are taught as instructor-led or as Web-based instruction. Projects and assignments can be submitted using a personal computer or the lab facilities on

campus.

The GIS program provides students with a solid educational background in communication skills, math, computer literacy and operations, and the humanities and behavioral sciences.

Learning Outcome(s):

1. Identify and define the components of a GIS
2. Evaluate quality and integrity of data and be able to determine that the data meets both professional and industry standards
3. Recognize and describe the components of project coordination, project development and professional practice
4. Distinguish how GIS is being implemented in different industries
5. Analyze spatial data using techniques from a variety of applications
6. Demonstrate a working knowledge of current GIS technologies
7. Create, organize, edit, georeference, and effectively use spatial data
8. Create effective visual, tabular and analytical products such as maps, graphs, charts, statistics, databases, models and programs.

First Semester **Units:** 15-16

ENGL 1100	Composition I	3
COLS 1100	First Year Experience Seminar	1
ITST 1101	IT Fundamentals +	2
OR		
CSCI 1101	Computer Concepts & Apps	3
GIS 1100	Introduction to GIS	3
GIS 1101	Acquiring GIS Data	2
GIS 1102	Mapping for Everyone	2
XXXX-XXXX (Basic Elective)		2

Second Semester **Units:** 15

NAT-XXXX (select from approved GE-NAT list)		3
STAT 1350	Elementary Statistics	3
OR		
MATH 1111	Discrete Mathematics for Computing	3
GEOG 2900	Elements of Cartography	3
GIS 1200	GIS Software I	2
GIS 1201	GIS Software II	2
GIS 1202	Planning and Implementing GIS	2

Third Semester **Units:** 5

GIS 2950	GIS Practicum & Seminar	3
XXXX-XXXX (Basic Elective)		2

Milestone/Progress Check: • Successful completion of GIS 2950 can result in student receiving a GIS Certificate which will apply towards education credit for a Geographic Information Systems Professional (GISP) certification in the industry.

Fourth Semester **Units:** 16

HUM-XXXX (select from approved GE-HUM list)		3
XXXX-XXXX (Basic Elective)		2
GIS 2100	Introduction to GIS Databases	3
GIS 2110	Introduction to Spatial Analysis	3
GIS 2120	Introduction to GIS Programming	3
GIS 2530	Web GIS	2

Fifth Semester **Units:** 14

SBS-XXXX (select from approved GE-SBS list)		3
COMM 2200	Business Communication	3
GIS 2200	Image Management and Analysis	3
GIS 2299	Advanced GIS Applications	4
GIS-XXXX (Technical Elective)		1

Milestone/Progress Check: • Successful completion of GIS Associate degree which will apply towards education credit for a Geographic Information Systems Professional (GISP) certification in the industry.

Technical Electives - 1 credit hour minimum **Units:** 0

The following courses are approved for technical elective requirements:

GIS 2130	Georeferencing and Editing	2
GIS 2510	Advanced Spatial Analysis	2
GIS 2520	Advanced GIS Programming	2
GIS 2540	GIS in Service	3
GIS 2550	GIS in 3D	2
GIS 2594	Current Topics: GIS	1-4

Basic Electives - 6 credit hours minimum **Units:** 0

The following courses are approved for basic elective requirements:

ARCH 1120	Basic CAD Drafting	1
ARCH 1130	AutoCAD 2D	3
ARCH 1274	Revit I	3
BMGT 2250	Project Management Principles	3
CMGT 1105	Construction Documents	3
CMGT 2215	Intro to Bldg Information Modeling	3
CSCI 1103	Intro to Programming Logic	3
CSCI 1145	HTML	3
CSCI 1152	Networking Concepts (Network+)	3
SURV 1410	Introduction to Surveying	3
SURV 1460	Computer Apps in Construction Science	2

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One) PHIL 1130 Preferred

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

ESSH 1101 Preferred

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
ESSH 1101	Intro to Environ Science, Safety, Health	3
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One) GEOG 2400 Preferred

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology	3

Total: 65-66

Geographic Information Systems Certificate

The GIS Certificate program is designed for professionals seeking to enhance their knowledge and skills in Geographic Information Systems. It is most beneficial to entry and intermediate level GIS users who lack formal training and education in this field. There are no prerequisites, and no previous work experience in geographic information technologies is required. The program is an evening and/or weekend program. Courses are taught as instructor-led or as Web-based instruction. Projects and assignments can be submitted using a personal computer or the lab facilities on campus.

First Semester **Units:** 7

GIS 1100	Introduction to GIS	3
GIS 1101	Acquiring GIS Data	2
GIS 1102	Mapping for Everyone	2

Second Semester **Units:** 6

GIS 1200	GIS Software I	2
GIS 1201	GIS Software II	2
GIS 2530	Web GIS	2

Milestone/Progress Check: • After taking the GIS software courses (GIS 1200 and GIS 1201), a student can find employment as a GIS Intern in a variety of places to start gaining important experience in the industry.

Third Semester **Units:** 5-6

GIS-XXXX (Technical Elective)		2
GIS 2299	Advanced GIS Applications	4
OR		
GIS 2950	GIS Practicum & Seminar	3

Technical Electives - 4 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

GIS 1202	Planning and Implementing GIS	2
GIS 2100	Introduction to GIS Databases	3
GIS 2110	Introduction to Spatial Analysis	3
GIS 2120	Introduction to GIS Programming	3
GIS 2130	Georeferencing and Editing	2
GIS 2200	Image Management and Analysis	3
GIS 2510	Advanced Spatial Analysis	2
GIS 2520	Advanced GIS Programming	2
GIS 2530	Web GIS	2
GIS 2540	GIS in Service	3
GIS 2550	GIS in 3D	2
GIS 2594	Current Topics: GIS	1-4

Total: 18-19

Health Information Management Technology AAS Degree

The Health Information Management Technology program prepares the student to become a professional responsible for maintaining components of health information systems consistent with the medical,

administrative, ethical, legal, accreditation, and regulatory requirements of the health care delivery system. In all types of health care facilities, the health information management technician possesses the technical knowledge and skills necessary to process, maintain, compile, and report health information data for reimbursement, facility planning, marketing, risk management, utilization management, quality assessment and research; to abstract and code clinical data using appropriate classification systems; and to analyze health records according to standards. The health information management technician may also be responsible for functional supervision of the various components of the health information system.

The HIMT degree program at Columbus State is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

Completion of the Associate Degree in Health Information Management Technology will permit graduates to sit for the Registered Health Information Technician (RHIT) certification examination and the Certified Coding Associate (CCA) examination. Graduates of the HIMT degree program may transfer to Franklin University, The Ohio State University, the University of Cincinnati, or the University of Toledo for a Bachelor of Science Degree, majoring in Health Information Management and Systems.

All coursework in the Health Information Management Technology degree program, the Health Data Analyst-Post HIMT degree Certificate program, the Health Information Management Technician Certificate program and the Medical Coding Certificate program are primarily web-based. There are classes that have on-campus labs. Students are required to complete proctored tests and come to campus for occasional class meetings. Proctored tests can be completed at the CSCC Testing Center, approved testing centers, or via Proctor U.

Students are also required to complete 90 professional practice experience (PPE) hours in both HIMT 2870 and HIMT 2930.

Learning Outcome(s):

1. Demonstrate knowledge of medical terminology and clinical data as it relates to the collection and use of health information.
2. Perform assembly and analysis of health records for completeness and accuracy.
3. Perform concurrent and retrospective ongoing reviews of health records to ensure compliance with standards for health record documentation.
4. Compile statistical data, such as admissions, discharges, deaths, births, and types of treatment given.
5. Operate computer to enter and retrieve data using various electronic health record (EHR) applications and other electronic programs such as word processing, data bases, and spreadsheets.
6. Assist clinical and administrative team in chart completion by running reports.
7. Perform release of information (ROI) function.
8. Demonstrate ethical practices as outlines in the American Health Information Management Association (AHIMA) Code of Ethics.

First Semester **Units:** 13

HIMT 1111	Introduction to Health Information Mgmt	2
HIMT 1133	Legal Aspects of Health Information	2
HIMT 1135	Health Data Management	3
COLS 1100	First Year Experience Seminar	1
CSCI 1001	Computer Fundamentals	2
ENGL 1100	Composition I	3

Second Semester **Units:** 15

HIMT 1121	Advanced Medical Terminology	2
HIMT 1256	Clinical Documentation & Disease	2
HIMT 1274	Intro to Medical Coding & Reimbursement	2
BIO 1101	Fundamentals Human Anatomy & Physiology	3
CSCI 1101	Computer Concepts & Apps	3
SBS-XXXX (select from approved GE-SBS list)		3

Third Semester **Units:** 11

HIMT 1141	Pharmacology	2
CSCI 1102	Intermediate Excel and Access	3

HUM-XXXX (select from approved GE-HUM list)		3
STAT 1350	Elementary Statistics	3

Fourth Semester **Units:** 16

HIMT 1245	ICD-10-CM/PCS Coding	3
HIMT 1255	CPT-4 Coding	3
HIMT 1265	Medical Reimbursement	2
HIMT 2870	PPE HIM Applications	1
CSCI 1320	Database Fundamentals	3
OR		
CSCI 2325	Expert Access	3
BIO 2300	Human Anatomy	4

Milestone/Progress Check: • These hours are completed throughout the semester and are varied depending upon what clinical site/course activities are available during a particular semester.

Fifth Semester **Units:** 9-11

HIMT 2257	Introduction to Health Statistics	2
HIMT 2259	Quality and Resource Management	3
HIMT 2267	Principles of Management	2
HIMT 2275	Intermediate Coding	2
OR		
HIMT 2294	Spec Topics in Health Info Mgmt	1-3
HIMT 2930	PPE HIM Field Experience	1

Milestone/Progress Check: • Completion of the Associate Degree in Health Information Management Technology will permit graduates to sit for the Registered Health Information Technician (RHIT) certification examination and the Certified Coding Associate (CCA) examination.

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Science Requirement - 3 credit hours minimum **Units:** 0

(Select One)

SOC 1101	Introduction to Sociology	3
SOC 2309	Law and Society	3
GEOG 2400	Economic & Social Geography	3

Total: 64-66

Health Information Management Technician Certificate

The Health Information Management Technician Certificate program prepares students to compile patient charts (paper, hybrid, electronic) in accordance with legal and regulatory standards. Students analyze patient charts for completeness and accuracy. They perform release of information (ROI) functions and other activities related to assisting the clinical and administrative team in the timely completion of health records.

This certificate requires that the student must earn a "C" or better in each course.

Learning Outcome(s):

1. Demonstrate knowledge of medical terminology and clinical data as it relates to the collection and use of health information.

2. Perform assembly and analysis of health records for completeness and accuracy.
3. Perform concurrent and retrospective ongoing reviews of health records to ensure compliance with standards for health record documentation.
4. Compile statistical data, such as admissions, discharges, deaths, births, and types of treatment given.
5. Operate computer to enter and retrieve data using various electronic health record (EHR) applications and other electronic programs such as word processing, data bases, and spreadsheets.
6. Assist clinical and administrative team in chart completion by running reports.
7. Perform release of information (ROI) function.
8. Demonstrate ethical practices as outlines in the American Health Information Management Association (AHIMA) Code of Ethics.

First Semester **Units:** 9

HIMT 1111	Introduction to Health Information Mgmt	2
HIMT 1133	Legal Aspects of Health Information	2
HIMT 1135	Health Data Management	3
CSCI 1001	Computer Fundamentals	2

Milestone/Progress: • Students eligible to apply to either the HIMT degree program or the Medical Coding Certificate program.

Second Semester **Units:** 7

HIMT 1121	Advanced Medical Terminology	2
HIMT 1274	Intro to Medical Coding & Reimbursement	2
CSCI 1101	Computer Concepts & Apps	3

Total: 16

Medical Coding Certificate

The Medical Coding Certificate program provides students with the entry-level skills needed to code, classify, and index diagnoses and procedures for the purpose of reimbursement, standardization, retrieval and statistical analysis. Students learn fundamental concepts of medical coding (ICD-10-CM, ICD-10-PCS, and CPT-4) and medical reimbursement. Courses such as medical terminology, anatomy/physiology, ICD-10-CM/PCS coding, CPT-4 coding, intermediate coding, and medical reimbursement are studied. Progression through the curriculum includes lab assignments and professional practice activities that require students to apply foundational concepts in medical coding using critical thinking and problem solving skills. The HIMT program is primarily web-based; however, some courses are only offered on campus. Also, some of the online courses require students to come to campus for proctored tests and occasional class meetings. For more information, see cscc.edu/himt

Learning Outcome(s):

1. Demonstrate knowledge of human anatomy, physiology and pathophysiology, medical terminology, pharmacology, and clinical data as it relates to the collection and use of health information.
2. Review health records for completeness and accuracy to determine appropriateness and adequacy of health-care documentation.
3. Identify components of appropriate and adequate documentation of health care.
4. Code, classify, and index diagnoses and procedures for the purpose of reimbursement, standardization, retrieval, and statistical analysis.
5. Abstract data from patient records for administrative, reimbursement, and research purposes.
6. Demonstrate ethical practices as outlined in the American Health Information Management Association (AHIMA) Code of Ethics.

First Semester **Units:** 7

HIMT 1141	Pharmacology	2
HIMT 1256	Clinical Documentation & Disease	2
BIO 1101	Fundamentals Human Anatomy & Physiology	3

Second Semester **Units:** 12

HIMT 1245	ICD-10-CM/PCS Coding	3
HIMT 1255	CPT-4 Coding	3
HIMT 1265	Medical Reimbursement	2
BIO 2300	Human Anatomy	4

Third Semester **Units:** 3

HIMT 2275	Intermediate Coding	2
HIMT 2930	PPE HIM Field Experience	1

Milestone/Progress Check: • Students in HIMT 2930 are required to spend 6 hours per week x 15 weeks (90 hours) in some sort of professional practice experience (PPE). These hours are completed throughout the semester and vary depending upon what sites are available.

Total: 22

Heating, Ventilating, and Air Conditioning Technology AAS Degree

The Heating, Ventilating and Air Conditioning Technology program prepares graduates for a wide variety of occupations in the $150 billion mechanical environment science field. Graduates find employment with large commercial heating and air conditioning contractors, residential mechanical contractors, parts and equipment distributors, large commercial and industrial facility maintenance departments, hospital facilities maintenance departments, custom design or new construction markets.

The increase in new high-rise buildings and real estate development within all major cities is a clear indication of the ongoing job opportunities available. Many graduates also find employment with equipment manufacturers in research and development. Today's society is demanding more emphasis on the ethical, legal, and regulatory requirements relating to environmental concerns facing the HVAC industry today and in the future.

The associate degree program offers the training needed to develop a high degree of technical skill, as well as the ability to work with minimal supervision and a strong sense of personal responsibility. Graduates with field experience and further experience in business management can look to ownership of their own HVAC companies.

Tool Requirements
Students taking courses in this curriculum will need to own or have access to proper hand tools and test equipment. Check with the program advisor to discuss specific course needs and options.

For more information, students can refer to the website www.cscc.edu/HVAC and/or contact HVAC Program Coordinator Bill Highley at 614-287-2657.

Learning Outcome(s):

1. Create manual and computer graphic representations of HVAC projects.
2. Select piping materials and design piping systems.
3. Perform designs for commercial and industrial piping systems, including water, steam and refrigeration piping.
4. Calculate heat loss and heat gain loads for residential and commercial structures, using National ACCA manuals and computer software.
5. Use testing and analyzing instruments and calculate combustion process for various fuels (e.g., natural gas, coal, and fuel oil) to ensure proper operation for the most efficient operation of boilers and furnaces.
6. Assist in the selection and application of a variety of residential and commercial HVAC equipment to solve environmental problems.
7. Assist in the design of automatic control circuits using electro- mechanical and electronic control devices.
8. Assist in designing preventative maintenance programs for various HVAC systems.
9. Test and calculate airflow through system equipment.

First Semester **Units:** 16

ARCH 1100	Basic Manual Drafting	1
HVAC 1140	Principles of Refrigeration	3
HVAC 1160	Hand Tools/Safety	3
HVAC 1180	HVAC Wiring Circuits I	2
ENGL 1100	Composition I	3
COLS 1100	First Year Experience Seminar	1
CSCI 1101	Computer Concepts & Apps	3

Milestone/Progress Check: • Student can take the EPA 608 exam at the completion of HVAC 1140.

Second Semester **Units:** 16

HVAC 1150	Instrumentation/ Combustion Process	3
HVAC 1120	Load Calculations I	3
HVAC 1280	HVAC Wiring Circuits II	3
SBS-XXXX (select from approved GE-SBS list)		3
MATH 1101	Math Construction Sciences/ Applied Tech	3
ESSH 1160	OSHA 10 Hr Construction Safety & Health	1

Milestone/Progress Check: • The student can take the ESCO Certified Carbon Monoxide Inspector Exam at the end of HVAC 1150.

Third Semester **Units:** 17

HVAC 2150	Heating Systems	3
HVAC 2160	Automatic Controls	3
HVAC 2220	Load Calculations II	2
HUM XXXX (select from approved GE-Arts/ Humanities list)		3
COMM 2200	Business Communication	3
BMGT 2231	Fundamentals of Entrepreneurship	3

Fourth Semester **Units:** 16

HVAC 2140	A/C & Heat Pump	4
HVAC 2193	Advanced Problems in HVAC	3
HVAC-XXXX (Technical Elective)		3
NAT-XXXX (select from approved GE-NAT list)		3
BMGT 2232	Entrepreneurship: Business Plan Develop	3

Milestone/Progress Check: • Upon completion of the Associate Degree, the student will also qualify for the Residential/ Light Commercial Certificate.

Technical Electives - 3 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

HVAC 2110	Piping Systems	2
HVAC 2170	Commercial A/C Systems	3
HVAC 2180	Advanced Controls	5
HVAC 2190	Boiler Systems	4
HVAC 2950	Field Experience HVAC	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

ASTR 1141	Life in the Universe	3
BIO 1127	Introduction to Environmental Science	4
CHEM 1100	Chemistry and Society	5
GEOL 1121	Physical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3

HUM Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(select one)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3

PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
GEOG 2400	Economic & Social Geography	3
SOC 1101	Introduction to Sociology	3

Total: 65

HVAC Controls Certificate

This certificate helps give the students a basic understanding of how control systems are designed, how they work and how to calibrate and test different control systems.

First Semester **Units:** 13

HVAC 1180	HVAC Wiring Circuits I	2
HVAC 1280	HVAC Wiring Circuits II	3
HVAC 2160	Automatic Controls	3
HVAC 2180	Advanced Controls	5

Milestone/Progress Check: • Students who complete all 4 courses receive the Controls Certificate.

Total: 13

High Pressure Boiler Certificate

The four-course High Pressure Boiler License Training Program Certificate provides the educational requirements necessary for students to sit for the State of Ohio High Pressure Boiler Operators exam.

First Semester **Units:** 12

HVAC 2110	Piping Systems	2
HVAC 1150	Instrumentation/ Combustion Process	3
HVAC 1160	Hand Tools/Safety	3
HVAC 2190	Boiler Systems	4

Milestone/Progress Check: • Students who complete all 4 courses receive the High Pressure Boiler License Training Program Certificate.

Total: 12

Large Commercial Certificate

In the six-course HVAC Large Commercial Certificate program, the student will gain the basic knowledge of large commercial systems and how they interact with the buildings and occupants. This certificate is designed to help the residential / light commercial service technician transfer into the world of large commercial Equipment. Students learn with a combination of theory and hands on education.

First Semester **Units:** 5

HVAC 1140	Principles of Refrigeration	3
HVAC 1180	HVAC Wiring Circuits I	2

Second Semester **Units:** 7

HVAC 1150	Instrumentation/ Combustion Process	3
HVAC 2190	Boiler Systems	4

Third Semester **Units:** 8

HVAC 2170	Commercial A/C Systems	3
HVAC 2180	Advanced Controls	5

Milestone/Progress Check: • Students who complete all 6 courses receive the Large Commercial Certificate.

Total: 20

Residential/Light Commercial Certificate

In the HVAC Residential/Light Commercial certificate program, the student will gain the basic knowledge and skills of the basic residential and light commercial heat and cooling systems that are currently in the general market. This certificate is designed to help the individual become prepared to enter the HVAC career field as a second year apprentice.

First Semester **Units:** 8

HVAC 1140	Principles of Refrigeration	3
HVAC 1160	Hand Tools/Safety	3
HVAC 1180	HVAC Wiring Circuits I	2

Milestone/Progress Check: • Student can take the EPA 608 exam at the completion of HVAC 1140.

Second Semester **Units:** 6

HVAC 1150	Instrumentation/ Combustion Process	3
HVAC 1280	HVAC Wiring Circuits II	3

Milestone/Progress Check: • The student can take the ESCO Certified Carbon Monoxide Inspector Exam at the end of HVAC 1150.

Third Semester **Units:** 7

HVAC 2140	A/C & Heat Pump	4
HVAC 2150	Heating Systems	3

Milestone/Progress Check: • Students who complete all 7 courses receive the Residential / Light Commercial Certificate.

Total: 21

HVAC Test and Balance Certificate

This certificate is designed to help the student be able to understand how the building/ equipment must work together to provide the proper requirements to allow the building/ equipment to operate correctly. Students will be able to understand what is and how to perform building/equipment commissioning. Students learn with a combination of theory and hands on education.

First Semester **Units:** 11

HVAC 1120	Load Calculations I	3
HVAC 1140	Principles of Refrigeration	3

HVAC 1150	Instrumentation/ Combustion Process	3
ARCH 1100	Basic Manual Drafting	1
ARCH 1120	Basic CAD Drafting	1

Second Semester **Units:** 4

HVAC 2110	Piping Systems	2
HVAC 2220	Load Calculations II	2

Milestone/Progress Check: • Students who complete all 7 courses receive the Test and Balance Certificate.

Total: 15

Hospitality Management - Baking and Pastry Arts AAS Degree

A passion for baking is at the heart of the CSCC Baking & Pastry Arts Major. Our curriculum introduces students to essential baking and pastry arts techniques and ingredients in state-of-the art facilities by ACF certified chefs. This quality program is designed to meet the demand for well-trained bakers and pastry chefs in a variety of hospitality environments; from independent bakeries and pastry shops to commercial bakeries, restaurants, hotels, and other specializations in the world of hospitality. Our highly respected practical exposure and hands-on work experience are a top priority in our teaching kitchen classes, our student-operated restaurant and bakery café, and on-site catering events. We maintain a strong focus on precision, accuracy, and consistency in baking and pastry production to achieve artisan quality. Leadership, teamwork, critical thinking skills, and artistic interpretation, are embedded while learning the many other facets of this major, such as food preparation skills, purchasing and costing, nutrition, food safety, menu development, customer relations, and the management of these dynamic, multi-dimensional, aspects.

Students successfully completing the National ServSafe® Food Safety Manager Level II Exam requirements in HOSP1104 will qualify for the NRAEF® Food Safety Manager® Certification.

Students interested in this degree should note this plan of study includes two academic components: classes with instructors in scheduled and structured environments *and* work hours completed in a retail environment within Mitchell Hall. The retail work shifts will be scheduled through the Blackboard Starfish link and the student coordinator, on a student-by-student basis. Students will have their pick of scheduled hours/ days decided on a first come - first serve basis. All hours must be fulfilled in order to pass the course.

CSCC academic programs are accredited by The Higher Learning Commission (HLC®).This major is also accredited by the American Culinary Federation Educational Foundation® (ACFEF®) Accrediting Commission. Program graduates earn the opportunity to meet the The American Culinary Federation® (ACF®) requirements for professional certification as Certified Pastry Culinarian® (CPC®).

Learning Outcome(s):

1. Demonstrate appropriate standards of professionalism, including ethical behavior and adherence to dress and grooming codes required for the industry.
2. Exceed the expectations of a diverse population of customers in providing the hospitality experience.
3. Manage effectively the resources of our industry operations, including human resources and financial controls.
4. Demonstrate the ability to comply with current laws, rules and regulations governing foodservice, lodging and tourism.
5. Demonstrate the ability to market and sell products and services.
6. Integrate learned or acquired skills, both personally and professionally, within the workplace.
7. Plan, organize and supervise the production and service of appropriate high quality food and beverage to a variety of customers.
8. Plan, organize, perform and supervise the completion of basic baking and pastry techniques in a competitive industry environment utilizing the required tasks of proper equipment usage, production, conversions and costing of formulas.

First Semester **Units:** 12

COLS 1100	First Year Experience Seminar	1
HOSP 1101	Introduction to Hospitality	1
HOSP 1104	Sanitation & Safety/Facilities Design	1
HOSP 1105	Professional Kitchen Fundamentals	2
HOSP 1107	Food Principles	2
HOSP 1110	Baking Principles	2

Although MATH1103 satisfies the requirements of this program, it will not necessarily transfer to an advanced degree, as other programs and 4-year colleges and universities have regulations regarding courses that qualify for transfer equivalency. Students considering transferring to other programs are highly encouraged to review the math requirements necessary for their intended program, or college or university pathway. For further assistance: https://www.cscc.edu/academics/transfer/university-transfer-center.shtml

MATH 1103	Mathematics for Hospitality and Culinary Arts	3
OR		
MATH 1104	Mathematical Concepts for Business	3

Second Semester **Units:** 13

HOSP 1109	Basic Food Production & Dining Room Services	3
HOSP 1112	Professional Baking	3
HOSP 1123	Food Purchasing	2
ENGL 1100	Composition I	3
BMGT 1102	Interpersonal Skills	2

Third Semester **Units:** 16

HOSP 1113	Pastries I	3
HNTR 1153	Nutrition for a Healthy Lifestyle	3
BMGT 2216	Business Ethics	3
GEOL 1101	Introduction to Earth Science	4
SBS-XXXX (select from approved GE-SBS list)		3

Milestone/Progress Check: • Consider appropriate courses for planned transfer.

Fourth Semester **Units:** 11

HOSP 2207	Hospitality Financial Analysis	2
HOSP 2114	Pastries II	3
HUM-XXXX (select from approved GE-HUM list)		3
ENGL 2367	Composition II	3
OR		
ENGL 2567	Comp II Writing about Gender & Identity	3
OR		
ENGL 2667	Comp II American Working-Class Identity	3
OR		
ENGL 2767	Comp II Writing About Science/Technology	3

Milestone/Progress Check: • HOSP 2114 will have earned the Baking Certificate.

Fifth Semester **Units:** 7

HOSP 2224	Hospitality Supervision and Quality Mgmt*	2
COMM 2200	Business Communication	3
HOSP 2284	Capstone Baking Operations Practicum	2

*A grade of "C" or higher is required.

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
SOC 1101	Introduction to Sociology	3

Total: 59

Hospitality Management - Culinary Apprenticeship AAS Degree

The Hospitality Management programs provide quality learning experiences to enhance initial employment opportunities and to improve technical and supervisory skills for career advancement in foodservice, lodging, and tourism. Several majors leading to associate degrees are available for Baking and Pastry Arts, Culinary Apprenticeship, Hotel, Tourism, and Event Management, Nutrition and Dietetics and Restaurant and Foodservice Management. The programs are accredited by the Accreditation Commission on Programs in Hospitality Administration (ACPHA) and the American Culinary Federation Educational Foundation (ACFEF) Accrediting Commission. In addition, Baking, Casino Management, and Meeting and Event Management Certificate programs are available.

The Culinary Apprenticeship Major is offered in cooperation with the American Culinary Federation Columbus Chapter. It includes the theory-related classroom instruction and on-the-job training required for the National Apprenticeship Training Program of the American Culinary Federation (ACF). A supplementary application is required. (See specific program admissions information.) Culinary apprentices are employed for on-the-job training under a professional chef in restaurants, clubs, hotels, hospitals, retirement communities or catering businesses. Those selected for the apprenticeship program will interview with prospective employers; however, work placement cannot be guaranteed by the college or the ACF Columbus Chapter. While employed, the apprentices attend classes at Columbus State one full day each week to work toward the Associate of Applied Science degree. The Columbus State program is accredited by the American Culinary Federation Foundation Accrediting Commission. Program graduates qualify as Certified Culinarians (CC) through the ACF upon successful completion of the ACF written exam. Additionally, graduates will qualify to become a Certified Sous Chef (CSC) through the American Culinary Federation (ACF) upon successful completion of the Certified Sous Chef practical and written exams. For more information, see cscc.edu/hospitality.

Learning Outcome(s):

1. Demonstrate appropriate standards of professionalism, including ethical behavior and adherence to dress and grooming codes required for the industry.
2. Exceed the expectations of a diverse population of customers in providing the hospitality experience.
3. Manage effectively the resources of our industry operations, including human resources and financial controls.
4. Demonstrate the ability to comply with current laws, rules and regulations governing foodservice, lodging and tourism.
5. Demonstrate the ability to market and sell products and services.
6. Integrate learned or acquired skills, both personally and professionally, within the workplace.
7. Plan, organize, and supervise the production and service of appropriate high quality food and beverage to a variety of customers.

First Semester **Units:** 10

COLS 1100	First Year Experience Seminar	1
HOSP 1101	Introduction to Hospitality	1
HOSP 1104	Sanitation & Safety/Facilities Design	1

AND		
HOSP 1105	Professional Kitchen Fundamentals	2
HOSP 1107	Food Principles	2
MATH 1103	Mathematics for Hospitality and Culinary Arts	3
OR		
MATH 1104	Mathematical Concepts for Business	3

Second Semester **Units:** 15

HOSP 1109	Basic Food Production & Dining Room Services	3
ENGL 1100	Composition I	3
GEOL 1101	Introduction to Earth Science	4
HOSP 2902	Hospitality Cooperative Work Experience	2
HNTR 1153	Nutrition for a Healthy Lifestyle	3

Third Semester **Units:** 7

HOSP 2218	Baking Fundamentals	2
SBS-XXXX (select from approved GE-SBS list)		3
HOSP 1123	Food Purchasing	2

Fourth Semester **Units:** 7-8

HOSP 2216	Food Production Lab	2
BMGT 1102	Interpersonal Skills	2
HOSP 2225	Menu Management	2
SES-XXXX (Basic Elective)		
SES 2694	Special Topics: Sport & Exercise Studies	2
OR		
SES 1104	Yoga	1
OR		

Fifth Semester **Units:** 6

HOSP 2217	Garde Manger	2
HUM-XXXX (select from approved GE-HUM list)		3
HOSP 2220	Advanced Garde Manger	1

Sixth Semester **Units:** 7

HOSP 2214	International Cuisine	2
BMGT 2216	Business Ethics	3
HOSP 2203	Beverage Management	2

Seventh Semester **Units:** 4

HOSP 2207	Hospitality Financial Analysis	2
HOSP 2271	Catering & Event Services	2

Eighth Semester **Units:** 6

HOSP 2224	Hospitality Supervision and Quality Mgmt	2
HOSP 2286	Apprenticeship Final Project	1
COMM 2200	Business Communication	3

Basic Electives - 2 credit hours minimum **Units:** 0

The following courses are approved for basic elective requirements:

SES 1104	Yoga	1
SES 1105	Intro Strength & Resistance Training	1
SES 1106	Golf	1
SES 1108	Women's Self Defense	1
SES 1109	Bowling	1
SES 1110	Fitness Kick Boxing	1
SES 1112	Total Body Conditioning	1
SES 2694	Special Topics: Sport & Exercise Studies	1-3
OR		

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3

HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 62-63

Hospitality Management - Culinary Arts AAS Degree

A passion for food is at the heart of the CSCC Culinary Arts Major. Our curriculum introduces students to essential culinary techniques and ingredients in state-of-the–art facilities by ACF certified chefs. This quality program is designed to meet the demand for well-trained food service associates in the dynamic world of hospitality.
Our highly respected practical exposure and hands-on work experience are a top priority in our laboratory classes, our student-operated restaurant and bakery café, and on-site catering events. Leadership, teamwork, and critical thinking skills are embedded while learning the many facets of food preparation such as cooking skills, nutrition, food safety, menu planning, customer relations, and management of these multi-dimensional aspects of the industry. Program graduates earn the opportunity to meet the American Culinary Federation (ACF) requirements for professional certification.

Students interested in this degree should note this plan of study includes two academic components: classes with instructors in scheduled and structured environments *and* work hours completed in a retail environment within Mitchell Hall. The retail work shifts will be scheduled through the student coordinator, Allison Hendricks, on a student by student basis. Students will have their pick of scheduled hours/days decided on a first come, first serve basis. All hours must be fulfilled in order to pass the course.

Learning Outcome(s):

1. Demonstrate appropriate standards of professionalism, including ethical behavior and adherence to dress and grooming codes required for the industry.
2. Exceed the expectations of a diverse population of customers in providing the hospitality experience.
3. Manage effectively the available resources of our industry operations, including human resources and financial controls.
4. Demonstrate the ability to market and sell products and services.
5. Demonstrate the ability to comply with current laws, rules and regulations governing foodservice, lodging and tourism.
6. Plan, organize, and supervise the production and service of appropriate high quality food and beverage to a variety of customers.
7. Integrate learned or acquired skills, both personally and professionally, within the workplace.

First Semester **Units:** 10

HOSP 1101	Introduction to Hospitality	1
HOSP 1107	Food Principles	2
HOSP 1104	Sanitation & Safety/Facilities Design	1
HOSP 1105	Professional Kitchen Fundamentals	2
MATH 1104	Mathematical Concepts for Business	3
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 17

HOSP 1109	Basic Food Production & Dining Room Services	3
ENGL 1100	Composition I	3
GEOL 1101	Introduction to Earth Science	4
HNTR 1153	Nutrition for a Healthy Lifestyle	3
HOSP 1123	Food Purchasing	2
HOSP 2221	Food Production Practicum	2

Third Semester **Units:** 16

HOSP 2218	Baking Fundamentals	2
BMGT 1102	Interpersonal Skills	2
SBS XXXX - GE Social/Behavioral Sciences course (see list)		3
HUM-XXXX Gen Ed Humanities course (see list)		3
HOSP 2217	Garde Manger	2
HOSP 2228	Culinary Arts Practicum	2
HOSP 2225	Menu Management	2

Fourth Semester **Units:** 11

BMGT 2216	Business Ethics	3
HOSP 2207	Hospitality Financial Analysis	2
SES XXXX - Basic Related Elective course (see list)		2
HOSP 2214	International Cuisine	2
HOSP 2271	Catering & Event Services	2

Fifth Semester **Units:** 9

COMM 2200	Business Communication	3
HOSP 2224	Hospitality Supervision and Quality Mgmt	2
HOSP 2230	Culinary Externship	2
HOSP 2203	Beverage Management	2

SBS XXXX - GE Social & Behavioral Sciences course list - 3 credit hours required **Units:** 0

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology	3

HUM XXXX - GE Arts & Humanities course list - 3 credit hours required **Units:** 0

HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SES XXXX - Basic Related Elective course list - 2 credit hours required **Units:** 0

SES 1104	Yoga	1
SES 1105	Intro Strength & Resistance Training	1
SES 1106	Golf	1
SES 1108	Women's Self Defense	1
SES 1109	Bowling	1
SES 1110	Fitness Kick Boxing	1
SES 1112	Total Body Conditioning	1

Total: 63

Hospitality Management - Nutrition and Dietetics AAS Degree

The Nutrition and Dietetics Major is accredited by the Accreditation Council for Education in Nutrition and

Dietetics (ACEND) of the Academy of Nutrition and Dietetics. The five semester program provides practicums coordinated with classroom instruction.

Students interested in this degree should note this plan of study includes three academic components: classes with instructors in scheduled and structured environments, practicum hours *and* work hours completed in a retail environment within Mitchell Hall. The retail work shifts will be scheduled through the student coordinator, Allison Hendricks, on a student by student basis. Students will have their pick of scheduled hours/days decided on a first come, first serve basis. All hours must be fulfilled in order to pass the course.

Graduates are eligible for membership in the Academy of Nutrition and Dietetics and qualify to take the national examination given by the Commission on Dietetic Registration to be credentialed as a Nutrition and Dietetics Technician Registered (NDTR).

Learning Outcome(s):

1. Demonstrate appropriate standards of professionalism, including ethical behavior and adherence to dress and grooming codes required for the industry.
2. Exceed the expectations of a diverse population of customers in providing the hospitality experience.
3. Manage effectively the resources of our industry operations, including human resources and financial controls.
4. Demonstrate the ability to comply with current laws, rules and regulations governing foodservice, lodging and tourism.
5. Demonstrate the ability to market and sell products and services.
6. Integrate learned or acquired skills, both personally and professionally, within the workplace.
7. Apply nutrition principles to menu planning and food production for a variety of customers.
8. Analyze and apply nutrition assessment data to plan menus and nutrition education sessions and to provide nutrition care for persons/groups on both regular and modified diets.

First Semester **Units:** 14.5

HNTR 1153	Nutrition for a Healthy Lifestyle*	3
HNTR 1901	DIET Practicum I*	1.5
HOSP 1104	Sanitation & Safety/Facilities Design	1
HOSP 1105	Professional Kitchen Fundamentals	2
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
STAT 1350	Elementary Statistics	3

Milestones/Progress Check: • Program acceptance required for all practicum courses. Completes required practicum hours/meets ACEND competencies – attends scheduled field trips to a variety of healthcare and community. • Achieves ServSafe certification.

Second Semester **Units:** 13

HNTR 1902	DIET Practicum II*	2
HOSP 1107	Food Principles	2
HOSP 1109	Basic Food Production & Dining Room Services	3
BIO 2300	Human Anatomy*	4
HOSP 1123	Food Purchasing	2

Milestone/Progress Check: • Completes required hours in food service and general nutrition rotations/meets ACEND competencies for food service rotations.

Third Semester **Units:** 12

BIO 2301	Human Physiology*	4
SBS-XXXX (select from approved GE-SBS list)		3
MULT 1110	Medical Terminology	2
SAHS 1115	Helping Skills in Social Work and Human Services	3
OR		
MULT 1115	Helping Skills Allied Hlth & Human Serv	3

Milestone/Progress Check: • Students encouraged to explore transfer opportunities for Bachelor's degree.

Fourth Semester **Units:** 14

HNTR 2275	Medical Nutrition Therapy I*	3
HNTR 2903	DIET Practicum III A*	1
HNTR 2904	DIET Practicum III B*	1
COMM 2200	Business Communication	3
HUM-XXXX (select from GE-HUM list)		3
SES 2524	Sport Management Foundations	3

Milestone/Progress Check: • Completes required hours in community nutrition rotations/meets ACEND competencies for community nutrition. • HNTR 2904 – achieves a grade of >85% on computer-based clinical nutrition. • Completes required hours in community nutrition rotations/meets ACEND competencies for community nutrition. • HNTR 2904 – achieves a grade of >85% on computer-based clinical nutrition competency exam. • Achieves National Restaurant Association ManageFirst CertificaCOMM. • Transfer considerations recommended.

Fifth Semester **Units:** 11.5

HNTR 2276	Medical Nutrition Therapy II*	3
HNTR 2277	Dietetic Technician Reg Exam Review*	1
HNTR 2905	DIET Practicum IV*	2.5
HOSP 2219	Food Production Management	3
HOSP 2225	Menu Management	2

Milestones/Progress Check: • A grade of >85% is required on computer based practice registration exam for dietetic technicians. • HNTR 2277 - completes forms required for Commission on Dietetic Registration in preparation for dietetic technician registration exam. • HNTR 2905 – completes required hours in clinical nutrition rotations/ meets ACEND competencies for clinical nutrition. • HNTR 2905 – achieves a grade of >85% on computer based clinical nutrition competency exam.

*These courses must be completed with a grade of "C" or higher.

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	History of Art I	3
HART 1202	History of Art II	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 65

Hospitality Management - Restaurant and Foodservice Management AAS Degree

The Restaurant and Foodservice Management Major combines classroom instruction, laboratory experience, and hospitality industry work experiences. The associate degree program prepares graduates for supervisory positions in a variety of restaurant and foodservice operations. This major is accredited by the American Culinary Federation Foundation Accrediting Commission, and graduates can qualify as Certified Culinarian (CC) by the American Culinary Federation upon successful completion of national written and practical examinations.

Learning Outcome(s):

1. Identify and apply knowledge and skills necessary for hospitality and tourism operations
2. Develop and integrate a core set of business skills necessary to successfully operate a hospitality organization.
3. Demonstrate competence in the communication skills necessary for hospitality and tourism management.
4. Formulate business decisions in hospitality and tourism management.
5. Evaluate leadership principles necessary in the diverse and global hospitality and tourism industry.
6. Demonstrate appropriate standards of professionalism, including ethical behavior and adherence to dress and grooming codes required for the industry.
7. Plan, organize, and supervise the production and service of appropriate high-quality food and beverage to a variety of customers.

First Semester **Units:** 7

COLS 1100	First Year Experience Seminar	1
HOSP 1101	Introduction to Hospitality	1
HOSP 1104	Sanitation & Safety/Facilities Design	1
HOSP 1105	Professional Kitchen Fundamentals	2
HOSP 1107	Food Principles	2

Milestone/Progress Check: • Successful completion of HOSP 1122 or HOSP 1106A or HOSP 1104 and the NRAEF National Exam (70% or better) qualify for the NRAEF ServSafe® Food Protection Manager Certification and Ohio Department of Heath Certification in Food Protection.

Second Semester **Units:** 16

HOSP 1143	Hospitality & Tourism Law	2
HNTR 1153	Nutrition for a Healthy Lifestyle	3
ENGL 1100	Composition I	3
MATH 1104	Mathematical Concepts for Business	3
HOSP 1123	Food Purchasing	2
HOSP 1109	Basic Food Production & Dining Room Services	3

Third Semester **Units:** 14

BMGT 1102	Interpersonal Skills	2
ENGL 2367	Composition II	3
OR		
ENGL 2567	Comp II Writing about Gender & Identity	3
OR		
ENGL 2667	Comp II American Working-Class Identity	3
OR		
ENGL 2767	Comp II Writing About Science/Technology	3
GEOL 1101	Introduction to Earth Science	4
SBS-XXXX (Select from approved SBS list)		3
HOSP 2225	Menu Management	2

Fourth Semester **Units:** 12

HOSP 2207	Hospitality Financial Analysis	2
HOSP 2246	Hospitality Sales and Marketing	2
HOSP 2271	Catering & Event Services	2

BMGT 2216	Business Ethics	3
COMM 2200	Business Communication	3

Fifth Semester **Units:** 12

HOSP 2219	Food Production Management	3
HOSP 2224	Hospitality Supervision and Quality Mgmt	2
HUM-XXXX (select from approved GE-HUM list)		3
HOSP 2203	Beverage Management	2
HOSP 2228	Culinary Arts Practicum	2

Milestone/Progress Check: • HOSP 2224: Successful completion (70% or higher) of Managefirst exams within this course earn the NRAEF Managefirst® Management & Supervision Certificate and/or the NRAEF Managefirst® Human Resources Management Certificate. HOSP 2901: Applied learning. Min. 300 working hours required. Co-op experience offered every semester. Instructor permission required.

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 2223	African-American History I Before 1877	3

SBS-XXXX GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 61

Hospitality Management - Hotel Management AAS Degree

Students who graduate with a degree in Hotel Management will expand their knowledge in the following areas: Demonstration of the skills required in training, leadership, and supervisory activities within the lodging industry, evidence of the effect of cultural and socio-economic affect lodging has on communities, & exhibition of the skills necessary to successfully operate an organization. The Hotel Management degree will incorporate critical thinking, qualitative and informational knowledge as well as an understanding and value of community service to prepare the student for a vast number of career opportunities.

Learning Outcome(s):

1. In addition to Columbus State General Education outcomes, upon completion of the Associate Degree in Hospitality Management, the graduate will be able to: *Demonstrate appropriate standards of professionalism, including ethical behavior and adherence to dress and grooming codes required for the industry. *Exceed the expectations of a diverse population of customers in providing the hospitality experience. *Manage effectively the resources of our industry operations, including human resources and financial controls. *Demonstrate the ability to comply with current laws, rules and regulations governing foodservice, lodging and tourism. *Demonstrate the ability to market and sell products and services. *Integrate learned or acquired skills, both personally and professionally, within the workplace.
2. In addition to the general Hospitality Management competencies, a graduate majoring in Hotel Management will be able to: *Plan, organize and supervise the delivery of services in lodging operations. *Demonstrate the ability to maintain fiscal responsibility within the lodging operation.

First Semester		**Units:** 12
ENGL 1100	Composition I	3
MATH 1104	Mathematical Concepts for Business	3
HOSP 1145	Lodging Operations	3
COLS 1100	First Year Experience Seminar	1
HOSP 1143	Hospitality & Tourism Law	2

Second Semester		**Units:** 15
BMGT 1101	Principles of Business	3
SBS-XXXX (select from approved GE-SBS list)		3
SES 2660	Ethics in Sports	3
HOSP 2711	Financial Regulations & Revenue Management	3
SES 2712	Promotion & PR in Sport & Events	3

Third Semester		**Units:** 10
SES-XXXX (Select from SES 1110, 1104, 1105 or 1112)		1
HOSP 1144	Hospitality Contracts & Negotiations	3
HOSP 2274	Hotel Labor Relations	3
HOSP 2712	Service Industry Compensation Development	3

Fourth Semester		**Units:** 14
HOSP 2275	Hospitality Facilities Management	3
GEOL 1101	Introduction to Earth Science	4
HOSP 2273	Casino & Gaming Operations	2
HOSP 2246	Hospitality Sales and Marketing	2
SES 2710	Sport Finance	3

Fifth Semester		**Units:** 9
HOSP 2224	Hospitality Supervision and Quality Mgmt	2
HOSP 2207	Hospitality Financial Analysis	2
HOSP 2902	Hospitality Cooperative Work Experience	2
HUM-XXXX (select from approved GE-HUM list)		3
		Total: 60

Hospitality Management - Hotel, Tourism and Event Management AAS Degree

The Hotel, Tourism, and Event Management Major combines classroom instruction, laboratory practice, and required industry work experiences. This degree prepares students for a wide variety of positions in hotels, resorts, cruise lines, convention and visitors bureaus, airlines, event management companies, sport management companies, travel agencies, tour operations, attractions and entertainment. Coursework includes customer service, travel and tourism operations, lodging operations, meeting planning, business management, marketing, and communication skills.

Learning Outcome(s):

1. Identify and apply the knowledge and skills necessary for hospitality and tourism operations.
2. Develop and integrate a core set of business skills necessary to successfully operate a hospitality and tourism organization.
3. Demonstrate competence in the communication skills necessary for hospitality and tourism management.
4. Formulate business decisions in hospitality and tourism management.
5. Evaluate leadership principles necessary in the diverse and global hospitality and tourism industry.

First Semester		**Units:** 14
HOSP 1145	Lodging Operations	3
HOSP 1154	Tourism Geography	3

COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
MATH 1104	Mathematical Concepts for Business	3
OR		
STAT 1350	Elementary Statistics	3
HOSP 1101	Introduction to Hospitality	1

Second Semester **Units:** 14

HOSP-XXXX (select from Technical Elective Specialization list) 3 credits		3
SBS-XXXX (select from approved GE-SBS list) 3 credits		3
SES 1102	Recreation and Leisure Operations	3
BMGT 1101	Principles of Business	3
HOSP 1143	Hospitality & Tourism Law	2

Milestones/Progress Check: • Student completes resume. • Attend information meeting or meet with advisor.

Third Semester **Units:** 11

SES 2712	Promotion & PR in Sport & Events	3
SES 2660	Ethics in Sports	3
HOSP-XXXX (select from Technical Elective Specialization list) 3 credits		3
HOSP 2273	Casino & Gaming Operations	2

Fourth Semester **Units:** 12

HOSP 2246	Hospitality Sales and Marketing	2
HOSP 2529	Sport & Event Management	3
GEOL 1101	Introduction to Earth Science	4
HOSP 2274	Hotel Labor Relations	3

Milestones/Progress Check: • Meet with advisor to review 5th semester courses. • Discuss and secure cooperative work assignment for fifth semester.

Fifth Semester **Units:** 13-14

HOSP 2207	Hospitality Financial Analysis	2
OR		
HOSP 2206	Management Accounting for Hotels	3
HUM-XXXX (select from approved GE-HUM list)		3
HOSP 2272	Event Management	3
HOSP 2224	Hospitality Supervision and Quality Mgmt*	2
SES 2700	Sport Tourism	3

Milestones/Progress Check: • Must have a C or higher Hospitality Supervision & Quality Management. • Minimum work experience is 300 hours per semester to complete Hospitality Cooperative Work Experience I. • Cooperative work experience must be completed in a hospitality environment that meets the course requirements and instructor. • Submit Petition to Graduate.

*A grade of "C" or higher is required.

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

HOSP-XXXX Hospitality Technical Elective **Units:** 0

HOSP-XXXX Technical Elective - Tourism/Event Management Specialization **Units:** 0

HOSP 1144	Hospitality Contracts & Negotiations	3
HOSP 1147	Wedding Planning I	3
HOSP 1155	Tourism Operations	4
HOSP 2271	Catering & Event Services	2
HOSP 2275	Hospitality Facilities Management	3
HOSP 2203	Beverage Management	2

HOSP-XXXX Technical Elective - Hotel Management Specialization **Units:** 0

HOSP 1144	Hospitality Contracts & Negotiations	3
HOSP 2711	Financial Regulations & Revenue Management	3
HOSP 2712	Service Industry Compensation Development	3
HOSP 2275	Hospitality Facilities Management	3

Total: 64-65

Baking Certificate

The Baking Certificate program will prepare students to assist in the preparation and production of pies, cookies, cakes, breads, rolls, desserts, and other baked goods in a variety of baking environments including independent and in-store bakeries as well as large commercial bakeries, restaurants, and hotels. Duties may include stocking ingredients, preparing and cleaning equipment, measuring ingredients, mixing, scaling, forming, proofing, oven tending, product finishing, and presentation. Credit hours earned may be applied to an Associate of Applied Science degree.

Learning Outcome(s):

1. Demonstrate appropriate standards of professionalism, including ethical behavior and adherence to dress and grooming codes required of the industry
2. Exceed the expectations of a diverse population of customers in providing the hospitality experience
3. Demonstrate the ability to comply with current laws, rules and regulations governing foodservice, lodging and tourism
4. Demonstrate the ability to market and sell products and services
5. Integrate learned or acquired skills, both personally and professionally, within the workplace
6. Plan, organize, and perform the completion of basic baking and pastry techniques in a competitive industry environment utilizing the required tasks of proper equipment usage, production, conversion and costing of formulas.

First Semester **Units:** 5

HOSP 1110	Baking Principles	2
HOSP 1104	Sanitation & Safety/Facilities Design	1
AND		
HOSP 1105	Professional Kitchen Fundamentals	2

Milestones/Progress Check: • Students successfully completing the National ServSafe ® Exam requirements in HOSP 1122/HOSP 1106 will qualify for the National NRAEF ServSafe® Food Safety Manager Certification offered by National Restaurant Association, and Ohio Department of Health Certification in Food

Protection.HOSP 1122/1106A/1104 with a NRAEF ServSafe® National Exam passing score of 70% or better. • HOSP 1110 and HOSP 1122/1106A must be successfully completed before advancing to Baking lab courses.

Second Semester **Units:** 6

HOSP 1112	Professional Baking	3
HOSP 1113	Pastries I	3

Third Semester **Units:** 3

HOSP 2114	Pastries II	3

Milestone/Progress Check: • Students who successfully complete the 5 courses with the # symbol will have earned the Baking Certificate.

Total: 14

Casino Management Certificate

The Casino Management Certificate is designed to provide students with an opportunity to gain the knowledge associated with the casino industry. The certificate will provide students with an overview of the legal and regulatory aspects of the casino industry. Students will develop an understanding of the relationship of the casino industry to the overall tourism environment. The certificate includes nine required courses. Upon successful completion of these courses, students could apply them to the Hotel, Tourism, and Event Management major to complete a degree in Hospitality Management.

First Semester **Units:** 7

HOSP 2246	Hospitality Sales and Marketing	2
HOSP 2272	Event Management	3
HOSP 1143	Hospitality & Tourism Law	2

Milestone/Progress Check: • Meet with program advisor to review program and timeline for completion application.

Second Semester **Units:** 7

HOSP 2206	Management Accounting for Hotels	3
HOSP 2273	Casino & Gaming Operations	2
HOSP 2224	Hospitality Supervision and Quality Mgmt	2

Milestone/Progress Check: • Advisor or instructor signature for admittance to class.

Third Semester **Units:** 9

HOSP 2711	Financial Regulations & Revenue Management	3
HOSP 2528	Technology in Casino & Hospitality & Recreation	3
HOSP 2712	Service Industry Compensation Development	3

Milestone/Progress Check: • Contact Advisor to Complete Final Steps of Certificate Application.

Total: 23

Culinary Arts Certificate

The Culinary Arts Professional Culinary Certificate Program provides basic skills and practice needed to start a career as a professional cook. Our programs provide high quality curriculum, small class size, and individual attention by Chef Instructors and experienced, certified, faculty. This 12-month program is designed to assist the student to move quickly through the basics of culinary arts and into the work place. Credits earned for this certificate may apply towards Associate of Applied Science Degrees in Culinary Apprenticeship, Restaurant & Foodservice Management and Baking & Pastry Arts. Upon successful completion of the written & practical

exams from the American Culinary Federation (ACF) and documented work experience, students may obtain ACF Certification at the level of Certified Culinarian (CC).

Students interested in this degree should note this plan of study includes two academic components: classes with instructors in scheduled and structured environments *and* work hours completed in a retail environment within Mitchell Hall. The retail work shifts will be scheduled through the student coordinator, Allison Hendricks, on a student by student basis. Students will have their pick of scheduled hours/days decided on a first come, first serve basis. All hours must be fulfilled in order to pass the course.

Learning Outcome(s):

1. Demonstrate appropriate standards of professionalism, including ethical behavior and adherence to dress and grooming codes required for the industry.
2. Exceed the expectations of a diverse population of customers in providing the hospitality experience.
3. Manage effectively the resources of our industry operations, including human resources and financial controls.
4. Demonstrate the ability to comply with current laws, rules and regulations governing foodservice, lodging and tourism.
5. Demonstrate the ability to market and sell products and services.

First Semester **Units:** 9

HOSP 1101	Introduction to Hospitality	1
HOSP 1107	Food Principles	2
HOSP 1104	Sanitation & Safety/Facilities Design	1
HOSP 1105	Professional Kitchen Fundamentals	2
HOSP 1109	Basic Food Production & Dining Room Services	3

Second Semester **Units:** 7

HOSP 2216	Food Production Lab	2
HOSP 2218	Baking Fundamentals	2
HNTR 1153	Nutrition for a Healthy Lifestyle	3

Third Semester **Units:** 6

HOSP 2224	Hospitality Supervision and Quality Mgmt	2
HOSP 2217	Garde Manger	2
HOSP 2228	Culinary Arts Practicum	2

Total: 22

Dietary Manager Certificate

The Dietary Manager Certificate Program is approved by the Association of Nutrition and Foodservice Professionals (ANFP), and is designed to prepare students to manage foodservice operations in a variety of healthcare facilities. Students are eligible for ANFP Pre-Professional membership; graduates are eligible for the Certified Dietary Manager (CDM) credentialing exam and ANFP Professional membership. The certificate includes nine required courses (19.5 credit hrs). Credit hours earned can be applied to the Dietetic Technician major to complete an Associate of Applied Science degree.

Students interested in this certificate should note that this plan of study includes three academic components: classes with instructors in scheduled/structured environments, practicum/field experience hours *and* work hours completed in a retail environment within Mitchell Hall.

All practicum/field experience hours are completed in healthcare facilities, agencies or organizations accredited by their appropriate agencies which have sufficient and experienced personnel, adequate equipment and opportunities to provide the type of experiences needed in the program.

Retail work hours will be scheduled through the student coordinator, Allison Hendricks, on a student by student basis. Students will have their pick of scheduled hours/days decided on a first come, first serve basis. All hours must be fulfilled in order to pass the course.

Learning Outcome(s):

1. Demonstrate appropriate standards of professionalism, including ethical behavior and adherence to dress and grooming codes required for the industry.
2. Exceed the expectations of a diverse population of customers in providing the hospitality experience.
3. Manage effectively the resources of our industry operations, including human resources and financial controls.
4. Demonstrate the ability to comply with current laws, rules and regulations governing foodservice, lodging and tourism.
5. Demonstrate the ability to market and sell products and services.
6. Integrate learned or acquired skills, both personally and professionally, within the workplace.
7. Apply nutrition principles to menu planning and food production for a variety of customers.
8. Analyze and apply nutrition assessment data to plan menus and nutrition education sessions and to provide nutrition care for persons/groups on both regular and modified diets.

First Semester **Units:** 7.5

HNTR 1153	Nutrition for a Healthy Lifestyle	3
HOSP 1104	Sanitation & Safety/Facilities Design	1
HOSP 1105	Professional Kitchen Fundamentals	2
HNTR 1901	DIET Practicum I	1.5

Second Semester **Units:** 9

HOSP 1109	Basic Food Production & Dining Room Services	3
HOSP 1107	Food Principles	2
HNTR 1902	DIET Practicum II	2
HOSP 1123	Food Purchasing	2

Third Semester **Units:** 3

SES 2524	Sport Management Foundations	3

Total: 19.5

Hotel Administration Certificate

This certificate will assist students interested in Hotel Management gain the basic skills and knowledge to step into an entry-level position. Within the certificate are courses that will offer certifications from the American Hotel & Lodging Educational Institute. The AH&LEI is a professional organization the offers certifications. Certifications from the American Hotel & Lodging Educational Institute is the ultimate distinction of professional excellence for the hospitality industry. Students who complete the Hotel Administration certification can easily move into the Hotel, Tourism & Event Management degree as all of the courses will apply to that major.

Learning Outcome(s):

1. Describe working relationships between hotel departments.
2. Perform basic lodging activities.
3. Demonstrate an understanding of Revenue Management as it relates to management decisions.
4. Understand the role, cost, and management of a hospitality venue's overall cost.
5. Explain the pros and cons of labor unions and their impact on the hospitality industry by sector.
6. Understand the impact of union organization as it relates to management.
7. Discuss the application of dispute resolution, strikes, and impasses in management strategies.
8. Explain how management administers labor contracts and associated clauses.

First Semester **Units:** 9

HOSP 1145	Lodging Operations	3

HOSP 1143	Hospitality & Tourism Law	2
HOSP 1101	Introduction to Hospitality	1
HOSP 2711	Financial Regulations & Revenue Management	3

Second Semester **Units:** 11

HOSP 2224	Hospitality Supervision and Quality Mgmt	2
HOSP 2274	Hotel Labor Relations	3
HOSP 2206	Management Accounting for Hotels	3
HOSP 1144	Hospitality Contracts & Negotiations	3

Summer Semester **Units:** 6

HOSP 2275	Hospitality Facilities Management	3
HOSP 2712	Service Industry Compensation Development	3

Total: 26

Meeting and Event Management Certificate

The Meeting and Event Management Certificate is designed to prepare students to assume positions in meeting and event planning in conference centers, hotels, or large corporations. The certificate includes eight required courses. Upon successful completion of these courses, student could apply them to the Hotel, Tourism, and Event Management major to complete a degree in Hospitality Management.

First Semester **Units:** 8

HOSP 1144	Hospitality Contracts & Negotiations	3
HOSP 2272	Event Management	3
HOSP 2246	Hospitality Sales and Marketing	2

Milestone/Progress Check: • Meet with program advisor to review program and timeline for completion application.

Second Semester **Units:** 8

HOSP 2529	Sport & Event Management	3
HOSP 2224	Hospitality Supervision and Quality Mgmt	2
HOSP 2712	Service Industry Compensation Development	3

Milestone/Progress Check: • HOSP 2224: Must have a C or higher Hospitality Supervision & Quality Management.

Third Semester **Units:** 8

HOSP 2206	Management Accounting for Hotels	3
HOSP 2203	Beverage Management	2
HOSP 2711	Financial Regulations & Revenue Management	3

Total: 24

Mixology Certificate

This certification will assist students with employment in the bartender/mixology field of various parts of the industry including hotels, restaurants, bars, private clubs, event management sites, and contract management employers.

Learning Outcome(s):

1. Demonstrate appropriate standards of professionalism, including ethical behavior and adherence to dress and grooming codes required for the industry.

2. Demonstrate ability to comply with current laws, rules and regulations associated with beverage management.
3. Demonstrate knowledge of the classification, history and control of beer, wines, and spirits. Including Ohio liquor regulations, inventory control, liquor dispensing systems, cash control, drink merchandising and responsible alcohol service.

HOSP 1104	Sanitation & Safety/Facilities Design	1
HOSP 2203	Beverage Management	2
HOSP 2224	Hospitality Supervision and Quality Mgmt	2

Special Topics in Mixology

HOSP 2294	Special Topics In: Hospitality Mgmt	2

Total: 7

Interactive Media AAS Degree

Companies today continue to invest in individuals with the skills and knowledge of Interactive Media as it has become an integral part of their future operations. The Interactive Media program provides the community and industry with professionals who can creatively develop and create media and services for integrated and interactive communications, advertising, and marketing purposes, with an emphasis in web design and front end development as well as social media and mobile trends.

The Interactive Media Associate Degree program is designed to impart four critical skills to its graduates:

- Design and aesthetic sensibility
- Front end scripting (source code and application), including HTML, CSS, and JavaScript
- Familiarity with various design-oriented application programs
- Marketing and Branding principles

By mastering these four areas, program graduates will be able to go beyond basic design and layout to complete the “big picture” regarding media structure and flowcharting. As a result, program graduates can cross cultural, aesthetic and technical boundaries.

Upon completion of the Associate Degree program in Interactive Media, the graduate will be able to:

- Possess a working-level knowledge of the interactive media field and how it affects society and industry.
- Comprehend the relationship between design, marketing, and interactive media projects.
- Understand the purpose and interrelationship between design, scripting, and software.
- Be able to evaluate the strengths and weaknesses of project design including storyboarding, diagramming, flowcharting, and brand relevance.
- Know the core concepts of scripting as they apply to interactive media and web/mobile development.
- Learn the basic principles of digital video editing using various original or provided video clips.
- Understand the basic principles of 2D design, the elements of design, and concepts of forms and structures.
- Create a functional, interactive, animated web presence from conceptual stages to finished product.
- Possess extensive knowledge of industry standard web animation software
- Gain working knowledge of web-design application software using Dreamweaver.
- Use storyboard, flowchart and drawing skills to represent finished versions of a website.
- Complete an interactive portfolio.
- Gain real-world experience working as an intern in a media-related company.

Learning Outcome(s):

1. Possess a working-level knowledge of the interactive media field and how it affects society and industry.
2. Comprehend the relationship between design, marketing, and interactive multimedia projects.
3. Understand the purpose and interrelationship among design, scripting, and software.

4. Be able to evaluate the strengths and weaknesses of project design including storyboarding, diagramming, flowcharting, and brand relevance.
5. Know the core concepts of scripting as they apply to interactive media and web/mobile development.
6. Learn the basic principles of digital video editing using various original or provided video clips.
7. Understand the basic priniciples of 2D design, the elements of design, and concepts of forms and structures.
8. Create a functional, interactive, animated Web presence from conceptual stages to finished product.
9. Possess extensive knowledge of industry standard Web animation software.
10. Gain working knowledge of web-design application software using Dreamweaver.
11. Use storyboard, flowchart and drawing skills to represent finished versions of a website.
12. Complete an interactive portfolio.
13. Gain real-world experience working as an intern in a media-related company.

First Semester **Units:** 13

IMM 1100	Principles of Interactive Design	3
COLS 1100	First Year Experience Seminar	1
CSCI 1103	Intro to Programming Logic	3
DDG 1525	Storyboarding	3
MKTG 1120	Branding	3

Second Semester **Units:** 14

ENGL 1100	Composition I	3
IMM-XXXX (Technical Elective)		2
IMM 1160	Media Graphics/ Optimization	3
CSCI 1145	HTML	3
IMM 1500	Digital Video Production I	3

Third Semester **Units:** 9

NAT-XXXX (select from approved GE-NAT list)		3
HUM-XXXX (select from approved GE-HUM list)		3
MATH 1104	Mathematical Concepts for Business	3

Fourth Semester **Units:** 15

IMM 1140	Cascading Style Sheets	3
IMM 2370	Interactive Animation	3
IMM 2622	WordPress	3
CSCI 2447	JavaScript Fundamentals	3
SBS-XXXX (select from approved GE-SBS list)		3

Fifth Semester **Units:** 11

IMM 2372	Hybrid App Development	3
IMM 2620	Website Design Creation	3
IMM 2710	Interactive Portfolio	3
IMM 2802	IMM Seminar	1
IMM 2902	Interactive Media Practicum	1

Technical Electives - 5 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

FOTO 1120	Photoshop for Photographers	3
FOTO 1140	Intro to Digital Photography	3
IMM 1510	Digital Audio Recording & Production	3
IMM 1520	Digital Video Production II	3
IMM 1530	Writing for Digital Media & Video Production	3
IMM 1580	Motion Graphics/ AfterEffects	2
IMM 2370	Interactive Animation	3
IMM 2390	Interactive 2D Games	3
IMM 2520	Advanced Video Editing/ Adobe Premiere	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4

BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics*	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

*Optional course NOT available to Interactive Media degree seeking students.

Total: 62

Interactive Media - Mobile Application Design AAS Degree

The Mobile App Design major equips Interactive Media students with highly specialized and in-demand skills in the design and development of content and media for mobile devices in IOS and Android. Design principles, user interface and user experience considerations for a multitude of screens are emphasized. Technical topics include markup or scripting languages that are required of specific media, as well as media optimization, distribution methods, mobile analytics, basic networking concepts, database fundamentals and project management skills.

Upon successful completion of the program, students will be able to: · Design and develop mobile media content incorporate design, usability, and interaction principles, specific to mobile device use. · Identify strategies and technologies for marketing, selling, and distributing products and services through the mobile arena. · Identify opportunities, challenges, and emerging technologies in the mobile industry.

Learning Outcome(s):

1. Evaluate current and emerging technologies in such areas as mobile applications, mobile analytics and media campaigns (social media platforms).
2. Identify and use best practices in information mobile app design.
3. Apply software design, development and quality assurance methodologies (beta testing).
4. Communicate effectively with technical peers, management, customers, and end-users (being able to sell the product).
5. Apply programming languages such as HTML, JavaScript and CSS.
6. Apply basic networking, database and mobile analytics to app design.
7. Mobile application designers/developers design, code, test, debug, monitor and document changes for mobile applications.
8. Mobile app designers/developers can implement application-programming interfaces (APIs) to support mobile functionality.
9. Mobile application designers / developers know the terminology, concepts, and best practices for coding mobile applications.
10. Build a portfolio with project based designs to display mobile app knowledge.
11. Utilize the SMARTT Mobile Device lab to work with outside businesses to create functional mobile apps.

First Semester **Units:** 14

IMM 1101	Mobile App Design I	3
COLS 1100	First Year Experience Seminar	1
CSCI 1103	Intro to Programming Logic	3
CSCI 1150	Networking Terminology	1
ENGL 1100	Composition I	3
IMM 1210	Mobile User Interface Design	3

Second Semester **Units:** 15

DDG 1525	Storyboarding	3
CSCI 1145	HTML	3
IMM 1110	Mobile App Design II	3
MATH 1104	Mathematical Concepts for Business	3
CSCI 1320	Database Fundamentals	3

Third Semester **Units:** 6

HUM-XXXX (select from approved GE-HUM list)	3
NAT-XXXX (select from approved GE-NAT list)	3

Fourth Semester **Units:** 15

IMM 1140	Cascading Style Sheets	3
CSCI 2447	JavaScript Fundamentals	3
IMM 2010	Mobile User Experience Design	3
IMM 2110	Mobile Project Management	3
SBS-XXXX (select from approved GE-SBS list)		3

Fifth Semester **Units:** 12

IMM 2372	Hybrid App Development	3
IMM 2710	Interactive Portfolio	3
IMM 2210	Mobile Analytics	3
IMM 2999	Mobile Capstone	3

HUM GE-Arts/Humanities - 3 credit hours minimum **Units:** 0

(Select One)

HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences - 3 credit hours minimum **Units:** 0

ASTR 1141	Life in the Universe	3

ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS GE-Social/Behavioral Sciences - 3 credit hours minimum **Units:** 0

ANTH 2202	Peoples & Culture	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 62

Interactive Media - Video Game Art and Animation Track AAS Degree

The Video Game Art and Animation track covers the core disciplines for video game art production. Students are provided the foundation in key areas that impact this field, including: time-based production, storytelling, a survey of the video game industry, traditional animation, etc. With this foundation, the remainder of the program focuses on 3D character and environment production, audio integration and game development skills, conducted through 2D and 3D software, as well as various scripting and programming languages. Students will ultimately work on team-based game projects that expose them to the video game production process.

Learning Outcome(s):

1. Demonstrate an understanding of the history, current industry and occupations that constitute the digital gaming industry.
2. Understand narrative and design principles in development of game concepts.
3. Demonstrate appropriate content creation skills, utilizing both 2D and 3D creation software.
4. Understand the roles and responsibilities of team members and their collaboration in all phases of design, development and implementation.
5. Demonstrate the ability to work in a collaborative game development environment.
6. Develop a comprehensive professional portfolio to be used in pursuing jobs and/or internship opportunities.

First Semester **Units:** 13

MATH 1104	Mathematical Concepts for Business	3
DDG 1525	Storyboarding	3
IMM 1201	3D Modeling 1	3
IMM 1115	Survey of Gaming Industry	3
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 15

IMM 1116	Storytelling for Games	3
IMM 1202	3D Modeling 2	3

DDG 1860	2D Animation	3
DDG 1870	Fundamentals of Design for Animiation	3
DDG 2650	Digital Painting	3

Third Semester **Units:** 9

NAT-XXXX (select from approved GE-NAT list)		3
HUM-XXXX (select from approved GE-HUM list)		3
SBS-XXXX (select from approved GE-SBS list)		3
Milestone/Progress Check: • 3/4 of the Associate of Arts degree completed.		

Fourth Semester **Units:** 15

IMM 2601	Game Development 1	3
IMM 2370	Interactive Animation	3
IMM 2201	3D Modeling 3	3
ENGL 1100	Composition I	3
MKTG 1120	Branding	3

Fifth Semester **Units:** 12

IMM 2390	Interactive 2D Games	3
IMM 2603	Collaborative Project	3
IMM 2710	Interactive Portfolio	3
IMM 2950	Game Studio	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2200	Introduction to Biological Anthropology	4
ECON 2200	Principles of Microeconomics*	3

GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

*Optional course NOT available to Interactive Media degree seeking students.

Total: 64

Digital Video Production Certificate

Understanding how to successfully communicate with current technology is necessary in an ever-changing world of digital communication. The Digital Video Production certificate provides students with hands-on comprehensive training in digital media production. Students will develop technical skills in lighting, videography/cinematography, motion graphics, digital audio, script writing and video editing. Students will learn to integrate graphics, sound, video, animation, text and still images to create any variety of entertainment, motion graphic and creative video content. In addition to building technical proficiencies, this certificate will provide the essential skills and knowledge needed to obtain entry level jobs in the communication, marketing, social media, or digital content production/broadcasting industry. To add to their foundation, real world experiences and opportunities will be given in order to create a working portfolio.

First Semester		**Units:** 6
IMM 1500	Digital Video Production I	3
IMM 1530	Writing for Digital Media & Video Production	3
Second Semester		**Units:** 6
IMM 1510	Digital Audio Recording & Production	3
IMM 1520	Digital Video Production II	3
Third Semester		**Units:** 5
IMM 1580	Motion Graphics/ AfterEffects	2
IMM 2520	Advanced Video Editing/ Adobe Premiere	3

Total: 17

Interpreter Education Program AAS Degree

The Interpreter Education Program Associate Degree prepares graduates for entry-level interpreting positions where persons who are deaf or hard of hearing and hearing persons must communicate with each other. The associate degree program offers extensive course work in American Sign Language, knowledge, theory, and skills related to the practice profession of interpreting. A language lab helps students develop ASL and interpreting skills. A two-semester practicum gives students opportunities to gain first-hand experience applying their interpreting skills and knowledge of professional ethics under the supervision of a qualified interpreter. Students must be 18 years of age within the first month of their first semester in the program due to clinical placements.

To qualify for admission to the associate degree program, students must (1) have an intermediate-level knowledge of American Sign Language and Deaf culture (equivalent to CSCC's ASL 1101 Beginning ASL I and ASL 1102 Beginning
ASL II); (2) have a good command of spoken English; (3) agree to adhere to the Code of Professional Conduct

established by the Registry of Interpreters for the Deaf, Inc.; (4) attend a Mandatory Information Session conducted by the coordinator to complete an application form for the program; (5) agree to complete a minimum number of IEP courses each semester; and (6) agree to daytime availability for one of their Practicum placements at a public school K – 12 setting.

Prior to acceptance into the Interpreter Education Program, students may take any General Education courses listed in the Plan of Study, and any courses listed in the ASL/Deaf Studies Certificate without permission of the IEP program coordinator. Second year interpreting students are required to take the EEP (Entrance Exam for Practicum) one semester prior to scheduling their first practicum experience (IEP 2901 or 2903). A minimum interpreting skill level must be met in order to register for the first practicum experience.

The five-semester program is sequential, carefully integrating theory and skills with problem solving and critical thinking. Students must adhere to the Code of Professional Conduct of the Registry of Interpreters for the Deaf (RID) or risk dismissal from the program. In order to ensure successful language learning, students are REQUIRED to participate each semester in activities and events outside of class time.

Learning Outcome(s):

1. Demonstrate knowledge of linguistics, cross-cultural and interpreting theories, approaches to ethical decisionmaking, and professional standards as they relate to the work of interpreters in various contexts.
2. Demonstrate knowledge of diversity within the Deaf community including history, cultural norms and values, community resources; and their resulting implications for interpreters.
3. Collaborate with colleagues, faculty, staff, and consumers in a manner that reflects appropriate cultural norms and professional standards.
4. Demonstrate an understanding of professionalism by adhering to commonly accepted professional standards including, but not limited to, those listed in the Code of Professional Conduct.
5. Demonstrate proficiency and flexibility in English by effectively communicating in a wide range of personal and professional situations with a diverse population of speakers.
6. Demonstrate proficiency and flexibility in American Sign Language by effectively communicating in a wide range of routine personal and professional situations with a diverse population of native and non-native speakers.
7. Apply academic and world knowledge during consecutive and simultaneous interpretations using appropriate cultural adjustments, while managing internal and external factors and processes, in a manner that results in accurate and reliable interpretations in both ASL and English.
8. Demonstrate flexibility to interpret by making adjustments as determined by consumers and supervisors, and by the recognized linguistic, cultural and professional norms of the speaker(s).
9. Assess the effectiveness of interpreting performance of self and peers during/post assignment.
10. Demonstrate the ability to effectively assess and monitor one's performance as a team interpreter in both lead and support roles.
11. Demonstrate self-awareness and discretion by monitoring and managing personal and professional behaviors, and applying professional conflict resolution strategies when appropriate.

First Semester **Units:** 13

IEP 1120	Intro to Interpreting Professions	2
IEP 1301	Beginning Interpreting	2
ASL 1103	Intermediate American Sign Language I	3
ASL 1150	Linguistics of ASL & English	2
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3

Milestone/Progress Check: • Upon completion of this semester with a "C" or better in ASL 1103, ASL 1150, IEP 1120 and IEP 1301 students are eligible to proceed to the interpreting sequence courses the next semester.

Second Semester **Units:** 16

IEP 1302	Intermediate Interpreting I	2
IEP 1401	Theoretical Foundations of Interpreting	3
IEP 1601	ASL to English Interpreting I	3
ASL 1100	Introduction to the Deaf Community	2

ASL 1104	Intermediate American Sign Language II	2
BIO 1111	Intro to Biology	4

Milestones/Progress Check: • Students complete their BCI and criminal background check prior to taking the Entrance Exam for Practicum (EEP). • Students who complete ASL 1104, ASL 1100, IEP 1302, IEP 1401 and IEP 1601 with a grade of "C" or better are able to proceed to the next semester IEP courses.

Third Semester **Units:** 8

IEP 2303	Intermediate Interpreting II	2
IEP 2403	Educational Interpreting I	3
MULT 2403	Ethics & Decision Making for Interpreter	3

Milestones/Progress Check: • Students are eligible to take the Entrance Exam for Practicum (EEP). • Students who complete IEP 2303, IEP 2403, IEP 2602, and MULT 2403 with a grade of "C" or better are able to proceed to the next semester IEP courses.

Fourth Semester **Units:** 14

IEP 2304	Advanced Interpreting I	3
IEP 2405	Interpreting in Healthcare Settings	2
IEP 2901	Community Interpreting Practicum I*	3
OR		
IEP 2903	K-12 Educational Interpreting Practicum*	3
PSY 1100	Introduction to Psychology	3
MATH 1104	Mathematical Concepts for Business	3
OR		
STAT 1350	Elementary Statistics	3

Milestones/Progress Check: • Students who complete IEP 2304 and IEP 2405, with a grade of "C" or better are able to proceed to the next semester IEP courses. Students enrolled in their first Practicum experience must score an 83% or higher to proceed into their second Practicum experience. • A minimum interpreting skill level must be met in order to register for the first practicum experience. Students enroll in their first Practicum experience if they have scored an 83% or higher on the EEP and met the Criminal Background Check requirements.

*Practicum courses require a grade of "B" or higher to satisfy graduation requirements.

Fifth Semester **Units:** 15-19

IEP 2404	Specialized Interpreting	2
IEP 2902	Community Interpreting Practicum II*	3
OR		
IEP 2903	K-12 Educational Interpreting Practicum*	3
ASL 1105	Advanced ASL I	2
IEP-XXXX (Technical Elective)		1-5
PSY 2261	Child Development	3
OR		
SOC 2202	Social Problems	3
IEP 2305	Advanced Interpreting II**	4

Milestones/Progress Check: • Students who complete IEP 2404, ASL 1105, and IEP 2305, with a grade of "C" or better are eligible for graduation. Students enrolled in their second Practicum experience must score an 83% or higher to fulfill their graduation requirement. • Graduates may apply for Ohio Department of Education Interpreter for the Hearing Impaired Licensure.

**All IEP and ASL courses require a grade of "C" or higher to move into the next level of courses and to fulfill certificate and degree requirements.

Technical Electives - 1 credit hour minimum **Units:** 0

The following courses are approved for technical elective requirements:

IEP 1194	Special Topics in Interpreting	1-5
IEP 1294	SPT: American Sign Language	1-5
IEP 2701	Processing	1
IEP 2703	Advanced Fingerspelling	1
IEP 2704	Religious Interpreting	1

Total: 66-70

American Sign Language/Deaf Studies Certificate

American Sign Language/Deaf Studies Certificate candidates do not need to attend a Mandatory Information Session.

First Semester **Units:** 5

ASL 1100	Introduction to the Deaf Community	2
ASL 1101	Beginning ASL I	3

Second Semester **Units:** 3

ASL 1102	Beginning ASL II	3

Third Semester **Units:** 6

ASL 1103	Intermediate American Sign Language I	3
ASL 1150	Linguistics of ASL & English	2
ASL-XXXX (Technical Elective)		1

Fourth Semester **Units:** 2

ASL 1104	Intermediate American Sign Language II	2

Milestone/Progress Check: • Deaf Studies Certificate earned.

Technical Electives* - 1 credit hour minimum **Units:** 0

The following courses are approved for technical elective requirements:

ASL 1801	Fingerspelling and Numbers in ASL	1
ASL 1802	History of the Deaf Community	1
ASL 2801	Classifier Use in ASL	1
ASL 2802	ASL Literature	1

*Technical elective may be taken any semester. See catalog for prerequisite(s) and co-requisite(s), and discuss with an advisor.

Total: 16

Landscape Design and Management AAS Degree

The Landscape Design and Management program prepares graduates for a wide range of careers with landscape design firms, landscape maintenance firms, materials wholesalers and retailers, commercial and private landscape facilities, and landscape contractors. Landscape Design and Management students learn plant selection, materials specification, landscape design, landscape construction estimating, and landscape maintenance procedures. Students in the program share common courses in surveying, soils, and drafting with other construction sciences students, giving the students a strong sense of the construction industry.

The Landscape Design and Management program provides students with a solid educational background in communication skills, math, computer literacy, operations, humanities, and behavioral sciences.

Learning Outcome(s):

1. Assist with the preparation of contract/design documents and construction specifications.
2. Assist landscape professionals with the management and implementation of construction processes.
3. Select suitable herbaceous and woody plants and properly install them.
4. Estimate residential landscape project costs by utilizing takeoff and costing methods.
5. Be able to read and interpret plans and drawings.
6. Assist in the survey and stake out of the job site.
7. Create manual and/or computer generated designs of landscape projects.
8. Create presentation materials using a variety of graphic techniques.

9. Assist in the maintenance of both commercial and residential landscapes.
10. Assist in the construction of landscapes and outdoor environments.
11. Assist in the design and installation of irrigation systems.
12. Identify common pests, diseases and problems as they relate to the landscape.

First Semester **Units:** 15

HORT 1130	Plant Sciences	3
LAND 1160	Landscape Principles	2
NAT-XXXX (select from approved GE-NAT list)		3
LAND 1165	Landscape Survey	1
LAND 1565	Landscape Graphics	2
ENGL 1100	Composition I	3
COLS 1100	First Year Experience Seminar	1

Milestones/Progress Check: • Students who plan to transfer to one of our partnering programs should plan to take the appropriate math to prepare them for College Algebra in Semester 2. • HORT 1130 and LAND 1160 are necessary starting classes for both the Design sequence and the Horticulture courses. • LAND 1165 requires the student to travel off campus for site visits.

Second Semester **Units:** 15

HORT 1530	Spring Plants	3
LAND 1560	Residential Design	3
LAND 1590	Landscape Management I	3
COMM 1110	Small Group Communication	3
MATH 1101	Math Construction Sciences/ Applied Tech	3

Milestones/Progress Check: • HORT 1530 does not have to be the first Plant Identification class for the student. If they start the ID series in the Autumn they can take HORT 2130 first. Both these courses can be taken concurrently with HORT 1130. • LAND 1560 is crucial for future Design courses.

Third Semester **Units:** 3

LAND 2900	LAND Field Experience	3

Fourth Semester **Units:** 12

HORT 2130	Autumn Plants	3
HORT 2530	Herbaceous Plant	3
LAND 2160	Landscape Construction	3
LAND 2190	Landscape Management II	3

Milestones/Progress Check: • LAND 2160 builds on material covered in LAND 1560 and should not be taken concurrently. • LAND 2190 requires the student to travel off campus for lab activities. • NOTE: LAND 2900 Field Experience for 3 units is required and usually taken in the Summer Semester.

Fifth Semester **Units:** 17

LAND 2560	Planting Design	3
LAND 2590	Landscape Operations	3
LAND-XXXX (Technical Elective)		2
HUM-XXXX (select from approved GE-HUM list)		3
COMM 2204	Technical Writing	3
SBS-XXXX (select from approved GE-SBS list)		3

Milestones/Progress Check: • LAND 2560 and LAND 2590 share some cap-stone type projects and are best taken concurrently. • Students enrolled in COMM 2204 are encouraged to use “Project Proposals” as examples of work to be completed.

Technical Electives - 2 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

ESSH 1160	OSHA 10 Hr Construction Safety & Health	1
HORT 1535	Arboriculture	2
HORT 2135	Plant Healthcare	3

LAND 1100	Introduction to the Landscape Profession	2
LAND 1545	Landscape Computer Applications	2
LAND 2165	Landscape Irrigation	3
LAND 2175	Sustainable Sites	4
SPAN 1121	Spanish for Landscaping	2
LAND 2994	SPT: LAND	1-3
SURV 1410	Introduction to Surveying	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One) ARCH 2100 Preferred

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

NAT-GE Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

ESSH 2120 is preferred

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
ESSH 2120	Environmental Aspects of Soil	3
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 62

Landscape Certificate

The Landscape Certificate prepares students for a variety of careers in the rapidly growing landscape profession including design, estimating, maintenance, project management, sales, and horticulture. Student learn in a design studio environment as well as in the field. The certificate is offered by the Landscape Design and Management program which is accredited by the National Association of Landscape Professionals. The Program is one of only 22 colleges or universities in the nation with this accreditation, and for the past 25 years has been ranked in the top ten landscape programs in the country.

First Semester		**Units:** 8
HORT 1130	Plant Sciences	3
HORT-XXXX (Horticulture elective) (select from list)		3
LAND 1160	Landscape Principles	2
Second Semester		**Units:** 6
HORT-XXXX (Horticluture Elective) (select from list)		3
LAND 1590	Landscape Management I	3
Horticulture Electives - 6 credit hours minimum		**Units:** 0
HORT 1530	Spring Plants	3
HORT 2130	Autumn Plants	3
HORT 2530	Herbaceous Plant	3
		Total: 14

Marketing AAS Degree

Marketing professionals are responsible for knowing how to produce, price, promote, and distribute goods and services. The Associate of Applied Science in Marketing provides the skills and knowledge needed to enter or advance in the marketing profession or continue studies at a four-year program. The program provides the skills graduates need to enter careers in sales, customer service, advertising, and small-business promotion. The Marketing program provides a strong foundation in fundamental marketing concepts and principles. The advanced courses provide the opportunity for studying topics of particular interest to the student in such areas as consumer behavior, digital marketing, and sales techniques. Courses incorporate realistic projects, case analyses, simulations, presentations, and teamwork. All of the courses in the Marketing program provide students with high quality instruction in a small classroom setting or online.

Learning Outcome(s):

1. Evaluate and apply fundamental marketing concepts as well as financial and quantitative analysis with regard to the pricing, promotion, and distribution of goods and services in a global economy.
2. Explain the role of branding, the concept of brand equity, and brand elements in designing marketing programs and strategies in global economy.
3. Differentiate between competitive marketing strategies for services and non-profit organizations.
4. Explain how consumer behavior impacts overall marketing strategy and influences the purchaser's decision-buying process as identified by consumer analysis and marketing information systems.
5. Identify issues and opportunities that arise in global marketing, and describe the basic mechanisms for doing business in international markets.
6. Evaluate business-to-business marketing issues as they relate to supply chain management, purchasing and pricing strategy, market segmentation, target markets, and positioning strategies in a global economy.
7. Explain the major components of direct marketing and database management with particular emphasis on interactive technologies and the financial evaluation of direct marketing campaigns.
8. Evaluate the components of e-Commerce models, using digital media (Internet, email, and blogs mobile technology and search engines), social media optimization, and Web analytics to effectively

reach consumers and business-to-business organizations.
9. Differentiate between the traditional role of advertising and promotion in marketing communications strategies for an organization and current trends which make use of interactive and digital media advertising and communications strategies in a global and competitive environment.
10. Analyze sales and customer services processes as they relate to consumer and business-to-business purchasing and customer retention.

First Semester **Units:** 16

ENGL 1100	Composition I	3
STAT 1400	Statistical Concepts for Business	3
ACCT 1211	Financial Accounting	3
MKTG 1125	Introduction to Social Media	3
SCM 1100	Supply Chain Mgmt Principles	3
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 16

ECON 2200	Principles of Microeconomics	3
MKTG 1110	Marketing Principles	3
BOA 1102	Excel I	2
BOA 1104	Access	2
FMGT 2201	Corporate Finance	3
BMGT 2200	Management & Organizational Behavior	3

Third Semester **Units:** 15

COMM 2200	Business Communication	3
MKTG 2400	Advertising and Promotion	3
MKTG 2200	Digital Marketing	3
MKTG 2550	Consumer Behavior	3
MKTG 2500	Intro to Marketing Analysis	3

Fourth Semester **Units:** 15

MKTG 1230	Customer Service & Sales	3
MKTG 2299	Marketing Capstone	3
OR		
BMGT 2901	Business Seminar/Practicum	3
HUM XXXX Choose One: HUM 1100 Introduction to Humanities HUM 1160 Music & Art since 1945 HUM 1270 Comparative Religions PHIL 1101 Introduction to Philosophy		3
XXXX-XXXX (Technical Elective)		3
XXXX-XXXX (Technical Elective)		3

Technical Electives - 3 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

BMGT 2250	Project Management Principles	3
BMGT 2254	Negotiation	3
FOTO 1140	Intro to Digital Photography	3
IMM 1220	Digital Media Preparation	2
MKTG 1105	Retailing	3
MKTG 1120	Branding	3
MKTG 2360	Direct and Database Marketing	3

Total: 62

Customer Service Certificate

Customer service representatives are consistently in-demand in businesses, government agencies, and non-profit organizations. This program prepares students for customer service jobs with basic and advanced training. The curriculum for the basic program includes learning how to use social media in the service of the customer, the study of negotiation, supply chain management and

the role of customer service, and customer service in the retail setting.

Learning Outcome(s):

1.

First Semester **Units:** 15

MKTG 1105	Retailing	3
MKTG 1125	Introduction to Social Media	3
MKTG 1230	Customer Service & Sales	3
BMGT 2254	Negotiation	3
SCM 1100	Supply Chain Mgmt Principles	3
		Total: 15

Digital Marketing Certificate

The digital marketing certificate provides a strong foundation in fundamental digital marketing concepts and principles. Students seeking the digital marketing certificate may be in career positions, but require specific educational opportunities in the digital marketing environment.

First Semester **Units:** 12

MKTG 1110	Marketing Principles	3
MKTG 1125	Introduction to Social Media	3
CSCI 1320	Database Fundamentals	3
FOTO 1140	Intro to Digital Photography	3

Second Semester **Units:** 9

MKTG 2200	Digital Marketing	3
MKTG 2360	Direct and Database Marketing	3
MKTG 2550	Consumer Behavior	3
		Total: 21

Massage Therapy/Entrepreneurship ATS Degree

Successful completion of the Massage Therapy program meets all requirements for graduates to sit for the Massage & Bodywork Licensing Examination (MBLEx) for massage therapy given by the Federation of State Massage Therapy Boards (FSMTB). A passing score on the MBLEx allows the graduate to apply for a license to practice massage therapy in Ohio via the State Medical Board of Ohio (SMBO). In Ohio, licensure from the SMBO is required for massage therapy employment.

The program prepares students for careers in the massage therapy field including health and fitness environments, salon and day spas, medical offices, private practices, and many other areas of opportunity.

Learning Outcome(s):

1. Demonstrate and perform soft tissue manipulation techniques which may be appropriate for use in the treatment of disorders of the human body.
2. Effectively communicate the beneficial effects of massage to patients.
3. Demonstrate the ability to assess and appropriately treat disorders of the human body, which may benefit from massage.

4. Display an understanding and demonstrate the ability to establish and maintain appropriate patient and business records.
5. Display an understanding of skills necessary to establish and operate a massage therapy practice or integrate into a multidisciplinary environment.
6. Demonstrate the ability to communicate effectively with other health care providers as to the advisability of massage.
7. Display an understanding of and demonstrate the effective use of complementary therapeutic modalities in the treatment of ailments of the human body.
8. Display an understanding of, and effectively educate patients in, the proper care and prevention of musculoskeletal injuries.
9. Demonstrate the ability to provide therapeutic massage in accordance with the State Medical Board of Ohio scope of practice and the professional ethical standards as determined by the American Massage Therapy Association.

First Semester **Units:** 12

BIO 1107	Human Biology	4
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
MULT 1110	Medical Terminology	2
MULT 1130	Responding to Emergencies	2

Second Semester **Units:** 14

MASS 1261	Massage Techniques	4
MASS 1236	Massage Therapy Law & Ethics	2
MASS 2200	Myology	2
BOA 1111	Bookkeeping	3
COMM 2232	Interpersonal Communication	3

Third Semester **Units:** 12

MASS 1273	Massage Pathophysiology	4
MASS 2891	Massage Clinical	4
SES 2441	Kinesiology	4

Fourth Semester **Units:** 13

MASS 22XX (Technical Elective)		2
MASS-22XX (Technical Elective)		2
MASS 2240	Fundamentals of Massage Therapy Practice	2
MASS 2296	Massage Therapy Board Review	2
BOA 1122	QuickBooks	2
MATH 1104	Mathematical Concepts for Business	3

Milestone/Progress: • Upon completion of MASS 2296 the student is eligible to apply to sit for the Massage & Bodywork Licensing Exam (MBLEx).

Fifth Semester **Units:** 12

HUM-XXXX (select from approved GE-HUM list)		3
LEGL 2064	Legal Environment of Business	3
SOC 1101	Introduction to Sociology	3
SES 2534	Sport Marketing	3

Milestone/Progress: • Successful completion of the MBLEx and the student is eligible to apply to the State Medical Board of Ohio for their license.

Technical Electives - 4 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

MASS 2280	Nationwide Children's Hosp Adv Studies	2
MASS 2281	Hot Stone Massage	2
MASS 2282	Trigger Point Therapy	4
MASS 2284	Sports Massage	2
MASS 2285	Aromatherapy Therapy Basics for Massage	2
MASS 2286	Spa Services for Massage Therapy	2
MASS 2287	Introduction to Oncology Massage	2
MASS 2298	Special Topics in Massage Therapy	2

HUM GE-Arts/Humanities Requirements - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

Total: 63

Massage Therapy Certificate

Successful completion of the Massage Therapy Certificate program meets all requirements for graduates to sit for the Massage & Bodywork Licensing Examination (MBLEx) for massage therapy given by the Federation of State Massage Therapy Boards (FSMTB). A passing score on the MBLEx allows the graduate to apply for a license to practice massage therapy in Ohio via the State Medical Board of Ohio (SMBO). In Ohio, licensure from the SMBO is required for massage therapy employment.

The program prepares students for careers in the massage therapy field including health and fitness environments, salon and day spas, medical offices, hospitals, private practices, and many other areas of opportunity.

Learning Outcome(s):

1. Demonstrate and perform soft tissue manipulation techniques which may be appropriate for use in the treatment of disorders of the human body.
2. Effectively communicate the beneficial effects of massage to patients.
3. Demonstrate the ability to assess and appropriately treat disorders of the human body, which may benefit from massage.
4. Display an understanding and demonstrate the ability to establish and maintain appropriate patient and business records.
5. Display an understanding of skills necessary to establish and operate a massage therapy practice or integrate into a multidisciplinary environment.
6. Demonstrate the ability to communicate effectively with other health care providers as to the advisability of massage.
7. Display an understanding of and demonstrate the effective use of complementary therapeutic modalities in the treatment of ailments of the human body.
8. Display an understanding of, and effectively educate patients in, the proper care and prevention of musculoskeletal injuries.
9. Demonstrate the ability to provide therapeutic massage in accordance with the State Medical Board of Ohio scope of practice and the professional ethical standards as determined by the American Massage Therapy Association.

First Semester **Units:** 9

BIO 1107	Human Biology	4
MULT 1110	Medical Terminology	2
MULT 1130	Responding to Emergencies	2
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 10

MASS 1261	Massage Techniques	4
MASS 1236	Massage Therapy Law & Ethics	2
MASS 2200	Myology	2
BMGT 1102	Interpersonal Skills	2

Third Semester **Units:** 12

MASS 2891	Massage Clinical	4
MASS 1273	Massage Pathophysiology	4
SES 2441	Kinesiology	4

Fourth Semester **Units:** 8

MASS 2240	Fundamentals of Massage Therapy Practice	2
MASS-22XX (Technical Elective)		2
MASS-22XX (Technical Elective)		2
MASS 2296	Massage Therapy Board Review	2

Milestones/Progress Check: • Upon completion of MASS 2296 the student is eligible to apply to sit for the Massage & Bodywork Licensing Exam (MBLEx). • Successful completion of the MBLEx and the student is eligible to apply to the State Medical Board of Ohio for his/her license.

Technical Electives - 4 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

MASS 2280	Nationwide Children's Hosp Adv Studies	2
MASS 2281	Hot Stone Massage	2
MASS 2282	Trigger Point Therapy	4
MASS 2284	Sports Massage	2
MASS 2285	Aromatherapy Therapy Basics for Massage	2
MASS 2286	Spa Services for Massage Therapy	2
MASS 2287	Introduction to Oncology Massage	2
MASS 2298	Special Topics in Massage Therapy	2

Total: 39

Massage Therapy Advanced Techniques Certificate

The Massage Therapy Advanced Techniques Certificate includes training in various advanced topics in massage therapy designed to prepare students for positions in specialized areas. For more information, see cscc.edu/mt.

First Semester **Units:** 6

MASS 22XX (Technical Elective)	2
MASS 22XX (Technical Elective)	2
MASS 22XX (Technical Elective)	2

Second Semester **Units:** 4

MASS 22XX (Technical Elective)	2
MASS 22XX (Technical Elective)	2

Technical Electives - 10 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

MASS 2280	Nationwide Children's Hosp Adv Studies	2
MASS 2281	Hot Stone Massage	2
MASS 2282	Trigger Point Therapy	4
MASS 2284	Sports Massage	2

MASS 2285	Aromatherapy Therapy Basics for Massage	2
MASS 2286	Spa Services for Massage Therapy	2
MASS 2287	Introduction to Oncology Massage	2
MASS 2298	Special Topics in Massage Therapy	2

NOTE: Registration for any MASS course requires acceptance to the Massage Therapy program. Students must receive a letter grade of "C" or higher in all Massage Therapy course work.

Total: 10

Mechanical Engineering Technology AAS Degree

Individuals who are mechanically inclined and like to solve problems can have a satisfying career in this challenging branch of engineering that creates the machines and machinery that human beings operate and benefit from.

Columbus State's Mechanical Engineering Technology program prepares students to enter this growing profession where the pool of applicants does not meet the consistent demand. The program presents an inside look at the manufacturing process, as well as highlights skills with drafting, computers, and troubleshooting. Coursework includes an introduction to manufacturing technology, hydraulics, robotics, materials science, and computer aided drafting and manufacturing.

Graduates are qualified to assist engineers in the industrial, consulting, scientific research and consulting communities or to transfer to a four-year college to pursue a Bachelor of Science in Engineering Technology Degree.

Engineering technology teaches students how to organize thoughts and approach problems — processes which are not only critical to their work, but also beneficial in everyday life. Mechanical engineering skills can take graduates anywhere, from designing stronger yet lighter helmets for the NFL to creating wheelchairs that are more maneuverable.

Learning Outcome(s):

1. Interpret and create engineering graphics.
2. Solve engineering and design problems.
3. Assist in the development and improvement of manufacturing processes.
4. Use computers in a manufacturing environment.

First Semester **Units:** 13

COLS 1100	First Year Experience Seminar	1
ENGT 1115	Engineering Graphics	3
MECH 1150	Engineering Materials	3
ITST 1101	IT Fundamentals +	2
MATH 1115	Mathematics for Engineering Technologies	4

Second Semester **Units:** 17

MECH 1130	Statics	3
MECH 1240	Machine Tools	3
MECH 1500	Manufacturing Processes	3
ENGL 1100	Composition I	3
PHYS 1200	Algebra-Based Physics I	5

Third Semester **Units:** 17

MECH 2242	Strength of Materials	3
ENGT 2260	Basic Mechanisms and Drives	3
MECH 2215	Parametric CAD	3
COMM 1105	Oral Communication	3
OR		
COMM 1110	Small Group Communication	3
XXXX-XXXX (Basic Elective)		2

SBS-XXXX (select from approved GE-SBS list)		3

Fourth Semester **Units:** 16

MECH 2243	Robotics	2
MECH 2253	Computer Numerical Control	2
MECH 2270	Engineering Statistics	3
MECH 2299	Machine Design/CAM	3
COMM 2204	Technical Writing	3
HUM-XXXX (select from approved GE-HUM list)		3

Basic Electives - 2 credit hours minimum **Units:** 0

The following courses are approved for basic elective requirements:

EMEC 1250	Motors and Control Logic	4
ESSH 1700	OSHA 30 Hr General Ind Safety & Health	2
ITST 1102	Industrial Network Communications	2
ITST 2252	Scripting Fundamentals	2
PHYS 1201	Algebra-Based Physics II	5
SKTR 1180	Welding: Introduction to Stick	2

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 63

Manufacturing Engineering Technician Certificate

Manufacturing Engineering Technicians play an important role in the production process. They are responsible for assembling various components into subassemblies and multiple subassemblies into working finished goods.

These technicians begin by reading detailed schematics or blueprints that show how to assemble complex machines. After determining how parts should connect, they often need to use hand or power tools to trim, shim, cut, and make other adjustments to join components and align them properly. Once the parts are properly aligned, they connect parts with bolts and screws or by welding or soldering pieces together. Careful quality control is important throughout the process, so they look for both mistakes in the assembly process and faulty components. They try to help fix problems before more defective products are produced.

Changes in technology have transformed the manufacturing and assembly process overall. Automated manufacturing systems now use robots, computers,

programmable motion control devices, and various sensing technologies. These systems change the way in which goods are made and affect the jobs of those who make them. The Manufacturing Engineering Technicians must be able to work with these new technologies and be comfortable using them to produce goods.

First Semester **Units:** 6

ENGT 1115	Engineering Graphics	3
MECH 1150	Engineering Materials	3

Milestone/Progress Check: • ENGT 1115 is a prerequisite for all CAD classes in the Mechanical Engineering Technology Major.

Second Semester **Units:** 8

ITST 1101	IT Fundamentals +	2
MECH 1240	Machine Tools	3
MECH 2215	Parametric CAD	3

Milestone/Progress Check: • Certificate is achieved.

Total: 14

Medical Assisting ATS Degree

The Medical Assisting program prepares graduates to work as medical assistants primarily in ambulatory settings such as medical offices, urgent care centers and clinics. Medical assistants are multi-skilled health professionals who assist in patient care management and perform a broad range of clinical and administrative duties. Administratively, medical assistants schedule and receive patients, establish and maintain medical records, manage telephone calls, complete varied correspondence, process insurance claims, billing, coding, and monitor finances. Clinical duties include: patient preparation, assisting in minor surgery and outpatient treatments, taking vital signs, venipuncture, performing CLIA waived testing, urinalysis, injections, electrocardiography, pulmonary function tests, Holter monitor, eye and ear instillations and irrigations, routine diagnostic tests, sterilization procedures, and assisting physicians with various examinations. Medical assistants are valuable members of the health care team, and job opportunities are numerous in Central Ohio and nationwide.

"The Columbus State Community College Medical Assisting Certificate Program is accredited by The Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB)."

Commission on Accreditation of Allied Health Education Programs (CAAHEP)
25400 U.S. Highway 19 North
Suite 158
Clearwater, FL 33763 P: 727-210-2350 F: 727-210-2354
mail@caahep.org

Medical assistants are multiskilled health professionals specifically educated to work in a variety of healthcare settings performing clinical and administrative duties. The practice of medical assisting necessitates mastery of a complex body of knowledge and specialized skills requiring both formal education and practical experience that serve as standards for entry into the profession.

"To prepare medical assistants who are competent in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains to enter the profession."

Statement Regarding Infectious Diseases
Students in any of the Allied Health programs, including Medical Assisting, perform their clinical work on real people. Columbus State does not discriminate against students, faculty, or patients in any way, or based on color, creed, national origin, gender, disability or sexual preference. The patient populations with whom students will work come from all walks of life, and students may therefore be exposed to many types of communicable diseases. These are not limited to, but may include, hepatitis (A, B, C or D), HIV/AIDS, tuberculosis, mumps, rubella, rubeola, Covid, etc.

NOTE: ALL students are required to have appropriate immunizations before they are admitted to the program, and must update throughout their course of study. (Information is provided to all admitted students.) Additionally, although all precautions are taken to minimize exposure and risk, there is always a slight possibility that precautions may fail or that a student may accidentally expose him/herself. All students entering the Medical Assisting program must be aware of this slight, but real, potential risk. Students are required to maintain personal health insurance or sign an insurance waiver. The student is financially responsible for any cost associated as a result of injuries incurred during clinical laboratories, practicum experiences or at clinical sites. Therefore, it is strongly recommended that all students carry their own health insurance.

Statement Concerning Students Who Plan to Follow the GXMO Radiography Licensing Path
It is required that IMAG 1190 (Radiation Protection for General Machine Operators), IMAG 1101 (Introduction to Radiogra- phy Equipment and Patient Care), plus one positioning course from the selection of: IMAG 1102, IMAG 1103, IMAG 1104, or IMAG 1105, must be completed. This optional elective is only for those affected students and is not a requirement of the general Medical Assisting Certificate program.

Learning Outcome(s):

1. Perform and document the patient interview, health history, and medication reconciliation.
2. Prepare the patient for examination and assist provider with patient instruction in follow-up care, as well as provide education in health maintenance and disease prevention.
3. Evaluate and demonstrate mutually OSHA and CLIA Standards by: 1) performing infection control techniques in compliance with the Standard Precautions and guidelines set forth by the OSHA and CDC and 2) performing various waived testing in compliance set forth by CLIA.
4. Demonstrate all administrative procedures performed in the medical office including EMR, while observing HIPAA laws, medicolegal and ethical responsibilities.
5. Demonstrate successful completion of all clinical and administrative competencies.
6. Conduct themselves in a professional manner to meet work force demands.

First Semester **Units:** 16

MAT 1100	Clinical Medical Assisting I	2
MAT 1122	Administrative Medical Assisting	4
MAT 1123	Administrative Medical Assisting Lab	1
MAT 1200	Clinical Medical Assisting I Lab	1
MAT 1300	Clinical Medical Assisting II	2
MAT 1400	Clinical Medical Assisting II Lab	1
BIO 1121	Anatomy and Physiology I	4
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 14

MAT 1230	Pharmacology	2
MAT 1231	Pharmacology Lab	1
MAT 1238	Comp Apps for the Medical Office Lab	1
MAT 1240	Lab Techniques for the Med Office	2
MAT 1241	Physician's Office Laboratory	2
BIO 1122	Anatomy & Physiology II	4
MULT 1110	Medical Terminology	2

Milestone/Progress Check: • CMA Review book completed during the MAT 1238 course.

Third Semester **Units:** 8

MAT 2800	Seminar: Medical Assisting	1
MAT 2950	Clinical Practium: Medical Assisting	2
ENGL 1100	Composition I	3
HIMT 1274	Intro to Medical Coding & Reimbursement	2

Milestone/Progress Check: • Students are required to take and achieve a grade of 85% or above on three practice exams (administrative, clinical, and general).

Fourth Semester **Units:** 13

BMGT 2200	Management & Organizational Behavior	3
HIMT 1245	ICD-10-CM/PCS Coding	3
HIMT 1121	Advanced Medical Terminology	2
HIMT 1255	CPT-4 Coding	3
HIMT 1265	Medical Reimbursement	2

Milestones/Progress Check: • HIMT 1245 (this is according to the catalog). • HIMT 1121 Students should be prepared to spend 8 hours per day/3 days per.

Fifth Semester **Units:** 11

BMGT 1102	Interpersonal Skills	2
HUM-XXXX (select from approved GE-HUM list)		3
MATH 1104	Mathematical Concepts for Business	3
OR		
STAT 1350	Elementary Statistics	3

PSY 1100	Introduction to Psychology	3

Milestone/Progress Check: • Consideration for transfer requirement recommended.

NOTE: Students are to follow the first three semesters in sequence on the plan of study.

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

Total: 62

Medical Assisting Certificate

"The Columbus State Community College Medical Assisting Certificate Program is accredited by The Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB)."

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Medical assistants are multiskilled health professionals specifically educated to work in a variety of healthcare settings performing clinical and administrative duties. The practice of medical assisting necessitates mastery of a complex body of knowledge and specialized skills requiring both formal education and practical experience that serve as standards for entry into the profession.

"*To prepare medical assistants who are competent in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains to enter the profession.*"

Graduates of the Medical Assisting Certificate Program are eligible to take the Certified Medical Assistant exam. Those students who successfully complete the CMA examination are credentialed through the Certifying Board of the American Association of Medical Assistants, therefore credentialed with The Certified Medical Assistant (AAMA) or CMA(AAMA).

Statement Regarding Infectious Diseases
Students in any of the Allied Health programs, including Medical Assisting, perform their clinical work on real people. Columbus State does not discriminate against students, faculty, or patients in any way, or based on color, creed, national origin, gender, disability or sexual preference. The patient populations with whom students will work come from all walks of life, and students may therefore be exposed to many types of communicable diseases. These are not limited to, but may include hepatitis (A, B, C or D), HIV/AIDS, tuberculosis, mumps, rubella, rubeola, Covid, etc.

NOTE: ALL students are required to have appropriate immunizations before they are admitted to the program, and must update throughout their course of study. (Information is provided to all admitted students.) Additionally, although all precautions are taken to minimize exposure and risk, there is always a slight possibility that precautions may fail or that a student may accidentally expose him/herself. All students entering the Medical Assisting program must be aware of this slight, but real, potential risk. Students are required to maintain personal health insurance or sign an insurance waiver. The student is financially

responsible for any cost associated as a result of injuries incurred during clinical laboratories, practicum experiences or at clinical sites. Therefore, it is strongly recommended that all students carry their own health insurance.

Statement Concerning Students Who Plan to Follow the GXMO Radiography Licensing Path
It is required that IMAG 1190 (Radiation Protection for General Machine Operators), IMAG 1101 (Introduction to Radiography Equipment and Patient Care), plus one positioning course from the selection of: IMAG 1102-5, IMAG 1103, IMAG 1104, or IMAG 1105, must be completed. This optional elective is only for those affected students and is not a requirement of the general Medical Assisting Certificate program.

Learning Outcome(s):

1. The graduate will be able to perform and document the patient interview, health history, and medication reconciliation
2. The graduate will be able to prepare the patient for examination and assist provider with patient instruction in follow-up care, as well as provide education in health maintenance and disease prevention
3. The graduate will be able to evaluate and demonstrate mutually OSHA and CLIA Standards by: 1) performing infection control techniques in compliance with the Standard Precautions and guidelines set forth by the OSHA and CDC and 2) performing various waived testing in compliance set forth by CLIA
4. The graduate will be able to demonstrate all administrative procedures performed in the medical office including EMR, while observing HIPAA laws, medicolegal and ethical responsibilities
5. The graduate will be able to demonstrate successful completion of all clinical and administrative competencies
6. The graduate will conduct themselves in a professional manner to meet work force demands

First Semester **Units:** 15

MAT 1100	Clinical Medical Assisting I	2
MAT 1122	Administrative Medical Assisting	4
MAT 1123	Administrative Medical Assisting Lab	1
MAT 1200	Clinical Medical Assisting I Lab	1
MAT 1300	Clinical Medical Assisting II	2
MAT 1400	Clinical Medical Assisting II Lab	1
BIO 1121	Anatomy and Physiology I	4

Second Semester **Units:** 14

MAT 1230	Pharmacology	2
MAT 1231	Pharmacology Lab	1
MAT 1238	Comp Apps for the Medical Office Lab	1
MAT 1240	Lab Techniques for the Med Office	2
MAT 1241	Physician's Office Laboratory	2
BIO 1122	Anatomy & Physiology II	4
MULT 1110	Medical Terminology	2

Milestone/Progress Check: • CMA Review book completed during the MAT 1238 course.

Third Semester **Units:** 8

MAT 2800	Seminar: Medical Assisting	1
MAT 2950	Clinical Practium: Medical Assisting	2
ENGL 1100	Composition I	3
HIMT 1274	Intro to Medical Coding & Reimbursement	2

Milestones/Progress Check: • Students are required to take and achieve a grade of 85% or above on three practice exams (administrative, clinical, and general areas) to pass the MAT 2800 course. • Students are eligible to apply for the CMA, RMA, CCMA Exam at the conclusion of this semester with successful completion of all courses listed on the MAT Certificate.

*Students are to follow the first three semesters in sequence on the plan of study. **A minimum grade of "C" is required in all MAT courses.

Total: 37

Medical Imaging/Radiography AAS Degree

Radiographers are highly skilled professionals qualified by education to perform imaging examinations and accompanying responsibilities at the request of a physician. A radiographer is a medical professional who applies doses of ionizing radiation to patients to create medical images of the human anatomy to aid radiologists and doctors in diagnosing and treating illness and injury. A radiographer is able to perform diagnostic imaging, fluoroscopy, trauma, surgical, and portable radiography. Specialized areas in the curriculum include: computed tomography, vascular interventional radiography, digital imaging, and magnetic resonance imaging.

These valuable professionals work in hospitals, clinics, medical laboratories, nursing homes, and in private practice. The Imaging Program is proudly JRCERT accredited.

JRCERT Accreditation Info:
Joint Review Committee on Education in Radiologic Technology (JRCERT)
20 N. Wacker Drive, Suite 2850
Chicago, Il 60606-3182
Phone: (312) 704-5300
Fax: (312) 704-5304
www.jrcert.org
mail@jrcert.org

Learning Outcome(s):

1. Graduates will recognize the need for life-long learning in their chosen profession and will have the ability to behave in a compassionate, ethical and professional manner.
2. Graduates will successfully complete all program requirements and exceed entry-level expectations of employers as defined by A.R.R.T. curriculum guidelines.
3. Graduates are prepared and pass the A.R.R.T. exam
4. Graduates have developed and apply skills in critical thinking and problem solving in the practice of the radiography profession.

First Semester **Units:** 14.5

MATH 1148	College Algebra	4
COLS 1100	First Year Experience Seminar	1
BIO 2300	Human Anatomy	4
IMAG 1110	Introduction to Medical Imaging	1
IMAG 1120	Patient Care in Medical Imaging	1
IMAG 1131	Radiographic Procedures 1A	1.5
IMAG 1132	Radiographic Procedures 1B	1.5
IMAG 1901	RAD Field Experience/ Internship I	0.5

Milestone/Progress Check: • Students should be prepared to spend 8 hours per day/2 days per week for 10 weeks in clinical rotation, for a total of 160 hours clinical experience.

Second Semester **Units:** 13

BIO 2301	Human Physiology	4
ENGL 1100	Composition I	3
IMAG 1113	Radiologic Science	2
IMAG 1142	Radiographic Procedures II	3
IMAG 1902	RAD Field Experience/ Internship II	1

Milestones/Progress Check: • Students should be prepared to spend 8 hours per day/2 days. • Chem 0100 might be a prerequisite.

Third Semester **Units:** 11

MULT 1110	Medical Terminology	2
COMM 2200	Business Communication	3
IMAG 1118	Radiographic Exposure & Processing	2
IMAG 1143	Radiographic Special Procedures	2
IMAG 1903	RAD Field Experience/ Internship III	1
IMAG 1803	Medical Imaging Seminar 3	1

Milestone/Progress Check: • Students should be prepared to spend 8 hours per day/3 days per week in clinical rotation, for a total of 384 hours clinical experience.

Fourth Semester **Units:** 13

SBS-XXXX (select from approved GE-SBS list)		3
IMAG 2620	Radiographic Pathology	2
IMAG 2212	Radiographic Sectional Anatomy	2
IMAG 2126	Radiographic Biology & Protection	2
IMAG 2800	Radiography/Medical Imaging Seminar	1
IMAG 2904	IMAG Field Experience/ Internship IV	3

Milestones/Progress Check: • Students should be prepared to spend 8 hours per day/3 days per week in clinical rotation, for a total of 384 hours clinical experience. • Transfer considerations recommended.

Fifth Semester **Units:** 12

HUM-XXXX (select from approved GE-HUM list)		3
IMAG-XXXX (select from list)		2
IMAG 2804	Medical Imaging Seminar I	1
IMAG 2905	IMAG Field Experience/ Internship V	3
CSCI 1101	Computer Concepts & Apps	3

Milestone/Progress Check: • Transfer considerations recommended.

Technical Electives - 2 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

IMAG 1101	Intro RAD Equipment/ Patient Care	0.5
IMAG 1102	Rad Positioning of Upper Extremities	0.5
IMAG 1103	Rad Positioning of Lower Extremities	0.5
IMAG 1104	Rad Positioning Chest & Abdomen	0.5
IMAG 1105	Rad Positioning Spine, Skull & Sinuses	0.5
IMAG 1190	Rad Protection General Machine Operators	1.5
IMAG 2806	IMAG Post Primary Seminar I	1
IMAG 2807	IMAG Post Primary Seminar II	1
IMAG 2906	Post Primary Imaging I	1-2
IMAG 2907	Post Primary Imaging II	2
MULT 1916	Venipuncture for Health Care Providers	2

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 63.5

GXMO Radiography/Medical Imaging Certificate

This certificate prepares the student for licensing as a General X-ray Machine Operator (GXMO) through the Ohio Department of Health. The GXMO credential allows performance of certain x-ray procedures under practitioner supervision. The GXMO license is specific to Ohio and may not transfer to other states. The license is especially useful as an additional skill for someone working in a doctor's office or clinic setting. The GXMO credential alone may not lead to entry level employment as most offices are looking for someone with additional medical skills.

Learning Outcome(s):

1. Demonstrate competence in academic technical courses that meet the ODH requirements.
2. Be eligible to apply for the ODH General X-Ray Machine Operator (GXMO) State Examination.
3. Demonstrate competence in patient care skills and radiographic positioning and imaging skills specific to a GXMO.
4. Incorporate general education outcomes for effective communication as necessary in a health care setting.
5. Incorporate basic related course content to support technical course academic theory and practice.
6. Develop technical skills required for employment in outpatient imaging facilities, urgent care centers, and physician practices.

First Semester **Units:** 11.5

IMAG 1190	Rad Protection General Machine Operators	1.5
ENGL 1100	Composition I	3
MATH 1148	College Algebra	4
BIO 1101	Fundamentals Human Anatomy & Physiology	3

Milestone/Progress Check: • Successful completion of IMAG 1190 required to take Ohio Department of Health GXMO examination and to proceed to IMAG 1101.

Second Semester **Units:** 2.5

IMAG 1101	Intro RAD Equipment/ Patient Care	0.5
IMAG 1102	Rad Positioning of Upper Extremities	0.5
IMAG 1103	Rad Positioning of Lower Extremities	0.5
IMAG 1104	Rad Positioning Chest & Abdomen	0.5
IMAG 1105	Rad Positioning Spine, Skull & Sinuses	0.5

Milestones/Progress Check: • Successful completion of IMAG 1101 required to proceed to IMAG 1102-1105. • *Essential skill mastery must be demonstrated in IMAG 1102-1105 to apply for GXMO license.

Third Semester **Units:** 8

CSCI 1101	Computer Concepts & Apps	3
MULT 1110	Medical Terminology	2
PHIL 1130	Ethics	3

Total: 22

Medical Laboratory Technology AAS Degree

Medical laboratory technicians play an important role in the practice of modern medicine. They perform diagnostic procedures in the health care setting, such as chemical analysis of body fluids, classification of blood cells, identification of disease producing microorganisms, and the selection of compatible donor blood for transfusion. The Medical Laboratory Technology Associate Degree program is designed to prepare graduates to perform laboratory procedures in a variety of settings. Career and employment opportunities include hospitals, research and reference laboratories, public health and veterinary facilities, and environmental and quality assurance laboratories. Graduates may also pursue careers in marketing, sales and customer service.

The first four semesters of the Medical Laboratory program provide the students with entry-level knowledge and skills in clinical chemistry, clinical microbiology, hematology, immunohematology, immunology, and phlebotomy in a classroom laboratory

setting. This training is enriched during the fifth semester of the program when students have the opportunity to apply their previously acquired knowledge and skills in an actual working environment. Affiliated hospital and private laboratories located within our service district of approximately 60-miles around Columbus will be utilized for this clinical practicum experience.

Students who successfully complete the program are eligible to take the certification examination administered by the Board of Certification of the American Society for Clinical Pathology and become a certified MLT (ASCP). With additional education and/or technical experience, graduates may also advance in the field to become a Medical Laboratory Scientist, research specialist, manager or educator.

The Medical Laboratory Technology program at Columbus State is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) at 5600 N. River Rd, Rosemont, IL 60018-5119, telephone 773-714-8880. The program has produced hundreds of graduates since it began in 1978 who have consistently met or exceeded the national average on credentialing examinations.

The Medical Laboratory Technology program delivers all program technical lecture courses in a web-based format (online) and the technical laboratories are offered face-to-face in the campus laboratories located in Union Hall.

Learning Outcome(s):

1. Pre-analytical, analytical, and post-analytical processes in all disciplines of the clinical laboratory.
2. Theoretical knowledge needed to assure accuracy and validity of test results by clinical correlation and quality control performance.
3. Professional attitudes and behaviors which are necessary for gaining and maintaining the confidence of the health care community.
4. Meeting the requirements to take a national certifying examination for Medical Laboratory Technicians.

First Semester **Units:** 13

MLT 1100	Basic Concepts in Health Care	2
MLT 1112	Laboratory Theory for Health Industries	2
MLT 1113	Laboratory Techniques for Health Industries	1
BIO 1101	Fundamentals Human Anatomy & Physiology	3
COLS 1100	First Year Experience Seminar	1
HIMT 1274	Intro to Medical Coding & Reimbursement	2
MULT 1916	Venipuncture for Health Care Providers	2

Milestone/Progress Check: • MULT 1916 provides entry-level phlebotomy skills that complement the laboratory assisting skills.

Second Semester **Units:** 16

MLT 1110	Introduction to MLT Lecture	1-1
MLT 1111	Introduction to MLT Lab	1
MLT 1120	Hematology I Lecture	2
MLT 1121	Hematology I Lab	2
MLT 1140	Clinical Chemistry Lecture	1
MLT 1141	Clinical Chem Lab	1
BIO 2215	Microbiology	4
CHEM 1113	Elements of Organic/ Biochemistry	4

Third Semester **Units:** 14

MLT 1130	Immunology Lecture	1
MLT 1131	Immunology Lab	1
MLT 2250	Body Fluids Lecture	2
MLT 2251	Body Fluids Lab	1
MLT 2260	Clinical Micro Lecture	3
MLT 2261	Clinic Micro Lab	3
ENGL 1100	Composition I	3

Fourth Semester **Units:** 13

MLT 2270	Immunohematology Lecture	2
MLT 2271	Immunohematology Lab	2
MLT 2280	Hematology II Lecture	1
MLT 2281	Hematology II Lab	1
MLT 2290	Med Lab Case Correlations	1
SBS-XXXX (Select from approved GE-SBS list)		3
STAT 1350	Elementary Statistics	3

Milestones/Progress Check: • Students prepare for the clinical practicum and for the national. • Transfer considerations recommended.

Fifth Semester **Units:** 9

MLT 2800	MLT Clinical Seminar	1
MLT 2900	MLT Clinical Practicum	2
HUM-XXXX (Select from approved GE-HUM list)		3
COMM 2200	Business Communication	3

Milestones/Progress Check: • Students prepare for career entry. • Transfer considerations recommended.

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 65

Medical Lab Tech Clinical Laboratory Assisting Certificate

The MLT Clinical Laboratory Assisting Certificate program may fulfill one of the certificate requirements for the Associate of Applied Science (A.A.S.) in Multi-Competency Health. These courses may also be taken as stand-alone courses that meet a professional need or personal interest.

Learning Outcome(s):

1. Prepare blood and body fluid specimens for analysis according to clinical laboratory industry standards.
2. Prepare reagents, standards, and control materials for analysis according to clinical laboratory industry standards.
3. Populate patient data into the Laboratory Information System (LIS) with accuracy.
4. Demonstrate safety practices consistent with clinical laboratory industry standards.
5. Perform waived laboratory testing with accuracy and precision and correlate with clinical conditions.

First Semester **Units:** 7

MLT 1112	Laboratory Theory for Health Industries	2
MLT 1113	Laboratory Techniques for Health Industries	1
MLT 1100	Basic Concepts in Health Care	2
HIMT 1274	Intro to Medical Coding & Reimbursement	2

A minimum grade of "C" or higher is required in each course.

Total: 7

Multi-Skilled Health AAS Degree

Many health care facilities have reorganized and the job roles within these systems have adjusted to provide care and services based on patient needs. As a result, employment opportunities have been created for the individual who has documented competencies in a variety of health care skills. Multi-Skilled Health provides the flexibility for students to gain these important skills in health care. Many of these courses require a clinical placement. Fingerprinting and drug screening may be required for this clinical placement. The student has many options from which to choose in Multi- Skilled Health.

Option 1: Associate Degree
An Associate of Applied Science degree (A.A.S.) or an Associate of Technical Studies degree (A.T.S.) in Multi-Skilled Health can be obtained by:
A) Associate of Applied Science (A.A.S.) option: A student may earn this degree option by choosing two or more certificate programs, one of which must be in MULT, and the second may be in MULT, CLA (Clinical Laboratory Assisting), IEP (Deaf Studies) or NURC (Nursing Certificate programs), the technical core courses, and at least six hours of technical options for a minimum of 30.5 technical hours. The student also completes the required general education courses, and the required basic related courses. This degree allows the student to choose the multi-skill grouping of certificates that best suits his/her interests or employer needs.
B) Associate of Technical Studies (A.T.S.) option: "Designing Your Own Degree" (Refer to the Graduation Requirements for the A.T.S. in the College Catalog.)

Option 2: Certificate Programs
Many certificate programs are offered through the Multi-Skilled Health Technology. These are focused, technical programs that result in a certificate of completion. The certificate programs range from those designed for anyone interested, to those that require completion of a health care program or specific licensure. Some courses require completion of a health record, fingerprinting, and drug screening.

Option 3: Enhance or Complement Primary Skills in Nursing or Allied Health
There are many courses within Multi-Skilled Health that can be taken in association with the degree option, as a complement to a certificate program, or as stand-alone courses that meet a professional need or personal interest. The requirements vary for each course.

Learning Outcome(s):

1. Use medical terminology correctly.
2. Recognize life-threatening situations and take appropriate action.
3. Demonstrate proficiency in technical skills.
4. Work in a health care organization as a valued member of the health care team.
5. Demonstrate interpersonal communication skills.
6. Demonstrate effective infection control and safety practices.

First Semester **Units:** 9-12

MULT 1110	Medical Terminology	2
MULT Technical Certificate Course		1-4
COLS 1100	First Year Experience Seminar	1
BMGT 1102	Interpersonal Skills	2
ENGL 1100	Composition I	3

Second Semester **Units:** 10-19

HUM-XXXX (select from GE-HUM list)		3
MULT Technical Certificate Course		1-4
MULT Technical Certificate Course		1-4
MULT-XXXX (Technical Elective)		1-4
MULT 1160	Exploring Healthcare Professions	1
STAT 1350	Elementary Statistics	3

Milestone/Progress Check: Meet with an Academic Advisor to discuss your certificate options.

Third Semester **Units:** 8-14

BIO 1101	Fundamentals Human Anatomy & Physiology	3
MULT Technical Certificate Course		1-4
SBS-XXXX (select from approved GE-SBS list)		3
MULT Technical Certificate Course		1-4

Fourth Semester **Units:** 8-17

XXXX-XXXX (Basic Elective)		2
MULT-XXXX (Technical Elective)		1-4
MULT Technical Certificate Course		1-4
COMM 1105	Oral Communication	3
OR		
COMM 1110	Small Group Communication	3
MULT Technical Certificate Course		1-4

Fifth Semester **Units:** 11.5-19

BIO 2215	Introduction to Microbiology	4
OR		
BIO 2300	Human Anatomy	4
OR		
BIO 2301	Human Physiology	4
MULT-XXXX (Technical Elective)		1-4
MULT Technical Certificate Course		1-4
MULT 1120	Cardiopulmonary Resuscitation	0.5
OR		
MULT 1130	Responding to Emergencies	2
MULT 1170	Current Issues:HIV Infection	1
CHEM 1113	Elements of Organic/ Biochemistry	4

Technical Electives - 1.5 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

MULT 1114	Introduction to Addiction Studies	3
MULT 1115	Helping Skills Allied Hlth & Human Serv	3
MULT 1130	Responding to Emergencies	2
MULT 1140	Adult & Pediatric CPR	0.5
MULT 1180	Family & Aging Services	2
MULT 1400	Screening for Substance Use: SBIRT	1
MULT 1401	Integrated Healthcare	2
MULT 1402	Selfcare for Allied Health/ Human Service	2
MULT 1500	Concepts for the Pharmacy Technician	4
MULT 1525	Calculations for the Pharmacy Technician	2
MULT 1550	Pharmacology for the Pharmacy Technician	2
MULT 1805	Pharmacy Technician Seminar	1
MULT 1900	Pharmacy Technician Lab and Practicum I	2
MULT 1905	Community Pharmacy Practice Practicum	1
MULT 1910	Basic Electrocardiography	3
MULT 1950	Phlebotomy	4
MULT 2070	HR Mgmt for Health Services	2
MULT 2072	Health Care Resource Management	2
MULT 2074	TQM/UM/Accreditation	2
MULT 2076	Legal Aspects and Risk Management	2
MULT 2114	Addiction Studies II	2
MULT 2234	Therapeutic & Applied Humor	2
MULT 2950	Phlebotomy Practicum II	1

Basic Electives - 2 credit hours minimum **Units:** 0

The following courses are approved for basic elective requirements:

SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology	3
HNTR 1153	Nutrition for a Healthy Lifestyle	3

Total: 46.5-81

Healthcare Management AAS Degree

The U.S. Healthcare system has changed and the focus isn't just on delivery of patient care but also on the role of taking care of the business of healthcare. Healthcare is ever expanding and the need for qualified individuals

to help manage the impact of new technology and treatment processes is pertinent. Healthcare management is key in providing the leadership necessary to guide healthcare through the 21st century.

Graduates of the program will:

- Apply theories and principles of human resource management to real life health care situations.
- Generate action plans, implementation activities, and evaluation processes to assure continuous quality improvement in health care institutions..
- Apply strategies, processes and current trends in health care management.
- Understand risk management and the underlying legal principles inherent in the health care system.

First Semester **Units:** 12

ENGL 1100	Composition I	3
MATH 1148	College Algebra	4
CHEM 1113	Elements of Organic/ Biochemistry	4
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 14

BIO 2300	Human Anatomy	4
PSY 1100	Introduction to Psychology	3
BMGT 2200	Management & Organizational Behavior	3
HUM-XXXX		3
MULT 1160	Exploring Healthcare Professions	1

Third Semester **Units:** 13

BIO 2301	Human Physiology	4
MLT 1100	Basic Concepts in Health Care	2
ACCT 1211	Financial Accounting	3
MULT 2070	HR Mgmt for Health Services	2
MULT 1130	Responding to Emergencies	2

Fourth Semester **Units:** 13

ACCT 1212	Managerial Accounting	3
MULT 2072	Health Care Resource Management	2
MULT 2074	TQM/UM/Accreditation	2
BMGT 2250	Project Management Principles	3
MKTG 2200	Digital Marketing	3

Fifth Semester **Units:** 13

MULT 2076	Legal Aspects and Risk Management	2
SES 2760	Clinic/Corporate Wellness	3
SES 2750	Chronological & Physiological Wellness	3
ECON 2200	Principles of Microeconomics	3
Technical Elective (See list for approved courses)		2

Technical Electives List **Units:** 0

Minimum of 2.0 credit hours required

BMGT 1102	Interpersonal Skills	2
BMGT 2245	Introduction to Non-Profit Management	3
MULT 1110	Medical Terminology	2
MULT 1401	Integrated Healthcare	2

Total: 65

Health Sciences AAS Degree

Columbus State offers the Associate of Applied Science in Health Sciences to students exploring health careers or that hold a certificate in a variety of relatable healthcare fields. This program would also assist in degree completion for those students interested in seeking to transfer to a baccalaureate degree in a healthcare profession.

Students are encouraged to select an area of emphasis and to select general education core requirements and electives based on the chosen area of emphasis.

All students must satisfactorily complete at least 61 credit hours of approved courses, a minimum of 20 of which must be completed at Columbus State.

Approved courses and suggested areas of emphasis are designated. Satisfactory completion requires a final grade of A, B, C, or D. Transfer credit may be awarded for courses in which a "C" or better has been earned at other accredited institutions or a "D" or better from public institutions, if the course equivalency has been approved by the Dean of Health & Human Services. Courses listed in the "Transfer Module" or "Transfer Assurance Guides" of an Ohio college have been pre-approved for credit toward a Columbus State degree. Credits by examination, proficiency credit, prior learning credit, and transfer credit do not apply toward meeting the 20 credit hour residency requirements.

All students must maintain an overall grade point average of 2.0 or better for all college level courses completed at Columbus State.

All students must complete the following General Education Core Requirements as well as additional technical coursework as specified on the following pages.

All students must file a completed Petition to Graduate form with the Office of the Registrar by the published deadline date for the intended semester of graduation.

First Semester **Units:** 13

COLS 1100	First Year Experience Seminar	1
OR		
COLS 1101	College Success Skills	1
ENGL 1100	Composition I	3
MATH XXXX GE Math/Stat Course (see list)		3
TECH XXXX Technical Elective Course (see list)		3
TECH XXXX Technical Elective Course (see list)		3

Second Semester **Units:** 12

BPS XXXX GE Natural Sciences Course (see list)	3
TECH XXXX Technical Elective Course (see list)	3
TECH XXXX Technical Elective Course (see list)	3
Basic Related Course (see list)	3

Third Semester **Units:** 12

HUM XXXX GE Arts/Humanities Course (see list)	3
TECH XXXX Technical Elective Course (see list)	3
TECH XXXX Technical Elective Course (see list)	3
Basic Related Course (see list)	3

Fourth Semester **Units:** 12

SBS XXXX GE Social/Behavioral Sciences Course (see list)	3
Basic Related Course (see list)	3
TECH XXXX Technical Elective Course (see list)	3
TECH XXXX Technical Elective Course (see list)	3

Fifth Semester **Units:** 12

TECH XXXX Technical Elective Course (see list)	3
TECH XXXX Technical Elective Course (see list)	3
Basic Related Course (see list)	3
Basic Related Course (see list)	3

GE Mathematics/Statistics Course List **Units:** 0

(Selection should be based on area of emphasis)

MATH 1104	Mathematical Concepts for Business	3
MATH 1148	College Algebra	4
MATH 1149	Trigonometry	4
MATH 1150	Precalculus	6
MATH 1151	Calculus I	5
MATH 1152	Calculus II	5

STAT 1350	Elementary Statistics	3
STAT 1400	Statistical Concepts for Business	3
STAT 1450	The Practice of Statistics	4

GE Natural Sciences Course list (BPS) **Units:** 0

(Selection should be based on area of emphasis)

BIO 1101	Fundamentals Human Anatomy & Physiology	3
BIO 1121	Anatomy and Physiology I	4
BIO 1122	Anatomy & Physiology II	4
BIO 2215	Microbiology	4
BIO 2300	Human Anatomy	4
BIO 2301	Human Physiology	4
BIO 2302	Human Pathophysiology	3
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1113	Elements of Organic/ Biochemistry	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5

GE Arts & Humanities Course List (HUM) **Units:** 0

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

GE Social & Behavioral Sciences (SBS) **Units:** 0

(Selection should be based on area of emphasis)

ANTH 2201	World Prehistory	3
ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

TECH XXXX Technical Elective Course Areas of Emphasis (30 credit hours required) **Units:** 0

Students are encouraged to select an area of emphasis in health sciences and complete the 30 credits from that emphasis area or a combination of areas. See your advisor if you have other health-related coursework that you think might apply to this requirement.

EMS XXXX Emergency Medical Services courses
MASS XXXX Massage Therapy courses
MAT XXXX Medical Assisting Technology courses
MULT XXXX Multi-Skilled Health courses
NURC XXXX Nursing Certificate Program courses
PNUR XXXX Practical Nursing courses

Basic Related Course List **Units:** 0

To complete the Health Sciences degree, the student must complete 15 credits of Basic Related courses to meet the degree requirements. Choose from the following list or additional courses from the previous GE Course lists. If you are uncertain about course selection, consult with a Health & Human Services Advisor for suggestions. All courses are 3 credit hours unless indicated otherwise.

BMGT 1102	Interpersonal Skills	2
BMGT 2200	Management & Organizational Behavior	3

BMGT 2280	Professional Development	1
BOA 1111	Bookkeeping	3
BOA 1122	QuickBooks	2
CHEM 1100	Chemistry and Society	5
CHEM 1200	Intro to General & Organic Chemistry	5
CHEM 2251	Organic Chemistry I	5
CHEM 2252	Organic Chemistry II	5
CHEM 2254	Organic Chemistry Lab I	3
CHEM 2255	Organic Chemistry Lab II	3
CHEM 2261	General Biochemistry	4
COMM 1105	Oral Communication	3
COMM 1110	Small Group Communication	3
COMM 2200	Business Communication	3
COMM 2232	Interpersonal Communication	3
CSCI 1101	Computer Concepts & Apps	3
CSCI 1102	Intermediate Excel and Access	3
CSCI 1320	Database Fundamentals	3
CSCI 2325	Expert Access	3
ECON 2201	Principles of Macroeconomics	3
ENGL 2367	Composition II	3
HNTR 1153	Nutrition for a Healthy Lifestyle	3
MKTG 1110	Marketing Principles	3
LEGL 2061	Business Law I	3
PSY 2200	Educational Psychology	3
PSY 2245	Children With Exceptionalities	3
PSY 2261	Child Development	3
PSY 2325	Social Psychology	3
PSY 2331	Psychopathology	3
PSY 2340	Human Growth and Development Over the Life Span	3
PSY 2530	Psychology of Personality	3
PSY 2551	Adolescent Psychology	3
SOC 2202	Social Problems	3
SOC 2209	Sociology of Criminal Justice System	3
SOC 2309	Law and Society	3
SOC 2330	Marriage and Family Relations	3
SOC 2410	Criminology	3
SHS 2230	Introduction to Communication Disorders	3
SES 1100	Personal Fitness Concepts	3
SES 2437	Health Promotion	3
SES 2440	Exercise Physiology	4
SES 2441	Kinesiology	4
SES 2534	Sport Marketing	3

Please Note: **Units:**

Students are responsible for knowing and following all prerequisites. Self-selection of courses or other changes to the approved degree program may adversely affect degree progression/graduation. Consult with a Health & Human Services Advisor, Union Hall 477, to identify proper course selections for your intended Bachelor degree.

Total: 61

Basic Electrocardiography (EKG) Certificate

The EKG Certificate Program prepares students with entry-level skills to correctly perform the twelve lead EKG process, interpret various heart rhythms, and troubleshoot equipment. Students will be exposed to a clinical experience where students will complete a minimum of 16 clinical hours and 30 tracings. Students who complete this program will receive a certificate of completion.

Learning Outcome(s):

1. Position leads and operate electrocardiographic equipment correctly.
2. Obtain and prepare an electrocardiography recording for analysis by a physician.
3. Recognize and correct technical errors in an electrocardiography recording.

4. Provide safe, professional, direct patient contact, specifically in the areas of infection control, electrical safety, privacy and environmental safety.

First Semester **Units:** 3

MULT 1910	Basic Electrocardiography*	3

Milestone/Progress Check : • Course may be applied to Multi-Skilled Health Degree.

*A minimum grade of "C" or higher is required in all courses.

Total: 3

Health Care Manager Certificate

The U.S. healthcare system has changed and the focus isn't just on the delivery of patient care but also the role of taking care of the business of healthcare. Healthcare is ever expanding and the need for qualified individuals to help manage the impact of new technology and treatment processes is pertinent. The Healthcare management certificate is key in providing content that engages the student to develop and hone leadership, financial, team building, legal and risk management skills necessary to guide healthcare through the 21st century and beyond.

Learning Outcome(s):

1. Apply theories and principles of human resource management to real life health care situations.
2. Generate action plans, implementation activities, and evaluation processes to assure continuous quality improvement in health care institutions.
3. Apply strategies, processes and current trends in health care management.
4. Understand risk management and the underlying legal principles inherent in the health care system.

First Semester **Units:** 7

MULT 2070	HR Mgmt for Health Services*	2
MULT 2072	Health Care Resource Management*	2
BMGT 1101	Principles of Business*	3

*A minimum grade of "C" or higher is required in all courses.

Second Semester **Units:** 7

MULT 2074	TQM/UM/Accreditation*	2
MULT 2076	Legal Aspects and Risk Management*	2
CSCI 1101	Computer Concepts & Apps*	3

Total: 14

Pharmacy Technician Certificate

The Pharmacy Technician Program is an entry-level certificate program that prepares students with the knowledge and skills necessary for a career as a pharmacy technician. Students will learn how to prepare medications for dispensing, perform dosage calculations, adhere to state and federal regulations, provide excellent customer service skills, take inventory, and order supplies all while being exposed to real-world situations pharmacy facilities are faced with day to day.

Certificate Completion Requirement: All courses must be completed with a grade of "C" or higher.

Learning Outcome(s):

1. Demonstrate the ability to practice safely and professionally in pharmacy practice.
2. Apply proper customer service procedures related to professional communication, appearance, and knowledge of allowed duties when working under a licensed pharmacist in a variety of settings.
3. Demonstrate correct methods of dispensing medications from the start by correctly reading prescriptions, entering information into specialized software, preparing labels, counting medication, and dispensing the medication.
4. Demonstrate knowledge of the requirements for state registration and national certification, along with the required continuing education for continued registration.
5. Be prepared to take and pass the Pharmacy Technician Certification Examination (PTCE).

First Semester **Units:** 10

MULT 1500	Concepts for the Pharmacy Technician	4
MULT 1525	Calculations for the Pharmacy Technician	2
MULT 1550	Pharmacology for the Pharmacy Technician	2
MULT 1900	Pharmacy Technician Lab and Practicum I	2

Second Semester **Units:** 6

MULT 1805	Pharmacy Technician Seminar	1
MULT 1905	Community Pharmacy Practice Practicum	1
	Technical Elective (see course list) - minimum of 4 credits is required	4

Technical Elective Course List - minimum of 4 credits is required **Units:** 0

MULT 1110	Medical Terminology	2
MULT 1130	Responding to Emergencies	2
MULT 1115	Helping Skills Allied Hlth & Human Serv	3
MULT 1401	Integrated Healthcare	2
MULT 1402	Selfcare for Allied Health/ Human Service	2
HIMT 1121	Advanced Medical Terminology	2

Total: 16

Phlebotomy Certificate

The Phlebotomy Certificate Program is a NAACLS approved program that prepares students with entry-level skills to perform blood collections within a health care setting. Students will be exposed to a clinical experience where students will complete a minimum of 100 clinical hours and 100 venipunctures. Students who complete this program will receive a certificate of completion and be eligible to take the certification exam through the American Society of Clinical Pathology (ASCP).

Learning Outcome(s):

1. Demonstrate proficiency in all areas of phlebotomy-related, pre-analytical processes of laboratory testing, recognizing and adhering to infection control and safety policies and procedures.
2. Demonstrate the theoretical knowledge needed to assure quality of phlebotomy processes through appropriate quality control methods, thus contributing to the accuracy of laboratory test results.
3. Exhibit the professional attitudes and behaviors that are necessary for gaining and maintaining the confidence of the health care community.
4. Meet the requirements to take a national certifying examination for Phlebotomy Technicians.

First Semester **Units:** 7

MULT 1910	Basic Electrocardiography	3
MULT 1950	Phlebotomy*	4

Milestone/Progress Check: • CPR certification must be obtained by clinical placement

*A minimum grade of "C" is required.

Second Semester **Units:** 2

MULT 1160	Exploring Healthcare Professions	1
MULT 2950	Phlebotomy Practicum II**	1

**A minimum grade of "S" is required.

Total: 9

Nursing - Bachelor of Science Degree

Columbus State's Bachelor of Science in Nursing degree focuses on professionalism, leadership, evidence-based practice research, application of liberal education to practice, and the promotion of diversity, equity, and inclusion within the nursing workforce for improved care of the richly diverse population of central Ohio.

The program may be completed in five semesters or less, allowing for students to work at their own pace. Nursing classes are structured to promote student participation and learning through an asynchronous environment, with consistent communication with peers, and ongoing feedback from faculty instructors, to provide practice and reinforcement of professional writing and communication. Pre-admission criteria includes completion of a nationally nursing accredited ADN program (i.e., ACEN, CCNE, CNEA).

Students must have 34 ADN technical course semester credits, take 26 semester credit hours of BNUR nursing courses and must fulfill 60 semester credit hours of general education coursework.

Learning Outcome(s):

1. Utilize evidence-based practice in planning, implementing and evaluating outcomes of care.
2. Analyze trends in healthcare policy, finance and regulatory environments and their implications for healthcare access, equity, and affordability.
3. Apply relevant theories from nursing and related natural and behavioral sciences as a foundation for planning holistic care to enhance modify or support population focused health care in diverse patient populations.
4. Examine leadership styles that promote use of evidence-based interventions that enhance patient safety and quality improvement initiatives within the context of the interprofessional team.
5. Use basic organizational and systems leadership skills for patient safety and quality patient care.
6. Use effective interpersonal and interprofessional communication and collaboration to improve patient health outcomes.
7. Explore the impact of information and communication technologies on workflow processes and healthcare outcomes.
8. Exhibit professionalism and the inherent values of autonomy, human dignity, integrity, and social justice.

ADN Technical Completion Requirements **Units:** 34

Students transferring from an outside nationally accredited nursing program with less than 34 nursing technical credits will be required to take additional technical credits to meet the required 34 semester ADN technical hour requirement.

NURS 1140	Pharmacology Concepts in Nursing I	1
NURS 1871	Fundamental Concepts of Nursing Care	6
NURS 1141	Pharmacology Concepts in Nursing II	1
NURS 1873	Concepts of Nursing Care Related to Health Problems	8
NURS 2042	Concepts of Pharmacology III	1
NURS 2864	Concepts of Nursing Care Related to Children and Families	3

NURS 2866	Concepts of Nursing Care Related to Reproductive Health and the Newborn	3
NURS 2872	Nursing Care Behavioral Health Problems	3
NURS 2873	Ldrshp & Nsg Care Multiple Hlth Problms	8

First Semester **Units:** 12-13

BNUR 3100	Professionalism in Nursing	3
Select one of the BNUR XXXX required courses		3
ENGL 1100	Composition I	3
OR		
ENGL 1101	Composition 1W: Composition Workshop	3
Choose one course from the OT36 Mathematics and Logical Analysis category.		3-4

Second Semester **Units:** 13

Select one of the BNUR XXXX required courses	4
Select one of the BNUR XXXX required courses	3
Choose one course from the OT36 Intermediate Composition category.	3
Choose one course from the OT36 Social & Behavioral Sciences category.	3

Third Semester **Units:** 9

Select one of the BNUR XXXX required courses	3
Choose any course from the OT36 Social & Behavioral Sciences category.	3
Choose any course from the OT36 Historical Study category.	3

Fourth Semester **Units:** 9

Select one of the BNUR XXXX required courses	3
Select one of the BNUR XXXX required courses	3
Student may choose any course from the OT36 Natural Sciences category.	3

Fifth Semester **Units:** 10

BNUR 4110	Excellence in Nursing	4
Student may choose any course from the OT36 Natural Sciences category.		3
Student may choose any course from the OT36 Literature, Culture & Ideas, Visual/Performing Arts category.		3

BNUR XXXX Required Courses **Units:** 0

BNUR 3110	Health Assessment	3
BNUR 3120	Diversity and Inclusion in Nursing	3
BNUR 3130	Population Health	3
BNUR 3140	Evidence Based Nursing	4
BNUR 3150	Emerging Trends in Nursing and Healthcare	3
BNUR 4100	Leadership	3

Intermediate Composition - 3 semester credits required **Units:** 0

Student may choose any course from the OT36 Intermediate Composition category. The following courses are recommended.

ENGL 2367	Composition II	3
ENGL 2767	Comp II Writing About Science/Technology	3

Mathmatics and Logical Analysis - 3 semester credits required. **Units:** 0

Students may choose any course from the OT36 Mathmatics and Logical Analysis category. The following courses are recommended.

MATH 1123	Quantitative Reasoning	3
MATH 1148	College Algebra	4

Historical Study - 3 semester credits required **Units:** 0

Students may choose any course from the OT36 Historical Study category. The following course is recommended.

HIST 2716	History of Western Medicine, Disease and Public Health II	3

Social & Behavioral Sciences - 6 semester credits required **Units:** 0

Students may choose any course from the OT36 Social & Behanioral Sciences category. The following courses are recommended.

PSY 1100	Introduction to Psychology	3
PSY 2340	Human Growth and Development Over the Life Span	3
SOC 1101	Introduction to Sociology	3

Literature, Culture & Ideas, Visual/ Performing Arts - 3 semester credits required **Units:** 0

Students may choose any course from the OT36 Literature, Culture & Ideas, Visual/Performing Arts category. The following course is recommended.

PHIL 1130	Ethics	3

Natural Sciences Courses - 6 semester hours required. One course must have a lab. **Units:** 0

Students may choose any course from the OT36 Natural Sciences category. The following courses are recommended.

BIO 2215	Microbiology	4
BIO 2300	Human Anatomy	4
BIO 2301	Human Physiology	4

Additional BSN General Education requirements - To fulfill the degree requirements a student must complete 60 semester hours of General Education coursework. See the recommended courses below and select additional courses listed on the following website https://www.cscc.edu/academics/transfer/pdf/OT36%20Checklist.pdf to meet the 60 semester hour requirement. Utilize Degree Audit (accessible through CougarWeb) to determine how many additional credits are needed to achieve the overall 60 semester hours required. **Units:** 33-34

HNTR 1153	Nutrition for a Healthy Lifestyle	3
COMM 1105	Oral Communication	3
COMM 1110	Small Group Communication	3
STAT 1350	Elementary Statistics	3

Total: 120-122

Nursing AAS Degree

Columbus State's Associate Degree program in Nursing prepares graduates to provide health care services to clients of all ages located in a variety of settings in the community and home.

The program is sequential and integrates theory from biological and social sciences with reasoning and communication skills to develop a graduate who can think critically, solve problems, and communicate effectively. The program is completed in five semesters which includes one summer semester. Students who go out-of-sequence in the Nursing program may join the program sequence with a subsequent class, providing space is available and petitioning requirements are met. Students entering subsequent nursing classes will meet the catalog requirements for graduation in place for that class.

Nursing classes are structured to promote student participation and learning through lecture, seminar, laboratory practice, and clinical experiences. Students may enter through two routes. One route is for students who are a Practical Nurse, a Paramedic, or a Military Medic who may enter the advanced standing track and receive prior learning credit for some courses. The other route is for students without this previous education. Two program tracks are available: the traditional track and the blended track. In the traditional track, lecture and seminar activities take place on campus in the classroom. In the blended track, lecture and most seminar content are done using an online format, but as

with the traditional track, laboratory practice, clinical experiences, and some seminars will be hands on. These learning opportunities are designed to encourage the student to apply concepts and utilize critical thinking skills in the promotion, maintenance, and restoration of health of clients. Students learn to work collaboratively with other health team members within the health care delivery system.

Students take 34 credit hours of nursing courses and 30 credit hours of general education and basic education requirements. Students participate in 4–16 hours of clinical experience each week in a variety of health care settings under the direction of a registered nurse.

Students who successfully complete the associate degree program are qualified to apply to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN). In Ohio, licensure from the Ohio Board of Nursing is needed for employment as a registered nurse. The Nursing program at Columbus State is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, Georgia 30326, (404-975-5000), www.acenursing.org and is approved by the Ohio Board of Nursing.

Students may apply to only one track per application period. All admission criteria must be met and on file either prior to or submitted with their application. Information about the admission criteria, application dates and admission process are posted on the Nursing Departmental Homepage: www.cscc.edu/nursing. Applicants should review Standards Essential for Nursing Students prior to applying to the Nursing Program. These are located on the Nursing Departmental Homepage.

Learning Outcome(s):

1. Implement safe patient centered care in the professional role of the registered nurse.
2. Utilize nursing judgement, supported by best current evidence and quality improvement measures in providing nursing care for patients across the lifespan.
3. Collaborate effectively with patient ,family, nursing and intraprofessional team.
4. Apply informatics and technology to communicate and manage patient care.

First Semester **Units:** 14

NURS 1140	Pharmacology Concepts in Nursing I	1
NURS 1871	Fundamental Concepts of Nursing Care	6
COLS 1100	First Year Experience Seminar	1
NURC 1104	Basic Care Skills	2
BIO 2300	Human Anatomy	4

Milestones/Progress Check: • Students are participating in their 1st clinical experience practicing assessment skills and administering oral medications.

Second Semester **Units:** 13

NURS 1141	Pharmacology Concepts in Nursing II	1
NURS 1873	Concepts of Nursing Care Related to Health Problems	8
BIO 2301	Human Physiology	4

Third Semester **Units:** 12

Technical Course Requirement - 1 course (3 credits) needed. Select from NURS 2864 or NURS 2866 or NURS 2872.		3
ENGL 1100	Composition I	3
PSY 1100	Introduction to Psychology	3
Basic Related Elective - must complete 3 credit hours		3

Fourth Semester **Units:** 13

NURS 2042	Concepts of Pharmacology III	1
Technical Course Requirement - 2 courses (3 credits each) needed. Select from NURS 2864 or NURS 2866 or NURS 2872.		6
PSY 2340	Human Growth and Development Over the Life Span	3
STAT 1350	Elementary Statistics	3

Fifth Semester **Units:** 12

NURS 2873	Ldrshp & Nsg Care Multiple Hlth Problms	8
BIO 2215	Microbiology	4

Milestones/Progress Check: • An NCLEX predictor test is given with remediation assigned at the beginning of the semester; then a repeat of the predictor test is given at the end of the semester. • Attendance at a live 3-day review session to prepare for the NCLEX licensure exam.

Basic Related Elective List - must complete 3 credit hours **Units:** 0

CHEM 1113	Elements of Organic/ Biochemistry	4
CHEM 1200	Intro to General & Organic Chemistry	5
COMM 1105	Oral Communication	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HNTR 1153	Nutrition for a Healthy Lifestyle	3
HUM 1270	Comparative Religions	3
MATH 1148	College Algebra	4
PHIL 1130	Ethics	3
SOC 1101	Introduction to Sociology	3
CHEM 1111	Elementary Chemistry I	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
PSY 2331	Psychopathology	3
ENGL 2367	Composition II	3

Total: 64

Practical Nursing (LPN) Certificate Program

The Practical Nursing Certificate program is a Full-time evening and weekend program and a full-time day program designed to prepare graduates to provide health care to clients of various ages in a variety of health care settings. The program is designed as a career path for entry-level patient care providers. Nursing assistants and patient care assistants can continue their education in the PN certificate program and become licensed practical nurses after

The Practical Nursing Certificate program is sequential and it helps students to develop communication, critical thinking, and problem-solving skills. Nursing courses are structured to promote student learning through lecture, laboratory, clinical, seminar, simulation and practicum experiences. All students are required to purchase the HESI online learning systems program, a comprehensive tutorial and testing package that is used throughout the program, as well as the HESI e-book package. Learning opportunities are designed to apply practical nursing concepts in the promotion, maintenance and restoration of health for clients. Students learn to work collaboratively with other health team members in the health care delivery system.

Students take 24 hours of Practical Nursing courses and 15 hours in arts and sciences for a total of 39 credits. Students will participate in clinical experiences in a variety of health care settings under the direction of a registered nurse. A comprehensive predictor exam will be given during the last semester of the program.

Students who successfully complete the Practical Nursing Certificate program are qualified to apply to take the National Council Licensure Examination for Practical Nurses (NCLEX- PN). The program is approved by the Ohio Board of Nursing. In Ohio, licensure from the Ohio Board of Nursing is required for employment.

Learning Outcome(s):

1. Implement safe, patient centered care in the professional role of the Practical Nurse.
2. Utilize nursing judgement; supported by best current evidence and quality improvement measures in providing nursing care for patients across the lifespan.
3. Collaborate effectively with patient, family, nursing and inter-professional team.
4. Apply informatics and technology to communicate and manage patient care.

First Semester **Units:** 11

PNUR 1100	Practical Nursing Fundamentals	2
PNUR 1102	Patient Care Skills	3
PNUR 1200	Mental Health Concepts for the PN	2
BIO 2300	Human Anatomy	4

Milestones/Progress Check: • Achievement of a 90% or better on the dosage calculation test. • Prior to second semester, students must complete specific requirements for health records and CPR.

Second Semester **Units:** 9

PNUR 1300	Pharmacology I for the Practical Nurse	2
PNUR 1766	PN Health Promotion & Restoration I	2
PNUR 1866	PN Health Promo & Rest I Clinical	1
BIO 2301	Human Physiology	4

Milestones/Progress Check: • Achievement of a 90% or better on the dosage calculation test. • Successful completion of clinicals required to progress in the program.

Third Semester **Units:** 6

PNUR 1400	Pharmacology II For the Practical Nurse	2
PNUR 1767	Concepts Rel to Health Promo/Rest II	2
PNUR 1867	PN Hlth Promo & Restoration Clinical II	2

Milestones/Progress Check: • Achievement of a 90% or better on the PNUR 1400 dosage calculation test. • Successful completion of clinicals required to progress in the program. • Successful completion of clinicals required to progress in the program.

Fourth Semester **Units:** 10

PNUR 1900	PN Transition to Practice	2
PNUR 1906	PN Transition to Practice Practicum	1
PNUR 1765	PN Maternal/Child Care	3
PNUR 1865	PN Maternal/Child Clinical	1
ENGL 1100	Composition I	3

Milestones/Progress Check: • An NCLEX predictor test is given with assigned remediation at the beginning of the semester; then a repeat of the predictor test is given at the end of the semester. • Attendance at a live two day review session to prepare for

Total: 36

Patient Care Assistant Certificate

The Patient Care Assistant certificate/course is designed to instruct students in the knowledge and skills needed to provide nursing care for patients in an acute care setting and/or a skilled rehabilitation unit. The course is an expansion of the curriculum content and skills that are within the state approved Nurse Aide Training Program. The curriculum includes information related to communication, infection control, and safety practices within the acute care setting and/or the skilled care unit. Students learn additional skills related to the measurements of vital signs, nutrition/intake, and elimination/output. Basic skin and wound care, specimen collection, telemetry and oxygen delivery are taught. In addition, the expanded role of the patient care assistant includes the care of: patients following surgery; patients receiving rehabilitation and restorative services; obstetrical patients and neonates; and the pediatric patient.

Learning Outcome(s):

1. Communicate effectively as a Patient Care Assistant (PCA) in the acute care and/or skilled care setting.
2. Demonstrate principles of medical and surgical asepsis.

3. Demonstrate safe patient care in the acute care and/or skilled care setting.
4. Demonstrate basic care skills necessary for diverse populations in specialized areas.

First Semester **Units:** 3 Total: 3

NURC 1003	Patient Care Assistant:Acute Care Focus	3

Nurse Aide Training Program Certificate

The Nurse Aide Training Program is designed to instruct the student in the knowledge and skills needed to provide basic care for patients in the long-term care setting. Because this is a skills based course, classroom, clinical and laboratory attendance is mandatory.

This course is recognized by the Ohio Department of Health as a State Approved Nurse Aide Course. The student who successfully completes the class with a grade of "C" or better will receive a "certificate of class completion" and will be eligible to take the state test for nurse aides. This standard is mandated by the Ohio Administrative Code (3701-18-13).

Learning Outcome(s):

1. Communicate effectively in the health care setting.
2. State and demonstrate principles of medical asepsis and standard precautions..
3. Identify and demonstrate the principles of safe resident care.
4. Discuss and demonstrate basic nursing care skills.
5. Meet requirements set forth in the Omnibus Budget Reconciliation Act of 1987.
6. Meet eligibility requirements needed to take the state test for nurse aides.

First Semester **Units:** 3 Total: 3

NURC 1001	Nurse Aide Training Program	3

Train the Trainer Nurse Aide Certificate

This certificate/course prepares the qualified nurse to teach, coordinate, and supervise a Nurse Aide Training Program and meets federal and state requirements.

Learning Outcome(s):

1. Teach, coordinate, and supervise a Nurse Aide Training Program.
2. Meet the requirements established by the Ohio Department of Health.

First Semester **Units:** 2

NURC 1250	Train the Trainer Program	2	Total: 2

Paralegal Studies AAS Degree

Due to the explosive growth of legal services now being requested in all sectors of our economy, there is a continuous demand for well-trained personnel in all facets of the legal process. The need for paralegals is so great that it is estimated that one paralegal will assist every three or four attorneys, and, in some areas of practice, such as corporate legal departments, there will be one paralegal hired for every attorney.

The nature of the paralegal's position in the legal community requires individuals with a well-rounded educational background.

Critical thinking and excellent communication skills are essential competencies of a paralegal and are included in courses in English, mathematics, humanities, social science, and basic science.

The technical curriculum has been designed to provide students with knowledge and skills in the role of a legal assistant, ethical requirements, legal research, analysis, the preparation of legal documents, litigation practice and procedure, real estate transactions, family law, administrative law, criminal law, and probate law and practice.

Paralegals have traditionally been utilized in legal environments that are intensive in both client contact and document preparation.

NOTE: Paralegals may not sign legal documents, appear in court, or give legal advice. All activities in legal matters must be supervised by a licensed attorney.

Learning Outcome(s):

1. Employ Substantive and Procedural Knowledge to Analyze Legal Problems
2. Recognize and Adhere to Legal Ethical Standards
3. Proficiently Apply Legal Technologies
4. Effectively Communicate in Oral and Written Forms, and Interpersonally
5. Consistently Demonstrate Behaviors Valued in the Legal Field

First Semester **Units:** 13

LEGL 1101	Intro to Paralegal Studies & Ethics	3
LEGL 1102	Law Office Technology	3
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
MATH 1104	Mathematical Concepts for Business	3
OR		
STAT 1350	Elementary Statistics	3

Second Semester **Units:** 12

LEGL 1105	Torts and Contracts	3
LEGL 1111	Research and Writing	3
CSCI 1101	Computer Concepts & Apps	3
ENGL 2367	Composition II	3
OR		
ENGL 2567	Comp II Writing about Gender & Identity	3
OR		
ENGL 2667	Comp II American Working-Class Identity	3
OR		
ENGL 2767	Comp II Writing About Science/Technology	3

Milestone/Progress Check: • Students who complete LEGL 1111 are eligible to take LEGL 2012 Advanced Legal Research.

Third Semester **Units:** 13

LEGL 2024	Business Organizations	3
LEGL 2026	Administrative Law	3
BIO 1127	Introduction to Environmental Science	4
SOC 1101	Introduction to Sociology	3
OR		
SOC 2380	American Race & Ethnic Relations	3

Fourth Semester **Units:** 13

LEGL 2005	Civil Practice & Procedure	3
LEGL 2012	Advanced Legal Research	3
LEGL-XXXX (Technical Elective)		2
LEGL-XXXX (Technical Elective)		2
COMM 1105	Oral Communication	3
OR		
COMM 1110	Small Group Communication	3

Milestones/Progress Check: • Through technical electives students are given the opportunity to focus on specific areas of interest within the paralegal profession. • Students complete Application for Practicum in preparation of the practicum experience- LEGL 2815.

Fifth Semester **Units:** 13

LEGL 2014	Family Law	3
LEGL 2815	LEGL Practicum & Seminar	2
LEGL-XXXX (Technical Elective)		2
HUM-XXXX (select from approved GE-HUM list)		3
PSY 1100	Introduction to Psychology	3

Technical Electives - 6 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

Litigation: **Units:** 0

LEGL 2010	Criminal Law & Procedure	3
LEGL 2015	Electronic Discovery	3
LEGL 2038	Insurance Law	2
LEGL 2043	Alternative Dispute Resolution	3

Technology: **Units:** 0

LEGL 2050	Intellectual Property	3
LEGL 2051	Computer Assisted Legal Research	2

General Practice: **Units:** 0

LEGL 2018	Probate Law	3
LEGL 2019	Real Estate	3
LEGL 2023	Immigration Law	3
LEGL 2029	Certified Paralegal Exam Review	3
LEGL 2044	Debtor/Creditor Relations	2

Alternative Dispute Resolution: **Units:** 0

LEGL 2043	Alternative Dispute Resolution	3
LEGL 2072	Mediation	2
LEGL 2194	SPT: Paralegal Studies	1-3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

Total: 64

Paralegal Studies Certificate (Post Baccalaureate Option)

The Paralegal Studies Certificate (Post Baccalaureate Option) is designed for persons who currently possess a bachelor's, master's, or doctoral degree.

NOTE: Paralegals may not sign legal documents, appear in court, or give legal advice. All activities in legal matters must be supervised by a licensed attorney.

Learning Outcome(s):

1. Employ Substantive and Procedural Knowledge to Analyze Legal Problems
2. Recognize and Adhere to Legal Ethical Standards
3. Proficiently Apply Legal Technologies
4. Effectively Communicate in Oral and Written Forms, and Interpersonally
5. Consistently Demonstrate Behaviors Valued in the Legal Field

First Semester **Units:** 12

LEGL 1101	Intro to Paralegal Studies & Ethics	3
LEGL 1102	Law Office Technology	3
LEGL 1105	Torts and Contracts	3
LEGL 1111	Research and Writing	3

Second Semester **Units:** 9

LEGL 2012	Advanced Legal Research	3
LEGL 2024	Business Organizations	3
LEGL 2026	Administrative Law	3

Third Semester **Units:** 8-9

LEGL 2005	Civil Practice & Procedure	3
LEGL 2014	Family Law	3
LEGL-XXXX (Technical Elective)		2-3

Fourth Semester **Units:** 4-5

LEGL 2815	LEGL Practicum & Seminar	2
LEGL-XXXX (Technical Elective)		2-3

Milestone/Progress Check: • A total of sixsemester hours of technical electives are required to complete the certificate program.

Technical Electives - 4 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

LEGL 2010	Criminal Law & Procedure	3
LEGL 2015	Electronic Discovery	3
LEGL 2018	Probate Law	3
LEGL 2019	Real Estate	3
LEGL 2023	Immigration Law	3
LEGL 2029	Certified Paralegal Exam Review	3
LEGL 2038	Insurance Law	2
LEGL 2043	Alternative Dispute Resolution	3
LEGL 2050	Intellectual Property	3
LEGL 2072	Mediation	2

Total: 33-35

Real Estate AAS Degree

The Associate Degree program in Real Estate offers course work that meets the standards of professionalism in the real estate industry. The program follows a blueprint for real estate education developed by the Ohio Association of Realtors®. Courses meet the educational requirements for real estate licensure in the State of Ohio.

The program meets the career objective of persons interested in real estate sales or other allied real estate professions. For licensed real estate brokers and sales associates, it provides training to upgrade their professional competence and to meet future educational requirements of the profession. For students who plan to continue their education beyond the associate degree, it offers credit courses that may transfer to some four-year colleges and universities.

Prospective real estate students who plan to take the real estatelicensing exam are more successful when they take courses
as shown in the plan of study.

Learning Outcome(s):

1. Demonstrate understanding of key principles and concepts involved in a real estate transaction.
2. Prepare and present correctly all forms necessary to complete a real estate transaction.
3. Create effective promotional plans to market property.

4. Identify and explain different construction materials.
5. Apply one of three appraisal techniques to the evaluation of a residential or commercial property.
6. Manage a real estate property sales force effectively.
7. Apply relevant formulas and microcomputer applications to the practice of real estate.
8. Effectively apply current technology to real estate activity.

First Semester **Units:** 15

COLS 1100	First Year Experience Seminar	1
CSCI 1101	Computer Concepts & Apps	3
ENGL 1100	Composition I	3
MATH 1104	Mathematical Concepts for Business	3
REAL 1011	Real Estate Principles and Practices	3
REAL 1013	Real Estate Finance	2

Milestone/Progress Check: • Transfer application preparation (optional).

Second Semester **Units:** 15

ACCT 1211	Financial Accounting	3
COMM 1105	Oral Communication	3
OR		
COMM 2200	Business Communication	3
REAL 1012	Real Estate Law	3
REAL 1014	Real Estate Appraisal	2
REAL 1221	Residential Sales Practices	2
REAL 2270	Introduction to Real Estate Investing	2

Third Semester **Units:** 16

FMGT 2201	Corporate Finance	3
HUM-XXXX (select from approved GE-HUM list)		3
LEGL 2064	Legal Environment of Business	3
MKTG 1230	Customer Service & Sales	3
REAL 2250	Commercial Real Estate	2
REAL 2221	Professional Property Management	2

Milestone/Progress Check: • Completion of coursework prepares the student for the Ohio Brokers Exam. To become a broker, they also need to be involved in several real estate transactions. See com.ohio.gov/documents/real RequirementsBrokersLicense.pdf.

Fourth Semester **Units:** 15

ECON 1110	Intro to Economics	3
BMGT 1210	21st Century Supervision	3
HRM 1121	Human Resources Management	3
REAL 2220	Real Estate Ethics & Etiquette	2
REAL 2275	Introduction to Property Renovation	2
REAL 2950	Real Estate Seminar/ Practicum	2

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

Total: 61

Real Estate Pre-Broker Certificate

The Real Estate Pre-Broker Certifi ate program would help prepare students and current license real estate agents interested in obtaining their Real Estate Broker's License. These courses satisfied the required classroom hours to qualify for the Real Estate Broker Exam. This course work is approved by the Ohio Department of Commerce Division of Real Estate & Professional Licensing and meets all requirements needed to be able to sit for the state broker's licensing exam.

First Semester **Units:** 10

REAL 1011	Real Estate Principles and Practices	3
REAL 1013	Real Estate Finance	2
REAL 1012	Real Estate Law	3
REAL 1014	Real Estate Appraisal	2

Second Semester **Units:** 12

HRM 1121	Human Resources Management	3
LEGL 2064	Legal Environment of Business	3
FMGT 2201	Corporate Finance	3
ECON 1110	Intro to Economics	3

Total: 22

Real Estate Pre-Licensure Certificate

This certificate program helps to prepare students interested in entering the real estate industry to earn their Ohio real estate license. The coursework is approved by the Ohio Board of Real- tors® and meets all classroom requirements needed to be able to sit for the state licensing exam.

Learning Outcome(s):

1. Demonstrate understanding of key principles and concepts involved in a real estate transaction.
2. Prepare and present correctly all forms necessary to complete a real estate transaction.
3. Qualify to take the state licensing exam.

First Semester **Units:** 5

REAL 1011	Real Estate Principles and Practices	3
REAL 1013	Real Estate Finance	2

Second Semester **Units:** 5

REAL 1012	Real Estate Law	3
REAL 1014	Real Estate Appraisal	2

*Students may not audit pre-licensure courses.
**Pre-licensure courses are not available for Good as Gold program.

Total: 10

Real Estate Professional Certificate

This certificate program helps to prepare students interested in entering the real estate industry to earn their Ohio real estate license and begin the course work to become a successful professional. The course work is approved by the Ohio Board of Realtors and meets all classroom requirements needed to be able to sit for the state licensing exam and add three additional Real Estate classes deemed critical by top professionals in the field.

Learning Outcome(s):

1. Demonstrate understanding of key principles and concepts involved in a real estate transaction.
2. Prepare and present correctly all forms necessary to complete a real estate transaction.
3. Describe and perform basic property renovation skills required to upgrade homes for resale.
4. Discuss and display the skills and ethics necessary to close a consumer real estate transaction.
5. Qualify to take the state licensing exam.

First Semester **Units:** 9

REAL 1011	Real Estate Principles and Practices	3
REAL 1013	Real Estate Finance	2
REAL 1014	Real Estate Appraisal	2
REAL 2275	Introduction to Property Renovation	2

Second Semester **Units:** 7

REAL 1012	Real Estate Law	3
REAL 1221	Residential Sales Practices	2
REAL 2220	Real Estate Ethics & Etiquette	2

Total: 16

Real Estate Property Management Certificate

The Real Estate Property Management Certificate would help prepare students for entry level positions into property management. The emphasis shall be on the practical application of actual management problems. Specifi topics include the Ohio Tenant Landlord Act, forcible entry and detainer, typical leases, office management, advertising, collection problems and maintenance.

Learning Outcome(s):

1. Apply appropriate technology as needed within the property management business.
2. Demonstrate understanding of key principles and concepts involved in property management.
3. Examine current market and develop a marketing program.
4. Promoting the management company and how fees are determined.
5. Criteria for establishing rental rates, maintenance schedules, and safety and security.
6. Managing residential rental housing and maintenance issues.

First Semester **Units:** 9

REAL 1011	Real Estate Principles and Practices	3
REAL 1012	Real Estate Law	3
COMM 1105	Oral Communication	3

Second Semester **Units:** 9

BMGT 1210	21st Century Supervision	3
CSCI 1101	Computer Concepts & Apps	3
ACCT 1211	Financial Accounting	3

Third Semester **Units:** 9

REAL 2221	Professional Property Management	2
REAL 2270	Introduction to Real Estate Investing	2
REAL 2275	Introduction to Property Renovation	2
HRM 1121	Human Resources Management	3

Total: 27

Respiratory Care AAS Degree

Respiratory therapists are life support specialists concerned with managing, controlling and treating problems related to the cardiopulmonary system. Practicing under the direction of a physician, the

respiratory therapist is responsible for providing all respiratory care therapeutic treatments and diagnostic procedures. In addition, they consult with physicians, nurses, and other members of the health care team to help develop and modify patient care plans.

Respiratory care takes place in such settings as intensive care units, the newborn nursery, surgical and medical units, emergency departments, outpatient departments, sleep laboratories, and home health facilities. The complexity of the respiratory therapist's responsibility requires extensive training, dedication and professionalism.

In addition to classroom learning, students enrolled in the Respiratory Care program gain hands-on experience while working in area health care facilities, under the supervision of qualified instructors. These clinical experiences teach students to apply their knowledge and skills in actual work environments.

Columbus State's program is accredited by the Commission on Accreditation for Respiratory Care. Graduates are eligible to sit for the Therapist Multiple Choice Examination offered by the National Board for Respiratory Care (www.nbrc.org).

In Ohio, licensure from the Ohio Medical Board is required for employment. Graduates are eligible to become licensed as a Respiratory Care Practitioner by the Ohio Medical Board after obtaining the Registered Respiratory Therapist credential. (http://med.ohio.gov/).

Learning Outcome(s):

1. Demonstrate the ability to collect and evaluate patient data; and recommend procedures to obtain additional data.
2. Demonstrate the ability to correctly assemble, use and maintain respiratory care equipment using principles of infection control and quality assurance.
3. Initiate, conduct, and independently modify prescribed therapeutic procedures and recommend modifications based on patient response.
4. Demonstrate personal and professional behaviors required for successful employment.

First Semester **Units:** 15

RESP 1110	Introduction to Respiratory Care	2
RESP 1220	Cardiopulmonary A&P	3
ENGL 1100	Composition I	3
COLS 1100	First Year Experience Seminar	1
BIO 2300	Human Anatomy	4
MULT 1110	Medical Terminology	2

Second Semester **Units:** 15

RESP 1230	Respiratory Pharmacology	2
RESP 1861	Intro to the Clinical Experience	1
RESP 2472	Respiratory Equipment	2
CHEM 1113	Elements of Organic/ Biochemistry	4
BIO 2301	Human Physiology	4
MULT 1130	Responding to Emergencies	2

Milestone/Progress Check: • 1st Clinical experience in hospital setting.

Third Semester **Units:** 13.5

RESP 1360	Therapeutic Procedures I	4
RESP 1862	Clinical Practice I	1.5
RESP 2442	Pulmonary Diagnostics	2
RESP 2452	Respiratory Pathophysiology	3
RESP 2482	Neonatal Pediatric Respiratory Care	3

Milestone/Progress Check: • Students obtain their NRP certification.

Fourth Semester **Units:** 12.5

RESP 2462	Therapeutic Procedures II	4
RESP 2870	Clinical Practice II	1.5
BIO 2215	Introduction to Microbiology	4
STAT 1350	Elementary Statistics	3

Fifth Semester **Units:** 9

RESP 2530	Therapeutic Procedures III	3
RESP 2890	Clinical Practice III	1.5
RESP 2950	Clinical Practicum	1.5
SOC 1101	Introduction to Sociology	3

Milestone/Progress Check: • Obtain ACLS certification.

Total: 65

Skilled Trades Technology - Carpentry Major AAS

Skilled Trades Technology - Electrician Major AAS

Skilled Trades Technology - Facilities Maintenance Major AAS

The Skilled Trades Associate Degree Program in Facilities Maintenance prepares individuals for careers in technical jobs sup porting the maintenance, upkeep, and light repair of residential, commercial, and multi-family properties. Facilities maintenance requires that employees have a broad range of knowledge and skills across multiple trades. The technical coursework in this program provides education and training in five technical skill areas: welding, carpentry, electricity, plumbing, and heating/air conditioning. In addition, to the technical theoretical knowledge coursework, students will study non-technical coursework needed to provide the necessary support of this technical degree.

Area facilities managers have been consulted and involved in the development of this program. Its goal is to prepare entry-level workers and to provide opportunities for developmental training of current employees within this growing industry.

Learning Outcome(s):

1. Apply underlying theories and principles that are foundational to the trade that they have chosen
2. Understand the role and function of the skilled trades in the construction industry
3. Discriminate the work they perform and how it interrelates with the other trades in the overall scope of a construction project
4. Read, interpret, and follow construction drawings.
5. Demonstrate skills and proper work practices in all building, renovation, or repair activities.
6. Demonstrate the use of proper safety procedures in all activities
7. Apply current industry-specific building codes in the planning and execution of work
8. Be qualified and prepared to become a lead worker and/or mentor to others on construction and maintenance jobsites.

First Semester **Units:** 17

SKTR 1110	Electrical: Fundamentals	2
SKTR 1120	Carpentry: Fundamentals	2
SKTR 1140	Plumbing: Introduction to Supply Systems	2
SKTR 1180	Welding: Introduction to Stick	2
ARCH 1100	Basic Manual Drafting	1
COLS 1100	First Year Experience Seminar	1
CSCI 1101	Computer Concepts & Apps	3
ENGL 1100	Composition I	3
ESSH 1170	OSHA 10Hr Gen Ind Safety & Health	1

Second Semester **Units:** 17

SKTR 1101	Survey of the Construction Industry	2
SKTR 1310	Electrical: Wiring I	2
SKTR 1320	Carpentry: Structural Framing I	2
SKTR 1340	Plumbing: Introduction to Dwv Systems	2
HVAC 1140	Principles of Refrigeration	3
CMGT 1121	Construction Drawings	3
ESSH 1101	Intro to Environ Science, Safety, Health	3

Third Semester **Units:** 17

SKTR 1300	Const Industry Employability Skills	2
SKTR 2010	Electrical: Wiring II	2
SKTR 2020	Carpentry: Structural Framing II	2
SKTR 2040	Plumbing:Intermediate Supply & DWV Syst	2
HUM-XXXX (select from approved GE-HUM list)		3
COMM 1105	Oral Communication	3
OR		
COMM 1110	Small Group Communication	3
COMM 2204	Technical Writing	3

Milestone/Progress Check: • Students planning to continue into Franklin University's bachelor's degree program (or other similar programs) should take ECON 2200 for their Social and Behavioral Science requirement. ECON 2200 satisfies both our SBS requirement as well as the SBS requirement at Franklin and in the Ohio Transfer Module.

Fourth Semester **Units:** 14

SKTR 2110	Electrical: Repair and Service Practices	2
SKTR 2120	Carpentry: Interior/Exterior Finish Syst	2
SKTR 2140	Plumbing: Repair and Service Practices	2
SKTR-XXXX Advanced Studies		2
SBS-XXXX (select from approved GE-SBS list)		3
MATH 1101	Math Construction Sciences/ Applied Tech	3

Advanced Studies - General **Units:** 0

The following courses are approved for Advanced Studies requirements:

EMEC 1250	Motors and Control Logic	4
EMEC 1251	Control Logic and PLC's I	4
SKTR 1894	Special Topics Skilled Trades I	1-4
SKTR 2894	Special Topics in Skilled Trades III	1-4

Advanced Studies - Carpentry **Units:** 0

SKTR 1520	Carpentry: Steel Framing Construction	2

Advanced Studies - Electrical **Units:** 0

SKTR 1510	Electrical:low Volt Systems I	2
SKTR 2210	Electrical: Photovoltaic Systems	3
SKTR 2410	Electrical: NFPA 70E Workplace Safety	1
SKTR 2710	Electrical: NEC&Electrical Contracting	4

Advanced Studies - Welding **Units:** 0

SKTR 1280	Welding: Oxyfuel Methods and Plasma Cutt	2
SKTR 1380	Welding: Introduction to MIG	2
SKTR 1470	Welding: Layout & Fit Up	2
SKTR 1480	Welding: Specifications and Drawings	2
SKTR 1570	Welding: Codes & Inspection	2
SKTR 1580	Welding: Introduction to TIG Process	3
SKTR 1670	Welding: Metallurgy	2
SKTR 1675	Welding: Basic of Principles NDT	2
SKTR 1770	Welding: GTAW PLATE	3
SKTR 2070	Welding: GTAW PIPE I	3
SKTR 2080	Welding: Intermediate Stick MIG	2
SKTR 2180	Welding: Intermediate Applications I	2
SKTR 2185	Welding: Intermediate Applications II	2
SKTR 2280	Welding: Intermediate V Groove & Pipe	3
SKTR 2370	Welding: SMAW PIPE I	3
SKTR 2470	Welding: SMAW PIPE II	3
SKTR 2570	Welding: GMAW PIPE I	3
SKTR 2670	Welding: FCAW PIPE I	3
SKTR 2780	Welding Certification Preparation I	1

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3

HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 65

Skilled Trades Technology - Millwright Major AAS

Skilled Trades Technology - Operating Engineer Major AAS

Skilled Trades Technology - Sheet Metal Major AAS

Skilled Trades Technology - Welding Major AAS

The Skilled Trades Associate Degree Program in Welding prepares individuals for careers in technical jobs supporting the welding industry. Students studying this major will acquire knowledge and skills that qualify them for commercial, industrial, and manufacturing jobs. Students will be trained in SMAW, OFW, PAC, GMAW, FCAW and GTAW for both round and flat work. Student's successfully completing their degree will also have the opportunity to earn up to a LEVEL II Advanced Welder Certification through the American Welding Society.

Learning Outcome(s):

1. Apply underlying theories and principles that are foundational to the trade that they have chosen
2. Understand the role and function of the skilled trades in the construction industry
3. Discriminate the work they perform and how it interrelates with the other trades in the overall scope of a construction project
4. Read, interpret, and follow construction drawings.
5. Demonstrate skills and proper work practices in all building, renovation, or repair activities.
6. Demonstrate the use of proper safety procedures in all activities
7. Apply current industry-specific building codes in the planning and execution of work
8. Be qualified and prepared to become a lead worker and/or mentor to others on construction and maintenance jobsites.

First Semester **Units:** 17

COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
SKTR 1101	Survey of the Construction Industry	2
ENGT 1115	Engineering Graphics	3
SKTR 1180	Welding: Introduction to Stick	2
SKTR 1280	Welding: Oxyfuel Methods and Plasma Cutt	2
SKTR 1300	Const Industry Employability Skills	2
SKTR 1380	Welding: Introduction to MIG	2

Second Semester **Units:** 16

MATH 1101	Math Construction Sciences/ Applied Tech	3
ARCH 1100	Basic Manual Drafting	1
SKTR 1285	Welding: Automation	4
SKTR 1470	Welding: Layout & Fit Up	2
SKTR 1480	Welding: Specifications and Drawings	2
SKTR 1670	Welding: Metallurgy	2
SKTR 2080	Welding: Intermediate Stick MIG	2

Third Semester **Units:** 17

CSCI 1101	Computer Concepts & Apps	3
CMGT 1121	Construction Drawings	3
COMM 1105	Oral Communication	3
OR		
COMM 1110	Small Group Communication	3
ESSH 1160	OSHA 10 Hr Construction Safety & Health	1
SKTR 1570	Welding: Codes & Inspection	2
SKTR 1580	Welding: Introduction to TIG Process	3
SKTR 2180	Welding: Intermediate Applications I	2

Milestone/Progress Check: • Students planning to continue into Franklin University's bachelor's degree program (or other similar programs) should take ECON 2200 for their Social and Behavioral Science requirement. ECON 2200 satisfies both our SBS requirement as well as the SBS requirement at Franklin and in the Ohio Transfer Module.

Fourth Semester **Units:** 15

ESSH 1101	Intro to Environ Science, Safety, Health	3
ARCH 1120	Basic CAD Drafting	1
SKTR-XXXX (Technical Elective)		3
HUM-XXXX (select from approved GE-HUM list)		3
SBS-XXXX (select from approved GE-SBS list)		3
SKTR 2185	Welding: Intermediate Applications II	2

Technical Electives - 3 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

SKTR 1675	Welding: Basic of Principles NDT	2
SKTR 1770	Welding: GTAW PLATE	3
SKTR 2070	Welding: GTAW PIPE I	3
SKTR 2280	Welding: Intermediate V Groove & Pipe	3
SKTR 2370	Welding: SMAW PIPE I	3
SKTR 2470	Welding: SMAW PIPE II	3
SKTR 2570	Welding: GMAW PIPE I	3
SKTR 2670	Welding: FCAW PIPE I	3
SKTR 2780	Welding Certification Preparation I	1

HUM - GE Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3

ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

Total: 65

Construction Trades Carpenter ATS

Construction Trades Electrician ATS

Construction Trades Equipment Operator ATS

Construction Trades HVAC Technician ATS

Construction Trades Low Volt Specialist ATS

Construction Trades Plumber ATS

Construction Carpentry Certificate

Construction Electrician Journeyman Certificate

Construction Heavy Equipment Certificate

Construction HVAC Certificate

Low Volt Technician Certificate

Facilities Maintenance Certificate

This short-term certificate program prepares students for employment as entry-level maintenance workers. The program can be completed in as little as three semesters. Since the certificate shares coursework with the associate degree program, graduates have the options of immediately entering the workforce, continuing on at Columbus State to complete the Associate Degree in Facilities Maintenance, or doing both, now or in the future.

First Semester **Units:** 11

SKTR 1110	Electrical: Fundamentals	2
SKTR 1120	Carpentry: Fundamentals	2
SKTR 1140	Plumbing: Introduction to Supply Systems	2
SKTR 1180	Welding: Introduction to Stick	2
HVAC 1140	Principles of Refrigeration	3

Second Semester **Units:** 11

SKTR 1310	Electrical: Wiring I	2

SKTR 1320	Carpentry: Structural Framing I	2
SKTR 1340	Plumbing: Introduction to Dwv Systems	2
SKTR 1380	Welding: Introduction to MIG	2
HVAC 1150	Instrumentation/ Combustion Process	3

Third Semester **Units:** 6.5

SKTR 2010	Electrical: Wiring II	2
SKTR 2020	Carpentry: Structural Framing II	2
SKTR 2040	Plumbing:Intermediate Supply & DWV Syst	2
MULT 1140	Adult & Pediatric CPR	0.5
		Total: 28.5

Carpentry Module Certificate (Facilities Maintenance)

The Module Certificates are a great way for students to focus on a single skill set and earn a college certificate. In combination, the modules can be applied towards the Facilities Maintenance Certificate program or the Facilities Maintenance Associate Degree program. In local industry, employers and employees both can benefit from these modules as a method to cross-train current workers to build or enhance additional skill sets.

First Semester **Units:** 8

SKTR 1101	Survey of the Construction Industry	2
SKTR 1120	Carpentry: Fundamentals	2
SKTR 1300	Const Industry Employability Skills	2
SKTR 1320	Carpentry: Structural Framing I	2

Second Semester **Units:** 5

SKTR 2020	Carpentry: Structural Framing II	2
SKTR 2120	Carpentry: Interior/Exterior Finish Syst	2
ESSH 1170	OSHA 10Hr Gen Ind Safety & Health	1
		Total: 13

Electrician Module Certificate (Facilities Maintenance)

The Module Certificates are a great way for students to focus on a single skill set and earn a college certificate. In combination, the modules can be applied towards the Facilities Maintenance Certificate program or the Facilities Maintenance Associates Degree program. In local industry, employers and employees both can benefit from these modules as a method to cross-train
current workers to build or enhance additional skill sets.

First Semester **Units:** 8

SKTR 1101	Survey of the Construction Industry	2
SKTR 1110	Electrical: Fundamentals	2
SKTR 1300	Const Industry Employability Skills	2
SKTR 1310	Electrical: Wiring I	2

Second Semester **Units:** 5

SKTR 2010	Electrical: Wiring II	2
SKTR 2110	Electrical: Repair and Service Practices	2
ESSH 1170	OSHA 10Hr Gen Ind Safety & Health	1
		Total: 13

Plumbing Module Certificate (Facilities Maintenance)

The Module Certificates are a great way for students to focus on a single skill set and earn a college certificate. In combination, the modules can be applied towards the Facilities Maintenance Certifi-cate program or the Facilities Maintenance Associates Degree program. In local industry, employers and employees both can benefit from these modules as a method to cross-train current workers to build or enhance additional skill sets.

First Semester		Units: 8	Second Semester		Units: 5
SKTR 1101	Survey of the Construction Industry	2	SKTR 2040	Plumbing:Intermediate Supply & DWV Syst	2
SKTR 1140	Plumbing: Introduction to Supply Systems	2	SKTR 2140	Plumbing: Repair and Service Practices	2
SKTR 1300	Const Industry Employability Skills	2	ESSH 1170	OSHA 10Hr Gen Ind Safety & Health	1
SKTR 1340	Plumbing: Introduction to Dwv Systems	2			
					Total: 13

Welding Module Certificate (Facilities Maintenance)

The Module Certificates are a great way for students to focus on a single skill set and earn a college certificate. In combination, the modules can be applied towards the Facilities Maintenance Certifi-cate program or the Facilities Maintenance Associates Degree program. In local industry, employers and employees both can benefit from these modules as a method to cross-train current workers to build or enhance additional skill sets.

First Semester		Units: 8	Second Semester		Units: 5
SKTR 1101	Survey of the Construction Industry	2	SKTR 2080	Welding: Intermediate Stick MIG	2
SKTR 1180	Welding: Introduction to Stick	2	SKTR 2180	Welding: Intermediate Applications I	2
SKTR 1300	Const Industry Employability Skills	2	ESSH 1170	OSHA 10Hr Gen Ind Safety & Health	1
SKTR 1380	Welding: Introduction to MIG	2			
					Total: 13

Intermediate Pipe and Plate TIG Welder Certificate

Students that complete the Intermediate Welder Certificate and looking to begin specializing in round or flat work as an AWS Certified Welder require more in-depth training. The Intermediate Pipe & Plate Tig Welder Certificate provides this necessary training and the ability to enter the workforce as an advanced GTAW Welder. Individuals already working in the welding industry, which have never had an opportunity to formalize their training by learning the fundamentals and theories of welding will also benefit greatly from this Intermediate Pipe & Plate Tig Welder technical training.

First Semester		Units: 9
SKTR 1180	Welding: Introduction to Stick	2
SKTR 1280	Welding: Oxyfuel Methods and Plasma Cutt	2
SKTR 1380	Welding: Introduction to MIG	2
ENGT 1115	Engineering Graphics	3

Second Semester		Units: 6
SKTR 1480	Welding: Specifications and Drawings	2
SKTR 1580	Welding: Introduction to TIG Process	3
ESSH 1170	OSHA 10Hr Gen Ind Safety & Health	1

Third Semester		Units: 7
SKTR 1470	Welding: Layout & Fit Up	2
SKTR 2080	Welding: Intermediate Stick MIG	2
MATH 1101	Math Construction Sciences/ Applied Tech	3

Fourth Semester		Units: 7
SKTR 1770	Welding: GTAW PLATE	3
SKTR 2070	Welding: GTAW PIPE I	3
SKTR 2780	Welding Certification Preparation I	1

Total: 29

Intermediate Pipe I Welder Certificate

Students that complete the Intermediate Welding Certificate and looking to begin specializing in round work as an AWS certified Welder require more in-depth training. The Intermediate Pipe I Welder Certificate provides this necessary training and the ability to enter the workforce as an advanced SMAW Pipe Welder.

Individuals already working in the welding industry, which have never had an opportunity to formalize their training by learning the fundamentals and theories of welding will also benefit greatly from this Intermediate Pipe I Welder Certificate technical training.

First Semester		Units: 7
SKTR 1180	Welding: Introduction to Stick	2
SKTR 1380	Welding: Introduction to MIG	2
ENGT 1115	Engineering Graphics	3

Second Semester		Units: 7
SKTR 1470	Welding: Layout & Fit Up	2
SKTR 1480	Welding: Specifications and Drawings	2
SKTR 2080	Welding: Intermediate Stick MIG	2
ESSH 1170	OSHA 10Hr Gen Ind Safety & Health	1

Third Semester		Units: 7
SKTR 2180	Welding: Intermediate Applications I	2
SKTR 2185	Welding: Intermediate Applications II	2
MATH 1101	Math Construction Sciences/ Applied Tech	3

Fourth Semester		Units: 7
SKTR 2370	Welding: SMAW PIPE I	3
SKTR 2470	Welding: SMAW PIPE II	3
SKTR 2780	Welding Certification Preparation I	1

Total: 28

Intermediate Pipe II Welder Certificate

Students that complete the Intermediate Welding Certificate and looking to begin specializing in round work as an AWS certified Welder require more in-depth training. The Intermediate Pipe II Welder Certificate

provides this necessary training and the ability to enter the workforce as an advanced GMAW & FCAW Pipe Welder. Individuals already working in the welding industry, which have never had an opportunity to formalize their training by learning the fundamentals and theories of welding will also benefit greatly from this Intermediate Pipe II Welder Certificate technical training.

First Semester		**Units:** 7
SKTR 1180	Welding: Introduction to Stick	2
SKTR 1380	Welding: Introduction to MIG	2
ENGT 1115	Engineering Graphics	3
Second Semester		**Units:** 7
SKTR 1470	Welding: Layout & Fit Up	2
SKTR 1480	Welding: Specifications and Drawings	2
SKTR 2080	Welding: Intermediate Stick MIG	2
ESSH 1170	OSHA 10Hr Gen Ind Safety & Health	1
Third Semester		**Units:** 7
SKTR 2180	Welding: Intermediate Applications I	2
SKTR 2185	Welding: Intermediate Applications II	2
MATH 1101	Math Construction Sciences/ Applied Tech	3
Fourth Semester		**Units:** 7
SKTR 2570	Welding: GMAW PIPE I	3
SKTR 2670	Welding: FCAW PIPE I	3
SKTR 2780	Welding Certification Preparation I	1
		Total: 28

Intermediate Welder Certificate

Students that complete the Welding Module Certificate and looking to become an AWS Certified Welder require more in-depth training. The Intermediate Welder Certificate provides this necessary training and the ability to enter the workforce as an intermediate level Welder. Individuals already working in the welding industry, which have never had an opportunity to formalize their training by learning the fundamentals and theories of welding will also benefit greatly from this Intermediate Welder Certificate's technical training.

First Semester		**Units:** 9
SKTR 1180	Welding: Introduction to Stick	2
SKTR 1280	Welding: Oxyfuel Methods and Plasma Cutt	2
SKTR 1380	Welding: Introduction to MIG	2
ENGT 1115	Engineering Graphics	3
Second Semester		**Units:** 6
SKTR 1480	Welding: Specifications and Drawings	2
SKTR 1580	Welding: Introduction to TIG Process	3
ESSH 1170	OSHA 10Hr Gen Ind Safety & Health	1
Third Semester		**Units:** 7
SKTR 2080	Welding: Intermediate Stick MIG	2
SKTR 2180	Welding: Intermediate Applications I	2
MATH 1101	Math Construction Sciences/ Applied Tech	3

Milestone/Progress Check: • Students planning to continue into Franklin University's bachelor's degree program (or other similar programs) should take ECON

2200 for their Social and Behavioral Science requirement. ECON 2200 satisfies both our SBS requirement as well as the SBS requirement at Franklin and in the Ohio Transfer Module.

Fourth Semester **Units:** 6

SKTR 2185	Welding: Intermediate Applications II	2
SKTR 2280	Welding: Intermediate V Groove & Pipe	3
SKTR 2780	Welding Certification Preparation I	1

Total: 28

Carpenter Apprenticeship Readiness Certificate

These short-term certificate programs help prepare students interested in entering trades apprenticeships to be more knowledgeable about their career choice and to develop fundamental knowledge and skills in the trade that will make them better prepared to be considered for entry into apprenticeship programs.

These certificates include both technical and soft skills apprenticeships are seeking from applicants. After successful completion of one of these certificates, candidates will be directed to the trade related apprenticeship program for application to that program. These external industry partners are solely responsible for final selection of candidates accepted into their programs.

For more information about starting one of these two semester programs of study, contact Skilled Trades Program Coordinator Lynn Giese, 614-287-2474, lgiese@cscc.edu.

First Semester **Units:** 12

SKTR 1101	Survey of the Construction Industry	2
SKTR 1120	Carpentry: Fundamentals	2
SKTR 1320	Carpentry: Structural Framing I	2
ARCH 1100	Basic Manual Drafting	1
ENGL 1100	Composition I	3
MATH 1024	Mathematics of Measurement	2

Second Semester **Units:** 13

CMGT 1171	Sustainability Management	3
SKTR 1300	Const Industry Employability Skills	2
SKTR 2020	Carpentry: Structural Framing II	2
SKTR 2120	Carpentry: Interior/Exterior Finish Syst	2
CMGT 1121	Construction Drawings	3
ESSH 1160	OSHA 10 Hr Construction Safety & Health	1

Total: 25

Electrician Apprenticeship Readiness Certificate

These short-term certificate programs help prepare students interested in entering trades apprenticeships to be more knowledgeable about their career choice and to develop fundamental knowledge and skills in the trade that will make them better prepared to be considered for entry into apprenticeship programs. These certificates include both technical and soft skills apprenticeships are seeking from applicants. After successful completion of one of these certificates, candidates will be directed to the trade related apprenticeship program for application to that program. These external industry partners are solely responsible for final selection of candidates accepted into their programs.

For more information about starting one of these two semester programs of study, contact Skilled Trades

Program Coordinator Lynn Giese, 614-287-2474, lgiese@cscc.edu .

First Semester **Units:** 12

SKTR 1101	Survey of the Construction Industry	2
SKTR 1110	Electrical: Fundamentals	2
SKTR 1310	Electrical: Wiring I	2
ARCH 1100	Basic Manual Drafting	1
ENGL 1100	Composition I	3
MATH 1024	Mathematics of Measurement	2

Second Semester **Units:** 13

HVAC 1280	HVAC Wiring Circuits II	3
SKTR 1300	Const Industry Employability Skills	2
SKTR 2010	Electrical: Wiring II	2
SKTR 2110	Electrical: Repair and Service Practices	2
CMGT 1121	Construction Drawings	3
ESSH 1160	OSHA 10 Hr Construction Safety & Health	1

Total: 25

HVAC Apprenticeship Readiness Certificate

The HVAC Apprenticeship Readiness Certificate, encompasses the technical requirements of the first year of a possible HVAC apprenticeship. Also offered are some Skilled Trades courses for employability skills and a construction industry survey, an introductory course in construction drawings, and a couple of General Education requirements in English and math.
These certificates include both technical and soft skills apprenticeships are seeking from applicants. After successful completion of one of these certificates, candidates will be directed to the trade related apprenticeship program for application to that program. These external industry partners are solely responsible for final selection of candidates accepted into their programs.

For more information about starting one of these two semester programs of study, contact Skilled Trades Program Coordinator Lynn Giese, 614-287-2474, lgiese@cscc.edu .

First Semester **Units:** 12

HVAC 1140	Principles of Refrigeration	3
HVAC 1150	Instrumentation/ Combustion Process	3
SKTR 1101	Survey of the Construction Industry	2
ARCH 1100	Basic Manual Drafting	1
ENGL 1100	Composition I	3

Second Semester **Units:** 13

HVAC 1160	Hand Tools/Safety	3
HVAC 1180	HVAC Wiring Circuits I	2
SKTR 1300	Const Industry Employability Skills	2
CMGT 1121	Construction Drawings	3
ESSH 1160	OSHA 10 Hr Construction Safety & Health	1
MATH 1024	Mathematics of Measurement	2

Total: 25

Plumbing Apprenticeship Readiness Certificate

These short-term certificate programs help prepare students interested in entering trades apprenticeships to be more knowledgeable about their career choice and to develop fundamental knowledge and skills in the trade that will make them better prepared to be considered for entry into apprenticeship programs. These certificates include both technical and soft skills apprenticeships are seeking from applicants. After successful completion of one of these certificates, candidates will be directed to the trade related apprenticeship program for application to that program. These external industry partners are solely responsible for final selection of candidates accepted into their programs.

For more information about starting one of these two semester programs of study, contact Skilled Trades Program Coordinator Lynn Giese, 614-287-2474, lgiese@cscc.edu.

First Semester **Units:** 12

SKTR 1101	Survey of the Construction Industry	2
SKTR 1140	Plumbing: Introduction to Supply Systems	2
SKTR 1340	Plumbing: Introduction to Dwv Systems	2
ARCH 1100	Basic Manual Drafting	1
ENGL 1100	Composition I	3
MATH 1024	Mathematics of Measurement	2

Second Semester **Units:** 13

SKTR 1300	Const Industry Employability Skills	2
SKTR 2040	Plumbing:Intermediate Supply & DWV Syst	2
SKTR 2140	Plumbing: Repair and Service Practices	2
HVAC 1140	Principles of Refrigeration	3
CMGT 1121	Construction Drawings	3
ESSH 1160	OSHA 10 Hr Construction Safety & Health	1

Total: 25

Sheet Metal Apprenticeship Readiness Certificate

These short-term certificate programs help prepare students interested in entering trades apprenticeships to be more knowledgeable about their career choice and to develop fundamental knowledge and skills in the trade that will make them better prepared to be considered for entry into apprenticeship programs. These certificates include both technical and soft skills apprenticeships are seeking from applicants. After successful completion of one of these certificates, candidates will be directed to the trade related apprenticeship program for application to that program. These external industry partners are solely responsible for final selection of candidates accepted into their programs.

For more information about starting one of these two semester programs of study, contact Skilled Trades Program Coordinator Lynn Giese, 614-287-2474, lgiese@cscc.edu.

First Semester **Units:** 12

SKTR 1101	Survey of the Construction Industry	2
SKTR 1180	Welding: Introduction to Stick	2
SKTR 1380	Welding: Introduction to MIG	2
ARCH 1100	Basic Manual Drafting	1
ENGL 1100	Composition I	3
MATH 1024	Mathematics of Measurement	2

Second Semester **Units:** 13

SKTR 1300	Const Industry Employability Skills	2
SKTR 2080	Welding: Intermediate Stick MIG	2

SKTR 2180	Welding: Intermediate Applications I	2
HVAC 1120	Load Calculations I	3
CMGT 1121	Construction Drawings	3
ESSH 1160	OSHA 10 Hr Construction Safety & Health	1
		Total: 25

Electrician Pre-Apprenticeship I Certificate

Construction Electrician Apprentice I Certificate

Inside Wireman Apprentice I Certificate

Inside Wireman Apprentice II Certificate

Construction Plumbing Apprenticeship I Certificate

Construction Plumbing Apprenticeship II Certificate

Operating Engineer Apprentice I Certificate

Sheet Metal Apprentice I Certificate

Journeyman Crane Operator Certificate

Journeyman Equipment Operator Certificate

Journeyman Inside Wireman Certificate

Journeyman Sheet Metal Worker Certificate

Social Work and Human Services AAS Degree

Social Work and Human Services is a dynamic, purposeful profession. This degree prepares students to work with individuals, families and groups in a variety of agencies and organizations. The curriculum emphasizes work with diverse populations including age, ethnicity, culture, race, ability, gender, religion, sexual orientation, socioeconomic status, nationality, other expressions of diversity, or other historically oppressed groups. The importance of social justice is woven throughout the curriculum. Students learn and practice skills that enable them to support and advocate for people impacted by life challenges, mental health disorders, developmental disabilities, and substance use disorders.

The five-semester program includes 315 hours of hands-on practicum experience under the direct supervision of professionals in the field. Students who complete this degree are immediately eligible for employment in the field. This degree meets the requirements for the Ohio Counselor, Social Worker and Marriage & Family Therapist Board, Social Work Assistant credential and the Ohio Chemical Dependency Professionals Board, Licensed Chemical Dependency Counselor II education requirements. Graduates may also transfer to four-year social work degree programs.

Learning Outcome(s):

1. Recognize the diverse settings and roles of human service workers in generalist social work, mental health, developmental disabilities, and addictions treatment.
2. Critically analyze, synthesize and evaluate multiple sources of information and evidence for assessment, treatment planning and interventions, and document professionally.
3. Demonstrate effective engagement and communication skills necessary to build rapport and establish and maintain collaborative relationships.
4. Engage in research-informed and evidence-based practices: engagement, assessment, service planning, interventions, evaluation with individuals, families, groups, organizations and communities.
5. Understand and demonstrate cultural humility and other congruent behaviors, attitudes, policies that enable a system, agency or professional to function effectively across cultures. Difference or diversity includes but is not limited to sex, age, sexual orientation, gender identity, race, ethnicity, religion, national origin, immigration status, political affiliation, marital status mental or physical disability and socio-economic status.
6. Demonstrate effective group facilitation skills.
7. Recognize the multi-faceted nature of addiction and the individualized needs of persons with substance use disorders while demonstrating the 12 core functions of a substance abuse counselor.
8. Engage in policy practices to advance social justice and economic well-being.
9. Provide effective service coordination/case management services.
10. Demonstrate sufficient self-awareness and respond appropriately to feedback.
11. Demonstrate sufficient self-awareness regarding competence, personal/professional wellness, and impairment, and respond appropriately to feedback.
12. Conduct oneself as a human service professional ac- cording to academic program and professional standards, goals, values and the Human Services, Social Work, and Addiction Professionals codes of ethics.

First Semester **Units:** 13

COLS 1100	First Year Experience Seminar	1
MULT 1114	Introduction to Addiction Studies	3
MULT 1115	Helping Skills Allied Hlth & Human Serv	3
ENGL 1100	Composition I	3
PSY 1100	Introduction to Psychology	3

Milestone/Progress Check: • Attend an SAHS program information session. Successful completion of MULT 1114 course enables students to apply for the Chemical Dependency Counselor Assistant with the OCDP Board.

Second Semester **Units:** 12

SAHS 1111	Introduction Social Work & Mental Health	3
ENGL 2367	Composition II	3
OR		
ENGL 2567	Comp II Writing about Gender & Identity	3
OR		
ENGL 2667	Comp II American Working-Class Identity	3
SOC 1101	Introduction to Sociology	3
HUM-XXXX (select from approved GE-HUM list)		3

Milestone/Progress Check: • Students must complete SAHS 1111, MULT 1114, MULT/SAHS 1115, PSY 1100, and ENGL 1100; apply for admission; and attend a program admission interview to proceed to 3rd semester SAHS courses.

Third Semester **Units:** 13-15

SAHS 1120	Service Delivery & Ethics in Human Services & Social Work	2
SAHS 1130	Intervention Strategies	2
SAHS 1150	Pharmacology in Human Services	2
SAHS/MULT (Technical Elective)		2
STAT 1350	Elementary Statistics	3
OR		
MATH 1122	Foundations of Quantitative Reasoning	5
OR		
MATH 1123	Quantitative Reasoning	3
MULT 1180	Family & Aging Services	2

Milestones/Progress Check: • Students complete required application for

practicum. • Students interested in addictions counseling must take MULT 2114 as one of the technical electives.

Fourth Semester **Units:** 14

SAHS 2241	Advanced Helping Skills	2
SAHS 2861	Fundamentals in Social Work and Human Services	4
SAHS 2901	Practicum/Seminar I in SAHS	3
SAHS/MULT (Technical Elective)		2
PSY 2340	Human Growth and Development Over the Life Span	3

Milestone/Progress Check: • Students participate in 1st practicum.

Fifth Semester **Units:** 12

SAHS 2251	Social Welfare & Policy	3
SAHS 2862	Treatment Approaches SAHS	3
SAHS 2922	Practicum & Seminar II in SAHS	3
SOC 2380	American Race & Ethnic Relations	3

Milestone/Progress Check: • Students participate in 2nd practicum.

Technical Electives - 4 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

MULT 1400	Screening for Substance Use: SBIRT	1
MULT 1401	Integrated Healthcare	2
MULT 1402	Selfcare for Allied Health/ Human Service	2
MULT 2114	Addiction Studies II	2
MULT 2234	Therapeutic & Applied Humor	2
SAHS 1112	Introduction Developmental Disabilities	2

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3

Total: 64-66

Addiction Studies Certificate

The Addiction Studies Certificate prepares students for an entry-level credential for working in the addictions field. Course content includes: theories of addiction, individual and group engagement strategies, assessment and evaluation of substance use disorders, treatment planning, pharmacology of drugs of abuse, medication assistance, introductory helping skills, and legal and ethical issues. These courses must be completed with a "C" pr better. The certificate meets the requirements for the Chemical Dependency Counselor Assistant Certification (CDCA) with the Ohio Chemical Dependency Professionals Board. Additional information about the addictions credentialing process can be found at www.ocdp.ohio.gov.

Learning Outcome(s):

1. Recognize the multi-faceted nature of addiction and the individualized needs of persons with substance use disorders while demonstrating the 12 core functions of a substance abuse counselor.
2. Understand and demonstrate a set of congruent behaviors, attitudes, policies that enable a system, agency or professional to function effectively across cultural difference. Difference or diversity includes but is not limited to sex, age, sexual orientation, gender identity, race, ethnicity, religion, national origin, immigration status, political affiliation, marital status mental or physical disability and socio-economic status.
3. Recognize the diverse settings and roles of human service workers in social work, mental health, developmental disabilities, and addictions treatment.

4. Demonstrate effective engagement and communication skills necessary to build rapport and establish and maintain collaborative relationships.
5. Demonstrate sufficient self-awareness and respond appropriately to feedback.
6. Conduct oneself as a human service professional according to academic program and professional standards, goals, values and the Human Services, Social Work, and Addiction Professionals codes of ethics.

First Semester **Units:** 6

MULT 1114	Introduction to Addiction Studies	3
MULT 1115	Helping Skills Allied Hlth & Human Serv	3

Milestone/Progress Check: • Successful completion of this course enables students to apply for the Chemical Dependency Counselor Assistant Phase I with the OCDP Board.

Second Semester **Units:** 4

MULT 2114	Addiction Studies II	2
SAHS 1150	Pharmacology in Human Services	2

Milestone/Progress Check: • Students must have been awarded or be in the process of applying for the CDCA Phase I. Successful completion of this course enables students to apply for the Chemical Dependency Counselor Assistant Phase 2 with the OCDP Board.

Total: 10

Advanced Addiction Studies Certificate

This 31 credit hour certificate program is for students with an associate degree in a behavioral science, or a bachelor's or a master's degree in any field for preparation to work in the field of addictions. The curriculum includes the Chemical Dependency Board's required 180 hours addictions specific content in the following areas: Theories of addiction, counseling procedures and strategies, group process and techniques, assessment and diagnosis, relationship counseling pharmacology, prevention strategies treatment planning and legal ethical issues pertaining to individuals with substance use disorders. Two semesters of practicum provide practical experience under the supervision of a licensed professional. Students need to obtain and maintain the Chemical Dependency Counselor Assistant (CDCA) certification. After completing 2000 hours of qualifying work, certificate completers are eligible to apply for the Licensed Chemical Dependency Counselor (LCDC) with the State of Ohio.

Learning Outcome(s):

1. Critically analyze, synthesize and evaluate multiple sources of information and evidence for assessment, treatment planning and interventions, and document professionally.
2.
3. Demonstrate effective engagement and communication skills necessary to build rapport and establish and maintain collaborative relationships.
4. Engage in research-informed and evidence based practices: engagement, assessment, service planning, interventions, evaluation with individuals, families, groups, organizations and communities.
5. Understand and demonstrate a set of congruent behaviors, attitudes, policies that enable a system, agency or professional to function effectively across cultural difference. Difference or diversity includes but is not limited to sex, age, sexual orientation, gender identity, race, ethnicity, religion, national origin, immigration status, political affiliation, marital status mental or physical disability and socio-economic status.
6. Demonstrate effective group facilitation skills.
7. Recognize the multi-faceted nature of addiction and the individualized needs of persons with substance use disorders while demonstrating the 12 core functions of a substance abuse counselor.
8. Provide effective service coordination/case management services.
9. Demonstrate sufficient self-awareness and respond appropriately to feedback.
10. Conduct oneself as a human service professional according to academic program and professional standards, goals, values and the Human Services,

Social Work, and Addiction Professionals codes of ethics.

First Semester **Units:** 12

MULT 1114	Introduction to Addiction Studies	3
MULT 1115	Helping Skills Allied Hlth & Human Serv	3
MULT 1180	Family & Aging Services	2
SAHS 1120	Service Delivery & Ethics in Human Services & Social Work	2
SAHS 1130	Intervention Strategies	2

Milestone/Progress Check: • Successful completion of this course enables students to apply for the Chemical Dependency Counselor Assistant Phase I with the OCDP Board.

Second Semester **Units:** 11

SAHS 1150	Pharmacology in Human Services	2
SAHS 2241	Advanced Helping Skills	2
SAHS 2861	Fundamentals in Social Work and Human Services	4
SAHS 2901	Practicum/Seminar I in SAHS	3

Third Semester **Units:** 8

SAHS 2862	Treatment Approaches SAHS	3
SAHS 2922	Practicum & Seminar II in SAHS	3
MULT 2114	Addiction Studies II	2

Milestones/Progress Check: • Successful completion of this course enables students to apply for the Chemical Dependency Counselor Assistant Phase II with the OCDP Board. • Students who earn the Advanced Addiction Studies Certificate meet the LCDC addiction specific education hours with the Ohio Chemical Dependency Professionals Board.

Total: 31

Advanced Mental Health Certificate

This certificate program is open to students with an associate degree in a related field, a bachelor's or master's degree in any field of study. The curriculum provides courses focused on the knowledge and skills necessary to work in the mental health field. Students participate in two clinical practicum experiences in a variety of human service agencies. An interview with the certificate coordinator is required prior to acceptance into the certificate program.

The Ohio Counselor/Social Worker/Marriage and Family Therapist board requires the following:

a) Forty-five quarter hours, or thirty semester hours, of core social service/social work skills, theory, and systems courses, which **must** include a social service practicum; **and**,

b) Twenty-one quarter hours or fourteen semester hours of related courses such as psychology, sociology, and economics.

c) The applicant must have received a grade of at least a "C-" in all relevant coursework.

Learning Outcome(s):

1. Recognize the diverse settings and roles of human service workers in social work, mental health, developmental disabilities, and addictions treatment. .
2. Critically analyze, synthesize and evaluate multiple sources of information and evidence for assessment, treatment planning and interventions, and document professionally
3. Demonstrate effective engagement and communication skills necessary to build rapport and establish and maintain collaborative relationships.
4. Engage in research-informed and evidence based practices: engagement, assessment, service planning, interventions, evaluation with individuals, families, groups, organizations and communities
5. Understand and demonstrate a set of congruent behaviors, attitudes, policies that enable a system,

agency or professional to function effectively across cultural difference. Difference or diversity includes but is not limited to sex, age, sexual orientation, gender identity, race, ethnicity, religion, national origin, immigration status, political affiliation, marital status mental or physical disability and socio-economic status.
6. Demonstrate effective group facilitation skills.
7. Provide effective service coordination/case management services.
8. Demonstrate sufficient self-awareness and respond appropriately to feedback.
9. Conduct oneself as a human service professional according to academic program and professional standards, goals, values and the Human Services, Social Work, and Addiction Professionals codes of ethics.
10. Engage in policy practices to advance social justice and economic well-being.

First Semester **Units:** 12

MULT 1115	Helping Skills Allied Hlth & Human Serv	3
SAHS 1111	Introduction Social Work & Mental Health	3
SAHS 1120	Service Delivery & Ethics in Human Services & Social Work	2
SAHS 1130	Intervention Strategies	2
SAHS 1150	Pharmacology in Human Services	2

Second Semester **Units:** 12

SAHS 2241	Advanced Helping Skills	2
SAHS 2861	Fundamentals in Social Work and Human Services	4
SAHS 2901	Practicum/Seminar I in SAHS	3
SAHS 2251	Social Welfare & Policy	3

Milestone/Progress Check: • 1st practicum experience in a community agency.

Third Semester **Units:** 8

MULT 1180	Family & Aging Services	2
SAHS 2862	Treatment Approaches SAHS	3
SAHS 2922	Practicum & Seminar II in SAHS	3

Milestone/Progress Check: • Students earn the Advanced MH Certificate and may be eligible for the Ohio Social Work Assistant Certification.

Total: 32

Human Services Assistant Certificate

This is a 16.5 credit-hour program for students who have an intellectual or developmental disability and an interest in developing skills needed to assist others. Students will learn about various disabilities, needed supports, interventions and tools to be a successful worker. Students participate in two clinical practicum experiences in a variety of human services agencies. While course work is adapted to meet the needs of the students, in order to enroll in the certificate program students must have a proven ability to participate appropriately in a classroom and/or professional work setting. The curriculum provides students with the knowledge and skills necessary to work as an assistant in the Developmental Disabilities / Habilitation field.

Students accepted into the program that have an intellectual disability may also be enrolled as a student in the COMPETE program. Information on the COMPETE program will be provided to students that meet COMPETE eligibility requirements.

Learning Outcome(s):

1. Recognize the diverse settings and roles of human service workers in developmental disabilities, aging and human service agencies.
2. Understand various disabilities and needed interventions to support individuals with a developmental disability or individuals who are aging.
3. Demonstrate effective engagement and communication skills necessary to build rapport and establish and maintain collaborative relationships.
4. Demonstrate sufficient self-awareness and respond appropriately to feedback.
5. Conduct oneself as a human service professional.

First Semester **Units:** 3

SAHS 1120	Service Delivery & Ethics in Human Services & Social Work	2
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 5.5

SAHS 1112	Introduction Developmental Disabilities	2
SAHS 2901	Practicum/Seminar I in SAHS	3
MULT 1140	Adult & Pediatric CPR	0.5

Third Semester **Units:** 7

MULT 1402	Selfcare for Allied Health/ Human Service	2
SAHS 1130	Intervention Strategies	2
SAHS 2922	Practicum & Seminar II in SAHS	3

*Optional additional practicum is contingent upon individualized student learning plan.

Total: 15.5

Sports & Exercise Studies - Exercise Science Major AAS Degree

The Sport and Exercise Studies program prepares students to work in sport, recreation, health and/or fitness centers. From private clubs to public facilities, personal trainers, exercise specialists, and strength and conditioning specialists are needed to develop, train, staff, and implement programming to address the wellness and fitness needs of the general public or specific clients/populations, in compliance with local, state, and federal guidelines. Exercise science, strength and resistance training, risk management, human nutrition, anatomy, physiology, kinesiology, and exercise prescription will enable students to effectively enter health and fitness careers or successfully transfer to 4 year schools and beyond. Career opportunities include physical therapy, physical therapy assistant, cardiac rehab, athletic training, personal training, fitness leadership, exercise specialist, conditioning specialist, and fitness coaching. These positions can be found in commercial, community, recreation and academic settings.

Learning Outcome(s):

1. Determine a target market for sport and exercise programs using needs-based evidence.
2. Use evaluation as a means for continuous improvement of sport and exercise programming.
3. Actively pursue professional development opportunities.
4. Model a lifestyle of physical activity.
5. Accurately interpret health assessment and risk stratification data.
6. Perform industry-standard measures of physical fitness assessments.
7. Use assessment-based data, in consultation with client needs and interests, to develop exercise prescriptions.
8. Monitor client physiological responses to exercise prescription, redefining appropriate goals as needed.
9. Educate clients and community about the benefits of increased l activity across the life span.

First Semester **Units:** 13

SES 1104	Yoga	1
OR		
SES 1105	Intro Strength & Resistance Training	1
OR		
SES 1106	Golf	1
OR		
SES 1108	Women's Self Defense	1
OR		
SES 1109	Bowling	1
OR		
SES 1110	Fitness Kick Boxing	1
OR		

SES 1112	Total Body Conditioning	1
ENGL 1100	Composition I	3
MATH 1148	College Algebra	4
COLS 1100	First Year Experience Seminar	1
BIO 1121	Anatomy and Physiology I*	4
OR		
BIO 2300	Human Anatomy*	4

Milestone/Progress Check: • Students must schedule an appointment within the Sport & Exercise Studies program to review their degree completion plan and schedule upcoming semester courses.

Second Semester **Units:** 13

SES 1100	Personal Fitness Concepts	3
SES 1101	Intro Sport & Exercise Studies	3
SES 1104	Yoga	1
OR		
SES 1105	Intro Strength & Resistance Training	1
OR		
SES 1106	Golf	1
OR		
SES 1108	Women's Self Defense	1
OR		
SES 1109	Bowling	1
OR		
SES 1110	Fitness Kick Boxing	1
OR		
SES 1112	Total Body Conditioning	1
HNTR 1153	Nutrition for a Healthy Lifestyle	3
PSY 1100	Introduction to Psychology	3

Milestone/Progress Check: • Students must schedule an appointment within the Sport & Exercise Studies program to review their degree completion plan and schedule upcoming semester courses.

Third Semester **Units:** 12

SES 2415	Adv Strength & Resistence Training Con	4
SES 2440	Exercise Physiology	4
BIO 1122	Anatomy & Physiology II*	4
OR		
BIO 2301	Human Physiology*	4

*Student must take either: BIO 1121/2300 series OR BIO 1122/2301 series.

Fourth Semester **Units:** 15

SES 2426	Athletic Injury Control & First Aid	3
SES 2437	Health Promotion	3
OR		
SES 2438	Fitness Concepts Across the Lifespan	3
SES 2535	Sport Law	3
SBS-XXXX (Select from approved GE-SBS list)		3
ENGL 2367	Composition II	3
OR		
ENGL 2567	Comp II Writing about Gender & Identity	3
OR		
ENGL 2667	Comp II American Working-Class Identity	3
OR		
ENGL 2767	Comp II Writing About Science/Technology	3

Milestones/Progress Check: • First Aid and CPR Certification. • Students must schedule an appointment within the Sport & Exercise Studies program to review their degree completion plan and schedule upcoming semester courses.

Fifth Semester **Units:** 12

SES 2441	Kinesiology	4
SES 2442	Exercise Prescript&quantitative Analysis	3
SES 2950	SES Practicum/Seminar	2
HUM-XXXX (select from approved GE-HUM list)		3

Milestones/Progress Check: • Students must schedule an appointment within the Sport & Exercise Studies program to review their degree completion plan and schedule upcoming semester courses. • Students will receive exercise specialist certificate upon completion of technical course requirements.

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
CLAS 1222	Classical Mythology	3
CLAS 1224	Classical Civilization: Greece	3
CLAS 1225	Classical Civilization: Rome	3
CLAS 1226	Classical Civilization: Byzantium	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
SOC 1101	Introduction to Sociology	3

Total: 65

Sports & Exercise Studies - Exercise Science Major Athletic Performance Track AAS Degree

The Sport and Exercise Studies Athletic Performance program prepares students to work in athletic or tactical strength and conditioning within public facilities, commercial facilities and athletic facilities. Students are will receive the education and training to perform athletic assessment, program design and implementation, and training for a wide variety of athletes and individuals training for greater sport or job performance. Exercise science, strength and resistance training, risk management, human nutrition, anatomy, physiology, advanced athletic assessment, advanced athletic prescription sport business/marketing, and health and physical education courses blended with the college's General Education course work will develop the skills necessary to land an assistant athletic strength and conditioning position for successfully transfer to a four year program to further education in athletic performance. Career opportunities include a variety of athletic performance specialist positions in commercial and community facilities, athletic strength and conditioning specialist positions in public facilities or academic settings.

Learning Outcome(s):

1. Determine a target market for sport and exercise programs using needs-based evidence.
2. Use evaluation as a means for continuous improvement of sport and exercise programming.
3. Actively pursue professional development opportunities.
4. Model a lifestyle of physical activity.
5. Accurately interpret health assessment and risk stratification data.
6. Perform industry-standard measures of physical fitness assessments.
7. Use assessment-based data, in consultation with client needs and interests, to develop exercise prescriptions.
8. Monitor client physiological responses to exercise prescription, redefining appropriate goals as needed.
9. Educate clients and community about the benefits of increased l activity across the life span.

First Semester **Units:** 14

SES 1101	Intro Sport & Exercise Studies	3
SES 1104	Yoga	1
OR		
SES 1105	Intro Strength & Resistance Training	1
OR		
SES 1106	Golf	1
OR		
SES 1108	Women's Self Defense	1
OR		
SES 1109	Bowling	1
OR		
SES 1110	Fitness Kick Boxing	1
OR		
SES 1112	Total Body Conditioning	1
ENGL 1100	Composition I	3
MATH 1148	College Algebra	4
BMGT 1102	Interpersonal Skills	2
COLS 1100	First Year Experience Seminar	1

Milestone/Progress Check: • Students must schedule an appointment within the Sport & Exercise Studies program to review their degree completion plan and schedule upcoming semester courses.

Second Semester **Units:** 13

SES 2410	Conditioning & Training Youth Athlete	3
SES 2625	Concepts of Coaching	3
BIO 1121	Anatomy and Physiology I*	4
OR		
BIO 2300	Human Anatomy*	4
HNTR 1153	Nutrition for a Healthy Lifestyle	3

Third Semester **Units:** 12

SES 2415	Adv Strength & Resistence Training Con	4
SES 2440	Exercise Physiology	4
BIO 1122	Anatomy & Physiology II*	4
OR		
BIO 2301	Human Physiology*	4

Milestone/Progress Check: • Students must schedule an appointment within the Sport & Exercise Studies program to review their degree completion plan and schedule upcoming semester courses.

*Student must take either BIO 1121/2300 series OR BIO 1122/2301 series.

Fourth Semester **Units:** 12

SES 2443	Advanced Athletic Assessment	3
SES 2660	Ethics in Sports	3
SBS-XXXX (select from approved GE-SBS list)		3
ENGL 2367	Composition II	3
OR		
ENGL 2567	Comp II Writing about Gender & Identity	3
OR		
ENGL 2667	Comp II American Working-Class Identity	3
OR		
ENGL 2767	Comp II Writing About Science/Technology	3

Milestone/Progress Check: • Students must schedule an appointment within the Sport & Exercise Studies program to review their degree completion plan and schedule upcoming semester courses.

Fifth Semester **Units:** 12

SES 2441	Kinesiology	4
SES 2444	Advanced Athletic Conditioning	3
SES 2950	SES Practicum/Seminar	2
HUM-XXXX (select from approved GE-HUM list)		3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
CLAS 1222	Classical Mythology	3
CLAS 1224	Classical Civilization: Greece	3
CLAS 1225	Classical Civilization: Rome	3
CLAS 1226	Classical Civilization: Byzantium	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3

HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
SOC 1101	Introduction to Sociology	3

Total: 63

Sports & Exercise Studies - Coaching Administration AAS Degree

A degree in Coaching Administration is designed to prepare students for increasing career opportunities in the sport coaching field. Objectives of this track are designed to provide students with a series of courses and experiences to successfully assist students who wish to become effective coaches and find careers in coaching, leadership, supervisory and even management positions in the sport and coaching field. A degree in Coaching Administration will prepare students to meet the rigorous demands associated with the global multi-billion dollar sport industry. This degree will span a broad array of industry specific areas with a concentration on coaching.

Learning Outcome(s):

1. Coordinate comprehensive sport programming to meet stated institutional goals and objectives.
2. Select and evaluate coaching staff and related personnel in a sport setting.
3. Secure supplemental funding sources for private and/or public sport programming.
4. Demonstrate applicable research skills and technology assisting sport.
5. Choose appropriate pedagogical methods for each sport.
6. Design and manage physical facilities and equipment to provide a safe, appropriate and cost-neutral facility.

First Semester **Units:** 13

SES 1100	Personal Fitness Concepts	3
ENGL 1100	Composition I	3
MATH 1104	Mathematical Concepts for Business	3
SBS-XXXX (select from approved GE-SBS list)		3
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 12

SES 1101	Intro Sport & Exercise Studies	3
SES 1327	Individual Sport & Activity	2
OR		
SES 1328	Team Sport & Activity	2
SES 2625	Concepts of Coaching	3
BIO 1121	Anatomy and Physiology I*	4
OR		
BIO 2300	Human Anatomy*	4

Third Semester **Units:** 11

SES 2534	Sport Marketing	3
SES 2950	SES Practicum/Seminar	2
BIO 1122	Anatomy & Physiology II*	4
OR		
BIO 2301	Human Physiology*	4

BMGT 1102	Interpersonal Skills	2

*Student must take either BIO 1121/2300 series OR BIO 1122/2301 series.

Fourth Semester **Units:** 12

SES 2410	Conditioning & Training Youth Athlete	3
SES 2626	Coaching the Young Athlete	3
SES 2670	Sport Psychology	3
HUM-XXXX (select from approved GE-HUM list)		3

Fifth Semester **Units:** 15

SES 2426	Athletic Injury Control & First Aid	3
SES 2535	Sport Law	3
SES 2660	Ethics in Sports	3
ENGL 2367	Composition II	3
OR		
ENGL 2567	Comp II Writing about Gender & Identity	3
OR		
ENGL 2667	Comp II American Working-Class Identity	3
OR		
ENGL 2767	Comp II Writing About Science/Technology	3
HNTR 1153	Nutrition for a Healthy Lifestyle	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
CLAS 1222	Classical Mythology	3
CLAS 1224	Classical Civilization: Greece	3
CLAS 1225	Classical Civilization: Rome	3
CLAS 1226	Classical Civilization: Byzantium	3
HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
SOC 1101	Introduction to Sociology	3

Total: 63

Sports & Exercise Studies - Recreation Administration Major AAS Degree

A degree in Recreation Administration is designed to prepare students for increasing career opportunities in sport & leisure services. Objectives of this major are designed to provide students with a series of courses and experiences to successfully assist students who wish to find careers in training, leadership, supervisory and management positions in the sport and leisure industry. Recreation & Leisure Studies prepares students to deliver recreation and leisure services in a diverse society. Professionals in Recreation and Leisure are skilled at planning, budgeting, organization, and promotion in a variety of recreation and leisure settings.

Students in this track pursue careers with professional and amateur sport teams, community programs, sports marketing, and commercial fitness programs.

Learning Outcome(s):

1. Demonstrate skill in teaching, leadership, and supervisory activities in the sport and leisure industry.
2. Demonstrate the effect of cultural and socio-economic affect sport and leisure has on communities.
3. Demonstrate the skills necessary to successfully operate an organization in both the public and private sectors relying on both profit and non-profit constraints.

First Semester **Units:** 13

SES 1102	Recreation and Leisure Operations	3
ANTH 2202	Peoples & Culture	3
ENGL 1100	Composition I	3
MATH 1104	Mathematical Concepts for Business	3
COLS 1100	First Year Experience Seminar	1

Milestone/Progress Check: • Schedule an appointment within the Sport & Exercise Studies program to review their degree completion plan and schedule upcoming semester courses.

Second Semester **Units:** 14

GEOL 1101	Introduction to Earth Science	4
HUM-XXXX (select from approved GE-HUM list)		3
BMGT 2245	Introduction to Non-Profit Management	3
HOSP 2246	Hospitality Sales and Marketing	2
HOSP 2273	Casino & Gaming Operations	2

Third Semester **Units:** 12

SES 2524	Sport Management Foundations	3
SES 2535	Sport Law	3
SES 2660	Ethics in Sports	3
SES 2700	Sport Tourism	3

Fourth Semester **Units:** 12

HOSP 2272	Event Management	3
SES 2720	Facilities Management	3
HOSP 2730	Security Mgmt Sport & Special Events	3
OR		
HOSP 2528	Technology in Casino & Hospitality & Recreation	3
ENGL 2367	Composition II	3
OR		
ENGL 2567	Comp II Writing about Gender & Identity	3
OR		
ENGL 2667	Comp II American Working-Class Identity	3
OR		
ENGL 2767	Comp II Writing About Science/Technology	3

Fifth Semester **Units:** 12

HOSP 2529	Sport & Event Management	3
SES 2710	Sport Finance	3
SES 2712	Promotion & PR in Sport & Events	3
HOSP 2206	Management Accounting for Hotels	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

CLAS 1222	Classical Mythology	3
CLAS 1224	Classical Civilization: Greece	3
CLAS 1225	Classical Civilization: Rome	3
CLAS 1226	Classical Civilization: Byzantium	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3

HIST 1152	American History Since 1877	3
HIST 2223	African-American History I Before 1877	3

Total: 63

Sports & Exercise Studies - Sports Management Major AAS Degree

A degree in Sport Management is designed to prepare students for a career in the extensive and growing field sport management at the amateur, semi-professional and professional level. Objectives for this major are designed to provide students with a series of courses and experiences that will prepare them for positions and careers in management, leadership, planning and development, financial administration, legal aspects, and public relations within the sport field. Students enrolled in the Sport Management major are prepared to deliver professionally based skills to a divers industry.

Professionals engaged in sport management are proficient in leadership, planning, budgeting, organization, and promotion in a variety of sport settings both professional and non-professional organizations. Students enrolled in this major pursue careers with professional and semi-professional and amateur sport teams, college and university athletic departments, compliance, and community engagement.

Learning Outcome(s):

1. Demonstrate skill in planning and administering effective rec- reational, fitness, wellness and sport activities in the community.
2. Assess the potential for behavioral change in each client, creating maximal opportunity for success.
3. Demonstrate organizational and administrative leadership in delivery of sport and exercise programs by establishing program direction, a risk management plan, and financial and budgetary stewardship.

First Semester **Units:** 14

SES 1101	Intro Sport & Exercise Studies	3
ENGL 1100	Composition I	3
MATH 1104	Mathematical Concepts for Business	3
SBS-XXXX (select from approved GE-SBS list)		3
COLS 1100	First Year Experience Seminar	1
MULT 1170	Current Issues:HIV Infection	1

Milestone/Progress Check: • Students must schedule an appointment within the Sport & Exercise Studies program to review their degree completion plan and schedule upcoming semester courses.

Second Semester **Units:** 13

BIO 1121	Anatomy and Physiology I	4
OR		
BIO 2300	Human Anatomy	4
OR		
GEOL 1101	Introduction to Earth Science	4
HUM-XXXX (select from approved GE-HUM list)		3
HNTR 1153	Nutrition for a Healthy Lifestyle	3
PSY 1100	Introduction to Psychology	3

Milestone/Progress Check: • Students must schedule an appointment within the Sport & Exercise Studies program to review their degree completion plan and schedule upcoming semester courses.

Third Semester **Units:** 12

SES 2524	Sport Management Foundations	3
SES 2660	Ethics in Sports	3
SES 2712	Promotion & PR in Sport & Events	3
SES 2720	Facilities Management	3

Milestone/Progress Check: • Students must schedule an appointment within the Sport & Exercise Studies program to review their degree completion plan and schedule upcoming semester courses.

Fourth Semester **Units:** 12

SES 2535	Sport Law	3
SES 2670	Sport Psychology	3
SES 2690	Sport Sociology	3
ENGL 2367	Composition II	3
OR		
ENGL 2567	Comp II Writing about Gender & Identity	3
OR		
ENGL 2667	Comp II American Working-Class Identity	3
OR		
ENGL 2767	Comp II Writing About Science/Technology	3

Milestone/Progress Check: • Students must schedule an appointment within the Sport & Exercise Studies program to review their degree completion plan and schedule upcoming semester courses.

Fifth Semester **Units:** 14

SES 2426	Athletic Injury Control & First Aid	3
SES 2534	Sport Marketing	3
SES 2710	Sport Finance	3
SES 2950	SES Practicum/Seminar	2
BMGT 2200	Management & Organizational Behavior	3

Milestone/Progress Check: • Students must schedule an appointment within the Sport & Exercise Studies program to review their degree completion plan and schedule upcoming semester courses.

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ARCH 2100	History of Architecture	3
CLAS 1222	Classical Mythology	3
CLAS 1224	Classical Civilization: Greece	3
CLAS 1225	Classical Civilization: Rome	3
CLAS 1226	Classical Civilization: Byzantium	3
HART 1201	History of Art I	3
HART 1202	History of Art II	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3
PHIL 1130	Ethics	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
SOC 1101	Introduction to Sociology	3

Total: 65

Sports & Exercise Studies - Health & Wellness Major AAS Degree

In response to the great health care demands of the twentieth century, the Wellness and Health Promotion major is designed for the health/fitness professional, personal trainer, educator, military professional, coach and others who want to learn about Wellness training program design and management for the general population. Research and current issues in the wellness industry will be a focus of this major. Students that study the Wellness & Health Promotion major are trained to design a wellness training program for the general population; monitor wellness positions in self-owned personal training businesses, health & fitness clubs,

sports medicine clinics, wellness centers, hospitals, professional sports teams, universities, high schools, military and much more. Additionally students learn to design practical approaches for meeting the challenges of the new healthcare, fitness, and wellness marketplace.

Learning Outcome(s):

1. Design a wellness training program for the general population.
2. Monitor wellness positions in self-owned personal training businesses, health & fitness clubs, sports medicine clinics, wellness centers, hospitals, professional sports teams, universities, high schools, military and much more.
3. Design practical approaches for meeting the challenges of the new healthcare, fitness, and wellness marketplace.

First Semester **Units:** 12

SES 1100	Personal Fitness Concepts	3
SES 1104	Yoga	1
OR		
SES 1105	Intro Strength & Resistance Training	1
OR		
SES 1106	Golf	1
OR		
SES 1108	Women's Self Defense	1
OR		
SES 1109	Bowling	1
OR		
SES 1110	Fitness Kick Boxing	1
OR		
SES 1112	Total Body Conditioning	1
ENGL 1100	Composition I	3
MATH 1104	Mathematical Concepts for Business	3
COLS 1100	First Year Experience Seminar	1
MULT 1170	Current Issues:HIV Infection	1

Second Semester **Units:** 13

SES 1101	Intro Sport & Exercise Studies	3
BIO 1121	Anatomy and Physiology I*	4
OR		
BIO 2300	Human Anatomy*	4
HNTR 1153	Nutrition for a Healthy Lifestyle	3
BMGT 2216	Business Ethics	3

Third Semester **Units:** 14

SES 2437	Health Promotion	3
SES 2440	Exercise Physiology	4
SES 2740	Dimension of Wellness	3
BIO 1122	Anatomy & Physiology II*	4
OR		
BIO 2301	Human Physiology*	4

*Student must take either BIO 1121/2300 series OR BIO 1122/2301 series.

Fourth Semester **Units:** 12

SES 2438	Fitness Concepts Across the Lifespan	3
SES 2535	Sport Law	3
SES 2750	Chronological & Physiological Wellness	3
ANTH 2202	Peoples & Culture	3

Fifth Semester **Units:** 14

SES 2760	Clinic/Corporate Wellness	3
SES 2770	Society and Wellness	3
SES 2950	SES Practicum/Seminar	2
HUM-XXXX (select from approved GE-HUM list)		3
ENGL 2367	Composition II	3
OR		
ENGL 2567	Comp II Writing about Gender & Identity	3
OR		
ENGL 2667	Comp II American Working-Class Identity	3
OR		
ENGL 2767	Comp II Writing About Science/Technology	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

CLAS 1222	Classical Mythology	3

CLAS 1224	Classical Civilization: Greece	3
CLAS 1225	Classical Civilization: Rome	3
CLAS 1226	Classical Civilization: Byzantium	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 2223	African-American History I Before 1877	3

Total: 65

Exercise Specialist Certificate

The Sport and Exercise Studies Exercise Specialist Certificate prepares students to sit for the leading certifications in the health and fitness industry. These certifications include (but are not limited to) the American College of Sports Medicine (ACSM) Certified Personal Trainer certification and the National Strength and Conditioning Association (NSCA) Certified Personal Trainer certification. Students can begin the Exercise Specialist Certificate track during any semester.

First Semester **Units:** 10

SES 1100	Personal Fitness Concepts	3
SES 2438	Fitness Concepts Across the Lifespan	3
SES 2440	Exercise Physiology	4

Second Semester **Units:** 11

SES 1101	Intro Sport & Exercise Studies	3
SES 2415	Adv Strength & Resistence Training Con	4
SES 2441	Kinesiology	4

Third Semester **Units:** 7

SES 2442	Exercise Prescript&quantitative Analysis	3
SES 2950	SES Practicum/Seminar	2
MULT 1130	Responding to Emergencies	2

Milestone/Progress Check: • Upon completion of MULT 1130 or SES 2426, students will be able to test for a CPR/First Aid certification.

Total: 28

Youth Coaching Certificate

The Sport and Exercise Studies Youth Coaching Certificate prepares students to provide coaching leadership in youth league sports. The certificate is designed using the American Sport Education Program (ASEP) as a framework. Upon completion, students are encouraged to finish the ASEP certification.

First Semester **Units:** 9

SES 1101	Intro Sport & Exercise Studies	3
SES 1105	Intro Strength & Resistance Training	1
SES 1327	Individual Sport & Activity	2
SES 2535	Sport Law	3

Second Semester **Units:** 8

SES 1328	Team Sport & Activity	2
SES 2410	Conditioning & Training Youth Athlete	3
SES 2625	Concepts of Coaching	3
SES 2426	Athletic Injury Control & First Aid	3
SES 2626	Coaching the Young Athlete	3
SES 2950	SES Practicum/Seminar	2

Third Semester **Units:** 8

Total: 25

Sterile Processing Technology Certificate

Sterile Processing Technology is a dynamic and exciting allied health profession. The Certified Sterile Processing Technologist is a vital member of the allied health field of professionals who work closely with hospital-wide, patient-care departments, especially surgical departments.

Columbus State Community College offers a two-semester academic/laboratory/clinical Certificate Sterile Processing Technology program.

The International Association of Healthcare Central Service Material Management (IAHCSMM) accredits the Certificate and Associate Degree programs. Graduates are eligible to obtain national certification as a Central Service Technician upon successful examination administered by the IAHCSMM.

Learning Outcome(s):

1. Accurately demonstrate a safe and professional level of practice, skills and knowledge in their role as a Sterile Processing Technician.
2. Acquire an understanding of the ethical, legal, moral, and medical standards related to the patient and the sterile processing team.
3. Perform proficiently and competently as an entry-level Sterile Processing Technician in the cognitive, psychomotor, and affective learning domains.
4. Students will be prepared to take the Certification Exam administered by IAHCSMM.
5. Students will be accountable as a medical professional and value the attributions of the Sterile Processing Technician to the central service team.
6. Describe the importance of workflow in a modern organized Central Service Department.
7. Define the legal and ethical responsibilities of Sterile Processing Technician's and their role in providing effective quality patient care.
8. Implement standard precautions by the use of hand hygiene and donning proper personal protective equipment.
9. Integrate infection control protocols while demonstrating appropriate decontamination techniques.
10. Utilize medical terminology to interpret surgical procedures and determine the correct instruments and supplies needed to build case carts.
11. Correlate manufacturer's recommendations when demonstrating cleaning, sterilization and maintenance of equipment and instrumentation.
12. Communicate and apply the principles and techniques for cleaning, testing and identification of patient care equipment and specialty items.
13. Identify, inspect, assemble and categorize by function surgical instruments and build procedure specific instrument sets and case carts.
14. In the course of inspecting surgical instruments and equipment identify damaged or worn items and implement the proper procedures for repair or disposal.
15. Proficiently correlate and determine the correct sterilization method to assure sterility of specific instrument groupings.
16. Establish inventory control and Utilize proper regulations and standards for preventing safety hazards when demonstrating the preparation, packaging, storage and distribution of sterile items.
17. Develop professional behaviors required for the successful completion of the Sterile Processing Program.

First Semester **Units:** 8

SPT 1861	Sterile Processing Tech I	6
HIMT 1121	Advanced Medical Terminology	2

Second Semester **Units:** 8

SPT 1862	Sterile Processing Technology II	6
SPT 2530	Sterile Processing Exam Review	2

Total: 16

Logistics Engineering Technology AAS Degree

Logistics Engineering Technology combines coursework from Supply Chain Management, Engineering and Computer Science. The program mixes convenient online courses with hands-on learning instruction on industry-standard logic controllers, conveyors and logistics technology. The supply chain industry has been greatly affected by the infusion of new technologies such as robotics, data tracking and analytics. This degree will explore how new technologies create opportunities to design and create more efficient systems and processes that can improve an organization's productivity.

Learning Outcome(s):

1. Demonstrate knowledge of supply chain management techniques including automated technologies, inventory techniques, bar-coding systems, picking and delivery processes, and storage/sorting systems.
2. Demonstrate knowledge of the function and operation of warehouses and distribution facilities relating to inventory control, and management.
3. Understand the analytical tools as they relate to measuring and analyzing productivity and for continuous improvement.
4. Demonstrate skill with spreadsheet and database programs for data analysis and interpretation.
5. Participate in collaborative projects utilizing the systems development life cycle (SDLC).
6. Identify and apply networking concepts.
7. Read and interpret engineering drawings.
8. Demonstrate understanding of electrical motors, motor controls, and programmable logic controllers as well as their use in controlling industrial machines.

First Semester **Units:** 15

SCM 1100	Supply Chain Mgmt Principles	3
ENGL 1100	Composition I	3
MATH 1111	Discrete Mathematics for Computing	3
BOA 1102	Excel I	2
ESSH 1101	Intro to Environ Science, Safety, Health	3
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 17

CSCI 1103	Intro to Programming Logic	3
SCM 2111	Inventory Management	3
ENGT 1200	Intro Industrial & Systems Engineering	3
BOA 1172	Excel II	2
ENGT 1115	Engineering Graphics	3
CSCI 1320	Database Fundamentals	3

Third Semester **Units:** 6

PHIL 1130	Ethics	3
STAT 1400	Statistical Concepts for Business	3

Fourth Semester **Units:** 16

ENGT 1300	Intro Electric Motors, Controls, PLC's	4
ACCT 1212	Managerial Accounting	3
SCM 1501	Business Technology & Automation	3
SCM 2110	Warehouse Management	4
ITST 1102	Industrial Network Communications	2

Fifth Semester **Units:** 11

EET 2235	Data Acquisition Systems	3
SCM 2802	SCM Seminar	1
SCM 2902	SCM Practicum	1
SCM 2601	Performance Mgmt SCM Managers	3

BMGT 2250	Project Management Principles	3

Total: 65

Supply Chain Management AAS Degree

Supply Chain Management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. It also includes coordination and collaboration with channel partners, such as suppliers, intermediaries, third-party service providers, and customers. In essence, Supply Chain Management integrates supply and demand management within and across companies, both domestically and internationally. The Greater Columbus Metropolitan Area is home to many distribution operations including centers for Limited Brands, Spiegel, Eddie Bauer, JC Penney, Kraft, Consolidated Stores Corporation, EXCEL, Logistics and McGraw-Hill Companies, and it is home to the only "Free Trade Zone" with customs clearance in the state of Ohio.

Supply Chain Management graduates may expect entry-level, first-line management positions as supervisors and managers in such areas as traffic and transportation, inventory management, warehousing, export/import, purchasing, materials control, traffic and operations management.

Columbus State Community College is nationally accredited by the Association of Collegiate Business Schools and Programs (ACBSP) for the offering of its business programs that culminate in the Associate of Arts, Associate of Science and Associate of Applied Science degrees.

Learning Outcome(s):

1. Describe the various functions that comprise supply chain management and describe the interrelationship between them and other functional areas within a company.
2. Be able to make channel-related decisions to satisfy industrial and consumer wants in both domestic and international markets.
3. Demonstrate knowledge of supply chain management terminologies including inventory techniques, barcoding systems, picking and delivery processes, and storage and sorting systems.
4. Demonstrate knowledge of the function and operation of warehouses and distribution facilities relating to inventory control and management.
5. Describe the traffic management function and its role in carrier selection, rate determination and rate negotiation.
6. Demonstrate knowledge of state and federal laws that impact the distribution function.
7. Participate in the development of an integrated plan of action consistent with established supply chain management goals.
8. Recognize the analytical tools useful in supply chain management particularly as they relate to measuring and analyzing productivity.
9. Possess a basic understanding of industrial safety issues particularly as they relate to the development of a basic safety program.
10. Identify the principles of interactive management and how they apply to managing worker performance, retention/hiring procedures, and developing collaborative action plans.
11. Possess fundamental supervisory skills including setting performance objectives, coaching and feedback, and conducting formal performance reviews.

First Semester **Units:** 13

SCM 1100	Supply Chain Mgmt Principles	3
ACCT 1211	Financial Accounting	3
COLS 1100	First Year Experience Seminar	1
ECON 2200	Principles of Microeconomics	3
ENGL 1100	Composition I	3

Milestone/Progress Check: • SCM 1100 is the Pre-req for the other SCM courses ENGL 1100 placement or completion is required for many of the Gen Ed requirements such as BIOL, GEOL, ASTR, etc.

Second Semester **Units:** 16

SCM 1101	Transportation & Traffic Mgmt	3
SCM 1501	Business Technology & Automation	3
SCM 1510	Strategic Procurement	4
MKTG 1110	Marketing Principles	3
MKTG 1230	Customer Service & Sales	3

Third Semester **Units:** 9

HUM-XXXX (select from approved GE-HUM list)		3
STAT 1400	Statistical Concepts for Business	3
TECH XXXX - Technical Elective (Select from approved technical elective list)		3

Fourth Semester **Units:** 14

SCM 2110	Warehouse Management	4
SCM 2111	Inventory Management	3
CSCI 2330	Project Mgt Fund & Case Studies	4
FMGT 2201	Corporate Finance	3

Fifth Semester **Units:** 12

SCM 2601	Performance Mgmt SCM Managers	3
SCM 2802	SCM Seminar	1
SCM 2902	SCM Practicum	1
SCM 2460	Procurement Planning & Negotiation	3
NAT-XXXX (select from approved GE-NAT list)		4

Milestones/Progress Check: • The SCM 2802 & 2902 are the Degree Internship courses and are to be taken simultaneously. SCM 2601 is the Degree Capstone Course. • GEOL does not require a prerequisite.

Technical Electives - 3 credit hours minimum **Units:** 0

The following courses are approved for technical elective requirements:

SCM 1190	International Commerce	3
SCM 2290	Intro Import/Export Regs & Comp	4
SCM 2450	Transportation Rates & Claims	3

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3

NAT GE-Natural/Physical Sciences Requirement - 4 credit hours minimum **Units:** 0

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

Total: 64

Supply Chain Management - International Commerce Major AAS Degree

As the sixth largest exporting state in the U.S., Ohio values international commerce. The state capital, Columbus, and its environs are a hub for international shipping and commerce. Columbus is the USA's third largest port of entry for textiles, and it is home to more than 40 freight forwarding companies and more than 132 internationally owned firms with over 27,000 employees.

The International Commerce major is designed to respond to the need for an educated workforce at all levels of the career ladder within such organizations. Grounded in fundamental courses in supply chain management—transportation, global shipping, global marketing, etc.—this major also includes a three-semester language sequence in Spanish or Chinese, as well as supplemental courses in business culture and economics to broaden and deepen student understanding of the complexities of international commerce. Atravel-abroad component is part of the program.

Learning Outcome(s):

1. Describe, discuss and comprehend the nature of current globalization.
2. Recognize the exponential growth of international trade and the economic impact of international supply chain logistics activities.
3. Discuss how Incoterms are used to share responsibilities between exporters and importers.
4. Differentiate the risks the currency exchange rates pose for international trade and the effect it has on the types of payment used in international commerce.
5. Identify and understand the purpose/function of various required documents common to international trade.
6. Explain cultural, social, economic, and political factors that impact organizations.
7. Identify the types of air/ocean transportation services and aircraft/vessel sizes.
8. Identify and understand the characteristics of intermodal transportation and the functions of international transportation forwarders and brokers.
9. Converse at a basic business level in Spanish or Chinese.

First Semester **Units:** 16

SCM 1100	Supply Chain Mgmt Principles	3
COLS 1100	First Year Experience Seminar	1
ECON 2200	Principles of Microeconomics	3
ENGL 1100	Composition I	3
GEOG 2750	World Regional Geography	3
STAT 1400	Statistical Concepts for Business	3

Second Semester **Units:** 13

SCM 1190	International Commerce	3
SCM 1501	Business Technology & Automation	3
MKTG 1110	Marketing Principles	3
SPAN 1101	Beginning Spanish I	4
OR		
CHIN 1101	Beginning Chinese I	4

Third Semester **Units:** 6

HIST-XXXX (select from approved GE-HUM list)		3
NAT-XXXX (select from approved GE-NAT list)		3

Fourth Semester **Units:** 17

SCM 2111	Inventory Management	3
SCM 2250	International Shipping	3
SCM 2290	Intro Import/Export Regs & Comp	4
SCM 2450	Transportation Rates & Claims	3
SPAN 1102	Beginning Spanish II	4
OR		
CHIN 1102	Beginning Chinese II	4

Fifth Semester **Units:** 12

SCM 2601	Performance Mgmt SCM Managers	3
SCM 2902	SCM Practicum	1
SCM 2802	SCM Seminar	1

MKTG 2750	Global Marketing	3
SPAN 1103 OR CHIN 1103	Intermediate Spanish Beginning Chinese III	4 4

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3

NAT GE-Natural/Physical Sciences Requirement - 3 credit hours minimum **Units:** 0

ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Intro to Biology	4
BIO 1107	Human Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
BIO 2215	Microbiology	4
BIO 2301	Human Physiology	4
CHEM 1100	Chemistry and Society	5
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1121	Physical Geology	4
GEOL 1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

Total: 64

International Commerce Certificate

Supply Chain Management (SCM) Certificate students will gain an in-depth understanding of SCM Principles in the areas of Transportation & Traffic Management, Strategic Procurement, Warehouse Management, Inventory Management, International Shipping, and Import/Export Regulations.

Courses for these certificates follow the guidelines and cover the content established by the Council of Supply Chain Management Professions (CSCMP), the Institute for Supply Management (ISM) and The North American Small Business International Trade Educators (NASBITE) respectively, in their certification exams.

First Semester **Units:** 12

SCM 1100	Supply Chain Mgmt Principles	3
SCM 1190	International Commerce	3
SCM 1501	Business Technology & Automation	3
SCM 2250	International Shipping	3

Second Semester **Units:** 7

SCM 2290	Intro Import/Export Regs & Comp	4
MKTG 2200	Digital Marketing	3

Total: 19

LINCS Customer Service Operations Certificate

LINCS Demand Planning Certificate

LINCS Procurement Certificate

LINCS Supply Chain Inventory Certificate

Provides an overview of supply chain terminology and technology. This course will serve to familiarize participants with the interrelationships among the functional areas of the supply chain.

First Semester		**Units:** 1
SCM 2111B	Inventory Management-B	1

Total: 1

LINCS Transportation Operations Certificate

LINCS Warehouse Operations Certificate

Supply Chain Management Certificate

Supply Chain Management (SCM) Certificate students will gain an in-depth understanding of SCM Principles in the areas of Transportation & Traffic Management, Strategic Procurement, Warehouse Management, Inventory Management, International Shipping, and Import/Export Regulations.

Courses for these certificates follow the guidelines and cover the content established by the Council of Supply Chain Management Professions (CSCMP), the Institute for Supply Management (ISM) and The North American Small Business International Trade Educators (NASBITE) respectively, in their certification exams.

First Semester		**Units:** 14
SCM 1100	Supply Chain Mgmt Principles	3
SCM 1101	Transportation & Traffic Mgmt	3
SCM 1510	Strategic Procurement	4
SCM 2110	Warehouse Management	4

Second Semester		**Units:** 10
SCM 2111	Inventory Management	3
SCM 2250	International Shipping	3
SCM 2290	Intro Import/Export Regs & Comp	4

Total: 24

Surgical Technology AAS Degree

Surgical Technology is a dynamic and exciting allied health profession. The surgical technologist is a vital member of the allied health field of professionals who work closely with surgeons, anesthesiologists, registered nurses, and other personnel delivering surgical patient care.

Columbus State Community College offers a three semester academic/laboratory/clinical Certificate Surgical Technology program concurrent with a five semester, academic/laboratory/ clinical Associate of Applied Science Degree program.

The Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredits the Certificate and Associate Degree programs. Graduates are eligible to obtain national certification as a Certified Surgical Technologist (CST) upon successful examination administered by the Liaison Council on Certification for the Surgical Technologist (LCC-ST).

Learning Outcome(s):

1. Demonstrate all competencies required for the certified Surgical Technologist (CST).
2. Demonstrate advanced knowledge and practice of patient care techniques.
3. Demonstrate advanced knowledge of sterile and surgical techniques.
4. Demonstrate advanced knowledge and practice in the role of the first scrub (STSR) and second scrub (STSR2).
5. Demonstrate knowledge and practice of circulating skills and tasks (STAC).
6. Demonstrate knowledge relating to operating room emergency situations.
7. Demonstrate advanced organizational skills.
8. Demonstrate advanced knowledge in one or two surgical specialty areas.
9. Demonstrate a professional attitude.

First Semester **Units:** 14

SURG 1861	Surgical Technology I	7
ENGL 1100	Composition I	3
MATH 1104	Mathematical Concepts for Business	3
OR		
STAT 1350	Elementary Statistics	3
COLS 1100	First Year Experience Seminar	1

Second Semester **Units:** 13

SURG 1862	Surgical Technology II	7
BIO 2300	Human Anatomy	4
HIMT 1121	Advanced Medical Terminology	2

Third Semester **Units:** 13

SURG 1863	Surgical Technology III	7
BIO 2301	Human Physiology	4
HIMT 1141	Pharmacology	2

Fourth Semester **Units:** 14

SURG 2864	Surgical Technology IV	7
BIO 2215	Microbiology	4
SBS-XXXX (select from approved GE-SBS list)		3

Milestone/Progress Check: • SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum.*

Fifth Semester **Units:** 10

SURG 2865	Surgical Technology V	4
MULT 1170	Current Issues:HIV Infection	1
MULT 1910	Basic Electrocardiography	3
MULT 2076	Legal Aspects and Risk Management	2

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology	3

Total: 64

Veterinary Technology AAS Degree

Veterinary technicians are registered, certified or licensed members of the veterinary health care team. They play an integral role in many areas of veterinary clinical practice, including medical, surgical, laboratory, and office procedures. All tasks are performed under the supervision of a licensed veterinarian. Compassion for

animals is essential, because the main focus of individuals employed as veterinary technicians is the treatment and nursing of healthy and sick animals.

The American Veterinary Medical Association accredits Columbus State's Veterinary Technology program. The Associate of Applied Science Degree in Veterinary Technology provides students with both classroom and clinical experiences. Students also will spend a portion of their clinical experience in various veterinary settings, including research centers, private clinical practices, veterinary emergency hospitals, veterinary diagnostic laboratories, and zoos. Columbus State Community College emphasizes safety and disease prevention because students and employees in health care professions may be exposed to infectious materials, communicable, and zoonotic diseases.

Columbus State Community College also offers an evening Veterinary Technology program designed for the working student. The evening/part-time program can be completed in 11 semesters with classes starting no earlier than 5:00 p.m. When evening students are enrolled in the Clinical Experience A-D courses, daytime availability will be required in order to provide quality education and training in the veterinary health care field.

For students interested in equine health, a joint program has been developed between Columbus State's Veterinary Technology and Otterbein University's Department of Equine Science. Successful completion of these two programs will result in an Associate of Applied Science Degree in Veterinary Technology from Columbus State Community College, and the Bachelor of Science Degree in Equine Veterinary Technology from Otterbein University. For more information, contact Dr. Stephanie Burk, sburk@otterbein.edu.

For students interested in animal science, a joint program has been created between Columbus State's Veterinary Technology and The Ohio State University's Department of Animal Science. Successful completion of these two programs will result in an Associate of Applied Science Degree in Veterinary Technology from Columbus State Community College, and the Bachelor of Science Degree in Agriculture from The Ohio State University. For more information, please contact Mariette C. Benage, benage.1@osu.edu. Special advising with the program coordinator is necessary for students who wish to participate in these joint programs.

Learning Outcome(s):

1. Perform patient assessment techniques, obtain thorough patient history, and maintain medical records for patient animals in a veterinary health care setting.
2. Effectively communicate preventative medicine, treatment protocols, dental health, and medical and surgical procedures to veterinary clients.
3. Prepare and dispense medications according to a prescription, perform drug dosage calculations, and maintain controlled drug records.
4. Administer and understand the effects of treatments and/or medications delivered either orally or parenterally.
5. Apply and manage wound dressings, bandages, and splints.
6. Properly collect, prepare and handle diagnostic specimens for laboratory analysis.
7. Perform clinical laboratory procedures, including complete blood counts, serum chemistries, microbiology, immunologic testing, urinalysis, and cytology.
8. Identify internal, external, and blood parasites of domestic animal species.
9. Safely handle and perform routine procedures on common laboratory animals used in research settings.
10. Prepare equipment, instruments, animals, and medications for surgical, diagnostic, and anesthetic procedures.
11. Administer and effectively monitor anesthesia, including anesthetic induction, maintenance, and recovery by inhalation and/or parenteral routes.
12. Assist in diagnostic, medical, and surgical procedures, including post-operative management, pain control, and skin closure.
13. Perform complete routine dental prophylaxis.
14. Administer and monitor basic and/or intensive nursing care, including fluid therapy and nutritional management.
15. Perform diagnostic imaging procedures using appropriate safety measures.
16. Comprehend the approach to providing safe and effective care for avian, exotic and small mammal species.

First Semester **Units:** 15

VET 1103	Intro to Small Animal Medicine	1
VET 1105	Veterinary Parasitology	2
STAT 1350	Elementary Statistics	3
BIO 1121	Anatomy and Physiology I	4
BIO 1122	Anatomy & Physiology II	4
COLS 1100	First Year Experience Seminar	1

Milestones/Progress Check: • Successful completion necessary to proceed with program in sequence. • Essential skill mastery must be demonstrated by by receiving a passing grade in exams.

Second Semester **Units:** 12

VET 1324	Principles of Veterinary Radiology	1
VET 1331	Veterinary Anatomy & Physiology	2
VET 1335	Clinical Pathology I	3
VET 1338	Veterinary Surgical Techniques	2
VET 1426	Principles of Veterinary Anesthesia	2
HIMT 1121	Advanced Medical Terminology	2

Milestone/Progress Check: • Essential skill mastery must be demonstrated by receiving a passing grade in exams.

Third Semester **Units:** 13

VET 1501	Animal Nutrition	1
VET 1502	Laboratory and Exotic Animal Medicine	1
VET 1533	Clinical Application I	2
VET 1536	Small Animal Health & Disease	2
BPS XXXX Biological and Physical Science Course (See List) - 4 credits required		4
ENGL 1100	Composition I	3

Milestones/Progress Check: • Successful completion required to proceed to VET 2535. • Essential skill mastery must be demonstrated by receiving a passing grade in exams. • Essential skill mastery must be demonstrated by receiving a passing grade in practical exams. • VET 1533 and all VET 1000 courses must be completed before practicum experiences. • Essential skill mastery must be demonstrated by receiving a passing grade in exams.

Fourth Semester **Units:** 13

VET 2535	Clinical Pathology II	2
VET 2562	Veterinary Pharmacology	2
VET 2563	Clinical Application II	2
VET 2566	Large Animal Health and Disease	2
VET 2599	Clinical Application III	2
BMGT 2200	Management & Organizational Behavior	3

Milestone/Progress Check: • Essential skill mastery must be demonstrated by receiving a passing grade in exams.

Fifth Semester **Units:** 12

VET 2800	Veterinary Seminar I	1
VET 2850	VET Seminar II	1
VET 2900	Veterinary Practicum I	2
VET 2950	Veterinary Practicum II	2
HUM-XXXX (select from approved GE-HUM list)		3
SBS-XXXX (select from approved GE-SBS list)		3

Milestones/Progress Check: • Day-time availability required (VET 2900/2950).

HUM GE-Arts/Humanities Requirement - 3 credit hours minimum **Units:** 0

(Select One)

HART 1201	Ancient and Medieval Art Histories	3
HART 1202	Renaissance to Contemporary Art Histories	3
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
HIST 1151	American History to 1877	3
HIST 1152	American History Since 1877	3
HIST 1181	World Civ I Non Western to 1500	3
HIST 1182	World Civ II Non Western Since 1500	3
HIST 2223	African-American History I Before 1877	3
HIST 2224	African-Amer History II Since 1877	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Intro to Philosophy	3

SBS GE-Social/Behavioral Sciences Requirement - 3 credit hours minimum **Units:** 0

(Select One)

ANTH 2202	Peoples & Culture	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic & Social Geography	3
POLS 1100	Introduction to American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3

BPS XXXX Biological Physical Science List - Select one course **Units:** 0

BIO 1111	Intro to Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Introduction to Environmental Science	4
CHEM 1111	Elementary Chemistry I	4
CHEM 1112	Elementary Chemistry II	4
CHEM 1113	Elements of Organic/ Biochemistry	4
CHEM 1171	General Chemistry I	5
CHEM 1172	General Chemistry II	5
CHEM 1200	Intro to General & Organic Chemistry	5
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5

Total: 65

Courses by Subject

Accounting

ACCT 1211—Financial Accounting (3)
Lecture: 2, Lab: 2
Prerequisite(s): Placement into ENGL 1100 or equivalent.
This course covers the generally accepted accounting principles and the framework for preparing financial reports on corporations and proprietorships for external users. Recording transactions, adjusting balances, and preparing financial statements are demonstrated. The financial statements covered in this course include: Income Statement, Owner's Equity Statement, Cash Flow Statement, and Balance Sheet. Knowledge of Excel highly recommended. Lab Fee: $2

ACCT 1212—Managerial Accounting (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100 or equivalent.
This course is a continuation of ACCT 1211 with special emphasis on the uses of financial measurements, calculations, and reports used by an organization to make a variety of management decisions. Specific uses discussed are methods for costing products and services, decision analysis, and budgeting. To be successful in this course it is recommended that students have a "C" or better in ACCT 1211. Lab Fee: $2

ACCT 1400—Accounting Systems (3)
Lecture: 3
Prerequisite(s): ACCT 1211.
ACCT 1400 studies current practices and computer technologies used to design, utilize, and manage accounting information systems. Transaction process cycles, general ledgers, and subsidiary ledgers are analyzed. Internal controls, information security, and fraud detection are also examined. Students will prepare flowcharts and practice on accounting system software. Lab Fee: $5

ACCT 2211—Cost Accounting (3)
Lecture: 3
Prerequisite(s): ACCT 1212.
ACCT 2211 offers a study in the cost analysis of acquiring and using resources in an organization's planning and decision making. Lab Fee: $2

ACCT 2231—State and Local Taxation (3)
Lecture: 3
Prerequisite(s): ACCT 1211.
ACCT 2231 covers payroll and unemployment taxes (withholding and reports); current state and local tax law; and preparation of forms and reporting requirements. Also addressed are the Commercial Activity Tax, Ohio income and personal taxes, sales and use taxes, real estate taxes, and various other taxes. Multi-state taxation and pass-through entities will be discussed as well Lab Fee: $5

ACCT 2232—Federal Taxation I (3)
Lecture: 3
Prerequisite(s): ACCT 1211.
ACCT 2232 covers individual income taxes, forms and returns, exemptions, deductions, gains and losses, rates, adjustments, and credits. Also explores issues of proprietorship, retirement, inventories, depreciation accounting, installment and deferred sales treatment. Filing requirements, payments, refunds, claims, and tax planning techniques are discussed. Corporate and partnership taxation will also be introduced. Lab Fee: $5

ACCT 2236—Federal Taxation II (3)
Lecture: 3
Prerequisite(s): ACCT 2232.
A continuation of ACCT 2232, this course deals primarily with the taxation of corporate entities, partnerships, and Sub-chapter S corporations. Specific topics include nonliquidating distributions; earning and profits; corporate complete liquidations; corporate reorganization; U.S. taxation of multinational companies; and partnership, LLC, and Sub-chapter S corporation's reporting of income, distributions, and liquidations. Lab Fee: $5

ACCT 2240—Tax Practice (3)
Lecture: 3
Prerequisite(s): ACCT 2232.
ACCT 2240 is an advanced tax course covering the administrative aspects of practice before the IRS including rules, penalties, procedures, and ethics for client representation as a CPA, EA or general tax preparer. This course discusses the requirements and processes to become a professional tax preparer. Initial classes will be instructive preparation for the VITA/CEA IRS volunteer program tax prepared examinations. Upon successful completion of these IRS exams, the students will be required to participate in the volunteer VITA program with practical experience as a tax preparer within the local community. Also covered are research techniques and understanding the structure of the Federal tax system. Lab Fee: $5

ACCT 2241—Auditing (4)
Lecture: 4
Prerequisite(s): ACCT 2250.
This is a course concerned with the identification of professional qualifications and responsibilities of an auditor and the study of auditing concepts utilized in the investigation and appraisal of economic information. Students will also participate in the practical application of audit techniques. Topics will include the role of the auditor in society, auditing standards, professional liability, audit objectives, and ethics. Lab Fee: $2

ACCT 2250—Intermediate Accounting I (4)
Lecture: 4
Prerequisite(s): ACCT 1211.
This course is a continuation of ACCT 1211 that reinforces the mechanical phase of theoretical concepts enabling the accounting majors to apply double entry accounting methods toward the daily maintenance of accounting resources and the preparation of basic financial statements. Additional topics explored in an in-depth study of the accounting processes, valuation, and statement presentation will be conducted on the following accounts; cash, receivables, inventories, property, plant, & equipment, and intangibles. Recommend: To be successful in this course it is recommended that students have a "C" or better in ACCT 1211. Lab Fee: $1

ACCT 2252—Intermediate Accounting II (4)
Lecture: 4
Prerequisite(s): ACCT 2250.
This course offers a continuation of ACCT 2250 including analysis and methods of valuation and statement presentation of the following items: current liabilities, long-term liabilities including contingent items and deferred charges, investments, stockholders equity, dilutive securities, deferred taxes, earnings per share, leases, pensions, cash flow statement, error analysis, and full disclosure in financial reporting. Recommend: Students complete Math 1030 with a "C" or better.To be successful in this course it is recommended that students have a "C" or better in ACCT 2250. Lab Fee: $1

ACCT 2258—Advanced Accounting (3)
Lecture: 3
Prerequisite(s): ACCT 2252.
This course is the study of financial accounting theory and practice relating to accounting for business combinations, consolidated financial statements, partnerships, and foreign operations. Lab Fee: $1

ACCT 2266—Public Administration/Fund Accounting (3)
Lecture: 3
Prerequisite(s): ACCT 2250.
ACCT 2266 deals with the principles and applications of fund accounting as it relates to state and local governments. It includes budgeting, accounting, reporting, and auditing for federal government, colleges, universities and hospitals. Lab Fee: $1

ACCT 2299—Accounting Capstone (3)
Lecture: 2, Lab: 2
Prerequisite(s): ACCT 2250.
In this course, students will apply the concepts they have learned throughout their plan of study through case studies and real world simulations. This course is designed to serve as a capstone course for graduating accounting students. Lab Fee: $2

ACCT 2901—Accounting Practicum & Seminar (3)
Seminar: 1, Practicum: 14
ACCT 2901 offers a structured employment situation in which the student is working in an actual accounting office for a minimum number of hours a week performing many of the accounting procedures studied in the conjunction with their other classes (i.e., bank reconciliation, payroll, journal entries, etc.). Weekly reporting is used to solve any job-related problems and to attempt to develop a sense of responsibility and a professional attitude within the student/intern. In addition to working the job, emphasis is placed upon analyzing and further understanding the student's working environment by requiring additional assignments inherent to that environment. Lab Fee: $0

Anthropology

ANTH 1194—SPT: Anthropology (1-3)
Lecture: 1 - 3
A detailed examination of selected topics of interest in anthropology. Lab Fee: $3

ANTH 2193—Independent Study in Anthropology (1-3)
Lecture: 1
Prerequisite(s): Instructor permission required.
An individual student-structured course that examines a selected topic in Anthropology through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. Lab Fee: $3

ANTH 2200—Introduction to Biological Anthropology (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100 or equivalent.
Introduction to the study of the human evolutionary past focused upon evolutionary theory and principles, living primates, the fossil record with particular emphasis on human ancestors, models for human evolution, and morphological and behavioral variation in modern human populations. Lab Fee: $3

ANTH 2200—Introduction to Biological Anthropology (4)
Lecture: 3, Lab: 1
Prerequisite(s): Placement into ENGL 1100 or equivalent.
Introduction to the study of the human evolutionary past focused upon evolutionary theory and principles, living primates, the fossil record with particular emphasis on human ancestors, models for human evolution, and morphological and behavioral variation in modern human populations. Lab Fee: $16

ANTH 2201—World Prehistory (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100 or equivalent.
This course is an overview of world prehistory. Since the majority of human existence occurred long before written records and historical documents were available, this course introduces students to the fundamentals of prehistoric archaeology. The course surveys human origins, investigates the emergence of domestication and agriculture, and explores the rise of settlements and civilization. A global perspective is taken in the study of the prehistoric human past. Lab Fee: $3

ANTH 2202—Peoples & Culture (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100 or equivalent.
This course focuses on understanding cultural diversity, using research techniques such as participant observation to explore the lifeways of groups. Topics include cross-cultural treatments of social systems, general theories of cultural interpretation, and change in a broad geographical context. Students apply concepts and complete a "mini-project" using anthropological research techniques. Lab Fee: $3

ANTH 2235—Introduction to Forensic Anthropology (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100 or equivalent and ANTH 2200 or; BIO 2300.
This course introduces students to the field of forensic anthropology. Students examine the development , the theoretical and methodological bases, and current applications in forensic anthropology. These methods are used in the investigation and detection of crime, the processing of mass disasters, the recovery of war dead and missing persons, and in international human rights investigations. Lab Fee: $3

American Sign Language

ASL 1100—Introduction to the Deaf Community (2)
Lecture: 1, Lab: 2
Prerequisite(s): Placement into ENGL 1100 or equivalent.
This course is designed to provide students with an overview of the Deaf community, its culture and language (ASL). Students will examine the following areas related to deafness: social, cultural, linguistic and educational experiences, Deaf history, and medical topics. This course also examines the employment trend and local programs and services available to the community. Lab Fee: $15

ASL 1101—Beginning ASL I (3)
Lecture: 2, Lab: 2
Prerequisite(s): Placement into ENGL 1100 or equivalent.
This course introduces the fundamental elements of American Sign Language within a cultural context. It focuses on everyday interactions and brief monologues in ASL. Grammar and vocabulary are presented in context, using ASL as the language of instruction. Additional information about the Deaf community and culture is introduced. Lab Fee: $15

ASL 1102—Beginning ASL II (3)
Lecture: 2, Lab: 2
Prerequisite(s): ASL 1101.
This course is a continuation of ASL 1101 Beginning ASL I. Students further acquire the fundamental elements of American Sign Language grammar and vocabulary in context through interactions and short monologues. ASL production and comprehension skills continue to develop, with an emphasis on comprehension of ASL. Knowledge and application of cultural norms and values continue to develop. ASL is the language of instruction for this course. Lab Fee: $15

ASL 1103—Intermediate American Sign Language I (3)
Lecture: 2, Lab: 2
Prerequisite(s): ASL 1102.
This course is a continuation of Beginning ASL II. Students further acquire the fundamental elements of American Sign Language grammar and vocabulary in context through interactions and short monologues. ASL production and comprehension of skills continue to develop and are given equal attention. Knowledge and application of cultural norms and values continue to develop. ASL is the language of instruction for this course. Lab Fee: $15

ASL 1104—Intermediate American Sign Language II (2)
Lecture: 1, Lab: 3
Prerequisite(s): ASL 1103.
This course is a continuation of ASL 1103 Intermediate ASL I. Students continue to develop more complex elements of American Sign Language grammar and vocabulary in context through interactions, monologues, and presentations. ASL production and comprehension skills continue to develop, with an emphasis on production of ASL. Knowledge and application of cultural norms and values continue to develop. ASL is the language of instruction for this course. Lab Fee: $5

ASL 1105—Advanced ASL I (2)
Lecture: 1, Lab: 3
Prerequisite(s): ASL 1104.
This course is a continuation of ASL 1104 Intermediate ASL II. Students continue to develop more complex elements of American Sign Language grammar and vocabulary in context through interactions, monologues, and presentations. ASL/English meaning equivalence is stressed. ASL production and comprehension skills continue to develop, with an emphasis on production of more complex ASL linguistic features. Knowledge and application of cultural norms and values continue to develop. ASL is the language of instruction for this course. Lab Fee: $5

ASL 1150—Linguistics of ASL & English (2)
Lecture: 1, Lab: 2
Prerequisite(s): ASL 1101; ASL 1102; ASL 1103.
This course offers an introduction to general linguistics, and provides an in-depth analysis of the major grammatical features and structure of ASL, and a comparison of ASL and English structure. Major topics also include language acquisition, language variation, and sociolinguistics. Specific linguistic considerations for interpreters are examined. Lab Fee: $5

ASL 1801—Fingerspelling and Numbers in ASL (1)
Lecture: 1
Prerequisite(s): ASL 1101.
This course offers students the opportunity to work on producing and comprehending fingerspelling and numbers in ASL. The emphasis of this course is on using fingerspelling and numbers in context. Opportunities are provided for the students to work with taped materials as well as live models. Lab Fee: $0

ASL 1802—History of the Deaf Community (1)
Lecture: 1
Prerequisite(s): ASL 1101; ASL 1102.
This course provides an in-depth look at the history of the Deaf community and how it has impacted the linguistic and cultural development of that community. Student will see how Deaf history around the world influences ASL, literature and education of the Deaf. Lab Fee: $0

ASL 2801—Classifier Use in ASL (1)
Lab: 2
Prerequisite(s): ASL 1103.
This course provides an in-depth look at the classifiers in ASL. This includes more intensive development of production and comprehension of classifiers. Students will analyze videos of native ASL users and continue to expand their use of classifiers. Lab Fee: $0

ASL 2802—ASL Literature (1)
Lecture: 1
Prerequisite(s): ASL 1103.
This course provides an in-depth look at the classifiers in ASL. This includes more intensive development of production and comprehension of classifiers. Students will analyze videos of native ASL users and continue to expand their use of classifiers. Lab Fee: $0

Applied Technology

APPL 1010—Introduction to Electricity (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This is an introductory electrical applications course covering the fundamentals of direct and alternating current concepts, measurements, circuit analysis, inductive magnetism, electrical energy sources, and basic electrical power formulas. Lab Fee: $0

APPL 1015—Electrical Foundations (3)
Lecture: 3
Prerequisite(s): APPL 1115.
This course begins with an in-depth overview of mathematics used in field conduit fabrication and common commercial and industrial installations. Topics studied include fractions, trigonometric functions, prefixes and powers of ten, algebraic equations and calculating square roots. A review of standard and metric conversions is followed by an introduction to blueprints in which the student uses actual blueprints and construction specifications for a job. The student is introduced to the National Electric Code and its conductor specifications sections. Finally, the student becomes familiar with common wiring devices, including switches and receptacles, which are used in commercial and industrial applications.

APPL 1018—Principles of Conduit Bending (2)
Lecture: 2
Prerequisite(s): APPL 1115.
This course will guide first year electrical apprentices with an overview of conduit types and general installation requirements applicable to conduit installations per NEC. Students will review and paractice bending procedures and methods. This course will provide a complete coverage of hand bending tools, conduit layout, mechanical benders, conduit threading techniques, threading tools, and procedures. Students will learn how to fabricate standard stub angles, offsets, kicks, three bend saddles and four bend saddles, as well as proper strapping requirements and techniques.

APPL 1030—OSHA 10 and Passport Certification (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The contents include OSHA 10 and Passport 16 safety standards for general safety, aerial lift, man lift, and laser safety. A qualification card is issued upon completion. Lab Fee: $0

APPL 1100—Safety Training Passport (1)
Lecture: 1
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course provides a basic understanding of OSHA and an awareness of the responsibility of employers and employees for safety in the construction industry. Lab Fee: $0

APPL 1103—Ohio CDL License Preparation (3)
Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course introduces the learner to the proper techniques needed to operate and drive large commercial equipment. Students are taught driver safety, proper vehicle equipment maintenance and State of Ohio laws regarding commercial vehicles. Students are taught proper methods of loading and securing equipment being hauled, as well as proper axle to weight distribution. A valid State of Ohio driver's license is required. Lab Fee: $0

APPL 1110—Electricity: DC Principles (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course serves as an introduction to direct current fundamentals, electron physics, current, voltage, watts (power), series and parallel resistances, electrical measurement devices, and circuit analysis. Lab Fee: $0

APPL 1113—Electricity: AC Principles (3)
Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course covers properties of alternating current (AC), AC measurements, inductance and inductive reactance, capacitance, impedance, series and parallel AC circuits, resonance, power and power factor correction, single-and three-phase transformers, and load analysis.

APPL 1115—Electrical Industry Survey (2)
Lecture: 2
Prerequisite(s): MATH 1050.
This first year inside apprentice course provides an industry overview focusing on apprentice responsibilities, industry structure, safety, and on the job activities. This course continues with exposure to common materials and equipment typically found on a commercial or industrial work site. Students are exposed to a multitude of industry specific topics during this course and finish their studies with training in CPR and basic First Aid.

APPL 1120—Interior Systems I (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The contents include an introduction to hand/power tool usage, safety standards, measuring and cutting operations, layout and installation of metal studs, drywall, and metal door frames/door hardware. Also included is course work in EIFS systems. stair framing, shaft walls, metal jamb and window frame, and insulation and sound control.

APPL 1130—Basic Millwright Fundamentals (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The contents include an introduction to the history of Millwrighting, advanced mathematics, electrical safety, and bolting and fastening. Torque values, fastener design and performance characteristics, and the development of safe electrical practices are established.

APPL 1160—Plumbing Fundamentals I (3)
Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course will introduce learners to the plumbing profession with a historical review of plumbing and its impact on humanity and population density. Students will review plumbing as emerging professional skilled trades, along with plumbing terminologies and the differences between plumbing systems. This course will expose students to plumbing's methodologies for protecting public health and safety, while providing comfort. The three phases of a plumbing project will frame the majority of this course.

APPL 1165—Plumbing Practices I (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The first in a series of courses will introduce learners to the plumbing profession's practices. Students will learn the hands-on skills needed for working as a plumbing professional. Students will learn various plumbing terminologies and different methods employed between these plumbing systems. Students will practice methodologies for protecting plubic health and safety, while providing comfort. Practicing the three phases of plumbing projects and implementing their procedures will give form and function to this course.

APPL 1170—Sheet Metal Fabrication I (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This is an introductory course to in-shop fabrication. This course includes safe operation of fabrication tools and equipment, basic materials used in fabrication, and elementary layouts.

APPL 1200—Forklift Operation (2)
Lecture: 2
Prerequisite(s): APPL 1100.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course involves understanding the OSHA regulations with regard to industrial forklift trucks. This course satisfies the general requirements as well as the training requirements of OSHA 1910.178. This course also covers characteristics of forklifts, the identification and functions of forklift components, operational safety, and safety equipment used on forklifts.

APPL 1203—Compacting Equipment (2)
Lecture: 2
Prerequisite(s): APPL 1100.
This course covers the study of standard features, procedures, tools, safety, inspection, and controls of compacting equipment. Topics include attachments, terminology, inspection, and controls.

APPL 1210—Electrical Applications (3)
Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course involves the study and measurements relative to layout and installation techniques. It includes the use of tools and bench work needed for the fabrication and installation of wiring and electrical/electronic controls.

APPL 1213—Electricity: Principles of Induction (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course studies fundamental principles of electricity including Ohm's Law, series and parallel circuits, voltage drop polarities, power, Kirchhoff's Laws, Inductance, Capacitance, and circuit troubleshooting.

APPL 1220—Scaffolding Systems (2)
Lecture: 1, Lab: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The contents include OSHA subpart L, competent person requirements, load calculations, scaffold hazard recognition assembly and disassembly of welded frame and mobile tower scaffold. A qualification card is issued upon completion.

APPL 1230—Measurements, Cutting & Welding Methods (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The contents include extensive lab time demonstrating the knowledge to accurately perform precision measurements repeatedly. Cutting and welding class and lab times are utilized so that the individual becomes familiarized with some of the basics of the welding field including procedural applications and electrical welding characteristics.

APPL 1250—Structured Cabling: Fundamentals (3)
Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course introduces the student to premises cabling, the related codes, and the TIA/EIA standards. With these fundamentals in place, the course further explains the need for structured cabling systems through exploring the system overviews. Subsequently, the student studies in more detail the unshielded twisted pair cables, connecting hardware, pathways, and spaces. After learning about telecommunications cabling administration, and grounding and bonding, the student begins to configure structured cabling systems and their applications. The course concludes with a hands-on lesson that involves the configuration and complete installation of a basic structured cabling system. Lab Fee: $0

APPL 1260—Plumbing Codes I (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course will introduce learners to the Current Ohio Plumbing Code and the theories that lie at the foundation for these requirements. Students will review the structure, format, and overall scheme of the Ohio Plumbing Code. This course will expand upon proper plumbing terminologies, materials, and equipment installation requirements as detailed in Chapters 1-3. This course will cover those codes pertaining to the repair and maintenance of plumbing systems and associated fixtures and appliances. Lab Fee: $0

APPL 1270—Introduction to Welding (2)
Lecture: 1, Lab: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course introduces the learner to the welding profession, welding tools, welding safety, OxyFuel setup, cutting, and heating, base metal preparation, weld quality, and all aspects of Shielded Metal Arc Welding (SMAW) (known as "Stick Welding") including equipment setup, and electrode selection. Through this course the learner will be able to assess what other welding skills and knowledge they desire and/or need for the work place.

APPL 1300—Heavy Construction Fundamentals I (3)
Lecture: 2, Lab: 2
Prerequisite(s): APPL 1100.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. A comprehensive study and application of the material testing methods of soils, aggregates, asphalt, and Portland cement concrete required in the heavy construction industry. Students will learn first hand steps needed for proper preparation for the American Concrete Institute (ACI) Grade 1 Concrete Field Technician requirements. Learners will learn the proper processes for site compaction methods and materials required for heavy construction.

APPL 1310—DC Theory (Commerical and Industrial) (3)
Lecture: 2, Lab: 2
Prerequisite(s): APPL 1115.
The course introduces basic DC electrical theory and circuits and their application in commercial and industrial settings. Later lessons introduce the student to the concept of series and parallel circuit properties. Calculations for resistance, voltage, power, voltage drop and current are examined in detail. Students are introduced to Kirchhoff's Laws, Thevenin's and Norton's Theorems and the calculations required as they apply to DC series and parallel circuits. Students will use vector analysis to solve complex combination circuits.

APPL 1313—AC Theory (Commercial and Industrial) (3)
Lecture: 2, Lab: 2
Prerequisite(s): APPL 1015 and APPL 1310.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Elementary and advanced AC Circuits in commercial and industrial settings are introduced and analyzed to give the student a clear understanding and foundation in AC theory. The mathematics used to calculate series and parallel RC, RL, LC, and RLC circuits is explained, along with filter theory and power factor. Students start with a study of inductors and inductive reactance in series and parallel circuits. Students then move to working with capacitors and capacitive reactance in a commercial and industrial setting. In the laboratory students learn the parameters of series and parallel RL/RC and LC/RLC circuits as they relate to real world large commercial and industrial projects. This class finishes with low-pass and high-pass filter design and analysis and power factor correction.

APPL 1315—Principles of Transformers (1)
Lecture: 1
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Students continue their electrical theory studies with a comprehensive overview of transformer design and practical applications. This course begins with a review of electromagnetic theory and how circuits react under AC parameters. The course continues with the theory and application of three-phase transformer connections. Students must complete in-class and homework assignments that require correct answers and mathematical proof.

APPL 1330—Rigging and Load Calculations (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The contents of the 'Qualified Rigger Course' will allow the participants to achieve a level of knowledge and skills far exceeding any in the field today. Volumes, percentages, calculated center of gravity, rig configurations, load stresses, angle multipliers, sling/ chain capacities and their sizes can be calculated upon successful completion of this course.

APPL 1350—Voice and Data Systems I (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course combines multimedia presentations, in-class demonstrations, group and individual hands-on projects along with extensive lessons to explore topics related to Residential and Commercial Information systems. Upon completion, students will be able to demonstrate improved competency in copper terminations, grounding requirements, testing and installation methods.

APPL 1370—Fundamentals of MIG Welding (3)
Lecture: 1, Lab: 4
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course introduces the learner to additional welding symbols and drawings, all aspects of Gas Metal Arc Welding (GMAW) (known as MIG Welding), including equipment set-up, gas selection, usage of both solid core and flux core welding wire, using both fillet and multiple-pass welds. Through this course the learner will be able to assess what other welding skills and knowledge they desire and need for the various trades in the work force. The learner will engage in lab projects joining metals in lap, tee, butt, and V-groove fit up using shielded and flux core MIG methods and materials.

APPL 1400—Basic Machine Operations (4)
Lab: 2, Lecture: 3
Prerequisite(s): APPL 1100.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course covers the basic operation of hydraulic and loader equipment including backhoes, dozers, graders, loaders, scrapers, cranes, and compacting equipment. Students will become familiar with basic operations. Equipment safety issues, pre-operation inspection and start-up, and safety procedures are also covered.

APPL 1403—Crane Oiler (1)
Lecture: 1
Prerequisite(s): APPL 1100.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course introduces the learner to the proper techniques needed to assist crane operators and a crane's operation. Students are instructed to know the most critical and high maintenance components of cranes requiring service while a crane is operating. Students are taught universal hand signs used to communicate with operators and other ground assist personnel.

APPL 1405—Crane Hand Signals (1)
Lecture: 1
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course will assist learners in gaining competencies to meet the requirements of OSHA 1926.1400 and 1926.1428 for signal persons. These requirements dictate each signal person must know and understand the type of signals used, be competent in the application of the type of signals used, have a basic understanding of equipment operation and limitations, and demonstrate that they meet these requirements through an oral or written test and through a practical test.

APPL 1410—AC Circuits and Wiring Methods (3)
Lecture: 2, Lab: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course continues the study of AC theory and applies the student's skills to commercial and industrial electrical systems. Students are introduced to a variety of real-world applications requiring a fundamental understanding of AC theory and mathematics. Topics include the use of digital multimeters and oscilloscopes, intermediate blueprints, transformers (including three-phase introduction) and connections, and conduit bending and fabrication.

APPL 1420—Concrete I (2)
Lecture: 1, Lab: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The contents include safety practices, familiarization with different aspects of the concrete industry, structural drawings, properties of concrete, related math, formwork materials/components and fabrication/assembly of patented and job built forms including footing forms, slab forms, wall forms, gang forms, and form hardware.

APPL 1430—Print and Drawing Fundamentals (2)
Lecture: 2
The content is relevant to the accelerated rate of development in machine trades. This course offers advanced blue print applications so as to become better acquainted with lines, symbols used in sectional views, isometrics drawings, orthographic projections, detailed drawings, and assembly drawings, plus information that is found in the title block, lists of materials, and special notes.

APPL 1450—Introduction to Networking Technologies (3)
Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course is designed to be used in conjunction with the Introduction to Networking Technologies textbook. It systematically introduces the student to networking definitions and basics, and builds upon those principles. Beginning lessons include network definitions, Ethernet basics, the OSI model, and the networked PC. The course also examines the need for keeping systems secure by describing types of malware and the best ways to prevent becoming a victim of malware. It includes a description about the two most common and popular types of networks used today. Networking operating systems are explored, as is their relationship with the OSI model in accomplishing their tasks. Subsequent lessons will discuss Windows and the OSI Model, 10Base2, 10Base5, Ethernet technology, and troubleshooting these systems. These and other topics are covered in this course.
Lab Fee: $0

APPL 1460—Plumbing Fundamentals II (3)
Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course will introduce learners to the next level of the plumbing profession. Students will review plumbing math formulas, drawings, and plumbing-related equipment. This course will continue to introduce and explain plumbing terminologies and differences between plumbing systems and materials. This course will expose students to plumbing methodologies for protecting public health and safety, while providing comfort. The three phases of a plumbing project will frame the majority of this course.

APPL 1465—Plumbing Practices II (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course will introduce learners to the next level of professional plumbing practices. Students will use plumbing math formulas, drawings, and plumbing-related equipment. This course will continue to introduce and explain plumbing terminologies and practices employed for installing different plumbing systems and materials. This course will expose students to plumbing's methodologies and best practices for protecting public health and safety while providing comfort. Practicing the three phases of plumbing projects and implementing their procedures will give form and function to this course.

APPL 1510—Introduction to Grounding and Bonding (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course is designed to introduce to the learner an understanding of the importance of using accepted definitions and methodologies applicable to grounding and bonding. The importance of providing a low-impedance path of proper capacity to ensure the operation of overcurrent protective devices is covered. Also covered are: the various components of the grounding and bonding system; how Ohm's Law and basic electrical theory are key to understanding faults and fault paths; the severe electric shock hazards and their effect on the human body; plus the damage to equipment resulting from improper fault protection.

APPL 1520—Interior Systems II (2)
Lecture: 2
Prerequisite(s): APPL 1120.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The contents include safety, tools, and equipment, ceiling components, job planning, installation of anchors and hanger wires, grid, wall molding and ceiling panels. Also included is acoustical ceiling tools, exposed grid, front line grid, concealed grid, stick up ceilings, suspended gypsum ceiling, rated ceilings and specialty ceilings. Lab Fee: $0

APPL 1530—Shielded Metal Arc Welding (2)
Lecture: 1, Lab: 2
Prerequisite(s): APPL 1130.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Contents of this course cover the principles of coalescence of fusion during Shielded Metal Arc Welding processes. This course delves into the different types of electrodes, proper manipulation of electrodes, amperage setting, and electrical circuitry configurations, joint designs, joint symbols and joint structural characteristics are covered extensively during this course. Lab Fee: $0

APPL 1550—Bldg Automation (3)
Lecture: 2, Lab: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This is a survey course of recent developments in building energy efficiency systems and apparatus as well as an introduction into commercial building energy audit procedures. This course will introduce students to three strands: Lighting systems including light sources and controls, an examination of commercial building energy audit procedures and processes as they relate to building control systems, and the integration of disparate building systems including HVAC devices and control systems, hydronic systems, security devices and systems, fire alarm systems and communication systems.

APPL 1555—Networked Building Systems (LONWorks) (2)
Lecture: 2
This is a hands-on course that provides training in the skills required to install and maintain networked building automation systems based on the LONWorks platform. The course is designed to introduce network concepts and the methods of installation used for networked building automation systems. A trainer is available for hands-on training during class to interface with PC-based software and other systems.

APPL 1570—Sheet Metal Fabrication II (2)
Lecture: 2
Prerequisite(s): APPL 1170.
This course explores the different metals and fasteners used in fabrication while providing an introduction to field installation.

APPL 1600—Trenching and Excavation Safety (1)
Lecture: 1
Prerequisite(s): APPL 1100.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course introduces the learner to the proper techniques needed to understand the importance and proper methods for installing trench shoring equipment. Students are taught methods of cutting back side walls with proper slope to prevent a cave in as an alternate to shoring equipment. Students are taught proper methods of relocating shoring equipment and trenching safety as work is in progress.

APPL 1610—Survey of National Electric Code (4)
Lecture: 4
Prerequisite(s): APPL 1015 and APPL 1310.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Students begin their studies with a comprehensive overview of the National Electric Code (NEC). This overview begins with an introduction to "codeology," a systematic study of the meaning and structure of the NEC. The course continues with exposure to code sections that pertain to commercial and industrial applications.

APPL 1616—Print Reading for Electricians (3)
Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course covers basic drawing and sketching techniques, recognition, creation, and usage of common views and projections. Students will review relevant measuring techniques and math employed for calculations relevant to drawings. Common framing and construction methodologies, as well as an overview of construction drawings and their interrelationship are covered. Students will review all mechanical and structural concepts relevant for residential, commercial, and industrial projects and related drawings. Special attention will be given to the electrical aspect of drawings and projects. Students will draft and evaluate portions of drawings for compliance to the National Electric Code, as implemented by local jurisdictions.

APPL 1620—Interior Finish I (2)
Lecture: 2
Prerequisite(s): APPL 1120.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The contents include interior door installation, commercial door and hardware and trim installation.

APPL 1630—Basic Welding Inspection (2)
Lecture: 2
Prerequisite(s): APPL 1430.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Content of this course focuses on defects that affect the size, shape, and contour of welds; defects that affect the internal continuity of welds; and defects that affect the property of the base and weld materials. This course explains the cause of such defects and tells how they can be prevented or corrected. This course also shows two ways to remove defective welds, and presents destructive and non-destructive examinations that can be used to locate weld defects on the surface and in its interior.

APPL 1650—Paging & Evacuation Systems (1)
Lecture: 1
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Paging systems, background music, and PA systems are evident almost everywhere. This course is intended to provide a basic understanding of these systems, their fundamental components, how these systems work, and some of the specific applications of these systems. Topics include the functions of components associated with distributed sound systems/paging systems, the difference between a constant voltage system and a self-amplified system, single-zone and multi-zone paging systems, and efficient power transfer between an amplifier and the associated speakers. Two power transfer methods are discussed, along with their advantages and disadvantages. Other topics include designing and layouts, sound masking systems, and a practical design application. Lab Fee: $0

APPL 1660—Plumbing Codes II (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course will expand the learner's knowledge of the Current Ohio Plumbing Code and those theories that lie at the foundation for these requirements. Students will review the structure, format, and overall scheme of the Ohio Plumbing Code. This course will expand upon proper plumbing terminologies, materials, and equipment installation requirements as detailed in Chapters 4-6. This course will cover those codes pertaining to the repair and maintenance of plumbing systems and associated fixtures and appliances. Lab Fee: $0

APPL 1700—Backhoe Operations (2)
Lecture: 2
Prerequisite(s): APPL 1100.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course covers the study of standard features, procedures, tools, safety, inspection, and controls of backhoes. Topics include attachments, terminology, inspection, and controls.

APPL 1710—OSHA 10 Hour Health and Safety (1)
Lecture: 1
The course introduces students to the Occupational Health and Safety Act and its impact on loss prevention at construction sites. Students are exposed to a variety of safety related topics including OSHA policies, fall protection, electrical safety, excavations and personal protection.

APPL 1720—Concrete II (2)
Lecture: 2
Prerequisite(s): APPL 1420.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The contents include safety practices, elevated concrete beams and slabs, job-built and patented shoring systems. Also included are column, beams and girders, piers and pier caps, slab and deck form and shoring, bridge forms, and types of pilings.

APPL 1730—Pumps and Hydraulic Systems (2)
Lecture: 2
Prerequisite(s): APPL 1130.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Contents of this course cover the operating principles of hydraulic systems. The course explains the functions of the major components of a hydraulic system, the information that can be derived from hydraulic schematics, how fluid and power are transmitted through a hydraulic system, and the safety consideration for working on a hydraulic system. This course also covers the function of pumps, operating principles of different pumps, common maintenance procedures performed on pumps, procedures for inspecting and monitoring pump efficiency, operating principles of different types of accumulators, and the recharging of accumulators.

APPL 1733—Principles of Dial Alignment (2)
Lecture: 2
Prerequisite(s): APPL 1130.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Content covers the principles of the reverse double dial alignment method used to measure and calculate misalignment. The course covers the necessary data needed to determine offset and angularity misalignment values by plotting values on graphs. In addition formulas used to calculate misalignment corrections are presented and factors, which may have an adverse affect on alignment, are discussed. The use of the reverse double dial alignment procedure to determine and correct for misalignment is also covered. It also includes procedures for determining bracket sag, taking dial indicator readings, adjusting vertical and horizontal alignment, and verifying the results.

APPL 1750—Fundamentals of Instrumentation (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This is a sixty hour hands-on course that provides training in the skills required to install and calibrate instruments used for process control applications. This is a basic course that emphasizes those skills relating to specific instruments used to measure pressure, temperature, flow, or level and are identified as the basic understanding required by anyone working in this rapidly changing industry. A trainer is available for hands-on training which makes this course the best available for electrical workers.

APPL 1753—Security Systems I (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course begins with an introduction to security systems, identifying the terms and definitions associated with those systems. It explores the various components of these systems. Students will gain an understanding of the magnetic contact and its specific applications. In addition, motion sensors, glass break sensors, control panels, keypads, and modules are discussed. The second part of the course introduces the students to access control systems and their components and applications. Lab Fee: $0

APPL 1894—SPT I: Applied Technologies (0.5-4)
Lecture: 0.5 - 4
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Special topic course for year one type content

APPL 1994—SPT II: Applied Technologies (0.5-4)
Lecture: 0.5 - 4
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Special topic course for year one type content

APPL 2000—Advanced Rigging (1)
Lecture: 1
Prerequisite(s): APPL 1400.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This class reinforces and expands the student's understanding of the uses of slings and common rigging hardware. The class will review and discuss various types of rigging gear, components, and rigging configurations, as well as their applications within the crane industry. Students will learn proper inspection techniques, hitch configurations, and load-handling safety practices, along with the standard ANSI (American National Standards Institute) hand signals.

APPL 2003—Intro to Lattice Boom Cranes (2)
Lecture: 2
Prerequisite(s): APPL 1400.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. During this class apprentices will be required to learn the controls of lattice boom trucks and crawler cranes. Boom assembly and disassembly and an introduction to clamshell operations will be included. Apprentices must pass the clamshell TSP.

APPL 2010—Intermediate Grounding and Bonding (3)
Lecture: 3
Prerequisite(s): APPL 1410; APPL 1610.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course examines grounding and bonding requirements for large commercial and industrial applications. Students are introduced to a variety of real world applications requiring an understanding of electrical theory, National Electric Code (NEC), and installation practices that explore all facets of grounding and bonding. Advanced topics include grounding requirements for AC systems, service equipment, and installing and testing earth grounds. Laboratories will include personal protection exercises in the correct installation of Ground Fault Circuit Interrupters and Low Voltage Intersystem Grounding used in large commercial and industrial settings.

APPL 2013—Applied Overcurrent Protection (3)
Lecture: 3
Prerequisite(s): APPL 2010.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Students will take a comprehensive look at overcurrent protection for systems of less than 600 volts. Topics include the purpose for overcurrent protection, types of overcurrent, short circuits, device ratings and categories. More advanced topics include selective coordination, tap rules, calculations of bolted fault currents, motor branch circuits, and transformer protection. Students will use skills learned in previous grounding and bonding lessons and will apply their code knowledge to practical field applications.

APPL 2020—Interior Systems III (2)
Lecture: 2
Prerequisite(s): APPL 1520.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The contents include expanded coverage of commercial framing from basics to advanced, light pocket, use of performed materials and applications of various layout and framing methods. Also included is soffits and fascias, demountable partitions, pre-fabricated panel systems, free-form lath, lathing tools and materials, pre-finished drywall, metal and gypsum lath, dome ceiling, barrel ceiling, and suspended lath. Lab Fee: $0

APPL 2030—Optical and Laser Alignment (2)
Lecture: 2
Prerequisite(s): APPL 1733.
Contents include the study of 'Rim and Face' alignment theories and procedures. The practice of mils per linear inch mensuration is covered in depth. Thermal growth factors, soft foot conditions, parallel offset values, and angular offset values are calculated during the course. Laser safety, laser properties, laser handling, and laser alignment are all covered.

APPL 2050—Electronics: Theory I (3)
Lecture: 2, Lab: 2
Prerequisite(s): APPL 1313 and APPL 1410.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course introduces the student to electronic theory that applies to large-scale commercial and industrial applications. Students are exposed to most basic components found in electronic circuits. Students are introduced to a variety of real world applications requiring a fundamental understanding of electronics and electronic components. Topics include semiconductors, diodes, SCRs, transistors, rectifiers, amplifiers, integrated circuits, oscillators and timers.

APPL 2056—Electrical Troubleshooting (2)
Lecture: 2
Prerequisite(s): APPL 2050.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course involves troubleshooting advanced three-phase systems, calculating tray fills and troubleshooting motor branch circuits, fiber optics, HVAC, cable faults, and other areas in large commercial and industrial system applications.

APPL 2060—Plumbing Fundamentals III (3)
Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course will introduce learners to the next level of the plumbing profession. Students will review plumbing applied plumbing math and sizing plumbing systems and their related equipment. This course will continue to introduce and explain plumbing terminologies and differences between plumbing systems and materials. This course will expose students to plumbing methodologies for protecting public health and safety, while providing comfort. The three phases of a plumbing project will frame the majority of this course.

APPL 2065—Plumbing Practices III (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course will introduce learners to the next level of professional plumbing practices. Students will use applied plumbing math for sizing plumbing systems and their related equipment. This course will continue to introduce and demonstrate plumbing practices and different methods for installing plumbing systems and materials. This course will expose students to plumbing's methodologies and best practices for protecting public health and safety while providing comfort. Practicing the three phases of plumbing projects and implementing their procedures will give form and function to this course.

APPL 2100—Mobile Crane Operations (3)
Lecture: 3
Prerequisite(s): APPL 1400.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course covers the fundamentals of mobile crane operation, identification of components & parts, crane signals, communications, operational safety in set-up, and OSHA standards and regulations. Students are also trained in understanding load charts.

APPL 2103—Intro to Lattice Boom Pile Driving (2)
Lecture: 2
Prerequisite(s): APPL 1400.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This class is to include pile driving theory, nomenclature, assembly and erection of hammers and leads, and pile driving practical exercises.

APPL 2106—Introduction to Tower Cranes (2)
Lecture: 2
Prerequisite(s): APPL 1400.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This class is designed to prepare students by providing them with the basic information and skills to become tower crane operators. The class focuses heavily on hands-on training. This introductory class is available to the students who have completed APPL 21006 (Mobile Crane) in the past five years and who have prior mobile and/or tower crane experience. Before they begin actual hands-on training, students must practice in class on the Tower Crane Computer Simulator to learn the controls.

APPL 2110—Motor Theory and Operation (2)
Lab: 1, Lecture: 1.5
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course will provide learners with a comprehensive overview of motor operation, maintenance, installation, and troubleshooting. This course is designed to develop basic competencies in elecrical apprentices. Learners will cover magnestism and electromagnetism as they apply to motor operation for proper understanding of sizing, braking, starting, variable frequency drives, bearings, drive systems, clutches and alignment of motors. This course will include safety procedures compliant to NFPA 70E. This course will cover the National Electric Code articles relevant to sizing and protection of power and control circuits for motors.

APPL 2120—Interior Finish II (2)
Lecture: 2
Prerequisite(s): APPL 1620.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The contents include cabinet installation, roofing systems, door hardware certification and countertop installation. Also included is basic door hardware, shelving and fixtures, store front trims and components, handicap access, and standing seam roofs.

APPL 2130—Monorail Systems (2)
Lecture: 2
Prerequisite(s): APPL 1733.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Content includes the familiarization with the most commonly used monorail systems. Each type of monorail system covered in this unit will be studied carefully and supplemented with manufacturers brochures, drawings, etc. to acquire the fullest knowledge of the systems. There is a strong emphasis on 'Power/Free' monorail systems due to the system's complexities.

APPL 2133—Conveyor Systems (2)
Lecture: 2
Prerequisite(s): APPL 1733.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Content deals with applications of bulk conveyors and job site procedures. Introduction, receiving shipment, preparation for a "Lay Down Area", site layout, and installation practices are covered. The major components are described in detail to enable proper equipment installation sequence.

APPL 2150—Nurse Call Systems (3)
Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Today’s health care market offers many types of nurse call systems that vary in their capabilities. The level of care required by patients in the facility or nursing unit generally determines the appropriate type of system. The basic intent of all nurse call systems is to provide patients and residents with the ability to notify staff if assistance is needed without the patients or residents having to leave their bed, room, or dwelling. This can be accomplished by simply providing a pull cord or push button next to the bed which, when activated, provides both audible and visual notification to the staff. There are several organizations that provide direction and guidelines for the hospital segment of the health care marketplace. This course explores the fundamentals of nurse call systems and their components. It also discusses how to plan for and install the wiring for a particular nurse call system.
Lab Fee: $0

APPL 2160—Plumbing Codes III (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course will expand the learner’s knowledge of the Current Ohio Plumbing Code and those theories that lie at the foundation for these requirements. Students will review the structure, format, and overall scheme of the Ohio Plumbing Code. This course will expand upon proper plumbing terminologies, materials, and equipment installation requirements as detailed in Chapters 7-10. This course will cover those codes pertaining to the repair and maintenance of plumbing systems and associated fixtures and appliances. Lab Fee: $0

APPL 2170—Sheet Metal Fabrication III (2)
Lecture: 2
Prerequisite(s): APPL 1570.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This advanced course focuses on the special characteristics of architectural sheet metal.

APPL 2200—Dozer Operations (3)
Lecture: 3
Prerequisite(s): APPL 1400.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course covers the study of standard features, procedures, tools, safety, inspection, and controls of dozers. Topics include attachments, terminology, inspection, and controls.

APPL 2203—Grader Operations (3)
Lecture: 3
Prerequisite(s): APPL 1400.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course covers the study of standard features, procedures, tools, safety, inspection, and controls of graders. Topics include attachments, terminology, inspection, and controls.

APPL 2206—Scraper Operations (2)
Lecture: 2
Prerequisite(s): APPL 1400.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This class will build on the student's abilities to operate a scraper in various configurations. Particular skills will be developed and tested, such as operation of both conventional and self-loading (elevating) scrapers, operation of single-engine and dual-engine scrapers, cutting, filling, and leveling to grade, picking up a grader windrow without disturbing the original grade, building a uniform stockpile, and picking up and delivering large objects (e.g., a stump) with a conventional scraper.

APPL 2210—Motor Control Systems (4)
Lab: 2, Lecture: 3
Prerequisite(s): APPL 2050.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course provides an introduction to motors and motor control systems in commercial and industrial settings. Students are introduced to DC, fractional horsepower, single phase and polyphase AC motors; basic motor control applications; and both manual and automatic operating devices.

APPL 2213—Industrial Automation (4)
Lab: 2, Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course combines lecture and hands-on lab to provide a comprehensive coverage of motor controls, Programmable Logic Controllers (PLC) and Variable Frequency Drives (VFD) with control devices used in industrial and commercial electrical systems. Topics include: electrical symbols and line diagrams, logic applied to ladder diagrams, VFD, PLC, AC/DC magnetic contractors and motor starters, control devices, time delay and logic, reversing motor circuits, photoelectric and proximity controls, preventive maintenance and troubleshooting. Lab Fee: $0

APPL 2216—Motor Control: PLC (3)
Lecture: 2, Lab: 2
Prerequisite(s): APPL 2210.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course involves the in-depth study of motors and industrial motor control systems. Students are exposed to advanced motor control applications found in modern commercial and industrial environments. Students are introduced to Programmable Logic Controllers (PLCs) through a motor control application.

APPL 2219—Motor Control: VFD (3)
Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course continues to build on motor control skills by introducing (Variable Frequency Drives (VFD)as a viable option for the start/stop and RPM control of motors. Topics include: fundamentals of VFD, AC frequency versus motor RPM, motor slip, Fundamentals of PWM (Pulse Width Modulations), Diode Bridge/Filter/IGBT (Insulated Gate Bipolar Transistor) methods, IGBT versus SRC for output inverters, cost saving applications for VFD, BFD startup procedures, and interconnection of VFD with energy management systems.

APPL 2230—Machinery Installation and Maintenance (2)
Lecture: 2
Prerequisite(s): APPL 1230.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Content includes installation consisting of identifying major components, handling, setting, assembling, blue print reading, layout, and alignment of machinery. Maintenance requires a more complete knowledge of machine operation and renovative procedures. Preventative maintenance and schedule inspection procedure plans are developed.

APPL 2250—Structured Cabling: Copper (3)
Lecture: 3
This course begins with an overview of copper transmission principles, professionalism, life safety and general industry practices as related to copper. A significant amount of course time will be spent on BICSI best practices for the installation, termination, testing, and retrofitting of copper cable. Additional topics covered will include BICSI best practices for pathways and spaces; grounding, bonding, and protection; and firestopping.

APPL 2253—Structured Cabling: Fiber (3)
Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course opens with an overview of optical fiber transmission principles, professionalism, life safety and general industry best practices as related to optical fiber. A significant amount of course time will then be spent on installation, splicing, termination, testing, and retrofitting of optical fiber cable. Additional topics covered will include pathways and spaces, firestopping, and an introduction field coordination.

APPL 2255—Structured Cabling: Technician (3)
Lecture: 3
Prerequisite(s): APPL 2250; APPL 2253.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course provides the necessary skill set of a structured cabling systems technician. An advanced study of copper splicing, testing and troubleshooting will open this course. A significant amount of course time will then be spent on the splicing, testing and troubleshooting of optical fiber cable. The third major topic covered in this class will be field coordination, including site surveys, blueprint reading, network infrastructure and project management. This course will also cover some special topics within ITS cabling installation.

APPL 2260—Print Reading for Plumbers (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course will advance the learner's knowledge and techniques of preparing and reading drawings and their symbols and abbreviations. This course will go into the process and techniques for drawing and reading Isometric type drawings. This course will cover the key elements of Isometric, Shop, and Riser drawings and related diagrams. This course will cover the necessity and process for preparing and submitting "As-built Drawings". Lab Fee: $0

APPL 2270—AutoCAD for Sheet Metal Systems I (2)
Lecture: 1, Lab: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This hands-on course is designed to enable the user to effectively use the AutoCAD functions, including 3D features, identify its powers and limitations and create, edit, and manipulate dimension CAD drawings. Familiarity with the Windows operating systems is recommended. Topics include: file commands, display commands, CAD tools and set-up, basic drawing commands, editing commands, plotting, and layered CAD construction techniques.

APPL 2300—Heavy Construction Procedures (2)
Lecture: 2
Prerequisite(s): APPL 1300.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The learner will study the methods used for building horizontal projects, such as highways, dams, airports, bridges and utility lines. The various pieces of equipment and materials used in these type projects will be explained as well as the processes used for a variety of base materials and final construction materials employed. Lab Fee: $0

APPL 2303—Intermediate Equipment Operations (2)
Lecture: 2
Prerequisite(s): APPL 2100.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course builds on the knowledge and skills of SKTR 1400 (Basic Machine Operations) Students will gain greater working skills needed for proper equipment operations and maintenance. This course will have a continued emphasis regarding equipment safety issues including: pre-operation inspection and post-operation maintenance procedures. Lab Fee: $0

APPL 2309—Loader Operations (2)
Lecture: 2
Prerequisite(s): APPL 2100.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course covers the study of standard features, procedures, tools, safety, inspection, and controls of loaders. Topics include attachments, terminology, inspection, and controls. Lab Fee: $0

APPL 2310—Welding for Wireman I (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This hands-on course provides training in the skills required to weld using ferrous metals. Students will setup and use the Lincoln 335 welder with various types and thickness rods. All types of welds (fillet, flat, vertical and overhead) with differing material thickness must be mastered. Students will setup cutting torches and plasma cutters for use on flat steel and angle iron. Lab Fee: $0

APPL 2313—Welding for Wireman II (2)
Lecture: 2
Prerequisite(s): APPL 2310.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This hands-on course provides training in the skills required to weld using non-ferrous metals. Students will setup and use TIG and MIG welders for aluminum, stainless steel and other specialty metals. All types of welds (fillet, flat, vertical and overhead) with differing material thickness must be mastered. Students will setup cutting torches and plasma cutters for use on flat steel and angle iron. Lab Fee: $0

APPL 2320—Concrete III (2)
Lecture: 2
Prerequisite(s): APPL 1720.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The contents include concrete stair forming systems, tilt-up walls, pre-cast wall panels and slip forms. Lab Fee: $0

APPL 2330—Air Compressor Systems (2)
Lecture: 2
Prerequisite(s): APPL 2230.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Content for this course covers the procedures for disassembly, inspection, repair, and reassembly of reciprocating and rotary air compressors. Typical maintenance operations will be performed during lab time. Packing and seal procedures for selecting and installing packing for values, pumps, and all types of machinery are covered. Lab sessions demonstrating proficiency in removal, disassembly, repair, and reassembly of air compressor are required. Lab Fee: $0

APPL 2350—Instrumentation I (3)
Lab: 1, Lecture: 2.5
Prerequisite(s): APPL 1750.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course begins with an introduction to the basics of instrumentation, including definitions of commonly used instrumentation terms and symbols, and an overview of the physical parameters of industrial measurement and control: pressure, flow, level, and temperature. The course also covers more complex matters such as configuration and calibration. It finishes with fundamentals of process control, control valves and control valve maintenance, analytical instrumentation, and instrument installation and tubing. Lab Fee: $0

APPL 2360—Plumbing Fundamentals IV (3)
Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course will introduce learners to the processes and principles of operating a plumbing business. Students will review skills needed for leadng a project or being a crew leader. This course will continue to introduce and expand upon plumbing terminologies and the differences between private and public plumbing systems, materials, and equipment. This course will expose students to solar and conservation plumbing processes. This course will cover the repair and maintenance of plumbing systems and associated fixtures and appliances. The three phases of a plumbing project will frame the majority of this course. Lab Fee: $0

APPL 2365—Plumbing Practices IV (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course will introduce learners to the processes, principles, and practices of operating a plumbing business. Students will put into practice skills for leading a crew. This course will continue to expand upon plumbing practices and differences between private and public plumbing systems, materials, and equipment. The course will continue expanding upon repair practices used for servicing piping sytems, fixtures, and common appliances. The three phases of a plumbing project will frame the majority of this course. Lab Fee: $0

APPL 2370—MIG & TIG Welding Applications (3)
Lecture: 1, Lab: 4
Prerequisite(s): APPL 1270; APPL 1370.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This advanced course introduces the learner to preheating and post weld heat treatment of metals and the physical characteristics and mechanical properties of metals. Gas Tungsten Arc Welding (GTAW) is introduced. This course covers the process still known as "TIG" and allows the learner to assess what other welding skills and knowledge they desire and need for the various trades in the work force. Lab Fee: $0

APPL 2400—Crane Operations II (2)
Lecture: 2
Prerequisite(s): APPL 2100.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course covers the study of standard features, procedures, tools, safety, inspection, and controls of cranes. Topics include attachments, terminology, inspection, and controls.

APPL 2403—Long Lattice Boom Crane Upgrade (2)
Lecture: 2
Prerequisite(s): APPL 2100.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This new apprentice upgrade is designed by the crane instructors using cranes equipped with 150 feet or more of boom and will include boom and jib assembly and disassembly, moving long boom cranes on the job site, and practical exercises for the long boom crane. Lab Fee: $0

APPL 2406—Hydraulic Crane Upgrade (3)
Lecture: 3
Prerequisite(s): APPL 2100.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The crane major apprentice must follow the upgrade description of prerequisites but will only need a minimum of 120 hours of practical seat time. This course discusses the hydraulic power system, preventive maintenance, and the safe operation of Hydraulic Cranes. Apprentices must pass a simulated CCO practical test and a TSP. Apprentices who wish to pass the crane upgrade but are not a crane major will still be required to operate hydraulic cranes a minimum of 160 hours at the training center. Lab Fee: $0

APPL 2410—Photovoltaic Systems (3)
Lecture: 2, Lab: 2
Prerequisite(s): APPL 2210.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This is a hands-on course that provides training in the skills required to design, install, troubleshoot and maintain photovoltaic systems. The course is designed to introduce design concepts and the methods of installation used for photovoltaic systems. Fully operational systems are available for hands-on training to interface with battery and grid tie systems. Lab Fee: $0

APPL 2416—Electric Vehicle Infrastructure (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The Electric Vehicle Infrastructure Training Program (EVITP) is a national training and certification program that provides the Electric Vehicle (EV) industry with the highest level of verifiable knowledge and technical understanding to support the sound, safe, and successful growth of the EV market. EVITP's training content incorporates and reflects the requirements, high standards, and concerns of industry partners and stakeholders. EVITP is committed to establishing the nationally recognized standard in EV infrastructure training. Students will learn the technical requirements, safety imperatives, and performance standards required to successfully install EV supply equipment. Lab Fee: $0

APPL 2430—Automatic and Manual Control Valves (2)
Lecture: 2
Prerequisite(s): APPL 2230.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Content includes repair procedures along with removal, overhaul, and reinstallation. Actuator design, operating principles, and maintenance of hydraulic cylinders and hydraulic motors will be addressed in depth along with the motor performance checks, system analysis, pressure testing, and internal system leakage checks. Lab Fee: $0

APPL 2450—Fire Alarm Systems (1)
Lecture: 1
Prerequisite(s): APPL 1313.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Basic and advanced fire and smoke alarm systems are discussed in large commercial and industrial settings. Advanced code calculations for initiating devices and for notification appliances are discussed. Student will be able to install, start checkout procedure, and maintain and troubleshoot fire alarm systems. Lab Fee: $0

APPL 2460—Plumbing Codes IV (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course will expand the learner’s knowledge of the Current Ohio Plumbing Code and those theories that lie at the foundation for these requirements. This course will expand upon proper plumbing terminologies, materials, and equipment installation requirements as detailed in Chapters 11 & 12. This course will cover those codes pertaining to the repair and maintenance of plumbing systems and associated fixtures and appliances.

APPL 2463—OmniBus I (4)
Lecture: 4
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course is the first part of a two-part series that combines advanced levels of learning in the areas of Backflow Prevention, Creation/Modification/Interpretation of piping system drawings, Material and Equipment Safe Rigging Procedures, Medical Gas Service and Installation, and Foreman Training. Lab Fee: $0

APPL 2466—OmniBus II (4)
Lecture: 4
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course is the second part of a two-part series that combines advanced levels of learning in the areas of Backflow Prevention, Creation/Modification/Interpretation of piping system drawings, Material and Equipment Safe Rigging Procedures, Medical Gas Service and Installation, and Foreman Training. Lab Fee: $0

APPL 2470—AutoCAD MEP (4)
Lecture: 2, Lab: 4
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This hands-on course is designed to enable the user to effectively use AutoCAD MEP (Mechanical, Electrical, and Plumbing). Students will learn to draft, design, and document building systems with AutoCAD MEP software, the version of AutoCAD software for mechanical, electrical, and plumbing designers and drafters. Upon completion of this course, students will be able to work with the AutoCAD MEP interface to create and edit intelligent objects, learn the meaning of parametric design, BIM and object-oriented CAD, understand the drawing management features, how to share information with third party energy analysis programs, work with source drawings, source drawing queries, convert AutoCAD geometry to AutoCAD MEP objects, understand the theory and applications of the AutoCAD MEP Style Manager and use the drawing compare and interference detection tools. Lab Fee: $0

APPL 2510—Industry Leadership (3)
Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course is the designed to strengthen the abilities of project supervisors at all levels. It is appropriate for newer supervisors to broaden their understanding of the responsibilities of a supervisor and to provide tools and techniques to better fulfill those responsibilities. It is appropriate for experienced supervisors to update their understanding of supervision, to strengthen their skills in traditional areas, and to develop new skills in emerging areas. Lab Fee: $0

APPL 2512—Significant NEC Changes (1)
Lecture: 1
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This extensive program analyzes the major changes to the most recent edition of the National Electric Code (NEC). Members of the 20 code-making panels contribute to the development of the authoritative text, which covers more than 400 of the most significant changes and includes interpretations by the group that enforces the NEC. This comprehensive course will provide users a solid understanding and application of the requirements contained in the most recent edition of the NEC. Lab Fee: $0

APPL 2520—Interior Systems IV (2)
Lecture: 2
Prerequisite(s): APPL 2020.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The contents include layout and installation of metal lath components used in wall and ceiling applications. Also included is heavy gauge framing applications, introduction to welding, oxy/acetylene cutting torch, SMAW welding, and GMAW welding. Lab Fee: $0

APPL 2530—Intermediate Welding Methods (2)
Lecture: 2
Prerequisite(s): APPL 1630.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Contents of this course provide access for participants to achieve certification in AWS D1.1, AWS D1.3, and AWS D1.5 welding codes. Attendees will be provided lab time to test for certifications in MIG, FCAW, and SMAW welding methods. Lab Fee: $0

APPL 2550—Closed Circuit TV Technologies (3)
Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course is designed to optimize understanding of all video technology aspects from light sources to video monitors and recorders. The course will introduce the student to video security systems and technology, then advance to remote monitoring and video communication control. Advanced topics discuss video image splitting, reversal and annotation, covert video surveillance and rapid deployment, integration, and testing. Lab Fee: $0

APPL 2553—AV Technologies (3)
Lecture: 3
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The average building is far more technologically sophisticated than the home of just a few years ago. The Audio/Video Technology course prepares the commercial install/technician to understand this technological sophistication. The course familiarizes the student with wireless control technologies, cabling infrastructures, audio/video fundamentals, commercial theater basics, automation controls, and RF distribution. The content of this course will prove to be useful in the commercial construction industry. Lab Fee: $0

APPL 2570—Advanced Sheet Metal Welding (2)
Lecture: 2
Prerequisite(s): APPL 2170.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This advanced course focuses on the special applications of welding techniques to the wide range of special materials and applications that are common to commercial and industrial sheet metal fabrication and installations. Lab Fee: $0

APPL 2600—Advanced Welding (2)
Lecture: 2
Prerequisite(s): APPL 2300.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This class is an introduction to safe oxy-acetylene cutting, arc welding, and plasma-arc cutting. Designed for the beginning student, this class teaches the procedures used in the maintenance and repair of heavy equipment. Topics covered include the use of the oxy-acetylene cutting torch, brazing and soldering with oxy-acetylene torch, developing basic skills in electric arc welding, recognizing different types of metals, and choosing correct electrodes. Lab Fee: $0

APPL 2601—Advanced Lasers (2)
Lecture: 1, Lab: 2
Prerequisite(s): APPL 2300.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This class is designed for students that want or need to use laser instruments. Students taking this course should have a background in grade checking and possess good math skills. Information on set-up and use of rotating beam lasers will be covered. Students will design and complete a project using an automatic laser controlled machine. Topics covered include calculating percentages of grade, determining elevations, proper laser setup of laser-controlled machines. Lab Fee: $0

APPL 2602—Advanced Grader I (2)
Lecture: 1, Lab: 2
Prerequisite(s): APPL 2300.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course is designed to help students gain skills and experience in grader operation. The course involves both classroom and hands-on field training. The student will learn how to cut slopes, create parking lots, cut ditches, build haul roads, and conduct various exercises in fine grading using manual controls. Lab Fee: $0

APPL 2603—Advanced Grader II (2)
Lecture: 1, Lab: 2
Prerequisite(s): APPL 2300.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This advanced class is for experienced students only. It is designed for those who already have experience in finish grading and want to learn more about laser usage and automatic control systems. Topics covered include installing control systems, entering data into control systems, and understanding operation and applications of ultrasonic tracers and lasers.

APPL 2605—Advanced Automated Control Systems (2)
Lecture: 1, Lab: 2
Prerequisite(s): APPL 2300.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This class is designed for students who have experience performing finish work with manually controlled machines. Automatic control systems will be used on graders, dozers, and excavators for this class. The student will gain knowledge using "Global Positioning Systems" and "Total Station Controls". Topics covered include equipment setup, benching, screen views, setup on known stations, setup on free stations, and troubleshooting. Lab Fee: $0

APPL 2606—Advanced Mobile Crane I (2)
Lecture: 2
Prerequisite(s): APPL 2300.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This intensive class has built in flexibility allowing it to be used for both inexperienced and experienced students and is highly recommended as preparation for taking the CCO (Certification for Crane Operators) written exam. This is the same class required for all third year students. Topics covered include crane operator responsibilities, applicable OSHA and ANSI requirements, proper mobile crane set-up and inspection, radio and hand signaling, working around high voltage, wire rope and rigging, load chart calculations, load moment indicators, operational techniques, components and terminology, multiple crane lifts, and safety and accidents. Lab Fee: $0

APPL 2607—Advanced Mobile Crane II (2)
Lecture: 1, Lab: 2
Prerequisite(s): APPL 2300.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This intensive class offers experienced students the opportunity for structured, hands-on field training. This class affords students the opportunity to improve their crane operating skills by reinforcing classroom-taught concepts with practical training. Topics covered include crane operator responsibilities, applicable OSHA and ANSI requirements, proper mobile crane set-up and inspection, radio and hand signaling, working around high voltage, wire rope and rigging, load chart calculations, load moment indicators, operational techniques, components and terminology, multiple crane lifts, and safety and accidents. Lab Fee: $0

APPL 2608—Advanced Crane Operator Refresher (1)
Lecture: 1
Prerequisite(s): APPL 2300.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This equivalent to a two day intensive class is offered only to students who are planning to take the CCO (Certification for Crane Operators) written exams. The fact that this class is termed a 'refresher' implies that students already have had some training and experience necessary to pass the written exams. Because of the comprehensive nature of the CCO written exam, not all subjects will be covered in depth. Topics covered include crane operator responsibilities, applicable OSHA and ANSI requirements, proper crane set-up, hand and radio signaling, crane inspection, working around high voltage, wire rope and rigging, load chart calculations for the CCO machines on the exam, load moment indicators, operational techniques, components and terminology, multiple crane lifts, and safety and accidents. Lab Fee: $0

APPL 2610—Cable Splicing I (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This is the first module of the Electrical Trades Center hands-on cable splicing course. This module covers hand-taped splices and terminations. The course presents information on several types of cable splices. Most have high voltage applications; however, many of the splice technologies are used in all areas of electrical installation. Materials are presented from many different manufacturers of cable splicing materials. Lab Fee: $0

APPL 2613—Cable Splicing II (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This is the second module of the Electrical Trades Center hands-on cable splicing course. This module covers several methods of terminating cable, Tee splices, and Protective Grounds. The hands-on exercises include the construction of a 5kV and 15kV termination and 15kV Tee splice, lead splicing, pulling cables and testing and fault location. Materials are presented from many different manufacturers of cable splicing materials. Lab Fee: $0

APPL 2620—Commercial and Industrial Drawings (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The contents include expanded coverage of blueprints reading fundamentals presented in the basic course. Lab Fee: $0

APPL 2700—Advanced Trench Safety and Excavation (1)
Lecture: 1
Prerequisite(s): APPL 2300.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This class is designed for students who have experience operating excavators or backhoes. Topics covered include OSHA Excavation Standards, safe operation of equipment, handling and installing trench boxes, locating and avoiding underground hazards, and the role of the competent person. Lab Fee: $0

APPL 2701—Advanced Mine Safety (1)
Lecture: 1
Prerequisite(s): APPL 2300.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This class covers all topics specified by the Mine Safety and Health Administration (MSHA). Students who plan to work in mines, quarries, or sand and gravel pits should consider this course. Topics covered include miners' rights, an introduction to the work environment, recognition and avoidance of hazards, a review of emergency medical procedures and first aid, fire warning signals and fire fighting procedures, health and safety aspects of assigned tasks, line authority descriptions for supervisors and miners' representative, rules and procedures for reporting hazards, and instruction in the use, care, and maintenance of self-rescue and respiratory devices. Lab Fee: $0

APPL 2703—Advanced Pipeline (4)
Lecture: 2, Lab: 4
Prerequisite(s): APPL 2300.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course is designed to improve the student's machine operating skills and training with a focus on pipeline construction. All students attending the pipeline course must have basic operating skills on dozers, excavators, or cranes. Each student will receive training on either dozers, excavators (backhoes) or side booms. Students will have ample opportunity to operate and practice on the pipeline equipment under the supervision of the instructor. This course may be taken more than once in order for the student to gain skills on each piece of pipeline equipment (dozer, backhoe, and side boom) for which this course offers credit. Lab Fee: $0

APPL 2704—Advanced Directional Drilling (2)
Lecture: 1, Lab: 2
Prerequisite(s): APPL 2300.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This class teaches state-of-the-art technology in underground installation of utilities. The student learns the proper and safe methods of operating a computer simulator in the classroom followed by hands-on training in the field operating an actual directional drilling machine. Students will be given hands-on opportunity to learn the techniques to successfully make a bore, which includes machine set-up, boring, and reaming. Lab Fee: $0

APPL 2706—Advanced Asphalt Paving (2)
Lecture: 1, Lab: 2
Prerequisite(s): APPL 2300.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This class teaches the proper method of operating asphalt paving equipment and the use of a variety of screed automation techniques to handle grades and slopes. This class provides a working knowledge of the hot-mix asphalt paving industry through the hands-on operation of paving equipment. Students will learn the proper techniques for performing the job completely and safely. Sand is used in the paving process to simulate asphalt. Topics include mix delivery, surface preparation, mix replacement, automatic screed controls, joint construction, compaction, and equipment and mat problems. Lab Fee: $0

APPL 2708—Advanced Plan Reading (2)
Lecture: 1, Lab: 2
Prerequisite(s): APPL 2300.
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This course introduces the student to a set of actual highway plans. This class allows the student to easily learn plan reading in a structured step-by-step process. By the conclusion of this class the student will be able to stake the job from these plans. Topics covered include identifying plan items, read legends and scales; utilize schematic plans, general notes and general summaries; identifying and calculating bearings; describing horizontal, vertical and super elevated curves; locating bench marks; utilizing cross section and plan and profile sheets; calculating earthwork, and scaling from plan sheets. Lab Fee: $0

APPL 2710—OSHA 30 Hr Health and Safety (2)
Lecture: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. The course continues the study of the Occupational Health and Safety Act and its impact on loss prevention at construction sites. Students are exposed to a more in depth study of safety related topics including OSHA policies, fall protection, electrical safety, excavations and personal protection. Additional topics include material handling, hazard communication, LOTO procedures and tool safety. Lab Fee: $0

APPL 2716—AutoCAD for Electric Systems I (2)
Lecture: 1, Lab: 2
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. This hands-on course is designed to enable the user to effectively use the basic AutoCAD LT functions, including 2D features of LT, identify its powers and limitations and create, edit, manipulate and dimension CAD drawings. Familiarity with the Windows operating systems is recommended. Topics include: File commands, display commands, CAD tools and set-up, basic drawing commands, editing commands, and layered CAD construction techniques. Lab Fee: $0

APPL 2894—SPT III: Applied Technologies (0.5-4)
Lab: 0 - 3, Lecture: 0.5 - 4
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Special topic course for year two type content Lab Fee: $0

APPL 2994—SPT IV: Applied Technologies (0.5-4)
Lab: 0 - 3, Lecture: 0.5 - 4
This course is restricted to students presently studying under the direction and oversight of an approved apprenticeship program, working in partnership with Columbus State Community College. Special topic course for year two type content Lab Fee: $0

Arabic

ARAB 1101—Beginning Arabic I (4)
Lecture: 4
Prerequisite(s): Placement into ENGL 1100 or equivalent.
ARAB 1101 presents an introduction to the fundamentals of the Arabic language with practice in listening, reading, speaking and writing. Course includes studies in Arabic culture. ARAB 1101 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

ARAB 1102—Beginning Arabic II (4)
Lecture: 4
Prerequisite(s): ARAB 1101.
ARAB 1102 is a continuation of ARAB 1101 with further development of listening, reading, speaking and writing skills and further study of Arabic culture. ARAB 1102 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

Architecture

ARCH 1100—Basic Manual Drafting (1)
Lecture: 0.5, Lab: 1.5
This course presents basic concepts and fundamentals of rapid visualization through sketching especially for the building construction industry and covers the use of conceptual hand drawing, drawing instruments, lettering practices, basic line work, dimension procedures and an introduction to orthographic projection & basic 3D geometry. Lab Fee: $25

ARCH 1115—MicroStation 2D (2)
Lecture: 1, Lab: 3
This course is to provide training in the use of basic display, drawing, manipulation, dimensioning, text, cell, reference files and plotting commands required to the elementary use of Bentley MicroStation. After mastering system basics, students will be given individual projects. Lab Fee: $25

ARCH 1120—Basic CAD Drafting (1)
Lecture: 0.5, Lab: 1.5
This course is an introduction to the basic features of AutoCAD. Emphasis is placed on the basic display, drawing, editing, dimensioning, and text commands required for the elementary use of AutoCAD. Lectures, in-class demonstrations, and hands on work sessions are employed as teaching tools during the course. The course uses the current release of AutoCAD. Lab Fee: $25

ARCH 1130—AutoCAD 2D (3)
Lecture: 2, Lab: 3
Prerequisite(s): ARCH 1120.
This course introduces students to the advanced features of AutoCAD and builds upon the basics learned in ARCH 1120. Emphasis is placed on advanced dimensioning features, hatching, attributes, external references and paper/model space. Several small projects will be created utilizing these features. Lectures, in-class demonstrations, and hands-on work sessions are employed as teaching tools during the course. The course uses current release of AutoCAD. Lab Fee: $25

ARCH 1200—Architectural Drawing (3)
Studio: 6
Prerequisite(s): ARCH 1100.
This course is intended to develop the skills of manual drawing especially for building construction and covers the use of lettering practices, line quality and weights, dimension procedures, orthographic projection, and the drawing of plans, sections and elevations. Rapid visualization will be emphasized and so will other Visual Communication skillsets. The art of sketching 3D objects such as isometrics, axonometrics, obliques, and perspectives will also be incorporated into the lesson plan for this course. Lab Fee: $25

ARCH 1232—Building Codes (2)
Lecture: 1, Lab: 3
This course introduces the application of Codes to building design. Using a case study program, both site and building are designed to meeting the Columbus Zoning Code and the Ohio Building Code. Labs are used to present specific code issues and allows the "word of the code" to be interpreted into the site planning and building design process. Specifications organization and writing are introduced. Professional practice material informs students about professional agencies and organizations, as well as licensing requirements. Code interaction with Sustainable Architectural principles will also be discussed. Lab Fee: $15

ARCH 1250—Enclosure Materials (2)
Lecture: 1, Lab: 3
This course will study how different building materials are combined to form the building shell. The course focuses on the separation between exterior and interior environments. Topics covered include roofing, glass, windows and doors, walls, foundations, and interior finishes, vertical transportation and acoustics. Lab Fee: $15

ARCH 1274—Revit I (3)
Lecture: 2, Lab: 3
Prerequisite(s): ARCH 1120.
This course uses Autodesk REVIT to design, change, and document a Commercial building using this revolutionary Building Information Modeling (BIM) software. In addition to the Architectural component of REVIT, this course also includes the integration of the Structural and MEP components of the software. Lab Fee: $15

ARCH 1276—SketchUp (3)
Lecture: 2, Lab: 3
To introduce the student to SketchUp (Current version), a software package developed for the conceptual stages of design. SketchUp is a deceptively simple, amazingly powerful tool for creating, viewing, and modifying 3D ideas quickly and easily. SketchUp was developed to combine the elegance and spontaneity of pencil sketching and the flexibility of today's digital media. Lab Fee: $30

ARCH 2100—History of Architecture (3)
Lecture: 3
Prerequisite(s): ENGL 1100 or; ENGL 1101.
This course studies the fundamental elements of architecture, its development, and its meaning to various cultures throughout western history. Architecture is viewed from the perspectives of form, function, interior and exterior space, technological development, and landscape. ARCH 2100 meets elective requirements in the Associate of Arts and Associate of Science degree programs. Lab Fee: $9

ARCH 2221—Design Studio (3)
Studio: 6
Prerequisite(s): ARCH 1130 and ARCH 1200.
This course is built around the design process and design logic and will also include an emphasis on working either alone or as part of a team. The design theme may include emphasis on sustainable architecture as the primary design goal. When sustainable architecture is the framework of the course, lectures and research assignments will include lessons on solar energy, conservation practices, building materials, and other aspects of sustainability. Lab Fee: $35

ARCH 2230—MEP Systems (2)
Lecture: 1, Lab: 3
This course studies the electrical code, electrical systems, standards, conventional symbols, nomenclature, layouts and fixture and equipment schedules. Coordination of mechanical, electrical, & plumbing work with the elements of the building is emphasized. This course also deals with the fundamentals of lighting within buildings. The appropriate quantity of lighting is calculated and the appropriate selection and placement of lighting within a space is studied. Sustainable Architectural MEP and Alternate Engineering systems will also be a part of this course. Lab Fee: $25

ARCH 2237—Structures (3)
Lecture: 2, Lab: 3
Prerequisite(s): ARCH 1120.
This course presents basic conceptual and practical structural design concepts. Included is the study of essential topics in Static and Strength of Materials. Steel and concrete structures are studied and evaluated mathematically. The student will learn how to evaluate and design beams and columns in both steel and concrete. Other topics include bearing plate/base plate design, bolted and welded connections, concrete and masonry wall design. Drafting projects require the use of CAD and will focus on structural elements. Lab Fee: $25

ARCH 2240—AutoCAD 3D (2)
Lecture: 1, Lab: 3
Prerequisite(s): ARCH 1120.
This course is an introduction to presentation drawing techniques using computer applications. The course will focus on three-dimensional modeling, rendering and other applications useful to the profession. Lab Fee: $25

ARCH 2242—Autodesk 3ds Max (3)
Lecture: 2, Lab: 3
Prerequisite(s): ARCH 1120.
This course is an introduction to three-dimensional computer modeling using current modeling software. Basic modeling functions, lighting, material applications and rendering will be studied. This course focuses on techniques and methods applicable to architects, interior designers and other building related professions. Lab Fee: $30

ARCH 2243—Autodesk Maya (3)
Lecture: 2, Lab: 3
Prerequisite(s): ARCH 1120.
This course continues the study of three-dimensional computer modeling using current modeling software. Basic modeling functions, lighting, material applications and rendering will be studied. The fundamentals of architectural animation will also be studied. This course focuses on techniques and methods applicable to architects, interior designers and other building related professions. Lab Fee: $30

ARCH 2266—Construction Documents (3)
Studio: 6
Prerequisite(s): ARCH 1130 and ARCH 1200.
This course introduces the student to the practice of creating construction documents. Knowledge learned in prior architectural courses is integrated into the course. Part of the course focuses on individual tasks, such as the generation of details, schedules, and plans, while another part of the course will focus on work generated in a group setting, simulating a team effort common to a modern architectural office. Lab Fee: $30

ARCH 2270—Professional Practice (3)
Studio: 6
Prerequisite(s): ARCH 1232 and ARCH 1250.
Students learn about planning projects, defining project scope and translating physical needs into building area, developing alternative solutions, preparing schedules and estimates, coordinating work efforts, and other practical factors. The student must consider physical constraints, code implications, costs, bidding, construction sequencing and practices, design goals, and working with consultants. Lab Fee: $25

ARCH 2275—Revit II (2)
Lecture: 1, Lab: 3
Prerequisite(s): ARCH 1120.
This course uses Autodesk REVIT to design, change, and document a Residential building using this revolutionary Building Information Modeling (BIM) software. Lab Fee: $20

ARCH 2282—Sustainable Design (2)
Lecture: 1, Lab: 3
This course will introduce the student to the issues and concepts related to sustainable design. The impact of the building's site, energy efficiency, the use of renewable forms of energy, including solar energy, will be studied as it relates to building design. Projects will be assigned on a regular basis and will be adaptable to the varied backgrounds of students. Lab Fee: $16

ARCH 2283—Sustainable Energy (2)
Lecture: 1, Lab: 3
Students become familiar with the concept of thermal transfer, the energy characteristics of various building energy systems and components, and learn how to compare the projected performance characteristics of one building model against another. The object is to learn an approach that enables well-informed decisions to be made that will affect sustainability. Lab Fee: $15

ARCH 2291—ARCH Field Experience (1-3)
Field Experience/Internship: 12
Off-campus work experience in architecture, consulting engineering, or construction-related paid employment that augments formal education received in the technology, with actual work conditions and job experience. "N" credit will not be allowed for this course. Lab Fee: $15

ARCH 2294—Special Topics in Architecture (1-4)
Lecture: 1 - 4
ARCH 2294 provides an opportunity for detailed examination of selected topics in Architecture. Lab Fee: $0

Art

ART 1205—Beginning Drawing (3)
Studio: 6
ART 1205 is an introduction to the basic techniques of freehand drawing. Emphasis is on media, concepts, drawing from observation and development of technique. Course meets elective requirements in the Associate of Arts degree program and distributive transfer requirements in the Arts. Lab Fee: $5

ART 1206—Two-Dimensional Design (3)
Studio: 6
ART 1206 is an introduction to the basic concepts of two-dimensional design: line, shape, space, hue, value and texture. Course covers the use of various media in a variety of problem-solving projects leading toward an awareness of the principles of visual organization. Lab Fee: $5

ART 1207—Three-Dimensional Design (3)
Studio: 6
Prerequisite(s): ART 1206.
ART 1207 is aimed at developing the student's basic understanding of three-dimensional visual communication through the exploration of three-dimensional principles. Students learn through the process of solving visual art problems. Solutions to these problems are achieved through the fabrication of three-dimensional art objects. Various techniques and media that are common to this area of study are systematically addressed. Lab Fee: $2

ART 2221—Life Drawing (3)
Studio: 6
Prerequisite(s): ART 1205.
Art 2221 emphasizes figure drawing with a foundation in anatomical study. The student will concentrate on proportion and design to further their understanding of the human figure as a complicated three-dimensional form and its metaphoric or literal interpretation through various drawing media. In addition, students will be able to develop a more advanced and informed interpretation of life drawing within historic and cultural contexts. Lab Fee: $20

ART 2230—Color Theory (3)
Lab: 6
Prerequisite(s): ART 1205.
This studio course is a guided exploration of color that examines the theory and artistic application of basic, intermediate, and advanced color principles through student projects, creative experimentation, lecture, and demonstration. Topics of inquiry and application include: color terminology, color schemes, effective observational image making, the principles of color organization, additive and subtractive mixing systems, and a thorough analysis of artists' pigments. In addition, students will learn and demonstrate how to critique and judge effective color communication. Lab Fee: $2

ART 2275—Beginning Painting (3)
Studio: 6
Prerequisite(s): ART 1205 and ART 1206 or; ART 2230.
ART 2275 introduces studio painting fundamentals utilizing varied subject matter and media. Lab Fee: $7

ART 2294—SPT: Art (1-3)
Lecture: 1 - 3
Student explores a detailed examination of selected topics in art. This course is on demand.

ART 2295—Portfolio Development and Exhibition (3)
Lab: 6
Prerequisite(s): ENGL 1100; ART 1205 or; ART 1206.
The Portfolio Development and Exhibition course will guide students in the cultivation and presentation of a professional portfolio. Emphasis is on the development and demonstration of professional artistic practices. Students will select original artworks, craft an artist’s statement, develop a portfolio, organize an art show, and display their original works. Lab Fee: $0

Arts & Sciences

ASC 1190—Critical Thinking in Arts & Sciences (1)
Lecture: 1
Prerequisite(s): ENGL 1100; ENGL 1100.
This course is designed to familiarize first time Arts and Science students at Columbus State with the academic environment. The course is designed to enhance critical reading and thinking skills and other general education abilities through selected reading of primary materials and activities. Lab Fee: $3

Astronomy

ASTR 1141—Life in the Universe (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course covers the potential for life elsewhere in the universe based on the discovery of extra-solar planets and the nature of life on Earth. Lab Fee: $1

ASTR 1161—The Solar System (3)
Lecture: 3
Prerequisite(s): MATH 1050; Placement into ENGL-1100 or higher.
This course offers an introduction to astronomy focusing on the solar system. Topics include the night sky, seasons, phases, eclipses; gravity, light and telescopes; solar system origins; planets, moons, rings, asteroids, comets, and exoplanets. This course may require additional time outside of scheduled class hours. Lab Fee: $7

ASTR 1162—Stars and Galaxies (3)
Lecture: 3
Prerequisite(s): MATH 1050; Placement into ENGL-1100 or higher.
This course explores stars, galaxies, and cosmology. Topics include gravity and light; the Sun; stellar properties, structure, and evolution; star formation and star death; black holes, white dwarfs, and neutron stars; galaxies and galaxy formation; structure, history, and future of the universe. This course may require additional time outside of scheduled class hours. Lab Fee: $7

ASTR 1400—Astronomy Laboratory (1)
Lab: 2
Prerequisite(s): MATH 1075 and ASTR 1161 or; ASTR 1162.
Laboratory investigations of light and matter, Earth's astronomical environment, and analysis of astronomical data. Lab Fee: $6

Automotive Technology

AUTO 1001—Autocare (2)
Lecture: 1.5, Lab: 1.5
This course is designed for the nonautomotive student who is interested in becoming familiar with the fundamentals of automotive systems and preventative maintenance. This course also provides information on choosing a repair shop, tips and techniques for dealing with minor breakdowns, and the vehicle purchase process. Lab Fee: $15

AUTO 1101—Basic Auto Systems (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): Placement into MATH 0114 or higher and Qualifying writing placement test score or completion of ENGL 0155, minimum grade ‘C’ and AUTO 1106 and AUTO 1160.
This introductory automotive course covers the basic components and systems of the automobile. Included in this course are automotive terminology and mechanical, hydraulic, and electrical theories as they apply to automobiles and light trucks. Students are strongly encouraged to take AUT0-1106 the same semester. See plan of study or Automotive Advisor for recommended course sequence. Lab Fee: $10

AUTO 1106—Auto Shop Orientation and Service (2)
Lecture: 1, Lab: 2
Prerequisite(s): Placement into MATH 0114 or higher and Qualifying writing placement test score or completion of ENGL 0155, minimum grade ‘C’; AUTO 1101 and AUTO 1160.
This introductory automotive course covers the operation of an automotive shop, the proper use of hand tools, power tools, and basic maintenance operations on cars and light trucks. Student must have credit for or be concurrently enrolled in AUTO 1101. See plan of study or an Automotive Advisor for recommended course sequence. Lab Fee: $30

AUTO 1110—Engines: Theory and Operations (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): Qualifying writing placement test score or completion of ENGL 0155, minimum grade ‘C’ and AUTO 1101 and AUTO 1106.
This course presents automotive engine design, theory, and operation. All engine mechanical systems are explored during teardown and reassembly of an automotive engine. Students will diagnose engine concerns and determine needed repairs. Student must have satisfactorily completed AUTO 1101 and AUTO 1106. Lab Fee: $25

AUTO 1140—Suspension and Steering: Theory and Oper (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): Qualifying writing placement test score or completion of ENGL 0155, minimum grade 'C' and AUTO 1101 and AUTO 1106.
This class examines the theory, operation, and basic procedures needed to service and repair wheels, tires, wheel bearings, and suspension and steering components. Basic wheel alignment theory and service are also emphasized. Student must have satisfactorily completed AUTO 1101 and AUTO 1106. See plan of study or an Automotive Advisor for recommended course sequence. Lab Fee: $40

AUTO 1150—Brake and Systems: Theory and Operation (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): Qualifying writing placement test score or completion of ENGL 0155, minimum grade 'C' and AUTO 1101 and AUTO 1106.
This course presents the theory, operation, service, and repair of drum brakes, disc brakes, hydraulic components, brake lines, and power brakes. Student must have satisfactorily completed AUTO 1101 and AUTO 1106. See plan of study or an Automotive Advisor for recommended course sequence. Lab Fee: $35

AUTO 1160—Electrical Syst: Theory and Operation I (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): Placement into MATH 0114 or higher and Qualifying writing placement test score or completion of ENGL 0155, minimum grade 'C'.
This course presents basic circuit theory, meter usage and interpreting wiring diagrams. Basic circuit troubleshooting is also explored. Student must have satisfactorily completed or be concurrently enrolled in AUTO 1101 and AUTO 1106. See plan of study or an Automotive Advisor for recommended course sequence. Lab Fee: $25

AUTO 1170—Heating & Air Condition Theory & Oper (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): Qualifying writing placement test score or completion of ENGL 0155, minimum grade 'C' and AUTO 1101 and AUTO 1106.
This course presents the theory, operation and service procedures of refrigeration and engine cooling and heating. Students learn proper use of recovery, recycling, charging, testing, and component evaluation equipment. Student must have satisfactorily completed AUTO 1101 and AUTO 1106. See plan of study or an Automotive Advisor for recommended course sequence. Lab Fee: $40

AUTO 1180—Engine Performance: Theory and Ops I (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): AUTO 1101 and AUTO 1106 and AUTO 1160.
This course presents the fundamentals of engine performance. It includes basic testing and diagnosis of the ignition and fuel systems. Basic engine mechanical testing is also covered. Student must have satisfactorily completed AUTO 1101, AUTO 1106 and AUTO 1160. Lab Fee: $25

AUTO 1210—Powertrain Systems Service (2)
Lecture: 1, Lab: 2
Prerequisite(s): Qualifying writing placement test score or completion of ENGL 0155, minimum grade 'C' and AUTO 1101 and AUTO 1106.
This course presents the procedures for the removal and replacement of various components of the powertrain system including engine assemblies, transaxles, transmissions and differentials. Student must have satisfactorily completed AUTO 1101 and AUTO 1106. Lab Fee: $40

AUTO 1240—Suspension & Steering Diagnosis & Repair (2)
Lecture: 1, Lab: 2
Prerequisite(s): AUTO 1101 and AUTO 1106 and AUTO 1140; AUTO 1160.
This course builds on the fundamentals covered in AUTO 1140 and examines the essential procedures and routines needed for diagnosis and repair of modern suspension and steering systems. It will also cover advanced alignment diagnostic angles and techniques. Student must have satisfactorily completed AUTO 1101, AUTO 1106 and AUTO 1140. Must have credit for or be concurrently enrolled in AUTO 1160. Lab Fee: $45

AUTO 1250—Brake Systems: Diagnosis & Repair (2)
Lecture: 1, Lab: 2
Prerequisite(s): AUTO 1101 and AUTO 1106 and AUTO 1150 and AUTO 1160.
This course builds on the fundamentals covered in AUTO 1150. Brake system diagnosis, live-car servicing, power booster service, antilock brake systems, and brake lathe operation are explored. Student must have satisfactorily completed AUTO 1101, AUTO 1106, AUTO 1150, and AUTO 1160. Lab Fee: $40

AUTO 1260—Electrical Systems Theory & Operation II (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): AUTO 1101 and AUTO 1106 and AUTO 1160.
This course builds on the fundamentals covered in AUTO 1160. Diagnosis and repair of the battery, starting, charging, lighting and accessory circuits are emphasized. Student must have satisfactorily completed AUTO 1101,AUTO-1106 and AUTO 1160. Lab Fee: $30

AUTO 2120—Auto Transmissions: Theory & Operations (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): AUTO 1101 and AUTO 1106 and AUTO 1160.
This course presents automatic transmissions and transaxle theory and operation. Hydraulic, mechanical and electrical systems are explored during teardown and reassembly of an automatic transmission. Student must have satisfactorily completed AUTO 1101, AUTO 1106 and AUTO 1160. Lab Fee: $25

AUTO 2130—Manual Trans: Theory and Operation (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): Qualifying writing placement test score or completion of ENGL 0155, minimum grade 'C' and AUTO 1101 and AUTO 1106.
This course presents theory and operation of manual transmissions, transaxles, and differentials. Lecture and lab activities also cover proper teardown and reassembly procedures. Students must have satisfactorily completed AUTO 1101 and AUTO 1106. Lab Fee: $25

AUTO 2190—Hybrid Vehicles: Theory and Operation (1)
Lab: 0.8, Lecture: 0.8
Prerequisite(s): AUTO 1101 and AUTO 1106 or; with instructor permission.
This course presents the theory and operation of hybrid vehicles. This is an informative course designed to provide a general overview of various hybrid vehicle systems. Proper safety precautions and procedures needed to service the basic systems of hybrid vehicles will be discussed. Student must have satisfactorily completed AUTO 1101 and AUTO 1106. Lab Fee: $10

AUTO 2193—Ind Studies in Automotive Technology (1)
Lecture: 1
Prerequisite(s): AUTO 1101 and AUTO 1106.
AUTO 2193 is an individual, student-structured course that examines a selected topic in the automotive industry through intensive reading and research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program Lab Fee: $2

AUTO 2194—Special Topics in Automotive Technology (1)
Lecture: 1
Prerequisite(s): AUTO 1101 and AUTO 1106.
This is an advanced level course elective that will address current issues in the automotive industry. Lab Fee: $15

AUTO 2220—Automatic Trans: Diagnosis & Car Repair (2)
Lecture: 1, Lab: 2
Prerequisite(s): AUTO 1101 and AUTO 1106 and AUTO 2120.
This course builds on the fundamentals covered in AUTO 2120. Emphasis is placed on in-car automatic transmission and transaxle service, diagnosis, and repair. Student must have satisfactorily completed AUTO 1101 AUTO 1106 and AUTO 2120. Lab Fee: $25

AUTO 2230—Manual Trans: Diagnosis & In-Car Repair (2)
Lecture: 1, Lab: 2
Prerequisite(s): AUTO 1101 and AUTO 1106 and AUTO 2130.
This course builds on the fundamentals covered in AUTO 2130. The topics of clutch, transfer case, drive shaft, drive axles and 4WD hub diagnosis and repair are explored through lecture, teardown, and reassembly. Student must have satisfactorily completed AUTO 1101, AUTO 1106, and AUTO 2130. Lab Fee: $35

AUTO 2270—Heat & Air Condition Diagnosis & Repair (2)
Lecture: 1, Lab: 2
Prerequisite(s): AUTO 1101 and AUTO 1106 and AUTO 1160 and AUTO 1170.
This course builds on the fundamentals covered in AUTO 1170. System diagnosis, electrical troubleshooting, air distribution, manual and automatic temperature control systems are explored through lecture and lab activities. Student must have satisfactorily completed AUTO 1101, AUTO 1106, and AUTO 1170. Lab Fee: $45

AUTO 2280—Engine Performance Theory & Operation II (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): AUTO 1180.
This course builds on the fundamentals covered in AUTO 1180. Emphasis is on exhaust gas analysis, scan tool use, emission control systems and the fundamentals of OBDII. Student must have satisfactorily completed AUTO 1101, AUTO 1106 and AUTO 1180. Lab Fee: $30

AUTO 2293—Independent Studies in Auto Technology (2)

Prerequisite(s): AUTO 1101 and AUTO 1106.
AUTO 2293 is an individual, student-structured course that examines a selected topic in the automotive industry through intensive reading and research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. Instructor consent is required. Lab Fee: $2

AUTO 2294—Special Topics in Automotive Technology (2)
Lecture: 2
Prerequisite(s): AUTO 1101 and AUTO 1106.
This is an advanced level course elective that will address current issues in the automotive industry. Lab Fee: $15

AUTO 2310—Engines: Diagnosis & In-Car Repair (2)
Lecture: 1, Lab: 2
Prerequisite(s): Qualifying writing placement test score or completion of ENGL 0155, minimum grade 'C' and AUTO 1110.
This course builds on the fundamentals covered in AUTO 1110. Engine mechanical systems diagnosis and proper component replacement procedures are emphasized. Student must have satisfactorily completed AUTO 1101, AUTO 1106, and AUTO 1110. Lab Fee: $40

AUTO 2360—Adv Electrical System Diagnosis & Repair (3)
Lecture: 2, Lab: 3
Prerequisite(s): AUTO 1260 or; FORD 1260.
This course continues the study of automotive electrical systems building on information and skills obtained in AUTO 1160 and AUTO 1260. Accessory system diagnosis, live-car servicing, supplemental restraints systems, and various body control computer systems will be emphasized. Student must have credit for AUTO 1260 or FORD 1260. Lab Fee: $25

AUTO 2380—Adv Engine Perform Diagnosis & Repair (3)
Lecture: 2, Lab: 3
Prerequisite(s): AUTO 2280.
This course continues the study of automotive engine performance systems building on information and skills obtained in AUTO 1180 and AUTO 2280. System diagnosis, live-car servicing, and various manufacturer's computer control systems will also be explored through lecture and lab activities. Student must have credit for AUTO 2280. Lab Fee: $25

AUTO 2390—Advanced Hybrid Vehicles: Diagnosis and Repair (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): AUTO 2190 and AUTO 2360 and AUTO 2280 or; ASE Certifications A-6 & A-8 or; with instructor permission.
This course builds on the fundamentals covered in AUTO 2190 Hybrid Vehicles Theory & Operation. The emphasis of this course will focus on high voltage systems: safety, service, diagnosis and repair. Must have completed AUTO 2190, AUTO 2360 and AUTO 2280 or completion of Auto 2190 and current ASE A6 & A8 certifications. This course is designed to complement the knowledge learned in AUTO 2190, 2280 and 2360 to prepare student to pass the ASE Light Duty Hybrid/Electric Vehicle Specialist Test (L3). Lab Fee: $40

AUTO 2391—Advanced Alternative Fueled Vehicles: Diagnosis and Repair (2)
Lab: 1.5, Lecture: 1.5
Prerequisite(s): AUTO 2190 and AUTO 2360 and AUTO 2380 or; ASE Certification A-6 & A-8 or; with instructor permission.
This course builds on the fundamentals of automotive engine performance and electrical systems building on the information and skills obtained in AUTO 2360 and AUTO 2380. Compressed natural gas (CNG), propane, bi-fuel, hydrogen and other alternative fueled vehicles will be explored. System safety, diagnosis, live car servicing, and various manufacture's systems will be explored through lecture and lab activities. An expected outcome of AUTO 2391 should be students are prepared to pass the ASE Alternative Fuels Certification Test (F1). Lab Fee: $40

AUTO 2393—Independent Studies: Auto Technology (3)

Prerequisite(s): AUTO 1101 and AUTO 1106.
AUTO 2393 is an individual, student-structured course that examines a selected topic in the automotive industry through intensive reading and research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program Lab Fee: $2

AUTO 2399—Maint & Light Repair Shop Experience (2)
Lecture: 1, Lab: 3
Prerequisite(s): AUTO 1101 and AUTO 1106 and AUTO 1140 and AUTO 1150 and AUTO 1160 and AUTO 1170 and FORD 1240 or; AUTO 1240 and AUTO 1250 or; FORD 1250 and AUTO 1260 or; FORD 1260.
This course includes instruction and assessment of skills and knowledge required by Maintenance and Light Repair technicians. Skills are measured in a shop setting with the students performing inspection, diagnosis, and repairs. This course is designed to improve students' hand skills and working knowledge of the daily shop environment. Preparation for ASE's G-1 Certification test is also emphasized. Lab Fee: $35

Aviation Maintenance Technology

AMT 1101—Introduction to Aviation (2)
Lecture: 1, Lab: 2
Prerequisite(s): Placement into ENGL 1100 and MATH 1024.
In this course, students receive an introduction to aerodynamics and the physics of flight. Focus will be on principles of simple machines, sound, fluid dynamics, heat, and pressure as they pertain to fixed wing aircraft, rotary wing aircraft, aircraft powerplants, and propellers. Students will also learn the principles of primary and secondary flight controls and aircraft nomenclature. Lab Fee: $20

AMT 1102—Aircraft Weight & Balance (2)
Lecture: 1, Lab: 2
Prerequisite(s): Placement into ENGL 1100 and MATH 1024.
In this course, there will be an in depth look at aircraft and helicopter weight and balance. Students will study the principles of computing weight and balance, computing and correction of adverse load conditions, and the basics of computing weight and balance for transport category aircraft. Procedures for weighing aircraft and documentation of weight and balance data are emphasized. Lab Fee: $20

AMT 1103—Aircraft Materials (4)
Lecture: 2, Lab: 5
Prerequisite(s): Placement into ENGL 1100 and MATH 1024.
Focus is placed on usage of common hand tools and safety, making precision measurements, and proper use of torque wrenches. Identification of aircraft hardware and other materials used in the aircraft industry will also be presented, and students will receive instruction in the methods of safety wiring hardware, the principles of inspection, fabrication, repair, and replacement of hydraulic and pneumatic rigid and non-rigid lines. In addition, students will learn the basics of non-destructive inspection techniques, corrosion detection, and corrosion control. The proper use of aircraft drawings and charts will also be explored. Lab Fee: $30

AMT 1104—AMT Regulation and Inspection (3)
Lecture: 2, Lab: 4
Prerequisite(s): Placement into ENGL 1100 and MATH 1024.
This course is an in-depth study of Title 14 of the Code of Federal Regulations, Aeronautics and Space, as they pertain to the Aviation Maintenance Technician. Focus will be on history of the FAR's, certification of mechanics, certification of aircraft, engines and propellers. In addition, students study the regulatory maintenance requirements of aircraft and regulatory requirements of aircraft records. The format of FAA and manufacturer's publications is studied with emphasis on aircraft technical publication research. The students will also be introduced to Human Factors in Aviation Maintenance. Lab Fee: $20

AMT 1105—Ground Operation and Servicing (2)
Lecture: 1, Lab: 2
Prerequisite(s): Placement into ENGL 1100 and MATH 1024.
Aircraft Maintenance cannot be safely performed unless there is a complete understanding of the hazards and handling procedures involved with aircraft in a hangar, shop, or outdoor ramp environment. In this class, students will study and engage in practices involving aircraft in these situations. Emphasis will be placed on accomplishment of tasks while preserving a safe environment for personnel as well as the equipment. Students will become proficient in performing various aircraft maintenance responsibilities that involve shop safety, tie down procedures, aircraft jacking and hoisting, and aircraft engine operation. Lab Fee: $30

AMT 1106—Basic Electricity for the AMT (6)
Lecture: 3, Lab: 6
Prerequisite(s): Placement into ENGL 1100 and MATH 1024.
The aircraft that are being manufactured today have become more dependant on electronics and electrical systems. An understanding of basic electrical concepts is essential to the success of the modern aircraft maintenance technician. In this course, students will develop a fundamental understanding of basic electrical circuits with an emphasis on airborne installations. AC and DC electrical theory and practical application will be accomplished and proven through extensive experimentation and calculations. Aircraft maintenance practices as they relate to batteries, power calculations, and the relationship of voltage, current, and resistance will be examined, as well as precision measurement of these values on operational circuits. Lab Fee: $20

AMT 2101—Aircraft Metallic Structures (6)
Lecture: 3, Lab: 6
Prerequisite(s): AMT 1103.
The primary structures of most aircraft today are made of some form of metal. An understanding of the techniques involved in forming and fabricating various components for metal structures is essential for the technician to maintain and repair airframes for continued service and reliability. In this course, students will study properties of aircraft metals, fabrication of aircraft repairs by complex bending, riveting, and use of structural adhesives. Students will design and layout repairs of metal aircraft. In addition, welding techniques, inspection of welds and heat-treatment of metals will be examined and applied. Lab Fee: $25

AMT 2102—Aircraft Electrical Systems (6)
Lecture: 3, Lab: 6
Prerequisite(s): AMT 1106.
Aircraft electrical system integrity is a major factor in the operation of complex aircraft today. The need for extensive understanding of the on-board power sources, distribution systems, and utilization equipment is essential to the technician. This course deals with complete DC and AC electrical systems overview including sources, distribution, utilization, control and monitoring systems. Troubleshooting, inspection and maintenance techniques related to these systems are put to practical use with a high level of expectation.

AMT 2103—Aircraft Instruments and Fire Protection (4)
Lecture: 2, Lab: 4
Prerequisite(s): AMT 1106.
In this course, students will study instrument systems for monitoring flight envelope, environment, and engine parameters. Analog and electronic display systems are covered. Airframe and powerplant fire detection and supression systems will also be studied. Practical application of common troubleshooting procedures and maintenance practices associated with these devices will be accomplished with a high level of achievement expected. Lab Fee: $25

AMT 2104—Aircraft Fuel Systems (2)
Lecture: 1, Lab: 2
Prerequisite(s): AMT 1105.
In this course, students will develop an understanding of the fuel systems for aircraft and engines. The course will cover the inspection techniques and maintenance of the aircraft fuel systems including integral tanks, bladder tanks, plumbing, and associated systems. Lab Fee: $30

AMT 2105—Aircraft Non-Metallic Structures (5)
Lecture: 3, Lab: 5
Prerequisite(s): AMT 1103.
This course is an introduction to aircraft structures constructed using composite materials and wood and doped fabric materials. Students will learn the basic core materials, types of material used, and repair procedures. This course will also cover maintenance practices related to windows, doors and interior furnishings. The students will become familiar with inspection and repair techniques of wood structures. Students will also study the types of aircraft fabric covering with a focus on inspection and repair of polyester based covering. The course will also cover the principles of composites aircraft structures. Lab Fee: $30

AMT 2106—Communications and Navigation Systems (2)
Lecture: 1, Lab: 3
Prerequisite(s): AMT 1106.
This course will examine the aircraft communication, navigation, and warning systems pilots use to fly to a desired destination, in varying weather conditions, while avoiding other aircraft and contact with terrain. Students will gain practical experience in the testing, troubleshooting, and required inspections associated with these systems. Lab Fee: $30

AMT 2107—Aircraft Environmental Controls (2)
Lecture: 1, Lab: 3
Prerequisite(s): AMT 1106.
In this class, students discover how pilots and passengers remain comfortable through heating, air conditioning, pressurization, and supplemental oxygen systems. This course will familiarize students with anti-ice, de-ice, ice detection, and rain protections systems used on the airframe, engine, and propeller installations. A large emphasis will be placed on troubleshooting and repair of these systems and associated servicing and inspection techniques.

AMT 2108—Aircraft Landing Gear & Fluid Power (4)
Lecture: 2, Lab: 5
Prerequisite(s): AMT 1103.
This course will include heavy focus on hydraulic and pneumatic principles, inspection and repair of air/oil struts, wheels, brakes, tires, and the landing gear system in relation to the aircraft. Lab Fee: $30

AMT 2109—Airframe Inspection (6)
Lecture: 3, Lab: 6
Prerequisite(s): AMT 2101 and AMT 2102 and AMT 2103 and AMT 2104 and AMT 2105.
Airframe Capstone course. In this course, aviation maintenance students will hone their critical inspection skills by studying the application of Federal Aviation Regulations to aircraft maintenance and the aircraft technician. With the help of aircraft maintenance forms, records, publications, and other pertinent technical data, an examination of the disposition of the required maintenance records, the use of inspection equipment and aids, and the proper procedures for returning the aircraft to service, and inspection of a complete airframe and all related systems will be accomplished. Lab Fee: $30

AMT 2201—Turbine Engine Maintenance I (5)
Lecture: 3, Lab: 5
Prerequisite(s): AMT 1103.
In this course, the theory and operation of aircraft turbine engines, the study of turbine engine construction and design, and principles of turbine engine maintenance, inspection, repair, and trouble-shooting will be presented. Application of procedures to remove, install, rig, and operationally test turbine engines will be accomplished along with the identification and repair or lubrication systems and components. Lab Fee: $30

AMT 2202—Turbine Engine Maintenance II (5)
Lecture: 3, Lab: 5
Prerequisite(s): AMT 1103.
This course deals with the study of electrical principles of turbine engine ignition systems, principles of operating turbine engine electrical and pneumatic starting systems, and the theory of operation of turbine engine fuel systems, fuel metering systems, and subsystems. A study of applied techniques to inspect, maintain, troubleshoot, repair and adjust the respective systems including airflow, temperature control, and thrust reverser systems will be undertaken. Principles of unducted fan systems will be examined as well. Lab Fee: $30

AMT 2203—Reciprocating Engine Maintenance I (5)
Lecture: 3, Lab: 5
Prerequisite(s): AMT 1103.
The focus of this course is the horizontally opposed reciprocating aircraft engine. Areas studied include theory of operation, engine construction features, maintenance and overhaul. Radial engine design, inspection and repair are also addressed. Reciprocating engine lubrication system design and maintenance for both radial and opposed engine are examined. Students learn the proper techniques for ground operational checks of reciprocating engines Lab Fee: $30

AMT 2204—Reciprocating Engine Maintenance II (5)
Lecture: 3, Lab: 5
Prerequisite(s): AMT 1103.
This course covers the reciprocating engine ignition, fuel metering and induction systems. Students study magnetos, float carburetors, fuel injections systems, supercharging and turbo-supercharging. Emphasis is placed on the theory of operation, inspection, maintenance practices, and troubleshooting of each system. Lab Fee: $30

AMT 2205—Propellers (2)
Lecture: 1, Lab: 2
Prerequisite(s): AMT 1103.
In this course, the principles of operation, governing systems, and ice control will be covered for all types of aircraft propellers. Focus will be placed on propeller inspection, lubrication, service, repair, removal, and installation. Lab Fee: $30

AMT 2206—Powerplant Inspection (4)
Lecture: 2, Lab: 4
Prerequisite(s): AMT 2201; AMT 2202; AMT 2203.
Powerplant Capstone course. In this course, aviation maintenance students will hone their critical inspection skills by studying the application of Federal Aviation Regulations to aircraft maintenance and the aircraft technician. With the help of aircraft maintenance forms, records, publications, and other pertinent technical data, an examination of the disposition of the required maintenance records, the use of inspection equipment and aids, and the proper procedures for returning the aircraft to service, and inspection of a complete powerplant and all related systems will be accomplished. Lab Fee: $30

Bachelor of Science in Nursing

BNUR 3100—Professionalism in Nursing (3)
Lecture: 3
This transition course bridges technical education and experience to professional foundations. Emphasis is placed on strategies that facilitate quality improvement, interprofessional collaboration, evidence-based practice, communication, and professionalism to improve health outcomes. Lab Fee: $0

BNUR 3110—Health Assessment (3)
Lecture: 3
Prerequisite(s): BNUR 3100.
This course reviews and expands upon the knowledge, skills, and professional communication strategies necessary to complete a comprehensive health assessment. Emphasis is placed on diverse populations and the holistic nature of nursing practice within an interdisciplinary health care team. Lab Fee: $0

BNUR 3120—Diversity and Inclusion in Nursing (3)
Lecture: 3
Prerequisite(s): BNUR 3100.
This course uses a diverse worldview to enhance nursing practice and explores strategies to improve cultural competence and inclusive nursing care. Emphasis is placed on strategies surrounding health equity related to gender, culture, race, and ethnicity. Lab Fee: $0

BNUR 3130—Population Health (3)
Lecture: 3
Prerequisite(s): BNUR 3100.
This course analyzes health promotion of diverse communities and populations with a focus on reducing social and environmental determinants of illness. Students will also examine principles of social justice in nursing practice through advocacy, policy development, care equity, and collaboration with community leaders and agencies. Emphasis is placed on the role of the nurse in identifying and improving gaps in the health of populations at the local, state, national, and international levels, as well as in vulnerable and specialty populations. Lab Fee: $0

BNUR 3140—Evidence Based Nursing (4)
Lecture: 4
Prerequisite(s): BNUR 3100.
The course examines concepts of quantitative and qualitative research and analyzes evidence to impact and improve patient care. Emphasis is placed on methodological foundations and the appraisal, critique, and evaluation of research as it relates to the nursing profession. Lab Fee: $0

BNUR 3150—Emerging Trends in Nursing and Healthcare (3)
Lecture: 3
Prerequisite(s): BNUR 3100.
The course explores innovations in health and health care, including strategies and interventions to reduce disparities and inequities in healthcare. Emphasis is placed on identifying trends of interest and how they affect the practice of nursing. A variety of nursing considerations which are impacted by these trends will be explored. Lab Fee: $0

BNUR 4100—Leadership (3)
Lecture: 3
Prerequisite(s): BNUR 3100.
This course promotes the knowledge, skills, attitudes, and judgements essential to effectively lead and mange self and others within constantly changing healthcare environments. Emphasis is placed on strategies that facilitate quality improvement, interprofessional collaboration, conflict management, resource management, equity, and change, as it relates to leadership. Lab Fee: $0

BNUR 4110—Excellence in Nursing (4)
Lecture: 4
Prerequisite(s): BNUR 3100; BNUR 3110; BNUR 3120; BNUR 3130; BNUR 3140; BNUR 3150; BNUR 4100.
This capstone course will integrate professionalism, diversity, evidence-based research, healthcare trends, and leadership to promote nursing excellence. Emphasis is placed on identifying an opportunity for change and proposing a solution. A variety of nursing considerations including ethics, law, regulatory agencies, and advocacy will be explored. Lab Fee: $0

Biology

BIO 100—Foundations of Biology (3)
Lecture: 3
Prerequisite(s): Qualifying writing placement score or Completion of ENGL 0155, minimum grade of ‘C’.
A general biology course where basic principles such as the characteristics of life, basic biochemistry, cell structure and function, mitosis, meiosis, Mendelian genetics, diversity of life and ecology are explored. Lab Fee: $4

BIO 1101—Fundamentals Human Anatomy & Physiology (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
The fundamentals of normal human anatomy and physiology including terminology, homeostasis, membrane transport, tissues, integumentary, musculoskeletal, neuroendocrine, hemic-lymphatic, cardiopulmonary, urogenital, digestive systems, and acid-based balance including on-line review of basic cell biology and biological chemistry. Case studies relate normal anatomy and physiology to specific disorders. Hybrid and web students are required to take exams at a proctored testing facility. Lab Fee: $4

BIO 1107—Human Biology (4)
Lab: 2, Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course introduces the study of human biology for the non-major student. Lessons include a detailed and topical study of the human body systems for skeletal, muscular and endocrine to learning about the brain, heart, lung, kidney, reproduction and the digestive system. Development, genetics, human populations and evolution, immunology and cancer as each impacts on humans will also be covered. This course includes a hands-on laboratory experience which emphasizes select lecture topics. Lab Fee: $20

BIO 1107—Human Biology (4)
Lab: 2, Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course introduces the study of human biology for the non-major student. Lessons include a detailed and topical study of the human body systems for skeletal, muscular and endocrine to learning about the brain, heart, lung, kidney, reproduction and the digestive system. Development, genetics, human populations and evolution, immunology and cancer as each impacts on humans will also be covered. This course includes a hands-on laboratory experience which emphasizes select lecture topics. Lab Fee: $20

BIO 1111—Intro to Biology (4)
Lab: 2, Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
A general bilogy course for non-majors designed to introduce the student to major concepts in these subject areas: cell biology, metabolism, genetics, evolution, diversity of life, and ecology. Sections of this course are H-designated Honors classes. Lab Fee: $20

BIO 1113—Biological Sciences I (4)
Lecture: 3, Lab: 3
Prerequisite(s): Placement into ENGL 1100 and BIO 0100.
The first half of a two-course sequence designed to give students majoring in the sciences an intensive introduction to the Biological sciences. Subjects covered in the course include biochemistry, cell biology, cell metabolism, genetics, gene technology, animal development and defense mechanism of the body. Sections of this course are H-designated Honors classes. Lab Fee: $27

BIO 1114—Biological Sciences II (4)
Lecture: 3, Lab: 3
Prerequisite(s): BIO 1113.
The second half of a two-course sequence designed to give students majoring in the sciences an intensive introduction to the biological sciences. Topics covered in this course include evolution, taxonomy, anatomy and physiology of plants and animals, behavior and ecology. Lab Fee: $26

BIO 1114—Biological Sciences II (4)
Lecture: 3, Lab: 3
Prerequisite(s): BIO 1113.
The second half of a two-course sequence designed to give students majoring in the sciences an intensive introduction to the biological sciences. Topics covered in this course include evolution, taxonomy, anatomy and physiology of plants and animals, behavior and ecology. Lab Fee: $26

BIO 1121—Anatomy and Physiology I (4)
Lab: 2, Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
An integrated organ-systems approach to normal anatomy & physiology with medical applications of homeostatic disruptions. Topics include course preparation, laboratory safety & public health, organization & body plan, homeostasis, biological chemistry, cell biology, tissues, integumentary system, skeletal system & articulations, action potentials, muscular system; overview, central, motor & sensory nervous systems. Hypothesis testing, collecting, analyzing & interpreting anatomical & physiological data from study of prosected cadavers, animal organ dissection, conducting experiments, collecting data from human volunteers, and case studies are required in laboratory following embedded safety standards. Lab Fee: $31

BIO 1122—Anatomy & Physiology II (4)
Lab: 2, Lecture: 3
Prerequisite(s): BIO 1121; Placement into ENGL 1100.
An integrated organ-systems approach to normal anatomy & physiology with medical applications of homeostatic disruptions. Topics include: course preparation, endocrine system and glucose regulation, blood components, immunity, lymphatic system, heart anatomy and physiology, respiratory system, circulatory system, urinary system, acid-base regulation, digestive system, metabolism and nutrition, reproductive system, development and life span, and genetics. Hypothesis testing, collecting, analyzing & interpreting anatomical & physiological data from study of prosected cadavers, animal organ dissection, conducting experiments, collecting data from human volunteers, and case studies are required in laboratory. All students including those taking blended sections are required to take proctored exams and participate in on-campus laboratories. Lab Fee: $31

BIO 1125—Plant Biology (4)
Lab: 2, Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course covers the biology of major plant groups. Topics include diversity, physiology, reproduction, anatomy, ecology, and the economic significance of plants. Lab Fee: $19

BIO 1127—Introduction to Environmental Science (4)
Lab: 2, Lecture: 3
Prerequisite(s): Placement into English 1100.
This course is concerned with the study and analysis of the interrelationship between humans and their environment and finding rational solutions to current environmental problems. Students are exposed to the scientific method of inquiry and will gain an appreciation for the relationship between environmental science and other natural sciences. Lab Fee: $20

BIO 1127—Introduction to Environmental Science (4)
Lab: 2, Lecture: 3
Prerequisite(s): Placement into English 1100.
This course is concerned with the study and analysis of the interrelationship between humans and their environment and finding rational solutions to current environmental problems. Students are exposed to the scientific method of inquiry and will gain an appreciation for the relationship between environmental science and other natural sciences. Lab Fee: $20

BIO 2215—Introduction to Microbiology (4)
Lecture: 3, Lab: 3
Prerequisite(s): Writing: Eligibility for Composition I and Science: Completion of BIO 0100 or higher.
BIO 2215 is a general microbiology course for non microbiology majors. Topics covered include: microbial taxonomy, morphology, staining, culture techniques, metabolism and physical and chemical methods for microbial control. General concepts in immunology, including host defense mechanisms, hypersensitivity and specific microbial diseases are also covered. Micro-related laboratory is required, including identification of unknown bacteria. Lab Fee: $27

BIO 2215—Microbiology (4)
Lecture: 3, Lab: 3
Prerequisite(s): Writing: Eligibility for Composition I and Science: Completion of BIO 0100 or higher.
BIO 2215 is a general microbiology course for non biology majors. General concepts in microbial diversity, metabolism, physical and chemical methods for microbial control, immunology, host defense mechanisms, and specific microbial diseases are covered. This course includes a hands-on laboratory component covering topics such as staining and culture techniques, identification and clinical applications. Lab Fee: $95

BIO 2293—Independent Study in Biology (1-3)
Lecture: 1 - 3
This independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. Lab Fee: $1

BIO 2294—Special Topics in Biology (1-3)
Lecture: 1 - 3
This course provides an opportunity for a detailed examination of selected topics of interest in biology. Lab Fee: $0

BIO 2300—Human Anatomy (4)
Lecture: 2, Lab: 4
Prerequisite(s): Writing: Eligibility for Composition I and Science: Qualifying science placement score or completion of BIO 0100 or higher.
The gross anatomy of the entire body is presented in detail. The human cadaver will be used to study the regions of the body (Back, lower limb, upper limb, head and neck, thorax, abdomen and pelvis. Lab Fee: $27

BIO 2301—Human Physiology (4)
Lab: 2, Lecture: 3
Prerequisite(s): BIO 2300.
An introductory course in human physiology designed to cover the normal physiology of all organ systems. Lab Fee: $14

BIO 2301—Human Physiology (4)
Lab: 2, Lecture: 3
Prerequisite(s): BIO 2300.
An introductory course in human physiology designed to cover the normal physiology of all organ systems. Lab Fee: $14

BIO 2302—Human Pathophysiology (3)
Lecture: 3
Prerequisite(s): BIO 1114 or; BIO 1122 or; BIO 2301 and Chemistry: Completion of CHEM 1111 or higher.
The etiology, pathogenesis, morphology, local effects, systemic manifestations, clinical significance, predisposition, and prevention of cell injury, teratology, cancer, and disorders of the hematological, immune, circulatory, nervous, endocrine, urinary, respiratory, gastrointestinal, reproductive and musculoskeletal systems. This course includes on-line reviews of cell biology, biological chemistry, anatomy, physiology, and terminology related to pathophysiological processes of the body. Case studies are used to interpret clinical information, diagnostic tests, signs, and symptoms relating to mechanisms of disease. Lab Fee: $4

BIO 2302—Human Pathophysiology (3)
Lecture: 3
Prerequisite(s): BIO 1114 or; BIO 1122 or; BIO 2301 and Chemistry: Completion of CHEM 1111 or higher.
The etiology, pathogenesis, morphology, local effects, systemic manifestations, clinical significance, predisposition, and prevention of cell injury, teratology, cancer, and disorders of the hematological, immune, circulatory, nervous, endocrine, urinary, respiratory, gastrointestinal, reproductive and musculoskeletal systems. This course includes on-line reviews of cell biology, biological chemistry, anatomy, physiology, and terminology related to pathophysiological processes of the body. Case studies are used to interpret clinical information, diagnostic tests, signs, and symptoms relating to mechanisms of disease. Lab Fee: $4

BIO 2500—General Genetics (3)
Lecture: 3
Prerequisite(s): BIO 1113 and 3 additional semester credit hours in biological sciences above BIO 1113; BIO-1113.
The principles of genetics including molecular genetics, transmission genetics of prokaryotes and eukaryotes, developmental and non chromosomal genetics and the genetics and evolution of populations. Lab Fee: $6

Bioscience Technology

BISI 1202—Biotechnology Safety and Measurements (3)
Lecture: 2, Lab: 2
Prerequisite(s): BTN 1101.
This is the second course in the biotechnology sequence with a focus on safety in the laboratory, the mathematics used in biotechnology, laboratory measurements, and laboratory solutions. Lab Fee: $44

BISI 1203—Biotechnology: Tissue Culture Techniques (5)
Lecture: 3, Lab: 4
Prerequisite(s): BIO 1113; BISI 1202.
This course provides an in-depth exploration of tissue culture techniques, which are a cornerstone of modern biotechnology. Through a combination of theoretical learning and hands-on laboratory exercises, students will delve into the fundamental principles and advanced methodologies in tissue culture. Topics covered in this course include cell culture techniques, media preparation, sterile techniques, subculturing, and cryopreservation. Lab Fee: $82

BISI 1204—Biotechnology: Protein Purification Techniques (4)
Lecture: 3, Lab: 3
Prerequisite(s): BISI 1203.
The fourth installment of a four-course sequence designed to provide students majoring in biotechnology a solid working knowledge of how to purify proteins as well as give them hands on experience with the techniques. Subjects covered in the course include solutions, separation of proteins using different types of chromatography, monitoring protein purity using gel electrophoresis and mass spectrometry, and bioinformatics. Lab Fee: $65

Biotechnology

BTN 1101—Introduction to Biotechnology (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100 and Qualifying math placement score or completion of MATH 1025 or higher.
This course provides students with a comprehensive introduction to the scientific concepts currently used in the field of biotechnology. Students are introduced to the fundamentals of biotechnology, current trends and careers in biotechnology, and the business, regulatory, quality, and ethical aspects of biotechnology. The knowledge and skills gained in this course will give students a broad understanding of biotechnology and its impact on society. Lab Fee: $0

Business Management

BMGT 1008—21st Century Workplace Skills (2)
Lecture: 2
In this fundamental course, students learn basic skills needed to gain entry to and thrive in a rapidly changing workplace environment. This course is highly recommended for College Credit Plus students. Lab Fee: $0

BMGT 1101—Principles of Business (3)
Lecture: 3
Prerequisite(s): Qualifying writing placement test score or completion of ENGL 0155, minimum grade ‘C’.
This course provides an overview of the various functions and activities of business enterprises. Marketing, human resources, accounting and finance, and operations are examined. Additionally, the topics of globalization and economics are covered. Students will learn important business terms and definitions. It is recommended that students complete COLS 1100 concurrently with this course. Lab Fee: $2

BMGT 1102—Interpersonal Skills (2)
Lecture: 1, Lab: 2
Prerequisite(s): Qualifying writing placement test score or completion of ENGL 0155, minimum grade 'C'.
This course provides opportunities for students to begin to understand their personal style via a battery of personal assessments that measure areas such as communication, listening, personality, and team building styles. Students will have the opportunity to apply this knowledge and adapt to other styles, which are critical to become an effective manager. A team project is required. Web conferencing may be required. Students may complete COLS 1100 concurrently with this course. Lab Fee: $2

BMGT 1210—21st Century Supervision (3)
Lecture: 3
Prerequisite(s): Qualifying writing placement test score or completion of ENGL 0155, minimum grade 'C' .
This course is focused on developing the managerial and leadership skill set for current supervisors, or students who aspire to become supervisors in the 21st century. Special emphasis will focus on current employment trends and problem solving, motivating, leading, and coaching employee associates. Students will learn how to monitor productivity, implement quality initiatives, and improve results in today's complex technology driven business environments. The course will use active and experiential learning techniquese to expose students to many supervisory scenarios while developing critical thinking and encouraging a team work mind set. Distance learning sections of this course may require participation in web conferencing sessions. Lab Fee: $5

BMGT 1798—Study Abroad Global Business Mgt (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course provides students with an overview of various topics with a global focus on management, trade, economics, industries, customers, competitors, etc. The course provides a unique opportunity for students to travel to the destination(s) they have been exploring during the semester. Each year, one semester trip will be traveling abroad and the other semester trip will travel within North America to globally significant destinations, thus providing an affordable experience. All students interested in the program will have an opportunity to submit a competitive application to attend the course. It is expected the student travel to the target location is a requirement for succeeding in this course. Lab Fee: $0

BMGT 2050—Sustainable Business (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course will address the shifting business environment resulting from climate change. It will examine all aspects of business through the lens of sustainability including strategy, management, innovation, operations, and the supporting functions of finance, accounting, marketing, communications, and information technology. Specific industries' impacts, trends, tools, standards, and requirements will be addressed. Lab Fee: $0

BMGT 2200—Management & Organizational Behavior (3)
Lecture: 3
Prerequisite(s): ENGL 1100 and Completion of minimum of 12 credit hours of college level coursework or; Permission of the Instructor..
This course examines theories and applications of management and organizational behavior with an emphasis on the interaction among individuals, teams and organizations that impact performance. Students are prepared to succeed in dynamic, diverse organizational environments. Web conferencing may be required for Distance Learning sections. Recommended: Student should complete COLS 1100 before enrolling in this course. Lab Fee: $3

BMGT 2216—Business Ethics (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
This course introduces students to contemporary ethical issues in business, ethical decision making strategies, and the laws which shape the ethical behavior of business organizations and their employees. Critical thinking and the application of ethical principles in the workplace are emphasized. This course has a heavy writing component. Students may be required to work in groups. Web conferencing may be required for Distance Learning sections. It is recommended that the student complete COLS 1100 before enrolling in this course. Lab Fee: $2

BMGT 2231—Fundamentals of Entrepreneurship (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course introduces the fundamental considerations in starting a new small business venture. Additionally the course focuses on selected critical aspects of a feasibility study and business plan. Areas include: market research and analysis, identifying sources of revenue, location analysis, pricing, and determining the feasibility of an opportunity. Web conferencing may be required for Distance Learning sections. Lab Fee: $2

BMGT 2232—Entrepreneurship: Business Plan Develop (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100 and BMGT 2231.
Topics covered in this course include various operational areas of entrepreneurship. Emphasis is given to implementing a marketing plan, detailed financial forecasting, cash flows and sources of financing. Special attention will be given to improving presentation skills by presenting a final business plan at the end of the semester. Lab Fee: $2

BMGT 2245—Introduction to Non-Profit Management (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course traces the history, philosophy, and societal role of nonprofits in the United States, and how social sector organizations today compare organizationally to public and private sector organizations. Additionally, this course explores the characteristics of effective and ethical management and leadership in nonprofit organizations. Finally, this course examines the roles of the executive director, the board, staff and volunteers. It is recommended that students complete COLS 1100 before enrolling in this course. Lab Fee: $0

BMGT 2250—Project Management Principles (3)
Lecture: 2, Lab: 2
This course introduces basic project management concepts and the PMI TALENT TRIANGLE® which includes the ideal skill set for successful Project Managers today. Specific PM skills include defining the scope of a project; identifying dependency networks; communicating plans with stakeholders; scheduling project tasks and resources; managing teams and using project evaluation techniques. This course is the first of a series that lead to a Project Management Certificate. It provides a solid foundation that may be used to pursue industry credentials such as the Certified Associate in Project Management (CAPM)® or the Project Management Professional (PMP)®. Web conferencing is required for Distance Learning sections. The PMI TALENT TRIANGLE, the Certified Associate in Project Management (CAPM), and the Project Management Professional (PMP) are registered marks of the Project Management Institute, Inc. Lab Fee: $2

BMGT 2251—Project Management Techniques (3)
Lecture: 3
Prerequisite(s): BMGT 2250.
This course builds upon foundational project management knowledge acquired in BMGT2250. Additional skills from the PMI Talent Triangle® are highlighted connecting people, processes, and the business environment. Technical skills to develop and crash network diagrams; determine earned values; estimate time and costs; and allocate resources will be emphasized. Predictive, agile and hybrid approaches as well as international projects will be covered. Completion of the series of Project Management courses will assist students to prepare for industry certification such as the Certified Associate in Project Manager (CAPM)® or the Project Management Professional (PMP)®. Web conferencing may be required for Distance Learning sections. The PMI TALENT TRIANGLE, Certified Associate in Project Management (CAPM), and Project Management Professional (PMP) are registered marks of the Project Management Institute, Inc. Lab Fee: $2

BMGT 2254—Negotiation (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
This course provides students with an overview of several negotiation skills and techniques used in business as well as other endeavors. Topics include a review of basic and advanced game theory, negotiation preparation, skill analysis, verbal/non-verbal communication, conflict of interest ethics, negotiating change, international/cross cultural considerations, and evaluating final outcome of negotiations. Students will become familiar with the application of tools, techniques, an methodologies that enhance strategies best suited for each situation. A team project is required. Web conferencing may be required for Distance Learning sections. Lab Fee: $3

BMGT 2258—Operations Management (3)
Lecture: 2, Lab: 2
Prerequisite(s): STAT 1400 or; MATH 1111 or; MATH1030/MATH1020 or MATH1050 may be used instead of STAT1400 and Placement into ENG1100.
This course provides students with a review of operations, including service and manufacturing. It includes a review of tools, techniques, and methodologies that enhance organizational problem-solving, planning, and process analysis and improvement. Students will become familiar with application of these tools and learn which is best suited to a particular organizational challenge. Web conferences may be required for distance learning sections. Lab Fee: $2

BMGT 2280—Professional Development (1)
Lab: 2
Prerequisite(s): Completion of 24 credit hours or permission of instructor..
In this course, each student will examine their individual career development in their selected program of study and build a professional electronic portfolio displaying course projects that demonstrate their knowledge, skills, and abilities. Course activities will include assessing their program competencies, analyzing social capital, conducting informational interviews, learning proper business etiquette, and completing related job search activities such as developing a professional resume and honing interviewing and networking skills. Web conferencing may be required for Distance Learning sections. Lab Fee: $8

BMGT 2299—Business Strategy (3)
Lecture: 2, Lab: 2
Prerequisite(s): Permission of BMGT Coordinator, Course Instructor, or Business Advisor..
A capstone course designed for graduating Business Program students providing an in-depth examination of strategic decisions and tactics using prior business coursework. Students work in cross-disciplinary teams to implement managerial decisions to operate a company in a simulated industry. Decision-making and analysis of product positioning, forecasting, marketing strategies, production, cost accounting, and financial management are key areas of focus. Additionally, students will use various strategic tools to evaluate a business's competitive advantage. Teamwork and peer reviews are a vital aspect of this course. All sections require attendance and participation either in person or virtually. Lab Fee: $70

BMGT 2599—Project Management Capstone (3)
Lecture: 3
Prerequisite(s): BMGT 2250 and BMGT 2251.
This course is the final sequence to earn the Project Management Certificate. Students will apply concepts covered in BMGT 2250 and BMGT2251 by managing a simulated project from initiation to closure. Completion of the series of Project Management courses will assist students to prepare for industry certification such as the Certified Associate in Project Manager (CAPM)® or the Project Management Professional (PMP)®. Web conferencing may be required for Distance Learning sections. The Certified Associate in Project Management (CAPM) and the Project Management Professional (PMP) are registered marks of the Project Management Institute, Inc. Lab Fee: $45

BMGT 2901—Business Seminar/Practicum (3)
Seminar: 1, Practicum: 14
Prerequisite(s): Completion of 30 credit hours and Instructor permission required..
In the practicum, students will work in an advisor-approved position to reinforce and apply the knowledge and skills acquired in their Business Management coursework. This practicum will involve the workplace supervisor under the guidance of a Business Management faculty member. The seminar will assist students in integrating and applying their business knowledge and skills during their work experience. Web conferencing may be required for Distance Learning sections. Lab Fee: $0

Business Office Administration

BOA 1101—Word I (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): Placement into ENGL 1100.
This course focuses on the features and functions of Microsoft Word software used in a business environment. Students will learn to create and customize documents using editing functions, formatting features, graphics, images, tables, and charts. Lab Fee: $2

BOA 1102—Excel I (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): Placement into ENGL 1100 and Placement into MATH 1104 or higher.
This course explores Excel features and functions used in business and accounting applications. Students will learn to create and modify worksheets, insert formulas, create charts, enhance the appearance of workbooks, and manage files and folders. Lab Fee: $2

BOA 1103—Powerpoint (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): Placement into ENGL 1100.
Students will learn to plan, create, and revise PowerPoint presentations. Emphasis will be placed on presentation skills and design standards. Students will test for the Microsoft Office Specialist certification for PowerPoint at the end of this course. Lab Fee: $61

BOA 1104—Access (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): ENGL 1100; MATH 1104.
This course includes features and functions of Microsoft Access database software used in a business environment. Topics include creating and modifying databases and tables, creating and manipulating queries, forms, and reports. Students will test for the Microsoft Office Specialist certification for Access at the end of this course. Lab fee includes the fee for taking certification exam at the Columbus campus; additional fees for testing will be applied by outside vendors if taken at an alternate location. Lab Fee: $61

BOA 1111—Bookkeeping (3)
Lecture: 3
Prerequisite(s): Placement into MATH 1104 or higher.
This course covers the accounting cycle for a service business including analysis of business transactions, journalizing, posting, adjusting and closing entries, and financial statement preparation. Special journals that are used in a merchandising business are also covered. Transactions involving payroll accounting, bank accounts, and cash funds are also covered. Lab Fee: $3

BOA 1117—Payroll (1)
Lecture: 1
Prerequisite(s): BOA 1111 or; ACCT 1211.
This course examines federal and state wage-hour laws, paying employees, obtaining required payroll data, completing state withholding and federal reporting forms, and how to record journal entries for wages and deductions, and withholding and remitting taxes. Lab Fee: $3

BOA 1122—QuickBooks (2)
Lecture: 1, Lab: 2
Prerequisite(s): BOA 1111 or; ACCT 1211 or; ACCT 1212.
Using the cloud-based version of QuickBooks, QuickBooks Online (QBO), this course covers how to manage customer, vendor, and employee information and how to perform the respective accounting functions for these three groups. This includes recording on-account and cash sales, receiving customer payments, writing checks, entering bills and expenses, managing inventory, setting up and processing payroll, banking and credit cards, and using apps to extend the power of QuickBooks. Lab Fee: $62

BOA 1131—Keyboarding & Document Formatting (2)
Lecture: 1, Lab: 2
Prerequisite(s): Placement into ENGL 1100 and Placement into MATH 1104 or higher.
This course emphasizes beginning touch-typing skills/proper keyboarding techniques, and document formatting using word processing software. Basic business documents such as letters, memos, and tables are included. Drill practice is integrated to develop speed, accuracy, and correct finger placement. Lab Fee: $3

BOA 1150—Office Procedures (3)
Lecture: 2, Lab: 2
Prerequisite(s): Placement into ENGL 1100 and Placement into MATH 1104 or higher.
This course covers the topics essential to the success of an office professional and continues to provide continuity and integration with all BOA courses and curriculum. Topics include professional skills, improving communication skills, planning and advancing your career, and professional development. Lab Fee: $5

BOA 1172—Excel II (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): BOA 1102.
This courses uses intermediate and advanced features and functions of Microsoft Excel spreadsheet software. Students will learn advanced formatting techniques, work with templates, and use advanced features for financial, math, statistical, and logical functions to analyze and solve problems in a business environment. Students will test for the Microsoft Office Specialist certification for Excel at the end of this course. Lab Fee: $61

BOA 1191—Word II (2)
Lecture: 1.5, Lab: 1.5
Prerequisite(s): BOA 1101.
This course focuses on the intermediate features and functions of Microsoft Word software used in a business environment. Students will learn to create and customize documents using advanced formatting features, create specialized tables, charts, and templates. Students will test for the Microsoft Office Specialist certification for Word at the end of this course. Lab Fee: $60

BOA 2950—BOA Practicum & Seminar (3)
Seminar: 1, Practicum: 14
Prerequisite(s): BOA 1132 and BOA 1150.
This practicum is a professional field experience program designed to provide the student with an opportunity to work in a professional office environment. This opportunity allows students to integrate the theory and knowledge of course content with the application of principles and practices in a work environment. The seminar provides opportunities for discussion and activities related to a business office environment. Lab Fee: $3

BOA 2999—BOA Capstone (3)
Lecture: 2, Lab: 2
Prerequisite(s): BOA 1132; BOA 1150.
This course provides a hands-on application environment where students work in teams to plan, develop, implement, and present automated business office applications. Students will complete a professional portfolio, participate in a service-learning project, and utilize Microsoft® Outlook. Lab Fee: $5

Chemistry

CHEM 100—Intro to Chemistry (4)
Lab: 2, Lecture: 3
Prerequisite(s): Writing: Eligibility for Composition I and Math: Qualifying math placement score or completion of MATH 1025 or higher or completion of STAT 1350.
This is a preparatory chemistry course covering the basic concepts of chemistry with emphasis on the physical and chemical properties of matter, problem solving and an introduction to chemical reactions. Related laboratory work and demonstrations are included. Safety training and goggles are required for laboratory sessions. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting and completion of certain exams and laboratories. Lab Fee: $14

CHEM 1100—Chemistry and Society (5)
Lecture: 5
Prerequisite(s): Writing: Eligibility for Composition I and Math: Qualifying math placement score or completion of MATH 1025 or higher.
This is a course for nonscience majors intended to a) acquaint students with the science of chemistry as it relates to modern technological society, and b) help students learn about chemistry in the context of their everyday lives. This course will help students realize the interconnection between chemistry and other disciplines in the natural sciences. The material in the course focuses on the practical significance of basic chemistry in the context of social, political and economic issues that affect our world. Lab Fee: $20

CHEM 1111—Elementary Chemistry I (4)
Lab: 2, Lecture: 3
Prerequisite(s): Writing: Eligibility for Composition I and Math: Qualifying math placement score or completion of MATH 1025 or higher or completion of STAT 1350.
This is an introductory course in fundamental chemical concepts and laboratory techniques. Topics include atomic structure, periodic classification of elements, stoichiometry, solutions, acids and bases, pH and buffers, the gas laws, chemical equilibrium, and nuclear chemistry. Lab Fee: $20

CHEM 1112—Elementary Chemistry II (4)
Lab: 2, Lecture: 3
Prerequisite(s): Writing: Eligibility for Composition I and Math: Qualifying math placement score or completion of MATH-1025 and or higher or completion of STAT-1350.
This is an introductory course in fundamental organic chemistry, biochemistry, and laboratory techniques. Course covers the study of carbon compounds organized according to functional groups, including carbohydrates, lipids, proteins, enzymes, and nucleic acids. Lab Fee: $20

CHEM 1113—Elements of Organic/Biochemistry (4)
Lab: 2, Lecture: 3
Prerequisite(s): Writing: Eligibility for Composition I and Math: Qualifying math placement score or completion of MATH 1025 or higher or completion of STAT 1350.
This is a course in elementary chemical concepts designed primarily for allied health students. It includes the study of basic organic chemistry, especially related to functional groups, and biochemistry including carbohydrates, lipids, proteins, enzymes, nucleic acids, and metabolism. Lab Fee: $20

CHEM 1171—General Chemistry I (5)
Lab: 3, Lecture: 4
Prerequisite(s): Writing: Eligibility for Composition I and Math: Qualifying math placement test score or completion of MATH 1146 or higher MATH courses and Science: Qualifying science placement score or completion of CHEM 0100 or higher.
This is a course in fundamental chemical principles. Topics include measurement, atomic structure, periodic classification, the mole concept, mass relationships in chemical reactions, the behavior of gases, the behavior of liquids, the behavior of solids, thermochemistry, quantum theory and electron configurations, chemical bonding, and molecular geometry. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting and completion of certain exams and laboratories. This is the first of a two-semester sequence designed for students entering a scientific field. Lab Fee: $29.5

CHEM 1172—General Chemistry II (5)
Lab: 3, Lecture: 4
Prerequisite(s): CHEM 1171.
This is a course in fundamental chemical principles. Topics include intermolecular forces, phase changes, the properties of solutions kinetics, equilibrium, acid-base chemistry and buffers, solubility equilibria, atmospheric chemistry, entropy and free energy, electrochemistry, the chemistry of metals and nonmetals, coordination complexes, and nuclear chemistry. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting and completion of certain exams and laboratories. This is the second of a two-semester sequence designed for students entering a scientific field. Lab Fee: $29.5

CHEM 1172—General Chemistry II (5)
Lab: 3, Lecture: 4
Prerequisite(s): CHEM 1171.
This is a course in fundamental chemical principles. Topics include intermolecular forces, phase changes, the properties of solutions kinetics, equilibrium, acid-base chemistry and buffers, solubility equilibria, atmospheric chemistry, entropy and free energy, electrochemistry, the chemistry of metals and nonmetals, coordination complexes, and nuclear chemistry. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting and completion of certain exams and laboratories. This is the second of a two-semester sequence designed for students entering a scientific field. Lab Fee: $51

CHEM 1200—Intro to General & Organic Chemistry (5)
Lab: 3, Lecture: 4
Prerequisite(s): Writing: Eligibility for Composition I and Math: Qualifying math placement score or completion of MATH 1025 or higher or completion of STAT 1350.
This is an introductory course in general chemistry, organic chemistry, biochemistry, and laboratory techniques. Topics include atomic structure, periodic classification of elements, stoichiometry, solutions, acids and bases, pH and buffers, the study of carbon compounds organized according to functional groups, carbohydrates, lipids, proteins, enzymes, and nucleic acids. Lab Fee: $20

CHEM 2251—Organic Chemistry I (5)
Lecture: 5
Prerequisite(s): CHEM 1172.
This is the first course in a two-course sequence in organic chemistry. This course includes the study of nomenclature, structure, bonding, and physical and chemical properties of alkanes, alkenes, alkynes, alkyl halides, alcohols, ethers, epoxides, aldehydes, and ketones. This course will also cover mass spectrometry, infrared spectroscopy, and 1H and 13C nuclear magnetic resonance spectroscopy. Lab Fee: $10

CHEM 2252—Organic Chemistry II (5)
Lecture: 5
Prerequisite(s): CHEM 2251.
This is the second course in a two-course sequence in organic chemistry. This course includes the study of the nomenclature, structure, bonding, and physical and chemical properties of conjugated systems, aromatic compounds, carboxylic acids and carboxylic acid derivatives, amines, carbonyl condensation reactions, carbohydrates, amino acids, peptides, lipids, radicals and polymers. Lab Fee: $10

CHEM 2254—Organic Chemistry Lab I (3)
Lecture: 1, Lab: 5
Prerequisite(s): CHEM 2251.
This is the first course in a two course sequence in organic chemistry laboratory. This course introduces the students to laboratory techniques of organic chemistry including synthesis, isolation, purification and identification of organic compounds. Spectroscopic techniques will be addressed as well. Lab Fee: $40

CHEM 2255—Organic Chemistry Lab II (3)
Lecture: 1, Lab: 5
Prerequisite(s): CHEM 2254; CHEM 2255 can be taken after either completion of CHEM 2252, or concurrently with CHEM 2252.
The second course in a two-course sequence in organic chemistry laboratory. This course includes further study of organic laboratory techniques including synthesis, isolation, purification and identification of organic compounds. Students will be required to participate in a laboratory research experience. Lab Fee: $40

CHEM 2261—General Biochemistry (4)
Lecture: 4
Prerequisite(s): CHEM 2251 and Completion of any college-level Biology course.
This is an introductory course in biochemistry dealing with the molecular basis of structure and metabolism of plants, animals and microorganisms. Lab Fee: $7

CHEM 2293—Independent Study in Chemistry (1-3)
Lecture: 1 - 3
This course is an individual, student-structured course that examines a selected topic in chemistry through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. A combination of lecture and lab hours may be required. Lab Fee: $1

CHEM 2294—SPT: Chemistry (1-3)
Lecture: 1 - 3
This course provides an opportunity to explore selected topics of interest in chemistry. A combination of lecture and lab hours may be required. Lab Fee: $1

Chinese

CHIN 1101—Beginning Chinese I (4)
Lecture: 4
Prerequisite(s): Placement into ENGL 1100.
This course offers an introduction to the fundamentals of the Mandarin Chinese language with practice in listening, speaking and simplified Chinese characters. It also includes selected studies in Chinese culture. CHIN 1101 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

CHIN 1102—Beginning Chinese II (4)
Lecture: 4
Prerequisite(s): CHIN 1101.
CHIN 1102 is a continuation of CHIN 1101 with further development of listening and speaking skills. Course also focuses on writing skills and further study of Chinese culture. CHIN 1102 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

CHIN 1103—Beginning Chinese III (4)
Lecture: 4
Prerequisite(s): CHIN 1102.
CHIN 1103 is a continuation of CHIN 1102 with further development of listening and speaking skills. Some focus also is given to writing skills and further study of Chinese culture. CHIN 1103 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

CHIN 1193—Independent Study in Chinese (1-3)
Lecture: 1
Prerequisite(s): CHIN 1103; CHIN-1103 or permission of instructor.
CHIN 1193 provides individual study opportunities for special topics in Chinese. Independent Study courses are offered to meet the special needs or interests of an individual student and to pilot new courses. Lab Fee: $2

CHIN 1194—Special Topics in Chinese (1-3)
Lecture: 1 - 3
Prerequisite(s): CHIN 1103.
CHIN 1194 provides group study opportunities for special topics in Chinese. Special topics courses are offered to meet the special needs or interests of a group of students and to pilot new courses. Lab Fee: $2

Civil Engineering Technology

CIVL 1120—Construction Materials Science (3)
Lecture: 2, Lab: 3
Prerequisite(s): MATH 1075.
A comprehensive study of the properties, construction applications, standards, specifications and elementary material testing methods of soils, aggregates, asphalts, Portland cement concrete, masonry, metals and woods. Laboratory exercises include fundamental common construction industry materials testing procedures and comparison of results to industry standards and specifications. The laboratory exercises also provide preparation for the American Concrete Institute (ACI) Grade 1 Concrete Field Technician exam. Preparation in the ACI Grade 1 Concrete Field Technician test is a course requirement. Lab Fee: $155

CIVL 1121—Highway Plan Reading (1)
Lecture: 0.5, Lab: 1.5
Prerequisite(s): MATH 1075; MATH 1075 or higher.
The study of traffic engineering analysis and application of design, operations and maintenance of traffic of surface transportation modes such as roads, parking lots and bike paths. The student will collect data, analyze it and recommend solutions in the areas of signalization, pavement markings, signage, maintenance of traffic and safety. Students will be introduced to government and industry standards, codes, and specifications. Lab Fee: $30

CIVL 1230—Heavy Construction Estimating (3)
Lecture: 2, Lab: 3
Prerequisite(s): MATH 1075.
This course is a comprehensive study of the topics associated with, and unique to, heavy/highway construction estimating. The major focus of the course will involve determining the cost factors of the equipment-intensive operations associated with heavy/highway construction. The secondary focus will be relating the equipment selection and cost factors to the labor requirements, materials' price extensions, and time requirements as utilized in the model crew method of estimating. Lab Fee: $23

CIVL 1320—Statics and Strengths of Materials (3)
Lecture: 2, Lab: 3
Prerequisite(s): CIVL 1120 and MATH 1075.
The study of static forces and equilibrium and the resultant stress, strain, deformation, failure and strength analysis of structures under loads, as well as understanding the concepts of torsion, modulus of elasticity, shear, bending, centroids and moments of inertia. Lab Fee: $30

CIVL 2210—Principles of Hydraulics (2)
Lecture: 2
Prerequisite(s): MATH 1075.
This course is a study of liquids at rest and in motion in enclosed conduits and open channels. The effects of static head, velocity, pressure and friction in enclosed piping systems are analyzed. Principles of pump systems, pump station design and detailing are emphasized. Fundamentals of open channel flow, quantification of rainfall runoff and culvert design are introduced. System analysis is performed using traditional methods and the use of AutoDesk Civil 3-D. Lab Fee: $23

CIVL 2230—Public Utility Systems (2)
Lecture: 2
Prerequisite(s): CIVL 2210.
This course is a study of the principles of public utility theory, planning, design and detailing. Emphasis is placed on applying current design standards and local and state regulations to the planning, design and plan preparation for sanitary collection systems, storm water management systems and water distribution systems (network analysis). Detail plan preparation using AutoDesk Civil 3-D systems is also emphasized. Lab Fee: $30

CIVL 2430—Roadway Location & Design (3)
Lecture: 2, Lab: 3
This course involves the elements of route location, construction materials, methods and procedures using local. state and federal standards. Relation of design standards to topography and prospective traffic, earthwork measurement, physical design standards, and financing are also explored. Both manual and computer operations are used in developing transportation solutions. SURV 1460 is recommended as concurrent. To improve student success, it is recommended that students complete SURV 1460 prior to or concurrently with this course. Lab Fee: $23

CIVL 2440—Traffic Engineering & Safety (3)
Lecture: 2, Lab: 3
Prerequisite(s): CIVL 1121 and MATH 1075;
CIVL-1121, MATH-1075 or higher.
The study of traffic engineering analysis and application of design, operations and maintenance of traffic of surface transportation modes such as roads, parking lots and bike paths. The student will collect data, analyze it and recommend solutions in the areas of signalization, pavement markings, signage, maintenance of traffic and safety. Students will be introduced to government and industry standards, codes and specifications. Lab Fee: $30

CIVL 2910—Field Experience (3)
Field Experience/Internship: 40
Prerequisite(s): completion of 40 semester credit hours.
Field Experience offers real-world, off-campus job/work experience in civil engineering, consulting engineering, or the surveying industry that augments formal education received in the technology. "N" credit will not be allowed for this course. Lab Fee: $0

CIVL 2994—Special Topics in Civil Engineering (1-3)
Lecture: 1
The study of special topics in civil engineering technology industry designed to meet specific needs. Lab Fee: $0

Classics

CLAS 1222—Classical Mythology (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course is an introduction to the world of mythology through the study of myths from Greece and Rome. The course explores some of the religious ideas, traditions and values that distinguish one civilization from another, while also indicating universally shared themes. Attention will be given to cultural expression of mythical themes in literature and art. Lab Fee: $2

CLAS 1224—Classical Civilization: Greece (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course is a survey of the culture and ideas of Ancient Greece. Emphasis is on the literature, history, ideas, art, and theater of the Ancient Greeks. Lab Fee: $2

CLAS 1225—Classical Civilization: Rome (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course is a survey of the culture and ideas of Ancient Rome. Emphasis is on the literature, history, ideas, art, and theater of the Ancient Romans. Lab Fee: $2

CLAS 1226—Classical Civilization: Byzantium (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course is a survey of the cultural legacy of the Byzantines. Emphasis is on Byzantine popular culture, court life, religion, art, and literature. Lab Fee: $2

CLAS 1294—SPT: Classics (1-3)
Lecture: 1 - 3
Students explore special topics in classics designed to meet specific needs. This course is on demand. Lab Fee: $0

College Success

COLS 1100—First Year Experience Seminar (1)
Lecture: 1
Prerequisite(s): This is a required course within the first 15 credits hours at CSCC.
First Year Success Seminar provides students with an introduction to the college. It emphasizes skills and resources necessary to be successful in their personal, academic and career-related pursuits. The course includes an orientation to College resources, policies, and processes. Sections of this course are H-designated Honors classes. Lab Fee: $2

COLS 1101—College Success Skills (1)
Lecture: 0.5, Lab: 1.5
Prerequisite(s): This is a required course for students placing into two or more DEV courses.
College Success Skills emphasizes skills and resources necessary for students to be successful in their personal, academic and career-related pursuits. Required for student placing into two or more DEV courses. Required course within the first 15 hours at CSCC. Lab Fee: $3

COLS 1102—Navigating College in the U.S. (1)
Lab: 1.5, Lecture: 0.5
Prerequisite(s): ESL 0189.
Navigating College in the U.S. emphasizes skills and resources necessary for non-native students to be successful in their personal, academic and career-related pursuits. This course provides students with a comprehensive orientation to the culture and norms of U.S. higher education and specific polices and processes of the College. Students assess their individual learning styles and expand the effectiveness of their academic strategies. COLS 1102 is to be taken within the first 15 hours at CSCC. Lab Fee: $3

Communications

COMM 1100—Introduction to Communication Theory (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
Introduction to Communication Theory provides an overview of some of the major theories, perspectives and approaches guiding our understanding of communication in various contexts. (Previously COMM 2201) Lab Fee: $0

COMM 1101—Introduction to Mass Communication (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
Introduction to Mass Communication provides a history of mass media and its influence on human communication and societal change. Students will become better consumers of news and other mass media through the study of the history, roles, and impact of mass media in American society. Students will objectively apply mass communication theories in order to understand behavior. Principle ethical, policy, and legal questions confronting reporters and media are reviewed. Students are introduced to new writing, advertising, and public relations techniques. Lab Fee: $0

COMM 1105—Oral Communication (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
This course emphasizes verbal and nonverbal communication in public contexts with a particular focus on extemporaneous speaking. Research, organization, style, and delivery of presentations will be covered along with active listening, analysis, and audience engagement. Lab Fee: $2.5

COMM 1110—Small Group Communication (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
Principles and practice of group communication and dynamics. Lab Fee: $2.5

COMM 1150—Video Art Production (3)
Lecture: 2, Lab: 2
Prerequisite(s): ENGL 1100.
Introduction to the art of independent film and video through analysis of short films and production of digital video shorts. Lab Fee: $25

COMM 2200—Business Communication (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
Principles of and practice in effective written and oral communication in the business context. Plan, edit, and revise using appropriate formats for internal, external, and job search communications. Develop a problem-solving report based on primary and secondary research. Design and deliver an oral presentation. Student is to complete 10 credit hours before enrolling in this course. Lab Fee: $2

COMM 2204—Technical Writing (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
Principles of and practice in common forms of technical writing including technical reports, instructions, and descriptions. Design and deliver an oral presentation and prepare job search documents. Lab Fee: $2

COMM 2207—Writing for the Web (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
Web communication requires specific skills. This course presents the stylistic and rhetorical principles of web writing, media selection, design, and usability based on analysis of audience and purpose. Lab Fee: $0

COMM 2208—Communications for the Mass Media (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
The course prepares students to communicate effectively with the mass media including newspapers, magazines, radio and television through press conferences, news releases, feature stories, research reports and statements. Lab Fee: $2

COMM 2221—Public Relations Writing & Media Techniq (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
This course explains and develops professional level writing techniques expected of public relations practitioners. It covers role of the PR practitioner, different approaches required for a variety of audiences and media, and ethical and legal issues in the public relations field. Lab Fee: $2.5

COMM 2232—Interpersonal Communication (3)
Lecture: 3
Analysis of communication in formal and informal face-to-face settings. Lab Fee: $2.5

COMM 2241—News Writing & Editing (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
Prepares students to write and edit news articles that conform to established and emerging ethical guidelines, and to emerging publication styles. Introduction to the history of journalism in the United States. Lab Fee: $2.5

COMM 2245—Introduction to Film (3)
Lecture: 3
Prerequisite(s): ENGL 1100; ENGL 1100.
Introduction to film by analyzing elements of film technique:literature, story, drama, editing, movement, acting, sound, photography, staging and theory. Lab Fee: $4.5

COMM 2268—Intercultural Communication (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
Explores role of communication in understanding, appreciating and interacting with individuals across diverse cultures. Lab Fee: $2.5

COMM 2268—Intercultural Communication (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
This course explores the role of communication in understanding, appreciating, and interacting with individuals across diverse cultures. Lab Fee: $2.5

COMM 2450—Persuasion (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
This course is designed to increase students' understanding of persuasive communication, or messages intended to influence people's attitudes and behaviors. It is also designed to improve students' writing, speaking, and critical thinking skills through an exploration of persuasion as it relates to the American experience. Lab Fee: $2

Computer Science

CSCI 1001—Computer Fundamentals (2)
Lecture: 1, Lab: 2
CSCI 1001 introduces the inexperienced user of computers to fundamentals of computer terminology, hardware, software, windows operating system, directories, folders, files, copy paste functions, naming conventions and setting passwords. Additional topics covered include the World Wide Web, the internet, search engines and Blackboard. Lab Fee: $6

CSCI 1100—Essential Computer Topics (1)
Lab: 2
For students without an IT background, provides a basic overview of computer architecture; networking and data communication; the Internet and WWW; computer security; social impact of computing. Basic terminology of computing is covered. Lab Fee: $1

CSCI 1101—Computer Concepts & Apps (3)
Lecture: 2, Lab: 2
Prerequisite(s): Placement into ENGL 1100.
CSCI 1101 is designed to provide students with a working knowledge of computer concepts and essential skills necessary for work and communication in today's society. Topics include, social networking, computer security, safety, ethics, privacy, operating systems and utility programs, communications and networks, input, output, system units, storage, word processing, spreadsheets, databases and presentation software. Lab Fee: $6

CSCI 1102—Intermediate Excel and Access (3)
Lecture: 2, Lab: 2
Prerequisite(s): CSCI 1101.
CSCI 1102 is a continuation of CSCI 1101, incorporating Intermediate concepts and techniques used in spreadsheets and database software. Examples: financial functions, data tables, amortization schedules, working with multiple worksheets, macros, database queries, reports, switchboards, pivot tables and charts, and using SQL. Project management and HTML concepts will be introduced. Students will learn how to use these tools for analysis and decision making. Lab Fee: $2

CSCI 1103—Intro to Programming Logic (3)
Lecture: 2, Lab: 2
Prerequisite(s): MATH 1025 or; MATH 1050 or; MATH 1099 or; ITST 1101 and ITST 1102.
CSCI 1103 introduces basic concepts in programming logic, including sequences, selections, and loops. Students are introduced to programming via an interactive visual programming application. Having mastered fundamental programming paradigms, students will learn the basics of the Python programming language. Lab Fee: $0

CSCI 1143—Introduction to HTML (1)
Lab: 2
Learn the most important topics of HTML, including creating an HTML document; viewing an HTML file in a Web browser; working with tag text elements; inserting special characters, lines, and graphics; creating hypertext links; working with color and images; creating text and graphical tables; using tables to enhance page design; creating and working with frames; and, controlling the behavior of hyperlinks on a page with frames. Lab Fee: $1

CSCI 1145—HTML (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1103.
CSCI 1145 will teach students the dynamics of the Web environment while pursuing an in-depth study of the most recent version of both Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS). Throughout the course, students will create a real website using HMTL and CSS on a live server environment. Students will learn other important topics such as FTP, TCP/IP, and HTTP. Lab Fee: $4

CSCI 1150—Networking Terminology (1)
Lab: 2
This course is designed to provide students a solid understanding of computer networking terminology and the technologies in the field of computer networking. Students will learn and gain an in-depth analysis of data mobility including the hardware infrastructure (wires, wireless, and devices supporting them), the ISO Open Systems Interconnection (OSI) stack, standards, Internet protocols, enterprise architecture models, OSI model, privacy, confidentiality, network security, topologies, and other technologies associated with computer networking. Note: Computer Science (CSCI) students will not be given credit for this course towards their required Computer Science (CSCI) degree. Lab Fee: $1

CSCI 1152—Networking Concepts (Network+) (3)
Lecture: 2, Lab: 3
CSCI 1152 is designed for students to learn popular networking and security concepts using Windows and Linux in a hands on lab environment. Students will learn concepts geared towards an industry certification. Students will complete a series of assignments and be able to demonstrate network administration for both wired and wireless networks in a LAN environment using hardware, software, and virtualization. Lab Fee: $3

CSCI 1275—Business Analysis with Agile Development Frameworks (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1103.
CSCI 1275 is an introduction to the software development process. Emphasis will be placed on the use of Agile Frameworks for software development and project management. Students will participate in Team activities to simulate the iterative software development process using the SCRUM agile framework. Students, working in teams, will create user stories and acceptance criteria based on best practices discussed in class. Agile values and principles will be demonstrated during the class team activities. Other topics covered are the Software Development Life Cycle (SDLC), User Stories, and Sprint Process. In addition, students will produce burnup/burndown charts, story mapping, and stakeholders map.

CSCI 1320—Database Fundamentals (3)
Lecture: 2, Lab: 3
This course will serve as the foundational course for database. It introduces the student to the fundamental concepts and techniques of relational database management, database technology, structured query language, database design, database management, web database applications and Big data. Students perform hands-on labs with commercial software and databases provided by real-world scenarios. Lab Fee: $10

CSCI 1420—Analytical and Computational Foundations for Data Analytics I (2)
Lecture: 1, Lab: 3
Analytical and Computational Foundations for Data Analytics I begins a course sequence that provides the analytical and computational foundation for the study of more advanced topics in analytics, visualization and data mining. This sequence will discuss what data are, how they are sourced, and how they are managed. Additionally, the mathematical, statistical and programming foundations of data analytics and visualization will be introduced. Principles are taught and applied using programming languages common to data analytics like SQL, Python, and R. Spreadsheets will also be used extensively for analysis. Students will be introduced to trending topics in the data analytics space as well as the ethical considerations that data practitioners will encounter. Lab Fee: $0

CSCI 1421—Analytical and Computational Foundations for Data Analytics II (2)
Lecture: 1, Lab: 3
Prerequisite(s): CSCI 1420; CSCI 1103.
Analytical and Computational Foundations for Data Analytics II continues the course sequence that provides the analytical and computational foundations for the study of more advanced topics in analytics, visualization and data mining. This sequence will discuss what data are, how they are sourced, and how they are managed. Additionally, the mathematical, statistical and programming foundations of data analytics and visualization will be introduced. Principles are taught and applied using programming languages common to data analytics like SQL, Python, and R. Spreadsheets will also be used extensively for analysis. Students will be introduced to trending topics in the data analytics space as well as the ethical considerations that data practitioners will encounter. Lab Fee: $0

CSCI 1445—Content Management & Integration (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1103 and CSCI 1145; CSCI-1103 and CSCI-1145.
The internet contains a massive amount of data which is constantly being served all over the world. Managing this data server-side is no small task. In CSCI 1445, students will explore methods and techniques to managing large amounts of information and learn ways to organize and deliver this information in a meaningful manner. In addition to implementing several examples as projects, students will also learn about the ethics and inherent security concerns of online content. Lab Fee: $2

CSCI 1511—Python Programming (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1103.
CSCI 1511 introduces basic concepts of game design and programming. Students learn the Python programming language constructs to write programs that integrate classes, class methods, and class instances, built upon basic structures such as: input method handling, 2D sprite manipulation and animation, collision detection, game physics and basic artificial intelligence. Lab Fee: $2

CSCI 1551—Concepts of 3D Game Engines (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1511.
CSCI 1551 is an introductory course in how a 3D, multiplayer, networked game engine would build platforms and control game logic. The game engine is Panda3D, developed by Disney. Panda3D is a framework for 3D rendering and game development for Python and C++ programs. Panda3D is Open Source and free for any purpose. Game development with Panda3D will consist of writing a Python program that controls the Panda3D library. Computer lab projects will provide hands-on experience investigating the various components of a network game. Lab Fee: $2

CSCI 1610—Object Oriented Programming Fundamentals (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1103.
CSCI 1610 introduces concepts of object oriented programming through the use of Greenfoot, a hands-on learning tool. While the hands-on object oriented programming labs are completed in Greenfoot, the concepts presented are general. Students complete hands-on exercises to solve a problem and then the objected oriented concepts that were used to solve the problem are explained. The labs provide students with hands-on experience with Classes, objects, methods. The labs show concrete examples of abstract concepts like inheritance, data hiding, global & private variables. Java is the language within Greenfoot and students learn the essentials of the Java programming language as they create objects & methods with Java. Programming structures, namely Sequence, Selection, & Loops will be reinforced as students modify methods to change the behavior of objects. Version Control, with Git & GitHub, is also introduced so that students have a working knowledge of this industry software. Students will be encouraged to start their own portfolio in GitHub that demonstrates their work both during their schooling and during their career. Lab Fee: $2

CSCI 1620—Visual Basic I (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1103.
CSCI 1620 emphasizes the essential aspects of creating the graphical user interface of a Visual Basic Windows program. The student also will learn fundamental aspects of coding a VB.NET program, along with more advanced topics such as manipulating MS Access databases, sequential file processing, error handling, and data validation. Software is provided to students. Lab Fee: $2

CSCI 1630—C# Programming I (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1103.
CSCI 1630 uses the Visual C# programming language as the programming tool for learning principles of object-oriented programming. The course covers implementation of classes that support static and instance methods, concrete vs. abstract classes, class inheritance, polymorphism, exception handling, and object serialization. The course demonstrates the implementation of event handler methods through GUI form containers. Students apply debugging techniques to repair faulty Visual C# code. Lab Fee: $4

CSCI 1650—Programming Fundamentals for iOS (3)
Lecture: 2, Lab: 3
Prerequisite(s): MATH 1111 and CSCI 1103.
CSCI 1650 uses the Swift programming language as the tool for learning the fundamental programming principles of application development for the iOS platform. The course covers basic data types, functions, and the implementation of classes, generic classes, inheritance, polymorphism, protocols, exception handling, and use of collections. Lab Fee: $2

CSCI 1660—Programming Fundamentals for Android (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1103 and MATH 1111.
CSCI 1660 uses the Java programming language as the tool for learning the fundamental programming principles of application development for the Android platform. The course covers implementation of classes, abstract classes, inheritance, polymorphism, interfaces, exception handling, and use of collections and consumption of network services. Lab Fee: $4

CSCI 1772—Networking I (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1152.
CSCI 1772 is designed for students to learn advanced computer networking concepts and how they can be applied to support enterprise-wide information management of a large organization. The student will learn to install and configure network servers. Lab Fee: $2

CSCI 2221—Agile Software Development and Testing (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1511 or; CSCI 1630 or; CSCI 2467 or; CSCI 1275; None..
Agile Software Development and Testing introduces students to delivering software in an agile project environment. Students build web applications to specification using Red/Green /Refactor with test-driven and acceptance test driven development. The course emphasizes collaboration through agile practices like standups, pull requests, code reviews, and build monitoring. Concepts and technologies covered include TDD, ATDD, Cucumber, Gherkin, continuous integration, RSpec, page object design, and browser automation. Students perform hands-on labs using open source software frameworks. Lab Fee: $24

CSCI 2325—Expert Access (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1102.
CSCI 2325 covers advanced features of Microsoft Access database application software and the skill set required for Microsoft certification. Lab Fee: $10

CSCI 2330—Project Mgt Fund & Case Studies (4)
Lecture: 2, Lab: 4
CSCI 2330 teaches the genesis of project management and its importance to improving the success of information technology projects. The student will demonstrate knowledge of project management terms and techniques such as the triple constraint of project management and the project life cycle using project management industry tools and techniques. Further, through the use of case studies, students will analyze and implement the concepts and techniques using appropriate project management documentation. This course satisfies PMI's 35-hour education requirement to sit for the Project Management Professional (PMP) Exam. Lab Fee: $4

CSCI 2370—Database Systems Programming (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1103.
CSCI 2370 presents database systems theory and application. Including functional dependencies, normalization, data modeling and entity relationship model, entity relationship diagrams and structured query language. Students will design, build databases and write database programs. Lab Fee: $4

CSCI 2371—Database Adminstration & Data Mining (4)
Lecture: 2, Lab: 4
Prerequisite(s): CSCI 1103 or; CSCI 1320 or; CSCI 2325.
CSCI 2371 provides the background, knowledge and skills necessary to identify and perform tasks involved in the administration and management of a database system. Topics include user rights and responsibilities, concurrency security, reliability, backup and recovery. The second part of this course will cover data design, data extraction and transformation, data quality, OLAP processing , processing for business intelligence s, reporting systems, data mining applications, data warehouses and data marts. Lab Fee: $4

CSCI 2380—Business Intelligence Fundamentals (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1320 or; CSCI 2325 and MATH 1111 or; STAT 1350 or; STAT 1400.
Business Intelligence Fundamentals introduces the student to the collection of computer technologies and techniques that support managerial decision making. The course concentrates on the theoretical and conceptual foundations of business intelligence for decision support. Concepts covered are the need and role of business intelligence, data warehousing, online transaction processing, working with unstructured data, data mining, working with big data, and legal and ethical issues associated with business intelligence. Students perform hands-on labs with software and large databases provided by real-world corporations. Lab Fee: $10

CSCI 2385—Business Intelligence Reporting and Visualization (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 2380.
Business Intelligence Reporting and Visualization focuses on the use of current tools and techniques for summarizing data and information reporting. A review of data, database, and statistical concepts is provided as they relate to reporting and visualization. Students will explore various reporting techniques. An exploration of various exploratory and explanitory visualization techniques and their use cases is discussed. The development and use of web-based reporting and visualization tools, including dashboards, will be discussed. A survey of advanced topics related to summarizing and categorizing data for reporting will be presented. Lab Fee: $10

CSCI 2412—Web Database Development (4)
Lecture: 2, Lab: 4
Prerequisite(s): CSCI 1145.
Web applications are an integral part of the internet, and many websites use server-side code and different data storage techniques to control their content. This course shows how to design and build web applications using the open-source technologies of Apache, PHP, and MariaDB. No previous knowledge of this stack is required. The student will design a dynamic web app proof-of-concept from the ground up, focusing on all aspects of the software development lifecycle. Lab Fee: $4

CSCI 2420—Data Analysis I (2)
Lecture: 1, Lab: 3
Prerequisite(s): CSCI 1320; CSCI 1421; STAT 1400.
Data science is about 80% data preparation and 20% modeling. Data Analysis I begins a two-course sequence that explores the better part of the 80%: methods for collecting and extracting data, joining data, aggregating data, cleaning and pre-processing data. Students will learn how to ask questions of the data that they have, how to enrich data, clean data, handle missing values and how to aggregate it so that the data are ready for analysis. Ethical considerations for decisions made in data pre-processing will also be discussed. Use cases for both structured and unstructured data will be explored. Current methodologies for conducting data analysis and data mining will be used. Lab Fee: $0

CSCI 2421—Data Analysis II (2)
Lecture: 1, Lab: 3
Prerequisite(s): CSCI 2420.
Data science is about 80% data preparation and 20% modeling. Data Analysis II continues the two-course sequence and explores problem solving with data to generate insights. With well-prepared data, a variety of descriptive, diagnostic, predictive, and prescriptive analytic approaches will be explored. This course introduces some of the tools and techniques that can be used to support the data-driven decision making process, enriching those processes with insights and actionable recommendations. Lab Fee: $0

CSCI 2422—Data Visualization I (2)
Lecture: 1, Lab: 3
Prerequisite(s): CSCI 1420.
In this course, students will learn strategies to communicate effectively with data by turning data into compelling and actionable stories and recommendations. Students will learn how to visualize diverse types of data (amounts, distributions, time series, geographic, etc.) and will work with current tools and techniques to practice creating visual stories and dashboards. Design principles will be discussed and ethical implications in the visual presentation of information will be central to the course discussions. Lab Fee: $0

CSCI 2423—Data Visualization II (2)
Lecture: 1, Lab: 3
Prerequisite(s): CSCI 2422; CSCI 1421.
In this course, students deepen their study of communicating with data. Students will work with current tools and techniques to further explore topics in data visualization such as interactivity. Students will practice creating additional types of visualizations and build models and explore how to visualize model quality. Lab Fee: $0

CSCI 2447—JavaScript Fundamentals (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1145.
CSCI 2447 provides an in-depth study of scripting languages that add interactivity to websites. Scripting languages such as JavaScript and PHP work with Hypertext Markup Language (HTML) to extend its functionality. In recent years, several libraries have been created to reduce development time. Students will be introduced to the several scripting languages and use them to complete multiple real-world tasks. Students will also learn how to work with several popular libraries and through multiple exercises. Lab Fee: $2

CSCI 2467—Java Programming I (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1103.
CSCI-2467 is an introduction to software development using the Java programming language. Students will learn how to develop and debug a Java application using an Integrated Development Environment (IDE). The course will cover basic Java syntax and will introduce Object-Oriented Programming (OOP) including the principles of abstraction, encapsulation, inheritance, and polymorphism. Students will learn about Java exception handling, file I/O, generics, and collections. The concepts of test-driven design, generating documentation, and version control will be introduced. Lab Fee: $2

CSCI 2469—Java Programming II (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 2467; CSCI 1145; CSCI 1320.
CSCI-2469 Java Programming II introduces string processing, regular expressions, database access, and web programming in Java. The focus of the course is developing full-stack applications in Java. Students will learn to connect to a local and cloud-based relational databases. Students will be introduced to the microservices architecture and REST API. Students will use Postman Web API tool. Students will learn Spring Boot and will use it to develop a simple full-stack application. Lab Fee: $0

CSCI 2479—Advanced Web Programming (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1145 and CSCI 2447; CSCI 2412.
CSCI 2479 is an advanced web application development course where students are exposed to tools, programs, and frameworks they will use in their internships and positions of employment. Not only will students be developing all layers – data, business logic, and user interface – of web applications, but they will learn about other conventions, design patterns, and best practices of software development, such as version control, application testing, agile workflow, and automated deployment to cloud infrastructure. While it is not expected that students will become masters of any of these skills, they will know enough to be productive members of their future teams as they leave academia and enter the workforce. Lab Fee: $2

CSCI 2521—C++ Programming (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1103.
CSCI 2521 uses the C++ programming language as the programming tool for learning principles of object-oriented programming. The course covers implementation of classes that support static and instance methods, method and operator overloading, concrete vs. abstract classes, class inheritance, polymorphism, exception handling, and function templates. The course demonstrates storing of objects in data files. Students apply debugging techniques to repair faulty C++ code. Lab Fee: $4

CSCI 2541—Foundations of 2-D Game Programming (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 2447; CSCI 1511.
CSCI 2541 provides students with an introduction to and many opportunities for applied game prototyping. Students learn about the theory and methods of creating game prototypes for design and development of original game concepts. Topics covered include: breakthrough game design, proof of concept and iterative prototyping, and prototype QA testing and documentation. Lab activities are designed to foster critical thinking and problem solving skills through the development of an understanding of the development process as well as interactive programming techniques through the creation of working interactive programs in a high-level programming language. Lab Fee: $4

CSCI 2551—Graphics in 3-D Game Engines (3)
Lecture: 2, Lab: 2
Prerequisite(s): CSCI 1551.
CSCI 2551 is a study in the basic elements of a 3D network game. The material will cover environments and terrain, character animation, texture mapping, modeling, physical dynamics, particles and other selected topics. Students will include these issues while investigating the development of a level for one of the current, popular, game engines. Lab Fee: $4

CSCI 2556—3-D Game Project (3)
Lecture: 1, Lab: 4
Prerequisite(s): CSCI 2551.
CSCI 2556 will address the issue of developing a level for an existing multi-player, network game. Students, individually or in groups, will design their own levels for a game that has an open design. Concepts introduced in the prerequisite course, CSCI 2551, will be continued in the design phase of this course. Students will develop their own assets, as well as adopt assets from a public library, and dynamics. The course will continue discussions concerning networking. Lab Fee: $4

CSCI 2620—Visual Basic II (4)
Lecture: 2, Lab: 4
Prerequisite(s): CSCI 1620.
CSCI 2620 is a continuation of CSCI 1620. Emphasizes advanced topics in VB.NET such as object-oriented programming, database programming, including SQL and Active X controls, and multi-tiered approach to applications. Advanced topics include deploying Web forms that utilize a database. Advanced features of Visual Studio.NET are explored and applied as they relate to connectivity with SQL Server, Oracle, and other databases. Lab Fee: $4

CSCI 2630—C# Programming II (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1630.
CSCI 2630 teaches implementation of n-tier, web-based applications using the ASP .NET framework. Using the Visual Studio C# programming language, the course integrates architectural patterns, web technologies and existing frameworks. Students learn to deploy the web application to a cloud computing environment. Lab Fee: $4

CSCI 2650—iOS Mobile Apps Development (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1650.
CSCI 2650 uses the Swift programming language to develop applications for the iOS mobile operating system, in a project-oriented, team-based learning environment. Students utilize Xcode to develop universal applications, which include multiple UI controls, interactive maps, and access data from RESTful web services. Students design mobile applications, which comply with the iOS application architecture pattern and the iOS Human Interface Guidelines. Testing of the applications is performed on the Xcode simulator and a mobile device. Students also learn the workflow to distribute applications to Apple App Store. Lab Fee: $20

CSCI 2660—Android Mobile Apps Development (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1660.
CSCI 2660 uses the Java programming language to develop applications for the Android mobile operating system, in a project-oriented, team-based learning environment. Students utilize the Android Studio IDE to develop universal applications, which include multiple UI controls, interactive maps, and access data from RESTful web services. Students design mobile applications that comply with the Android application architecture pattern and the Android material design guidelines. Testing of the applications is performed on the Android Emulator and a mobile device. Students also learn the workflow to distribute applications to the Google Play app store. Lab Fee: $20

CSCI 2740—Data Structures and Algorithm Analysis (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 2467; MATH 1111 or; MATH 1146.
CSCI-2740 Data Structures and Algorithm Analysis covers sorting and searching algorithms, recursion, analysis of algorithms, and commonly used data structures. Students will study data structures such as linked lists, stacks, queues, hash tables, trees, and graphs. Lab assignments will be completed using the Java programming language. Lab Fee: $0

CSCI 2750—Introduction to CISCO Networks (3)
Lecture: 2, Lab: 3
CCNAv7: Introduction to CISCO Networks covers the architecture, structure, functions and components of the Internet and other computer networks. Students achieve a basic understanding of how networks operate and how to build simple local area networks (LAN), perform basic configurations for routers and switches, and implement Internet Protocol (IP). Upon successful completion of this course, students will earn a Networking Academy badge. Lab Fee: $2

CSCI 2752—CISCO Switching, Routing & Wireless Essentials (SRWE) (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 2750 or; CSCI 1152.
CCNAv7: Switching, Routing, and Wireless Essentials (SRWE) covers the architecture, components, and operations of routers and switches in small networks and introduces wireless local area networks (WLAN) and security concepts. Students learn how to configure and troubleshoot routers and switches for advanced functionality using security best practices and resolve common issues with protocols in both IPv4 and IPv6 networks. Lab Fee: $20

CSCI 2757—CISCO Enterprise Networking, Security & Automation (ENSA) (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 2752.
CCNAv7: Enterprise Networking, Security, and Automation covers wide area network (WAN) technologies and quality of service (QoS) mechanisms used for secure remote access. It also introduces software-defined networking, virtualization, and automation concepts that support the digitalization of networks. Lab Fee: $0

CSCI 2760—CCNA Voice (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 2756; CSCI-2756.
CSCI 2760 covers basic IP telephony installation, configuration, and maintenance skills. Students will implement and configure small- to medium sized IP Telephony solutions using Cisco Unified Communications Manager Express, Cisco Unity Express, and the UC500 Smart Business Communications System solutions. Lab Fee: $2

CSCI 2762—CCNA Security (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 2756; CSCI-2756.
CSCI 2762 equips students with the knowledge and skills needed to prepare for entry-level security specialist careers. This course is a hands-on, career-oriented e-learning solution that emphasizes practical experience. CCNA Security is a blended curriculum with both online and classroom learning. Lab Fee: $2

CSCI 2770—Network Communication & TCP/IP (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1772.
CSCI 2770 is designed for students to learn data communications, basic communication theory as applied to digital, analog, wireless, and voice networks and the OSI layered network model. The concepts of TCP/IP are thoroughly covered in this course such as TCP/IP history, security, protocols, IP addressing, bridging, and routing/DHCP, sub-netting, Windows domains and name services and Linux. Lab Fee: $4

CSCI 2774—Networking II (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 2770.
CSCI 2774 is designed for students to learn advanced concepts of the Microsoft Windows Server environment to support small and enterprise-wide information management systems. Students will learn and apply management of data storage, design and develop a security needs analysis, and administer Windows security. Students will apply client/server technologies used in designing and implementing Web services such as network address translators, proxy servers, firewalls, and Internet Information Services. Students will complete a series of laboratory assignments using the Windows Server environment. Lab Fee: $4

CSCI 2776—Network Security Fundamentals (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1152 or; ITST 1102.
CSCI 2776 will introduce network security theory and practice in areas of cryptography, security architecture, firewalls, VPNs, IP Security. Intranet/Internet security vulnerabilities and methods of protection will also be introduced. This course offers an introduction to virtual private networks (VPNs) and firewalls for securing a network. Various network security-related issues are introduced and examined. Different types of VPNs for securing data in an organizational setup are discussed as well as the benefits and architecture of a VPN and how to implement a VPN. Other topics include the utility of firewalls in tackling security problems and the limitations of a firewall. Instruction is also given on how to construct, configure, and administer a firewall and the functionality of a firewall. Lab Fee: $6

CSCI 2778—Wireless, Voice, & Mobile Comm (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 2770 and MATH 1151.
CSCI 2778 is designed to provide students and network administrators with an in-depth knowledge of the risk of threats to security and the need to secure wireless, voice over IP (VoIP), and mobile communication networks. Students will learn to configure and install wireless networks, design mixed networks to carry voice, video, and data traffic and define policies to secure mobile networks. Students will learn and apply the concepts of IEEE 802.11, Wi-Fi, Bluetooth, WiMax technologies, encryption techniques, site surveys, securing wireless, VoIP, and mobile networks, troubleshooting, monitoring, and managing these networks, while preparing the students for an industry certification. Lab Fee: $20

CSCI 2780—Computer Forensics and Incident Response (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 2776.
This course is an introduction to general forensic processes for investigating cybercrime. The student learns the legal and technical aspects of digital forensics and incident response. Areas of study include procedures for investigating computer and cybercrime, and concepts for collecting, analyzing, recovering, and preserving forensic evidence. Technical subjects include imaging, hashing, file recovery, file system basics, identifying mismatched file types, reporting, and laws regarding computer evidence. Lab Fee: $2

CSCI 2781—Computer Security Ethical and Legal Foundations (3)
Lecture: 2, Lab: 3
CSCI 2781 introduces concepts of government in the American federal system, including branches of government, jurisdiction, and the interplay of federal and state law. Students will complete and analyze readings to gain an understanding of consequences relating to cybersecurity and its jurisprudence under the U.S. Constitution, federal, and state law. Students will engage in critical thinking and ethical reasoning relating to concepts such as free speech, search and seizure, self-incrimination, criminal liability, and individual rights relating to use of technology. Lab Fee: $0

CSCI 2782—Information Security Audit (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 2776.
CSCI 2782 is designed for students, web developers, and network administrators who want to gain knowledge related to information and database security focusing on the areas of security, auditing, and implementation. Lab Fee: $2

CSCI 2783—Ethical Hacking & Systems Defense (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1152 and ITST 1136 and CSCI 2781.
The course combines an ethical hacking methodology with the hands-on application of security tools to better help students secure their systems. Students are introduced to common countermeasures that effectively reduce and/or mitigate attacks. Beginning with an examination of the current threat landscape, key terms, and concepts/techniques used by attackers to compromise systems. Lab Fee: $0

CSCI 2784—Business Continuity & Disaster Recovery (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 2782.
CSCI 2784 is designed for students and network administrators who need to obtain knowledge and experience for disaster recovery. This course will provide methods used to identify vulnerabilities and take appropriate countermeasures to prevent and mitigate failure risks for an organization. This course takes an enterprise-wide approach to developing a disaster recovery plan. Lab Fee: $2

CSCI 2786—Security Practice & Management (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 2780.
CSCI 2786 is designed to introduce students to practical security applications including penetration testing and modern attack methods such as social engineering. The student will also be expected to understand a management perspective of security including the ten domains identified by (ISC)2 Lab Fee: $2

CSCI 2790—Linux Administration (Linux+) (3)
Lecture: 2, Lab: 3
Prerequisite(s): CSCI 1772 or; ITST 1136.
CSCI 2790 is designed to provide students with the knowledge and skills required to build, and manage and Linux servers. Students will apply and demonstrate hands-on administration to install, configure and support Linux servers for reliability, functionality and performance. Students will also configure file, print and network services for both Linux and Windows clients. Students will create, edit and search Linux files, control permissions and ownership, process and format text data, and use learn to write shell scripts to automate routine tasks. Network Administration Majors are required to take CSCI 1772 as a prerequisite. Lab Fee: $1

CSCI 2792—Virtualization (2)
Lecture: 1, Lab: 3
Prerequisite(s): CSCI 2790.
CSCI 2792 is designed to teach students the knowledge and skills required to install, configure and manage virtual servers and workstations. Students will learn how to use VMware and Microsoft virtual machine (VM) technologies, migrate from physical to virtual machines, combine Windows and Linux workstations and servers on a single platform, and manage virtual machines using VMWare and Microsoft Hyper-V. Lab Fee: $4

CSCI 2802—CSCI Seminar (1)
Seminar: 1
Prerequisite(s): CSCI 2902.
CSCI 2802 seminar offers an opportunity for supervised, on-the-job application of knowledge and skills acquired in the classroom. Student must be a Computer Science major who has completed 12 hours in the technology and has permission of the instructor Lab Fee: $1

CSCI 2902—CSCI Practicum (3)
Practicum: 21
Prerequisite(s): CSCI 2802.
CSCI 2902 practicum offers an opportunity for supervised, on-the-job application of knowledge and skills acquired in the classroom. Student must be a Computer Science major who has completed 12 hours in the technology and has permission of the instructor Lab Fee: $1

CSCI 2994—CSCI Current Topics (1-3)
Lecture: 1
CSCI 2994 course is a detailed examination of a selected current topic in Computer Science. This course can be repeated. Lab Fee: $0

CSCI 2999—CSCI Capstone (3)
Lecture: 2, Lab: 3
Students will design a project and begin implementation of the project based on skills within their field of study and research of current markets. Students will apply and demonstrate technical expertise in the areas of software application programming, network administration, computer systems support, web technologies and network security. Students will formally present their project results to faculty and management. The student must be a Computer Science major who has completed 12 hours in the technology and has the permission of the instructor. Lab Fee: $4

Construction Management

CMGT 1105—Construction Documents (3)
Lecture: 2, Lab: 3
A study of construction industry documents as they relate to a construction project. Emphasis is placed upon legal aspects of documents; roles of design professionals, contractors, and owners; utilization and effects of construction documents; procurement of construction services; assembly of a project manual and bid proposal; specifications formatting; drawing and specifications coordination; submittals and project closeout. Standard forms, ethics, bonding, CSI MasterFormat, and credentialing will also be examined. This course will also help prepare the student to take the Construction Specifications Institute (CSI) Construction Documents Technologist (CDT) exam, which the student will attempt towards the end of the course. Lab Fee: $181

CMGT 1115—Construction Methods (3)
Lecture: 2, Lab: 3
The course will present the technical operations, methods of constructing and operational sequences used in constructing commercial buildings and related infrastructure. The content will be presented in a sequential nature so as to enhance the understanding of the students as to the responsibilities of a Construction Manager/ Supervisor on a construction site. Every project has differing requirements and this course will integrate information requirements of codes, permits and inspections into the quantity survey and take-off processes. Lab Fee: $21

CMGT 1121—Construction Drawings (3)
Lecture: 2, Lab: 3
A study of reading and interpreting construction working drawings and project manuals, as related to residential, commercial, industrial and heavy highway construction. Emphasis is placed upon: drawing organization; relationship of plan, section, and elevation; coordination of the drawings and specifications; shop drawings and submittals, graphic symbols and interpretation skills; and construction mathematics required for the use of building drawings. Lab Fee: $30

CMGT 1131—Quantity Survey (3)
Lecture: 2, Lab: 3
Prerequisite(s): CMGT 1121.
This course is an explanation and application of the use of construction math relative to linear, area and volumetric measures of common construction materials. The computation and organization of basic material quantities used in a typical building construction project including site preparation work utilizing appropriate equipment, tools and calculators. The course will integrate information regarding requirements of Codes, Permits, and Inspections into the Quantity take off process, as it will impact each job somewhat differently. Lab Fee: $33

CMGT 1135—Safety & Loss Prevention (2)
Lecture: 1, Lab: 3
This course introduces the students to materials covering the expanding concerns of construction safety and loss prevention. Students will learn to identify work hazards and unsafe practices, and to utilize supervisory safety and loss prevention techniques to minimize loss in productivity and resources. Students will also learn how to utilize OSHA and Ohio BWC resources to conduct a jobsite safety analysis, and to promote an ethical and pro-active safety culture in the construction workplace through exploration of topics such as safety theories, direct and indirect costs, and safety behavior modification. Lab Fee: $14

CMGT 1141—Construction Estimating (3)
Lecture: 2, Lab: 3
Prerequisite(s): CMGT 1131.
A study of the current manual practices of estimating skills and methods utilized to create project estimates. Emphasis will be placed upon: preparation of estimates for typical commercial building projects; incorporation of drawing and document interpretation, quantity survey, and construction methods. An overview of planning and scheduling; cost control; and project management skills is included. Lab Fee: $21

CMGT 1153—Residential Construction Management (3)
Lecture: 2, Lab: 3
This course is an overview of residential construction using hands on experiences. Emphasis is placed upon: safety, methods, financing, real estate legalities, field supervision, design elements, terminology, sequencing, materials/tools and equipment and management strategies. The lab portion utilizes tools and materials to afford students the opportunity to experience constructing various segments of a residential building. Lab Fee: $30

CMGT 1171—Sustainability Management (3)
Lecture: 3
This course is an introduction to sustainable building science, methods and challenges for technicians and entry level managers. The course focuses on resources, alternative products and methods, and cradle-to-cradle approaches to buildings and their functions. Career skills development, investigation of preparation for certifications from ASHRAE, RESNET, BPI, LEED, GBI and other organizations, and opportunities to utilize thermal imaging, weatherization and tools to conduct a home or business energy audit. Emphasis is on whole structure and systems approaches to managing sustainability in the built environment. Lab Fee: $5

CMGT 1173—Sustainability Applications (3)
Lecture: 3
Prerequisite(s): CMGT 1171.
The course will instruct students on the methods and techniques of conducting auditing and commissioning relating to sustainable construction, BIM, and SmartGridr for new and existing buildings Students will learn techniques and applications of geothermal, wind, and solar PV energy strategies and incentives to affect a positive return on investment for building energy consumption and generation. Preparation strategies and content for certifications from RESNET, BPI, LEED, GBI and other organizations will be presented. Emphasis is on whole structure and systems approaches to applying sustainability in the built environment. This course builds upon the foundations and principle of CMGT 1171 Sustainability Management. Lab Fee: $10

CMGT 2215—Intro to Bldg Information Modeling (3)
Lecture: 2, Lab: 3
This course provides students with an overview of building information modeling (BIM). Emphasis will be placed upon: providing an introduction to BIM technologies, developing an understanding of the business, organizational and supervisory issues associated with the implementation of building information modeling and promoting an awareness of the substantial impacts on the building process that utilization of BIM practices can provide to all members of a project team. Lab Fee: $20

CMGT 2216—BIM Applications (3)
Lecture: 2, Lab: 3
Prerequisite(s): CMGT 2215.
A presentation and review of means and methods for implementing building information modeling (BIM) on a construction project. Emphasis will be placed upon: strategies for implementing BIM, identifying challenges and opportunities in the application of BIM technologies on the construction work site, evaluating BIM as a tool for managing the entire building lifecycle, examining the challenges associated with sharing data among project stakeholders, and sharing best practices as they pertain to routine utilization of BIM technologies with construction projects. Lab Fee: $20

CMGT 2221—Management & Professional Development (3)
Lecture: 2, Lab: 3
This applications-based course introduces the students to an overview to the operations, management and professional development in a technical career. Topics include: business organization, financial matters, sales and marketing, entrepreneurship, ethics, human resources, and creating a sound business plan to increase opportunities for manufacturing, design, construction, and service industries will be presented. Lab Fee: $186

CMGT 2231—Commerical Computer Estimating (3)
Lecture: 2, Lab: 3
Prerequisite(s): CMGT 1131.
A comprehensive study of the skills required to quantify and price the amount and type of materials from a set of construction plans in an orderly manner and arrive at a final price utilizing computer software. The course will develop the general background information and bidding strategies to be used for bidding a commercial construction project. Discussion of code related items and how they could/will impact cost of construction. Lab Fee: $30

CMGT 2241—Planning and Scheduling (3)
Lecture: 2, Lab: 3
Prerequisite(s): CMGT 1115 and CMGT 1131.
This course is a study of the management and coordination of construction projects utilizing systematic planning and scheduling. Local and global construction industry methods and techniques will be reviewed and practiced in simulated projects. Topics include: WBS (Work Breakdown Structure), PDM (precedence diagram method), also the manual calculations involved with CPM (Critical Path Method) scheduling. The course will stress fundamental skills to develop, analyze and manage construction projects utilizing several scheduling methods. The course will include discussion of code related items and required inspections as to how they could /will impact the construction schedule. Fundamental scheduling will be supplemented with the use of Primavera Project Planner (P3) software. Lab Fee: $30

CMGT 2281—Residential Computer Estimating (3)
Lecture: 2, Lab: 3
Prerequisite(s): CMGT 1131.
A comprehensive study of and application of the skills required to "take-off" the amount of materials from a set of residential construction plans in an orderly and effective manner and arrive at a cost for construction. The course will develop the general background information for the purpose of bidding/pricing a residential construction project utilizing estimating software. Information regarding Codes, Permits and Inspections will be integrated into the estimate cost as it will impact the cost of each project just a little differently. Lab Fee: $30

CMGT 2282—Sustainable Construction (2)
Lecture: 1, Lab: 3
Prerequisite(s): ESSH 2282 or; Permission of Instructor.
This course introduces students to sustainability as it applies to managing construction projects, implementing design strategies, materials and methods selection and executing contracts to comply with contract requirements and LEED and other commissioning entities for energy efficient buildings and related infrastructure. Lab Fee: $14

CMGT 2699—Project Management (3)
Lecture: 2, Lab: 3
Prerequisite(s): CMGT 2241.
This Capstone Experience provides student the opportunity to demonstrate, present, and simulate methods and techniques used to obtain and manage a construction project. The methods and techniques studied include project marketing, obtaining financing, start-up, schedule development, control structures, organizational forms, subcontractor and vendor coordination, schedule adjustment, shop drawing coordination, move-out/shut-down phase, along with correspondence and tracking techniques. Some computer simulations will be used to demonstrate project management activities and processes. Student teams are selected jointly by the students and approved by the instructor to prepare for and simulate the process of obtaining financing, marketing/sales, management and some field operational concerns by the project management teams. This information shall be organized by the teams and presented as if making a presentation to a potential customer as a final exercise for the course. Lab Fee: $30

CMGT 2910—Construction Field Experience (3)
Field Experience/Internship: 36
This is a work study/internship course design to have student work at a construction industry related company, complying with OBOR requirement for hours worked as assessment submitted and evaluated by student and employer. Lab Fee: $0

CMGT 2994—Special Topics in Construction Mgmt (1-4)
Lecture: 1
This is a course set aside to introduce students to new topics and technologies in a timely manner, to respond to community needs and to take advantage of market opportunities.

Criminal Justice

CRJ 1101—Introduction to Criminal Justice (3)
Lecture: 3
This course examines the development of law and the systems and procedures developed by society for dealing with law violations. Emphasis will be placed on the three major components of the system: the police, courts, and corrections. Lab Fee: $0

CRJ 1110—Policing (3)
Lecture: 3
This course will describe the evolution of policing in the United States while introducing different styles of policing. Ethics and police discretion are also large topic areas in the course. Lab Fee: $0

CRJ 1115—Criminal Procedure (3)
Lecture: 3
This course presents a study of the rules of criminal procedure as they apply to criminal cases and how they affect the ability of the Criminal Justice practitioner to have the evidence he/she collects or prepares presented in court. Lab Fee: $0

CRJ 1116—Government and the Law (3)
Lecture: 3
The role of local government in the community, its structure, organization, and responsibility are covered. Local government politics and the community also are reviewed. Urban, suburban, rural, and community structure will be discussed in relationship to delivery of services. Lab Fee: $0

CRJ 1135—Terrorism (3)
Lecture: 3
This course will examine the underlying issues of the terrorist threat, including an overview of terrorism goals, methods of attack, weapons of mass destruction, and how law enforcement can assess and deal with threats. Lab Fee: $0

CRJ 1140—Corrections (3)
Lecture: 3
This course offers an introduction to the field of corrections. The history and goals of corrections will be explored, and students will receive an overview of the processing of offenders from arrest through final release. Lab Fee: $0

CRJ 1145—Juveniles and the CRJ System (3)
Lecture: 3
This course details how the Criminal Justice System is different for juveniles including their rehabilitative potential, relevant case law, and the procedures for coordinating their passage through the system. Lab Fee: $0

CRJ 1150—Intro Homeland Security (3)
Lecture: 3
This course will introduce students to the vocabulary and important components of Homeland Security. We will discuss the importance of the agencies associated with Homeland Security and their interelated duties and relationships. We will examine historical events that impact Homeland Security. We will expolore state, national, and international laws impacting Homeland Security. We will examine the most critical threats confronting Homeland Security. Lab Fee: $0

CRJ 1151—Intelligence Analysis & Security Mgmt (3)
Lecture: 3
This course examines intelligence analysis and its indispensable relationship to the security management of terrorist attacks, man-made disasters and natural disasters. It also explores vulnerabilities of our national defense and private sectors, as well as the threats posed to these institutions by terrorists, man-made disasters, and natural disasters. Students will discuss substantive issues redgarding intelligence support of homeland security measures implemented by the United States and explore how the intelligence community operates. Lab Fee: $0

CRJ 1152—Transportation & Border Security (3)
Lecture: 3
This course provides an overview of modern border and transportation security challenges, as well as different methods employed to address these challenges. The course covers a time period from post 9-11 to the present. The course explores topics associated with border security and security for transportation infrastructure, to include: seaports, ships, aircraft, airports, trains, train stations, trucks, highways, bridges, rail lines, pipelines, and buses. The course will include an exploration of technological solutions employed to enhance security of borders and transportation systems. Students will be required to discuss the legal, economic, political, and cultural concerns and impacts associated with transportation and border security. The course provides students with a knowledge level understanding of the variety of challenges inherent in transportation and border security. Lab Fee: $0

CRJ 2006—Ethics in Criminal Justice (3)
Lecture: 3
Ethical considerations within a criminal justice context will be examined both from a theoretical perspective and a practical perspective. Case studies of ethical situations will be covered. Lab Fee: $0

CRJ 2008—Applied Leadership CRJ Professions (3)
Lecture: 3
Theoretical leadership will be covered along with practical scenario based leadership analysis. The course is designed for current or aspiring law enforcement leaders. Lab Fee: $0

CRJ 2011—Crisis Intervention (3)
Lecture: 3
This course provides the student with intervention strategies for dealing with persons in crisis. The areas of domestic disputes, suicide prevention, and special problems of crime victims will be emphasized. Lab Fee: $0

CRJ 2020—Constitutional Law (3)
Lecture: 3
This course is a study of federal constitutional law, the Bill of Rights, and its application to the states, with emphasis on due process of law, equal protection of the law, jury trial, and assistance of counsel. The course will review interpretations of the Constitution by the U. S. Supreme Court as given in their decisions. Lab Fee: $0

CRJ 2021—Introduction to Cyberlaw (3)
Lecture: 3
The technological advancements associated with computers and the World Wide Web have led to increased criminal activity involving such technology. In addition, laws regulating computer usage, the Web, and intellectual property issues, have become very complex. This course examines these issues and the difficulties associated with investigating such activities. Lab Fee: $0

CRJ 2024—Community Relations (3)
Lecture: 3
This course examines the complex relationship between the police and the public they serve. Areas of potential problems will be discussed and programs and procedures for enhancing the relationship will be presented. Students will critically examine the effectiveness of various Community Policing programs particularly in terms of limited budget and funding availability and whether such programming should continue to be a part of modern law enforcement agencies priorities. Lab Fee: $0

CRJ 2030—Criminal Investigation (3)
Lecture: 3
This course details the steps important to all criminal investigations. It also goes into detail on different aspects of common types of criminal investigations conducted by law enforcement investigators. Lab Fee: $0

CRJ 2041—Special Category of Offenders (3)
Lecture: 3
This course will focus on six subject areas: treatment of sex offenders, mentally disordered offenders, mentally retarded offenders, inmates with AIDS, inmates with disabilities and the substance abuse offender. Further attention will be directed to correctional personnel, impact of political influences, perceptions, training, problems and corrective actions. Lab Fee: $0

CRJ 2042—Community Based Corrections (3)
Lecture: 3
This course will investigate alternative models for corrections. Various alternatives to incarceration or institutionalization, and the benefits that derive from placing the offender back in the community, will be discussed. Lab Fee: $0

CRJ 2043—Institutional Corrections (3)
Lecture: 3
This course explores the development and purposes of correctional institutions. Emphasis will be placed on major correctional facilities at the state and federal levels. Operation of such facilities and the care and treatment of prisoners will be examined. Lab Fee: $0

CRJ 2044—Counseling: Probation & Parole (3)
Lecture: 3
This course will provide students with an overview of the probation, parole, and supervision component within the criminal justice system. Focus areas will include the goals and objectives of supervision, the duties of parole or probation officers various treatment needs, revocations processes, investigative report writing and sentencing structures. Lab Fee: $0

CRJ 2075—Peace Officer Academy I (6)
Lecture: 3, Lab: 9
Prerequisite(s): CRJ 2076.
This course contains student performance objectives required by the Ohio Peace Officer Training Academy for Law Enforcement Officer Certification in the State of Ohio. This course is Part 1 of a 4 part series where all four parts must be completed to obtain the law enforcement certification. Strict entrance and attendance requirements are governed by the State of Ohio. Lab Fee: $125

CRJ 2076—Peace Officer Academy II (6)
Lecture: 3, Lab: 9
Prerequisite(s): CRJ 2075.
This course contains student performance objectives required by the Ohio Peace Officer Training Academy for Law Enforcement Officer Certification in the State of Ohio. This course is Part 2 of a four-part series where all four parts must be completed to obtain the law enforcement certification. Strict entrance and attendance requirements are governed by the State of Ohio. Lab Fee: $125

CRJ 2077—Peace Officer Academy III (6)
Lecture: 3, Lab: 9
Prerequisite(s): CRJ 2075 and CRJ 2076; CRJ 2078.
This course contains student performance objectives required by the Ohio Peace Officer Training Academy for Law Enforcement Officer Certification in the State of Ohio. This course is Part 3 of a 4 part series where all four parts must be completed to obtain the law enforcement certification. Strict entrance and attendance requirements are governed by the State of Ohio. Lab Fee: $125

CRJ 2078—Peace Officer Academy IV (6)
Lecture: 3, Lab: 9
Prerequisite(s): CRJ 2075 and CRJ 2076; CRJ 2077.
This course contains student performance objectives required by the Ohio Peace Officer Training Academy for Law Enforcement Officer Certification in the State of Ohio. This course is Part 4 of a 4 part series where all four parts must be completed to obtain the law enforcement certification. Strict entrance and attendance requirements are governed by the State of Ohio. Lab Fee: $125

CRJ 2100—Foundations for Diversity & Equity in Criminal Justice (3)
Lecture: 3
This course will examine current issues, social problems, and existing research related to culturally diverse societies and the American Criminal Justice System. Emphasis will be placed on the need for cultural awareness and diversity education, an enhanced understanding of cultural differences, and a critical thinking and research approach that correlates with the exploration of diversity and equity criminal justice field. Students will be introduced to and learn to recognize the concept of implicit bias as it relates to all practices within the justice system. Lab Fee: $0

Dance

DANC 1110—Dance Appreciation (2)
Lecture: 1, Studio: 2
This class explores dance as ritual, tradition, educational tool, popular entertainment and art form as a reflection of culture. Includes teaching of proper body warm-up, flexibility and strength and movement. This course is on demand. Lab Fee: $0

DANC 1131—Beginning Jazz I (1)
Studio: 2
Jazz dance techniques at the beginning level, combining classic Broadway theatre dance with contemporary styles. Repeatable for up to 2 total credits. Lab Fee: $2

DANC 1132—Beginning Jazz II (1)
Studio: 2
Prerequisite(s): DANC 1131.
This course demonstrates additional jazz techniques including more complex movements and combinations. This course is on demand. Repeatable for up to 2 total credits. Lab Fee: $2

DANC 1140—Modern Dance I (2)
Lecture: 1, Studio: 2
A beginning course in the movement and vocabulary, both physical and linguistic, of modern dance. Repeatable for up to 4 total credits. Lab Fee: $2

DANC 1201—Classical Ballet I (2)
Lecture: 1, Studio: 2
Students study the basics of this form of art. Class covers fundamentals of ballet technique, coordination, strength and flexibility with an emphasis on proper execution and comprehension. Repeatable for up to 4 total credits. Lab Fee: $2

DANC 1202—Classical Ballet II (2)
Lecture: 1, Studio: 2
Prerequisite(s): DANC 1201.
Continuation of Classical Ballet I. This course is on demand. Repeatable for up to 4 total credits. Lab Fee: $2

DANC 1203—Beginning Tap I (1)
Studio: 2
Introduction to basic level tap dance techniques, emphasizing precession in sound, rhythm, movement, gesture and expression. Repeatable for up to 2 total credits. Lab Fee: $2

DANC 1204—Beginning Tap II (1)
Studio: 2
Prerequisite(s): DANC 1203.
Continuation of Beginning Tap I. This course is on demand. Repeatable for up to 2 total credits. Lab Fee: $2

DANC 1294—SPT: Dance (1-3)
Lecture: 1 - 3
Students explore special topics in Dance designed to meet specific needs. This course is on demand.

Dental Hygiene

DHY 1100—Introduction to Dental Hygiene (3)
Lecture: 2, Lab: 3
Prerequisite(s): DHY 1130 and DHY 1140 and DHY 1200 and DHY 1210 and DHY 1260.
This course is designed to acquaint the dental hygiene student with the role of the dental hygienist and to provide background knowledge, information and the necessary foundation required for clinical dental hygiene care. Lab Fee: $110

DHY 1130—Dental Radiography (3)
Lecture: 2, Lab: 3
Prerequisite(s): DHY 1100 and DHY 1140 and DHY 1200 and DHY 1210 and DHY 1260.
This course introduces the student to radiographic theory and techniques with emphasis on its nature and properties, safety precautions, and uses of the x-ray in dentistry. Laboratory experience provides opportunity for practice in film placement, tube angulation, exposure, processing and mounting. Lab Fee: $75

DHY 1140—Dental Anatomy & Histology (3)
Lecture: 2, Lab: 3
Prerequisite(s): DHY 1100 and DHY 1130 and DHY 1200 and DHY 1210 and DHY 1260.
This course provides the study of head and neck anatomy as well as anatomy of the oral cavity including tooth morphology. The student will also study the tissues comprising the oral cavity, along with the embryonic development of these tissues and facial structures. Lab Fee: $100

DHY 1200—Dental Hygiene Pre-Clinic (3)
Lab: 9
Prerequisite(s): DHY 1100 and DHY 1130 and DHY 1140 and DHY 1210 and DHY 1260.
This laboratory course is designed to prepare students for the clinical practice of dental hygiene. The necessary techniques and skills will be presented to perform an oral prophylaxis and related procedures. Lab Fee: $300

DHY 1210—Preventive Concepts (1)
Lecture: 1
Prerequisite(s): DHY 1100 and DHY 1130 and DHY 1140 and DHY 1200 and DHY 1260.
This didactic course is designed to prepare the students for the clinical practice of dental hygiene. The necessary techniques and skills will be presented to perform an oral prophylaxis and related procedures. Lab Fee: $0

DHY 1250—Oral Pathology (1)
Lecture: 1
Prerequisite(s): DHY 1100; DHY 1261 and DHY 1300 and DHY 1861.
This course provides the study of oral pathology with emphasis placed upon the recognition of normal and abnormal conditions. Lab Fee: $0

DHY 1260—Periodontology I (1)
Lecture: 1
Prerequisite(s): DHY 1100 and DHY 1130 and DHY 1140 and DHY 1200 and DHY 1210.
This course studies periodontal disease including current concepts pertaining to etiology, pathogenesis and assessment. Lab Fee: $0

DHY 1261—Periodontology II (1)
Lecture: 1
Prerequisite(s): DHY 1100; DHY 1250 and DHY 1300 and DHY 1861.
This course continues the study of periodontal diseases with emphasis on treatment and planning dental hygiene care for the periodontally involved patient. Lab Fee: $0

DHY 1300—Community Health Concepts (1)
Lecture: 1
Prerequisite(s): DHY 1100; DHY 1250 and DHY 1261 and DHY 1861.
This course introduces the dental hygiene student to public health concepts and principles. The student will be introduced to their roles and responsibilities as a community health educator. The student will also study biostatistics, dental indices, and research methods in dentistry. Lab Fee: $0

DHY 1861—Clinic I (2)
Directed Practice: 10
Prerequisite(s): DHY 1100; DHY 1250 and DHY 1261 and DHY 1300.
This directed practice course continues the clinical experience of total patient care and radiographic techniques. Topics covered in this directed practice course includes theory of planning dental hygiene care based on individuals needs, study of tobacco cessation program, dental appliances, implants, topical anesthetics and special needs of geriatric, pregnant and child patients. Lab Fee: $355

DHY 2200—Pain Management (1.5)
Lecture: 0.5, Lab: 2
Prerequisite(s): DHY 1250; DHY 2240 and DHY 2862.
The course provides the basic concepts of local anesthesia and pain control. Lab Fee: $200

DHY 2240—Dental Materials (1)
Lecture: 0.5, Lab: 1.5
Prerequisite(s): DHY 1250; DHY 2200 and DHY 2862.
This course is designed to study the chemical, physical and biological properties of materials used in dentistry. Emphasis will be placed on the manipulation and utilization of materials that have application to the dental hygienist. Lab Fee: $150

DHY 2275—Dental Hygiene Case & Concept Review (1)
Lab: 3
Prerequisite(s): DHY 2400; DHY 2864.
This comprehensive review of dental hygiene aids the student in preparation for both clinical and written examinations for licensure. During the course, each student will present a capstone project of a completed patient case study based on the assessment, plan, implementation and evaluation of the case. Lab Fee: $100

DHY 2294—SPT: Dental Hygiene (1-4)
Lecture: 1 - 4
Provides a variety of topics to meet the current needs of the community and the industry. Lab Fee: $0

DHY 2300—Community Health (2)
Lecture: 1, Lab: 2
Prerequisite(s): DHY 2200; DHY 2863 and DHY 2400.
This course provides the dental hygiene student with the opportunity to apply the principles of community dental health in a practical setting. The practicum involves development, implementation and evaluation of public health dental programs. Lab Fee: $40

DHY 2400—Pharmacology for the Dental Hygienist (1.5)
Lecture: 1.5
Prerequisite(s): DHY 2200; DHY 2863 and DHY 2300.
This course surveys the drugs commonly used in the dental office. Lab Fee: $0

DHY 2862—Clinic II (2)
Directed Practice: 10
Prerequisite(s): DHY 1250; DHY 2240 and DHY 2200.
This directed practice course continues the clinical experience of total patient care and radiographic techniques. Topics covered in this directed practice course includes introduction of practical aspects of nutritional needs of the dental patient and nutritional counseling, clinical techniques of root planing, sequencing of instrumentation, advanced instrumentation, hypersensitivity and dental sealents. This is an S-designated Service-Learning course. Lab Fee: $355

DHY 2863—Clinic III (2.5)
Directed Practice: 13
Prerequisite(s): DHY 2200; DHY 2300 and DHY 2400.
This directed practice course continues the clinical experience of total patient care and radiographic techniques. In addition, this course is designed to provide knowledge and understanding regarding the dental hygiene care and management for patients with special needs. This is an S-designated Service-Learning course. Lab Fee: $355

DHY 2864—Clinic IV (2.5)
Directed Practice: 13
Prerequisite(s): DHY 2400; DHY 2275.
This course is the final course in the dental hygiene clinical sequence. This course will also provide the student with knowledge of professional and ethical issues, legal responsibilities, the role of organized dentistry, and securing employment. The student will create a Dental Hygiene Portfolio including preparing resume. This is an S-designated Service-Learning course. Lab Fee: $355

Digital Design & Graphics

DDG 1100—Introduction to Computer Design (3)
Lecture: 1, Lab: 4
DDG 1100 introduces the student to the computer software program most widely used in the digital design & graphics field. A basic working knowledge of Adobe Photoshop, Adobe Illustrator, and Adobe InDesign is the primary goal of this course. Students will also be introduced to electronic publishing, specifically InDesign with typographical command sequences and manipulation applications. Special emphasis is placed on its use to generate and create professional quality publications, such as advertisements and newsletters. Lab Fee: $18

DDG 1101—Survey of Digital Design (3)
Lecture: 3
DDG 1101 provides an overview of the Digital Design & Graphics industry. The student will be introduced to various areas and job opportunities in this field. A basic overview of the printing industry, graphic design, advertising, marketing communications, packaging design, digital painting, logo and corporate identity development, traditional and vector illustration, digital photography, typography, and brand identity will be discussed. Lab Fee: $1

DDG 1200—Color Mgt/Business of Design (3)
Lecture: 2, Lab: 2
DDG 1200 is an introduction to color and how color is perceived and managed across different devices and outputs. Techniques will be used to identify, examine, and measure color to ensure color quality. Students will develop an understanding and application of color theory, color perception, and color management for a color?s final destination. Students are also introduced to the business and marketing practices needed, and commonly found, in professional design firms and in freelance design work. Emphasis will be placed on developing professional, interpersonal, and ethical practices particular to design. Lab Fee: $2

DDG 1525—Storyboarding (3)
Lecture: 1, Lab: 4
DDG 1525 provides students with basic drawing techniques, including proportion of the human figure, perspective, composition, line, and contrast. An in-depth look at line drawings-how to produce them, how to understand their varieties and how this relates to animation and storyboarding. Marketing strategy and research are use to development an original character and storyboard to provide a visual concept for the client. Verbal and written skills will also be developed for project presentations. Lab Fee: $1

DDG 1555—Adobe Photoshop I/A (3)
Lecture: 1, Lab: 4
Prerequisite(s): DDG 1100.
DDG 1555 provides the student with basic and intermediate level knowledge of Adobe Photoshop software. This software will enable the student to design multi layer digital images. Intermediate to advanced level projects are used for evaluation. Lab Fee: $23

DDG 1565—Adobe InDesign (3)
Lecture: 1, Lab: 4
Prerequisite(s): DDG 1100.
This course expands student's skill sets in Adobe InDesign. Emphasis will be placed on layout, objects, text, typography, color, creating styles, modifying graphics, creating tables, working with transparencies, and exporting a file. Students will also be introduced to creating interactive PDF's and creating a fixed-layout ePub. Lab Fee: $10

DDG 1860—2D Animation (3)
Lecture: 1, Lab: 4
Prerequisite(s): DDG 1525.
DDG 1860 will teach students about the process of traditional animation. Students will learn the fundamental skills of traditional animation, and animated storytelling, through the creation of pencil tests. Lab Fee: $8

DDG 1870—Fundamentals of Design for Animiation (3)
Lecture: 1, Lab: 4
Prerequisite(s): DDG 1525.
DDG 1870 is an appendage to the 2D animation course. Students will learn about shape, gesture, anatomy, shading, and design through the study of the human figure. It will also help the student to further develop their drawing skills, and in understanding basic form and structure in all other disciplines. Lab Fee: $10

DDG 2550—Typography/Advertising Design (3)
Lecture: 2, Lab: 2
Prerequisite(s): DDG 1100; DDG 1101; DDG 1555; DDG 1565; DDG 2750.
DDG 2550 will focus on the importance of type selection and structure in relation to graphic design and advertising. Case studies in applied problem solving will demonstrate knowledge of typographic forms and communications. Designing unique typography for specific products and business applications will be developed. Lab Fee: $9

DDG 2650—Digital Painting (3)
Lecture: 2, Lab: 2
DDG 2650 will introduce the students to Digital Painting. With the use of various digital painting software programs in conjunction with use of the Wacom tablet. The student will be exposed to digital painting on the computer that will expand the creative thinking of the student. The student will also learn how to apply a variety of effects to their creative drawings. This study will give the appearance of oil painting on canvas. We will study the ideas behind creatively interpreting color, shape, movement and techniques that can be useful in graphic design, photography, art and illustration. Lab Fee: $26

DDG 2750—Adobe Illustrator I/A (3)
Lecture: 1, Lab: 4
Prerequisite(s): DDG 1100.
DDG 2750 provides the student with a comprehensive knowledge of Adobe Illustrator. It will cover two-dimensional technical illustration. This software will enable the student to design simple and complex illustrations. Intermediate and advanced level projects are used for evaluation. Lab Fee: $23

DDG 2802—Digital Design & Graphics Seminar (1)
Seminar: 1
Prerequisite(s): DDG 2902.
DDG 2802 offers an opportunity for supervised application of digital design and graphics knowledge to the specific area of internship. Student must be a Digital Design & Graphics major who has completed 12 hours in the technology and has permission of the instructor Lab Fee: $1

DDG 2902—Digital Design & Graphics Practicum (2)
Practicum: 14
Prerequisite(s): DDG 2802.
DDG 2902 Supervised on-the-job application of knowledge and skills acquired in the classroom. Student must be a Digital Design & Graphics major who has completed 12 hours in the technology and has permission of the instructor. Lab Fee: $1

DDG 2975—Ad Agency/Portfolio Development (3)
Lecture: 1, Lab: 4
Prerequisite(s): DDG 2550.
DDG 2975 is a capstone course for the graphic designer. The student will understand graphic design techniques and portfolio presentation practices. The student will learn how to produce advertising campaigns in two and three dimensional form and working in a simulated advertising agency environment, from design concepts to visual applications. In the second half of the course: the student will develop and prepare a traditional portfolio and a portfolio on CD. Creative projects will be selected to create this portfolio. The student will learn how to prepare and maintain a professional portfolio and how to present this portfolio to a prospective employer. Lab Fee: $19

DDG 2994—Current Topics in Advertising & Design (1-3)

Advertising and graphic design is a very creative, fast paced business. Ideas, hot colors and strategies that motivate consumers change constantly. This class will focus on industry changes and what designers can do to stay on top of their game. Case studies will be reviewed and discussed.

Digital Photography

FOTO 1100—Black & White Photography (3)
Lecture: 2, Lab: 2
FOTO 1100 introduces students to the basic principles of continuous-tone photography, emphasizing a balance of technical, aesthetic, and business concerns including composition and lighting, as well as manipulative functions, operative settings, exposure, and focus control of cameras and enlargers. Students will also learn to develop film and produce industry acceptable contact sheets and prints. A 35 mm SLR film camera with manual setting capabilities is needed. This course is film-based. Lab Fee: $10

FOTO 1115—Lightroom for Photography (2)
Lecture: 1, Lab: 2
FOTO 1115 introduces students to the basic principles and applications of Adobe Lightroom CC. Topics include techniques to manage, adjust, and present large volumes of digital photographs, essential imaging tactics, digital workflow for photography, print, web and image storage and archival. Students are required to have access to Lightroom 3 to 5 to complete the assignments. Lab Fee: $30

FOTO 1120—Photoshop for Photographers (3)
Lecture: 2, Lab: 2
FOTO 1120 familiarizes students with basic Photoshop post-production techniques and its relationship with digital photography as a business, design, and communication tool. The goal of this industry-based approach is to facilitate the integration of technical ability and visual problem solving skills in order to strengthen visual communication with the medium of digital photography. Lab Fee: $22

FOTO 1130—Corel Painter for Photographers (3)
Lecture: 2, Lab: 2
FOTO 1130 is focused on the principles and applications of Painter X as it relates to digital photography. Students will learn Painter 11 techniques by completing a series of skill-based projects and quizzes. Topics covered include; digital painting theory, image size and resolution, basic image editing control, tonal and color correction, retouching, digital painting, sharpening, blurring, filtering and other manipulation, as well as additional special effects techniques related to the digital photography industry. To develop a student's technical ability and visual problem solving skills. Lab Fee: $26

FOTO 1140—Intro to Digital Photography (3)
Lecture: 2, Lab: 3
FOTO 1140 introduces students to the basic principles and applications of digital photography as a medium, a skill-set, and an integral part of today's digital literacy needs. Topics covered include capturing images using digital cameras while emphasizing the manipulation of camera controls, exposure, lighting, on-and-off camera flash, essential imaging tactics, digital workflow for photography, print, web and image storage and archival. Students are required to have a digital camera (point and shoot or DSLR). Lab Fee: $1

FOTO 1145—Art of Photography (3)
Lecture: 2, Lab: 2
This course provides the student with an introduction to the software and business applications as used by today’s digital artists. It will cover Adobe Photoshop, Adobe Illustrator, and Corel Painter as the main creative tools. This course consists of lectures, demonstrations, hands on drawing/painting with Wacom tablets on computers, and active student participation in discussions and critiques. Prior to each discussion is a reading assignment, creative activity or research activity. Lab Fee: $30

FOTO 1150—Digital Photography & Design (3)
Lecture: 2, Lab: 2
Prerequisite(s): FOTO 1140.
FOTO 1150 introduces students to the basic to advanced principles of design as they relate to digital photography as a business, design and communication tool. The goal of this industry-based approach is to facilitate the integration of aesthetics and technical ability and visual problem solving skills in order to strengthen visual design and communication with the medium of digital photography. Students are required to have a digital camera (point and shoot or DSLR). Lab Fee: $0

FOTO 1170—Digital Panoramic Photography (2)
Lecture: 1, Lab: 2
Prerequisite(s): FOTO 1140.
FOTO 1170 covers the basic and advanced principles of digital panoramic photography. Students will learn the latest technological advances in panoramic digital photography. Students will learn how to control exposure, focus, and white balance when taking 5 to 30 pictures of a single scene (e.g., landscape, building, room interior) that will be stitched together digitally in a current image-editing software. Focus will be on visual communications of natural and urban landscapes in the context of commercial utilization for marketing or advertising material. Students are required to have a digital camera (point and shoot or DSLR). Lab Fee: $5

FOTO 1190—Digital Infrared Photography (2)
Lecture: 1, Lab: 2
Prerequisite(s): FOTO 1140.
FOTO 1190 introduces students to the basic principles of digital infrared photography as it is used for contemporary wedding portraiture and landscapes for client products, magazine ads and Web sites. This course covers all the techniques, skills and equipment students needed to use their existing digital camera to photograph infrared radiation. Students are required to have a digital camera (point and shoot or DSLR). Lab Fee: $7

FOTO 1200—Underwater Photography (3)
Lecture: 2, Lab: 2
Prerequisite(s): FOTO 1140.
This course affords you further opportunity to refine and extend the skills of photography begun in other FOTO courses. This course provides an in-depth look into Underwater Photography. Topics covered are best practices, lighting, macro concerns and exposure/color correction issues in camera and in post-production. This class will require students to enter a pool or ocean (depending on the time of year offered) so all students will need to know how to swim and be comfortable staying submerged in the water. Scuba training will be provided if needed (depending on location of the course/time of year offered. Lab Fee: $10

FOTO 1210—HDR Photography (2)
Lecture: 1, Lab: 2
Prerequisite(s): FOTO 1140.
FOTO 1210 affords you further opportunity to refine and extend the skills of photography begun in other FOTO courses. This course provides an in-depth look into High Dynamic Range Imaging which is a method to digitally capture and edit all light in a scene. It represents a quantum leap in imaging technology, as revolutionary as the leap from Black & White to Color imaging. A huge variety of subjects can now be photographed for the first time ever. Lab Fee: $8

FOTO 1250—Night Photography (2)
Lecture: 1, Lab: 2
Prerequisite(s): FOTO 1140.
FOTO 1250 introduces students to the principles of night photography using digital camera equipment. Students will learn effective motion control techniques, architectural documentation, light painting, and multiple exposure techniques commonly used in today?s commercial advertisements and promotional materials. Students will learn how to effectively use the law of reciprocity to create exposures that last up to a half an hour with minimal digital noise. Also covered will be many post-production alternatives which can refine the night-time digital capture. Students are required to have a digital camera (point and shoot or DSLR) and a tripod. Lab Fee: $0

FOTO 1300—Macro & Close-Up Photography (2)
Lecture: 1, Lab: 2
Prerequisite(s): FOTO 1140.
FOTO 1300 introduces students to all the concepts, equipment and techniques related to macro and close-up photography as it relates to commercial photography applications such as advertisements and promotions for both print and Web. Students will learn the technical considerations involved in using their DSLR to capture the smallest details. Students will implement the core design and exposure theories in digital photography to capture the details of a smaller world. Working with close-up filters, extension tubes and bellows, students will achieve professional macro-photographed subjects. Lab Fee: $2

FOTO 1500—Off-Camera Flash (2)
Lecture: 1, Lab: 2
FOTO 1500 introduces students to the basic principles and applications of off-camera flash as a medium, a skill-set, and an integral part of today's digital photography needs. Topics covered include capturing images using off camera flashes while emphasizing the manipulation of camera controls, exposure, lighting, wireless and wired triggering alternatives, essential lighting modifiers, and shooting tethered. Students are required to have a digital camera (point and shoot or DSLR) with an external speed light, light stand, trigger system and light modifier (an umbrella, softbox, etc.). Lab Fee: $0

FOTO 1600—Advanced Off-Camera Flash (2)
Lecture: 1, Lab: 2
Prerequisite(s): FOTO 1500.
FOTO 1600 introduces students to the advanced principles and applications of off-camera flash as a medium, a skill-set, and an integral part of today's digital photography needs. Topics covered include capturing images using off camera flashes while emphasizing the manipulation of camera controls, exposure, lighting, wireless and wired triggering alternatives, essential lighting modifiers, and shooting tethered. Students are required to have a digital camera (point and shoot or DSLR) with an external speed light, light stand, trigger system and light modifier (an umbrella, softbox, etc.). Lab Fee: $0

FOTO 1780—Photo Lab (1)
Lab: 2
Prerequisite(s): FOTO 1100.
FOTO 1780 lab provides students currently enrolled in other photography courses the opportunity to enhance their film processing and printing technique skills. This course may be repeated. Lab Fee: $5

FOTO 2100—Adv Digital Photography (3)
Lecture: 2, Lab: 2
Prerequisite(s): FOTO 1120 and FOTO 1140.
FOTO 2100 provides an in-depth look at the digital single lens reflex camera (DSLR), advanced digital shooting techniques in different lighting conditions, and digital workflow solutions with image editing software for taking full advantage of the DSLR's range of capabilities. This course focuses on high resolution JPEG and RAW capture for photo-industry specific venues and outputs. A continuation of aesthetic and technical camera controls will be covered. This course assumes that the student has an understanding of basic digital photography and has access to a DSLR camera with at least 10 meg. capture. Lab Fee: $5

FOTO 2120—Adv Photoshop for Photographers (3)
Lecture: 2, Lab: 2
Prerequisite(s): FOTO 1120.
FOTO 2120 introduces students to advanced principles of Photoshop as they relate to digital image editing and digital workflow. The goal of this course is to continue the integration of technical ability and creative visual problem-solving skills in order to strengthen visual communication and digital workflow skills. Students will need access to a version of Photoshop that best suits their needs. Lab Fee: $8

FOTO 2125—Digital Black & White Photography (3)
Lecture: 2, Lab: 2
Prerequisite(s): FOTO 1120.
FOTO 2125 Digital Black & White Photography introduces students to the basic principles and applications of digital black and white photography as a medium, a skill-set, and an integral part of today’s digital literacy needs. Topics covered include capturing images using digital cameras while emphasizing the manipulation of camera controls, exposure, lighting, color conversion imaging tactics, software workflow for photography for output to print and web. Students are required to have a digital camera (point and shoot or DSLR). Students will gain an appreciation and understanding for the fine art of photography through the study of photography skills and concepts related to nurturing creativity. Lab Fee: $30

FOTO 2130—Photoshop for Retouching (3)
Lecture: 2, Lab: 2
Prerequisite(s): FOTO 1120.
FOTO 2130 is focused on the principles using Photoshop for professional retouching as it relates to digital photography. Students will learn Photoshop retouching techniques by completing a series of skill-based projects and quizzes that cover basic to advanced topics of: digital imaging, image editing, tonal and color correction, retouching, glamour, single and multiple portraits, batch retouching, collage techniques, as well as additional special effects techniques related to the digital photography industry. The goal of this approach is to facilitate the integration of technical ability and visual problem solving skills with today's industry recognized post-production program, Photoshop, to strengthen visual communication. Lab Fee: $16

FOTO 2140—Photoshop for Compositing (3)
Lecture: 2, Lab: 2
FOTO 2140 is specially designed for photography students to introduce them into using Photoshop as a compositing tool. The goal of the course is to build a foundational skill set that can benefit any photographer as well as apply for those who pursue photography or retouching jobs. The course will focus on the use of DSLR cameras that shot HD video. Editing will be done in Photoshop CS6 or CC2014. Lab Fee: $0

FOTO 2150—Photoshop for Video (2)
Lecture: 1, Lab: 2
FOTO 2150 is specially designed for photography students to introduce them into video shooting and editing. The goal of the course is to build a foundational skill set that can benefit any photographer as well as apply for those who pursue video careers. The course will focus on the use of DSLR cameras that shoot HD Video. Editing will be done in Photoshop CS6 or CC2014. The theories taught both in shooting and editing are not limited to these tools, rather they apply to shooting and editing in any system. Lab Fee: $0

FOTO 2200—Studio Lighting (3)
Lecture: 2, Lab: 2
Prerequisite(s): FOTO 2100.
FOTO 2200 has an emphasis on lighting problem solving in relation to indoor studio lighting techniques and equipment for product photography. This course exposes the student to more extensive use of product lighting, lighting techniques and the Zone System of exposure with the use of digital camera systems. This course will introduce the concepts of lighting required for basic commercial product photography with emphasis on lighting products based upon surface qualities and shape. Additional emphasis will be on designing sets and advertising arrangements for print and Web. Lab Fee: $3

FOTO 2500—View Camera (3)
Lecture: 2, Lab: 2
Prerequisite(s): FOTO 1100; FOTO 1780.
FOTO 2500 is an advanced photography class dealing with large format photography. The student, using college-provided 4x5 equipment, explores the techniques used in large format film exposure, development, and printing. The emphasis is on discovering all of the benefits associated with a view camera in various aspects of the photographic field. Studio work outside of regular class time is required. Lab Fee: $10

FOTO 2600—Studio & Environmental Portraiture (3)
Lab: 2, Lecture: 2
Prerequisite(s): FOTO 2100.
FOTO 2600 focus in this class will be upon advanced posing, lighting and background creation of the single subject and multiple-subject portraiture for "studio work" and "environmental location work". Basic-to-advanced studio portrait lighting techniques and on-location (indoor and outdoor) portrait lighting techniques will be covered, in addition to on and off camera flash fill techniques and portable strobe use. This course assumes that the student has an understanding of advanced digital photography and has access to a DSLR camera and a hand-held incident meter (analog or digital). Lab Fee: $7

FOTO 2650—Photojournalism (3)
Lecture: 2, Lab: 2
Prerequisite(s): FOTO 2100.
FOTO 2650 provided an introduction to the principles and theories of photojournalism in the digital era and will increase technical understanding of digital photography as a medium, enabling the student to document newsworthy events with accuracy. The latest digital photographic techniques and technology will be employed throughout and the digital work output should be suitable for publication in newspapers, mags, Web sites, company publications, brochures, pamphlets, announcements, circulars, folders, handouts, leaflets, throwaways, tracts, and digital slide-show presentations. This course will also cover media ethics, legal issues and the evolving technological impact of photojournalism. Student must have access to a DSLR camera. Lab Fee: $28

FOTO 2802—Digital Photo Seminar (1)
Seminar: 1
Prerequisite(s): FOTO 1140; FOTO 2902.
FOTO 2802 seminar offers an opportunity for supervised, on-the-job application of knowledge and skills acquired in the classroom. Student must be a Digital Photography major who has completed 12 hours in the technology and has permission of the instructor. Lab Fee: $0

FOTO 2902—Digital Photo Practicum (3)
Practicum: 21
Prerequisite(s): FOTO 2100; FOTO 2802.
FOTO 2902 practicum offers an opportunity for supervised, on-the-job application of knowledge and skills acquired in the classroom. Student must be a Digital Photography major who has completed 12 hours in the technology and has permission of the instructor. Lab Fee: $0

FOTO 2960—Business Photography (2)
Lecture: 1, Lab: 2
FOTO 2960 course introduces students to the business and marketing practices common in a professional photography business or in freelance photography work. Emphasis will be placed on developing professional objectives based upon careful consideration of the financial, legal, organizational, promotional, interpersonal and ethical practices particular to photography. This course is a research and business-planning course. No camera is needed. Lab Fee: $2

FOTO 2970—FOTO Field Studies (1-4)
Lecture: 1
Prerequisite(s): FOTO 1140.
FOTO 2970 hands-on course introduces students to a range of field trips to the local zoo to foreign lands. Students learn ways of visualizing and capturing outside subjects. Course topics include studying equipment, portable digital storage devices, and other materials necessary to create the best digital photographs in a field environment. Students go on field trips lasting a day or several days depending on the location and topic to be covered. Students are responsible for the cost of any entrance fees, travel and lodging (if needed) and meal expenses TBA. This course can be repeated. Lab Fee: $7

FOTO 2975—Digital Portfolio Development (3)
Lecture: 3
FOTO 2975 course is designed for digital photography majors to gain knowledge of photography portfolio book design and production as well as Web-hosted portfolio production as it relates to self-promotion for future clients, job placement, or pursuit of photo-education at a four year university. Since the course is focused on the printed page and Web-posted portfolio to enhance the multi-medium delivery of any visual information, its potential applications are almost limitless. This course can provide groundwork for continued study and/or a career in digital photography or related industries. Lab Fee: $2

FOTO 2994—Current Topics in FOTO (1-3)
Lecture: 1 - 3, Lab: 1 - 3
FOTO 2994 course is a detailed examination of a selected current topic in Digital Photography. This course can be repeated. Lab Fee: $0

Early Childhood Development & Education

ECDE 1100—Introduction to CDA (3)
Lecture: 3
Prerequisite(s): ECDE 1101 and ECDE 1105.
This course is for students seeking the Childhood Development Associate Credential (CDA). The content will include an overview of the CDA program requirements. Emphasis will focus on the competency statements, building the professional portfolio, preparing for the classroom observation and the required final exam. In addition, professionalism, ethics and child care licensing regulations will be explored. Lab Fee: $14

ECDE 1101—Early Childhood Curriculum (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100 and placement into No Reading Required or college transcript with previous ENGL course work.
This course presents an overview of observations and curriculum planning in early childhood development and education. Emphasis will be placed on appropriate objective methods for observing and recording children's behavior in group setting. Strategies for observing while fulfilling the role of the teacher will be addressed. This course will also discuss skills necessary to plan a developmentally appropriate curriculum, including organizing space and time, facilitating daily routines and transitions, creating structured group time experiences, and planning for diverse early childhood classrooms. Students will be introduced to Ohio's Early Learning and Development standards and Ohio's Early Childhood Core Knowledge and Competencies. Lab Fee: $22

ECDE 1103—Guidance & Curriculum for Early Childhood Aide (2)
Lecture: 2
Prerequisite(s): SAHS 1120; ECDE 1106 and ECDE 2840.
This course, meant for the Early Childhood Aides, presents an overview of the early childhood curriculum. Emphasis will be placed on skills necessary to plan a developmentally appropriate curriculum, including organizing space and time, facilitating daily routines and transitions, creating structured group time experiences, and planning for diverse early childhood classrooms. Attention will be given to implementing positive guidance techniques, effective classroom management, preventative strategies, and the importance of a holistic approach to understanding children's behavior. Lab Fee: $14

ECDE 1104—Soc Emotional Dev Early Childhood Aide (2)
Lecture: 2
Prerequisite(s): ECDE 1106; ECDE 2841.
This course, meant for Early Childhood Aides, examines the teacher's role as facilitator of social emotional development, including practices that help children develop positive self-image, self esteem and competence. The impact of a teacher?s self-image, values, and attitudes will be discussed. The major components of social development are addressed: family patterns and traditions, gender identity and sex roles, moral reasoning of young children, play theories and programming for classroom play, multicultural practices and diversity, and social studies for young children. Lab Fee: $14

ECDE 1105—Social Emotional Dev Curriculum (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course examines the teacher's role as facilitator of social emotional development, including practices that help children develop positive self-image, self esteem and competence. The impact of a teacher's own self-image, values, and attitudes will be discussed. The major components of social development are addressed: theories related to social emotional development, positive communication, gender identity and sex roles, moral reasoning of young children, play theories and programming for classroom play, and multiculturalism and diversity. Attention will be given to ideas for implementing positive guidance techniques, effective classroom management, preventative strategies, and the importance of a holistic approach to understanding children's behavior. Ohio's Early Learning and Development Standards are discussed. Lab Fee: $22

ECDE 1106—Language & Literacy Exp Early Childhood (1)
Lecture: 1
Prerequisite(s): ECDE 2294 and SAHS 1120; ECDE 1103 and ECDE 2840.
This course focuses on early language and literacy development in children birth through age five. Emphasis will be placed on the teacher's role in facilitating communication and literacy skills, and on selecting and using literature to enhance language development. The Ohio Department of Education Early Learning Standards, English Language Arts will also be covered. Lab Fee: $9

ECDE 1108—Nurturing Creativity (3)
Lecture: 3
Prerequisite(s): ECDE 1101 and ECDE 1105.
This course deals with the principles of creativity and its importance in the life of the young child. Focus is on the sequence of development in the child's use of creative material. Techniques for creative arts, movement and music will be explored, demonstrated and implemented. Environments that support and encourage creativity will be discussed. Also, students will have the opportunity to explore ways to take these creative ideas outdoors with young children in addition to developing and evaluate materials, objectives and activities in these areas. Lab Fee: $28

ECDE 1109—Language & Literacy Experiences (3)
Lecture: 3
Prerequisite(s): ECDE 1101 and ECDE 1105.
This course focuses on theories of language development, the sequence of speech and language development and differentiating between normal and atypical speech. Emphasis will also be placed on the teacher?s role in facilitating communication and literacy skills, on planning and implementing appropriate language and literacy activities, on selecting and using literature to enhance language development, and on supporting children and families whose first language is not English. The Ohio Department of Education Early Learning and Development Standards, English Language Arts will also be covered. Lab Fee: $28

ECDE 2010—Infant Toddler Curriculum (3)
Lecture: 3
Prerequisite(s): ECDE 1101 and ECDE 1105.
This course presents an overview of care giving for infants and toddlers in group settings. Developmentally appropriate programming for infants and toddlers is emphasized across developmental areas through routines, environment, and experiences with a focus on language and brain development. The role of staff and parent relationships is explored as well as Ohio's Rules for Licensed Child Care Centers. Implementation of Ohio's Early Learning and Development Standards is also addressed. Lab Fee: $15

ECDE 2012—Families, Communities & Schools (3)
Lecture: 3
Prerequisite(s): ECDE 1108 and ECDE 1109.
This course explores educational considerations for teachers including the policies, theories, practices, skills, and knowledge of home, school, and community partnerships. Candidates will examine: the multiple influences on the whole child; accessibility of community services and supports; ethical, practical, and culturally competent decisions to foster family engagement; knowledge and skills needed to address family structure, socio-cultural and linguistic backgrounds, identities and customs, and advocacy for children and families. Lab Fee: $7

ECDE 2014—Cognitive Curriculum (3)
Lecture: 3
Prerequisite(s): ECDE 1108.
This course explores the theoretical foundations behind a child's cognitive development. Techniques for promoting concept development as well as focus on science, technology, engineering and math activities for young children are part of this course. Active learning and learning through play are discussed and demonstrated. Young children's brain development is reviewed. Emphasis is on planning activities which encourage questioning, probing and problem-solving skills. The course also includes studying the effects and use of media and technology, block play, simple machines, healthy nutrition and cooking with children. Ohio's Early Learning Content Standards are discussed and applied to planning for young children. Lab Fee: $22

ECDE 2016—Health, Safety, and Nutrition (2)
Lecture: 2
Prerequisite(s): ECDE 1108; ECDE 1109.
This course engages participants in exploration and discussion about high-quality care giving and developmentally appropriate practices when engaging with infants and toddlers and their families. The importance of quality environments that support development, language and literacy, family engagement, advocacy, positive guidance, and professionalism are discussed as they relate to required standards and the care of infants and toddlers. Lab Fee: $0

ECDE 2021—Org/Prof Leadership in EC Programs (3)
Lecture: 3
Prerequisite(s): ECDE 1109 and ECDE 2014.
This course takes an in-depth look at the operations of a quality early childhood program. The administrator and staff roles will be explored as well as their interactions with children and families. The administrator and staff roles will be explored as well as their interactions with children and families. Personnel rights, ethical implications of teaching, and team functioning, professional growth and development. Also, the legal requirements and responsibilites of Ohio Child Day Care Licensing procedures will be reviewed. Lab Fee: $6

ECDE 2099—ECDE Capstone (1)
Lecture: 1
Prerequisite(s): ECDE 2920; ECDE 2930.
In this capstone, students will assemble, edit, and present a professional portfolio. Professionalism, ethics, and current trends in Early Childhood will be discussed. Lab Fee: $4

ECDE 2105—Best Practice Inclusive Early Childhood (1)
Lecture: 1
Prerequisite(s): ECDE 1108 and ECDE 1109.
This course focuses on best practices for the inclusive early childhood classroom. Topics include adapting the curriculum, environment and teaching strategies to meet the needs of young children with special needs. Individual Family Service Plans, Individual Education Plans, community resources, supporting parents and providing advocacy for children and families will also be covered. Lab Fee: $6

ECDE 2106—First Aid, Communicable Diseases, Child Abuse Recognition and Prevention (2)
Lecture: 2
This course will focus on promoting health in children, ways to recognize child abuse and neglect, and identification of resources for abused and neglected children. The course will prepare students to help prevent childhood accidents, to help manage injuries and chronic health conditions, to recognize common communicable diseases, and to understand their role in reducing the spread of communicable diseases. The course will also cover rules and regulations established for childcare providers in Ohio, including early reporting. Students who pass the required examinations will earn ODJFS-approved certificates in First Aid, Communicable Diseases, and Child Abuse Recognition and Prevention. Lab Fee: $0

ECDE 2107—Media Resources (1)
Lecture: 1
Prerequisite(s): ECDE 1101.
This course will provide opportunities to create, implement and evaluate appropriate materials and learning activities for children. Emphasis will be placed on extensions of appropriate classroom activities through the use of media materials. Students will have the opportunity to create safe and economical classroom resources as well as have opportunities to practice appropriate skills in creative ways. Lab Fee: $20

ECDE 2109—Phonics & the Structure of Language (4)
Lecture: 4
Prerequisite(s): ECDE 1108 and ECDE 1109.
This course is designed to introduce students to teaching of phonics and grammar in the context of reading, writing, and spelling. Students will learn basic terminology, will apply this terminology to instruction, and will develop an understanding of and an appreciation for the structure and function of language elements. Students will also learn how to assess and teach phonics in the context of a comprehensive literacy program. Lab Fee: $24

ECDE 2111—Playing with the Arts (1)
Lecture: 1
This course will focus on integrating the arts (music, dance, creative movement, poetry, story telling and drama) into all early childhood curriculum areas. Students will be actively involved in planning and sharing developmentally appropriate activities. Emphasis will be placed on the importance of arts in the lives of young children. Lab Fee: $0

ECDE 2294—ECDE Contemporary Issues (1-5)
Lecture: 1
These courses will facilitate offerings of special topics related to ECDE on an annual basis. Topics may include Children's Literature, Diversity and Young Children, Intergenerational Care, Music and Movement, Fitness for Children, Nutrition, Sign Language, Leadership, Advocacy, etc. These topics may be for new students in ECDE or meet requirements for Pre-K Associate Licenses teachers for renewal purposes. Lab Fee: $0

ECDE 2840—Early Childhood Practicum & Seminar I (4)
Practicum: 14, Seminar: 2
Prerequisite(s): SAHS 1120; ECDE 1103 and ECDE 1106.
This practicum experience allows students to work directly with young children in an early childhood classroom. Students will plan and implement activities for the children and assist the mentor teacher with daily classroom tasks. Seminar will be an opportunity for students to discuss and reflect on their experience in the early childhood classroom. Students will be supported and evaluated by their mentor teacher and their Columbus state faculty observer. Successful completion with a "C" or better is required as a prerequisite to the next seminar. Lab Fee: $31

ECDE 2841—Early Childhood Practicum & Seminar II (4)
Practicum: 14, Seminar: 2
Prerequisite(s): ECDE 2840; ECDE 1104.
This second level practicum experience allows students to work directly with young children in an early childhood classroom. Students will plan and implement activities for the children and assist the mentor teacher with daily classroom tasks. Seminar will be an opportunity for students to discuss and reflect on their experience in the early childhood classroom. Students will be supported and evaluated by their mentor teacher and their Columbus state faculty observer. Successful completion with a "C" or better is required as a prerequisite to the next seminar. Lab Fee: $31

ECDE 2910—Seminar Practicum I: Infants & Toddlers (2)
Seminar: 1, Practicum: 7
Prerequisite(s): ECDE 1108 and ECDE 1109 and ECDE 2010; ECDE 2014.
This course is an integral part of the ECDE program and includes both a seminar and practicum experience. The course includes integration of theory and practice, with focus on observing and recording children's play and interactions, basic principles of guidance, and application of knowledge. Students observe and directly interact with young children. Students plan developmentally appropriate activities for young children that will be implemented in the classroom placement. Students are observed in the classroom setting three times during the semester by an assigned ECDE faculty member. Successful completion with a "C" or better is required as a prerequisite to the next seminar practicum experience in the series. Lab Fee: $22

ECDE 2920—Seminar/Practicum II: Preschool (2)
Seminar: 1, Practicum: 7
Prerequisite(s): ECDE 2910.
This course is an integral part of the ECDE program and includes both a seminar and practicum experience. The course includes integration of theory and practice, with focus on observing and recording children's play and interactions, basic principles of guidance, and application of knowledge. Students observe and directly interact with young children. Students plan developmentally appropriate activities for young children that will be implemented in the classroom placement. Students are observed in the classroom setting three times during the semester by an assigned ECDE faculty member. Successful completion with a "C" or better is required as a prerequisite to the next seminar practicum experience in the series. Lab Fee: $25

ECDE 2930—Seminar/Practicum III: Preschool (2)
Seminar: 1, Practicum: 7
Prerequisite(s): ECDE 2920.
This course is an integral part of the ECDE program and includes both a seminar and practicum experience. The course includes integration of theory and practice, with focus on observing and recording children's play and interactions, basic principles of guidance, and application of knowledge. Students observe and directly interact with young children. Students plan developmentally appropriate activities for young children that will be implemented in the classroom placement. Students are observed in the classroom setting three times during the semester by an assigned ECDE faculty member. Successful completion with a "C" or better is required as a prerequisite to the next seminar practicum experience in the series. Lab Fee: $25

ECDE 2932—Seminar/Practicum III: Administration (2)
Seminar: 1, Practicum: 7
Prerequisite(s): ECDE 2920.
This practicum experience allows students to work directly with administrators in an early childhood setting. Students will plan and implement a mock staff interview and center tour. The student will also assist the mentor administrator with daily center tasks. Seminar will be an opportunity for students to discuss and reflect on their experience in the early childhood program. Students will be supported and evaluated by their mentor administrator and their Columbus State faculty observer. Successful completion with a "C" or better is required as a prerequisite to the next seminar. Lab Fee: $0

ECDE 2933—Seminar/Practicum III: Community Setting (2)
Seminar: 1, Practicum: 7
Prerequisite(s): ECDE 2920.
This practicum experience allows students to work directly with young children in the community setting. Students will work with families and young children as directed by the community settings mentor (camps, tours, family programming, workshops, etc.). Seminar will be an opportunity for students to discuss and reflect on their experience at the various community settings. Students will be supported and evaluated by their mentor teacher and their Columbus State faculty observer. Successful completion with a "C" or better is required for this course. Lab Fee: $6

Economics

ECON 1110—Intro to Economics (3)
Lecture: 3
Prerequisite(s): MATH 1050 and Placement into ENGL 1100.
This course is an issues- based introduction to basic economic concepts. Students will relate principles such as scarcity, opportunity cost, and markets to current events. Lab Fee: $3

ECON 2193—Independent Study in Economics (1-3)
Lecture: 1
An individual, student-structured course that examines a selected topic in Economics through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. Lab Fee: $3

ECON 2200—Principles of Microeconomics (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100; MATH 1050 or; STAT 1350 or; STAT 1400.
This course introduces students to the economic decision making of individuals and firms. Topics include: scarcity; opportunity cost; supply and demand, consumer choice, elasticity, market structure, profit maximization, resource markets, and international trade. Lab Fee: $3

ECON 2201—Principles of Macroeconomics (3)
Lecture: 3
Prerequisite(s): ECON 2200.
This course introduces students to economic decision-making at the aggregate level. Topics include national income analysis, the business cycle, inflation, unemployment, fiscal and monetary policies and objectives. Lab Fee: $3

Education

EDUC 2210—Introduction to Education (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course provides an introduction to the teaching profession. Candidates will learn how the historical, philosophical and sociological foundations of education as well as current cultural, economic and political forces impact schools through class discussion, inquiry, and field experiences. Focusing on understanding themselves, understanding their students, and understanding the teaching profession, candidates work in community and school settings and critically reflect on their values, experiences, and observations. Specifically, students will gain an understanding of educational policy and practice in preschool, elementary, middle and high school settings Lab Fee: $2

EDUC 2220—Educational Technology (3)
Lecture: 3
This course provides those entering the teaching profession with an understanding of how to effectively enhance modern education with various types of technology. Students will explore the benefits and challenges of using technology and develop the skills to choose and implement technologies that will improve learner understanding and retention. Teaching and learning topics include basic hardware configurations and troubleshooting, operating systems, file types, spreadsheets, presentation software, databases, word processing, audio-visual technologies, and online and distance-learning technologies. Students will be able to find reliable educational resources online and to understand intellectual property and copyright laws. Lab Fee: $2

Electro-Mechanical Engineering Technology

EMEC 1250—Motors and Control Logic (4)
Lecture: 3, Lab: 3
This course covers AC motors, generators, transformers, and the basic components used to control them. Students will learn how to generate ladder and wiring diagrams as well as gain competency in wiring power and control circuits to meet a given set of criteria. They will also learn how to troubleshoot using digital multi-meters. Lab Fee: $36

EMEC 1251—Control Logic and PLC's I (4)
Lecture: 3, Lab: 3
Prerequisite(s): EMEC 1250.
The course covers advanced control circuits and advanced design of ladder and wiring diagrams to meet a given set of criteria as well as basic PLC programming of Allen Bradley PLCs using RS Logix software. Lab Fee: $36

EMEC 1252—Control Logic and PLC's II (4)
Lecture: 3, Lab: 3
Prerequisite(s): EMEC 1251.
The course will be a continuation of EMEC 1251 (Control Logic and PLC's). Students will do programming of Allen Bradley's ControlLogix PLC's, use both discrete and analog I/O, do rudimentary PanelView programming, and explore simple networking. Lab Fee: $36

Electronic Engineering Technology

EET 1105—Basic DC Electronic Systems (3)
Lecture: 2, Lab: 2
Prerequisite(s): Placement into ENGL 1100 and MATH 1050.
Every electrical or electronic device operates using either Direct Current (DC) or Alternating Current (AC) or both. This course is an introduction to DC and AC fundamentals, the systems that use them, and the basic sources of DC and AC electricity. Lab Fee: $12

EET 1115—Basic Digital Systems (3)
Lecture: 2, Lab: 2
Prerequisite(s): EET 1105; EET-1105.
A digital system is one that uses a precise sequence of discrete voltages, representing numbers, non-numeric symbols or commands for input, processing, transmission, storage, or display. The fundamental electronic concepts for wireless, mobile devices are introduced. Lab Fee: $35

EET 1125—Basic AC Electronic Systems (3)
Lecture: 2, Lab: 2
Prerequisite(s): EET 1105; EET-1105.
Every electrical or electronic device operates using either Direct Current (DC) or Alternating Current (AC) or both. This course is an introduction to AC fundamentals, the systems that use them, and the basic sources of AC electricity. Lab Fee: $35

EET 1135—Electronic Switching & Amplifier Systems (3)
Lecture: 2, Lab: 2
Prerequisite(s): EET 1125; EET-1125.
"This course introduces the basic concepts of operational amplifiers and practical applicationsof electronic switching systems including AC-to-DC rectification, DC-to-DC voltage conversion; AC-to-AC conversion and DC-to-AC inversion. " Lab Fee: $30

EET 1145—Data Communication Systems (3)
Lecture: 2, Lab: 2
Prerequisite(s): EET 1115; EET-1115.
This course introduces the fundamental concepts of electronic communications systems, data communications and networks. Topics include wireless and wired communications systems, basic data communications systems and local area networks. This course describes how the electronics of these systems work, it does not include the software applications required to operate the networks. Lab Fee: $30

EET 2215—Adv Digital Systems (FPGA) Programming (3)
Lecture: 2, Lab: 2
Prerequisite(s): EET 1115 and ITST 1101; EET-1115, ITST-1101.
This course will provide the ideal vehicle for learning about digital logic, microcontroller organization, and Field Programmable Gate Arrays(FPGA). Students will use state-of-the-art technology in both hardware and schematic capture tools over a wide range of topics. The Altera DE2 Development and Education board will be used in a laboratory environment to offer a rich set of features that make it suitable for a variety of design projects. Lab Fee: $42

EET 2225—Embedded Microcontroller Systems (3)
Lecture: 2, Lab: 2
Prerequisite(s): EET 1115; EET-1115.
Microcontrollers are used in automatically controlled products and devices, such as automobile engine control systems, remote controls, office machines, peripherals for computer systems, appliances, power tools, and toys. By reducing size, cost, and power consumption, microcontrollers make it economical to electronically control many more processes. In the laboratory setting, students will learn how to interface with embedded systems, which typically have no keyboard, screen, disks, printers, or other recognizable computer I/O devices, and may lack human interaction devices of any kind. Lab Fee: $42

EET 2235—Data Acquisition Systems (3)
Lecture: 2, Lab: 2
Prerequisite(s): EET 1125; EET-1125.
This course will focus on electronic systems that extract data from their surroundings for statistical analysis. The digital data is catalogued, stored and sometimes utilized to make improvements on the object being measured. Through a combination of external hardware and/or software, such systems facilitate the collection of data in biomedical applications, aerospace products, automation processes, and robotics. "Human Machine Interface" (HMI), "Distributed Control Systems" (DCS) and "Supervisory Control and Data Acquisition"(SCADA) systems will be studied. Lab Fee: $42

EET 2599—Capstone Experience in EET (3)
Lecture: 1, Lab: 6
Prerequisite(s): Completion of 15 credit hours of EET credit; COMM 1110 and COMM 2204; COMM-1110, COMM-2204.
Designed to be the final course in the degree program, students will master skills related to the design, development, fabrication, troubleshooting, implementation and documentation of a system or systems relevant to emerging technologies. The course requirements include preparation of system requirements specifications, proposals, prototyping, troubleshooting, testing, and functional demonstration of a core project. The specific student core project will be based on currently emerging technology. Lab Fee: $20

EET 2994—SPT Electronic Engineering Technology (1-5)
Lecture: 1
none provided

Emergency Medical Services Technology

EMS 1002—Paramedic Preparation Course (4)
Lab: 2, Lecture: 3
Prerequisite(s): EMS 1860.
This is the course pre-requisite for the paramedic certification program. Content will cover anatomy, physiology, and pathophysiology relevant to providing advanced level emergency care. Lab Fee: $25

EMS 1107—Search & Rescue-Wilderness EMT (5)
Lecture: 3.6, Lab: 4.4
This course will prepare the student to function in many search and rescue situations and improve missing person incident interoperability. The course will focus on responses to urban, rural, and wilderness environments. In addition to response, the student will be instructed in wilderness emergency care and will receive a Wilderness EMT upgrade certification if currently holding an EMT or Paramedic certification. Those not holding an EMT certification will receive a Wilderness First Responder certification. The course is taught over and above the minimum requirements of NASAR (National Association of Search and Rescue) for the SAR Technician-Level III certification and students can challenge the NASAR on-line exam upon completion of the course. Lab Fee: $40

EMS 1109—Emergency Pyschiatric Intervention (2)
Lecture: 2
Prerequisite(s): EMS 1860 or; Current State of Ohio EMT certification.
This course deals with the pre-hospital approach to people exhibiting abnormal behavior and provides an in-depth look into methods of evaluation and management of people experiencing behavioral crises. Lab Fee: $20

EMS 1860—Emergency Medical Technician (EMT) (7)
Clinical: 1.5, Lecture: 3.5, Lab: 8.5, Directed Practice: 1
The EMT Certificate program is the National Education Standards training for one to gain national and Ohio certification as an EMT. Once students successfully complete the EMT course, they are eligible to sit for State/National EMT Certification written and practical examinations. The EMT Certificate is accredited by the Ohio Department of Public Safety, Division of EMS (Certificate # 311). Course includes a minimum of 40 clock hours of hospital and field (directed practice) clinical experience. Lab Fee: $200

EMS 1861—Paramedic I (6)
Lecture: 5, Lab: 3
Prerequisite(s): EMS 1860 and EMS 1002 or; Current State of Ohio EMT certification.
This is part one of a six part course sequence covering all the knowledge and skills required for the state certification examination for Paramedic. Lab Fee: $240

EMS 1862—Paramedic II (3)
Lecture: 1.5, Lab: 3, Directed Practice: 3
Prerequisite(s): EMS 1861.
This is part two of a six part course sequence covering all the knowledge and skills required for the state certification examination for Paramedic. Lab Fee: $250

EMS 1863—Paramedic III (8)
Lecture: 4, Lab: 6, Clinical: 3, Directed Practice: 6
Prerequisite(s): EMS 1862.
This is part three of a six course sequence covering all the knowledge and skills required for the state certification examination for Paramedic. Course includes weekly clinical and field experiences. Lab Fee: $245

EMS 1864—Paramedic IV (3)
Lecture: 1, Lab: 3, Clinical: 1.5, Directed Practice: 0.5
Prerequisite(s): EMS 1863.
This is part four of a six course sequence covering all the knowledge and skills required for the state certification examination for Paramedic. Course includes weekly clinical and field experiences. Lab Fee: $30

EMS 1865—Paramedic V (7)
Lecture: 4, Lab: 3, Clinical: 3, Directed Practice: 6
Prerequisite(s): EMS 1864.
This is part five of a six course sequence covering all the knowledge and skills required for the state certification examination for Paramedic. Course includes weekly clinical and field experiences. Lab Fee: $155

EMS 1866—RN to Paramedic Bridge (6)
Lab: 3, Lecture: 4
Prerequisite(s): EMS 1860 and EMS 2006 and EMS 2007 and Two years of active RN experience.
This course is designed for Registered Nurses with previous experience to obtain education necessary for them to challenge the National Registry Exam for Paramedics. Lab Fee: $250

EMS 1899—Paramedic Capstone (3)
Lecture: 1, Lab: 3, Directed Practice: 6
Prerequisite(s): EMS 1865.
This course is the final requirement for the paramedic program. The student will be expected to complete a minimum of 20 Advanced Life Support calls as the Lead Paramedic. This aligns with the CoAEMSP requirement found in Appendix G. The student will also prepare for a cognitive and psychomotor exam required for certification as determined by the State. Students will attend labs designed with multiple stations to prepare for the psychomotor exam. Students must also meet a minimal standard on weekly assignments/exams in order to successfully complete the course. Lab Fee: $0

EMS 2000—EMS Management (3)
Lecture: 3
Prerequisite(s): EMS 1860.
This course is an introduction to management of an EMS system. Students will review different types of EMS systems and explore recruitment, training, and oversight of EMS staffing. Lab Fee: $15

EMS 2001—Disaster Plan & Incident Comm System (2)
Lecture: 2
Prerequisite(s): EMS 1860.
This course will give pre-hospital providers an introduction to disaster planning. Students will look at the history and types of disasters, both natural and man made. For course completion each student will be developing an actual disaster plan. Lab Fee: $15

EMS 2002—12 Lead EKG Interpret & Adv Cardiac (2)
Lecture: 2
Prerequisite(s): ACLS certification or equivalent.
This course will teach students to perform and interpret 12 lead EKGs. Students will also learn to integrate advanced cardiac assessment and 12 lead EKG into treatment plans for critical patients. Lab Fee: $75

EMS 2101—Critical Care Transport (6)
Lab: 3, Lecture: 5
This course deals with the special needs of critical patients during transport, including the use of advanced equipment and procedures. This course is designed to prepare paramedics and nurses to function as members of a critical care transport team. This is the UMBC CCEMT-P course. Lab Fee: $310

EMS 2102—Public Safety Service Instructor (5)
Lecture: 5
This course is the Ohio curriculum required for current firefighters, EMS providers, and Registered Nurses who wish to teach in Fire/EMS programs. Lab Fee: $30

Engineering

ENGR 1181—Fundamentals of Engineering I (3)
Lecture: 2, Lab: 2
Prerequisite(s): Writing: Eligibility for Composition I AND Math: Qualifying math placement score or completion of MATH 1146 or MATH 1148; MATH 1149 or; MATH 1150; Placement into ENGL 1100, MATH-1150.
This first course in the Fundamentals of Engineering sequence introduces the student to engineering career areas and hands-on skills related to engineering applications: systems, modeling and data analysis; the use of Excel and MATLAB for problem solving; effective teamwork; communication and ethics. Students are strongly advised to complete MATH 1149 or MATH 1150 prior to enrollment in ENGR 1181 or concurrently with ENGR 1181. Lab Fee: $25

ENGR 1182—Fundamentals of Engineering II (3)
Lecture: 2, Lab: 2
Prerequisite(s): Completion of MATH 1151, minimum grade ‘C’ AND completion of ENGR 1181; MATH 1151 or higher, Min grade C and ENGR-1181, MATH-1151.
An introduction to 3D modeling and CAD integrated with the engineering design-build process. hands-on experience, teamwork, and project management are emphasized as well as written, oral and visual communications. Students are strongly advised to complete MATH 1151 prior to enrollment in ENGR 1182 or concurrently with ENGR 1182. Lab Fee: $25

ENGR 2010—Engineering Statics (3)
Lecture: 3
Prerequisite(s): ENGR 1181 and ENGR 1182 and PHYS 1250 and MATH 1152 or; MATH 1172.
The course will examine forces in a plane or in 3 dimensions, equivalent systems of forces, equilibrium of rigid bodies, centroid, center of gravity, distributed loads, friction, moment of inertia and analysis of structures including trusses, frames and beams. Lab Fee: $0

ENGR 2030—Dynamics (4)
Lecture: 4
Prerequisite(s): ENGR 2010 or; ENGR 2040.
This course will introduce fundamental concepts of vector mechanics of particles and rigid bodies in motion. Newton's laws of translational and rotational motion and relationships between forces acting on a body and its motion. Lab Fee: $4

ENGR 2040—Statics & Intro Mechanics of Materials (4)
Lecture: 4
Prerequisite(s): Completion of MATH 1152 or MATH 1172 AND completion of ENGR 1181 AND completion of PHYS 1250; ENGR 1181; PHYS 1250; MATH 1152 OR MATH 1172.
This course will introduce fundamental concepts of vector mechanics of particles and rigid bodies at rest, fundamental concepts of reactions of external supports of bodies in equilibrium, common engineering structures such as trusses, frames, and machines, geometric and inertial properties of solid bodies, stress distributions under various loadings including pure shear, axial, torsion, and bending loadings. Lab Fee: $4

Engineering Technologies

ENGT 1101—Industrial Foundations (3)
Lecture: 2, Lab: 2
In this course, students will be introduced to print reading and part visualization from drawings, including sketching multi-view drawings and three-dimensional models, location of key features and dimensioning specifications. Students introduced to beginning concepts in geometric dimensioning and tolerancing. Instruction in using precision measurement tools including, but not limited to scales, calipers, micrometers, dial indicators, coordinate measurement machines. Students will incorporate use of computer interfaces in metrology and basic statistical process control and topics in lean manufacturing. Lab Fee: $0

ENGT 1102—Micro-ElectroMechanical Systems Fabrication (4)
Lecture: 3, Lab: 2
This course introduces students to the manufacturing environment and processes for production of Micro-Electromechanical Systems (MEMS). Students will learn how to operate in a cleanroom environment, and will be introduced to the history, properties, and uses of silicon wafers. Manufacturing process including wafer-level processes, surface and bulk micromachining, thin-film deposition, dry and wet etching, photolithography, process integration and the equipment used for these processes will be covered. Lab Fee: $10.5

ENGT 1115—Engineering Graphics (3)
Lecture: 1, Lab: 5
This course covers basic Engineering Graphic practices for Technology Majors. Broad coverage of engineering drawing interpretation, orthographic views, sketching, symbols, tolerances, and AutoCAD. Fundamental CAD concepts will be taught to produce orthographic projection drawings, assembly drawings and solid models. It is the pre-requisite to MECH 2215 (Parametric CAD). Lab Fee: $22

ENGT 1200—Intro Industrial & Systems Engineering (3)
Lecture: 3
This course in an introduction to the basic principles of Industrial Engineering and the efficiencies derived from their application in a host of industries. Lab Fee: $10

ENGT 1294—SPT: Engineering Technologies (1-4)
Lecture: 4
This courses provides for a detailed examination of selected topics in Engineering Technologies. Lab Fee: $0

ENGT 1300—Intro Electric Motors, Controls, PLC's (4)
Lecture: 3, Lab: 3
This course is designed to provide a general overview of electric motors, motor controls, and rudimentary PLC programming for non-Electro-Mechanical majors. Lab Fee: $36

ENGT 2201—Vacuum Systems (3)
Lecture: 2, Lab: 3
Prerequisite(s): ENGT 1101 or; ENGT 1102.
In this course, students will be introduced to the operational mechanisms and process use of vacuum pumps used in the semiconductor industry. Students will explain the operational methodology and process use of equipment that require vacuum pumps used in the semiconductor industry. Students will demonstrate problem-solving, critical thinking and communication skills while learning how to perform maintenance on a vacuum system. Lab Fee: $20

ENGT 2260—Basic Mechanisms and Drives (3)
Lecture: 1, Lab: 5
Prerequisite(s): ENGT 1115 or; ENGT 1101.
This course will cover basic machine mechanisms (gears, belts, sprockets, bearings, clutches, couplings, springs, etc). It will also examine the basic drives of such mechanisms (electric motors and hydraulic & pneumatic actuators). Lab Fee: $33

English

ENGL 135—Vocabulary Development (2)
Lecture: 2
Prerequisite(s): None.
This course is designed to improve vocabulary and related spelling skills through memorization, word analysis, and the application of rules. Lab Fee: $3

ENGL 140—Intermediate Reading (3)
Lecture: 3
Prerequisite(s): By placement.
This course focuses on developing students' basic reading skills. Elements explored include vocabulary in context, implied and stated main ideas, supporting details, patterns of organization, inferences, and argument. Students will practice strategies for improving reading rate and comprehension. Critical reading skills will be introduced through reading and responding to essays, writing journals, and completing workbook activities. Not open to students with credit for DEV-0145. Lab Fee: $5

ENGL 145—Advanced Reading (3)
Lecture: 3
Prerequisite(s): ENGL 0140 or; By placement.
This course focuses on refining students' critical reading skills. The curriculum includes the study of vocabulary in context, implied and stated main ideas, supporting details, patterns of organization, facts and opinions, fallacies, inferences, purpose and tone, and argument. Students will complete projects, read and respond to various essays, compose journals, and complete workbook activities. Lab Fee: $5

ENGL 151—Basic Grammar (1)
Lecture: 1
Prerequisite(s): None.
This course covers the identification of basic parts of speech, the effective use of verbs (tense, form, and agreement), the identification and correction of sentence structure errors (unintentional fragments, run-ons, and comma splices), and the structure and punctuation of compound and complex sentences. Lab Fee: $1

ENGL 152—Basic Punctuation (1)
Lecture: 1
Prerequisite(s): None; None.
This course covers punctuation skills, including the correct use of commas, semicolons, quotation marks, apostrophes, end marks, and the conventions of capitalization. Lab Fee: $1

ENGL 155—Basic Composition (4)
Lab: 2, Lecture: 3
Prerequisite(s): By placement.
This course focuses on the processes and principles of writing clear, coherent, and well-developed paragraphs and short essays. Additional topics include the conventions of grammar, usage, and mechanics, as well as the comprehension, summary, and analysis of various types of texts. Lab Fee: $4

ENGL 199—Fundamentals of College Writing (3)
Lecture: 3
Prerequisite(s): ENGL 0155; ENGL 1101.
ENGL 0199: Fundamentals of College Writing is an Accelerated Learning Program (ALP) English course that allows students to take the ENGL 0199 course concurrently with Composition I, to accelerate remediation into one semester. English 0199 students develop processes for critically reading, writing, and responding to a variety of texts in order to compose clear, concise essays in Composition I. The course facilitates the development of writing skills with an emphasis on purpose, audience, content, structure, style, and documentation methods. In ENGL 0199, students will evaluate and reflect on their own writing while they study language in the context of academic discourse. Students learn important skills to be active and collaborative participants in their own education and the greater learning community. ENGL 0199 presents students with strategies to recognize their learning strengths and weaknesses and to equip them for success in the English classroom, in the college culture, and beyond. Students must receive a passing grade of a C or better in ENGL 0199 to receive a passing grade in the co-enrolled Composition I course. Lab Fee: $5

ENGL 1100—Composition I (3)
Lecture: 3
Prerequisite(s): ENGL 0155 minimum grade B; or by placement; Completion of ESL 0190 minimum grade C; or by placement.
English 1100 is a writing-centered course that recognizes linguistic and cultural diversity through course materials and activities. Assignments invite students to analyze the contexts of writing tasks and compose for different purposes, audiences, genres, mediums, and technologies. Students engage in critical questioning, reading, and researching as they plan, draft, review, revise, and reflect on their writing. The course helps students practice processes and habits of mind that they can apply to the diverse writing situations they'll encounter in college and beyond. S-designated Service-Learning classes. Sections of this course are H-designated Honors classes. Lab Fee: $1

ENGL 1101—Composition 1W: Composition Workshop (3)
Lecture: 2, Lab: 2
Prerequisite(s): ENGL 0155 minimum grade C; or by placement ; ENGL 0199.
English 1101 is a beginning composition course, for students who can benefit from additional independent small-group or tutor/teacher-directed work, that develops processes for critically reading, writing, and responding to a variety of texts in order to compose clear, concise expository essays. The course facilitates an awareness of the interplay among purpose, audience, content, structure, and style, while also introducing research and documentation methods. Course reading and writing assignments may be thematically organized. Completion of English 1101 is equivalent to completion of English 1100. Lab Fee: $5

ENGL 1101—Composition I Plus (6)
Lecture: 6
Prerequisite(s): ENGL 0155 minimum grade C; or by placement .
English 1101: Composition I Plus is a writing-centered course that recognizes linguistic and cultural diversity through course materials and activities. The course is equivalent to English 1100 and satisfies the same OT-36 learning outcomes and expected competencies. Assignments invite students to analyze the contexts of writing tasks and compose for different purposes, audiences, genres, mediums, and technologies. Students engage in critical questioning, reading, and researching as they plan, draft, review, revise, and reflect on their writing. The course helps students practice processes and habits of mind that they can apply to the diverse writing situations they'll encounter in college and beyond. The course facilitates the development of writing skills with an emphasis on purpose, audience, content, structure, style, and documentation methods. Students evaluate and reflect on their own writing while they study language in the context of academic discourse. The Plus designation denotes additional support and feedback for students whose placement scores warrant greater time and attention in the classroom. English 1101 Plus helps students learn important skills to be active and collaborative participants in their own education and the greater learning community at Columbus State. The course presents students with additional assignments to recognize their learning strengths and weaknesses and to equip them for success in the English classroom, in the college culture, and beyond. Students will develop successful study skills, learn the conventions of the college classroom, and practice noncognitive skills and confidence-building through expanded assignments as they engage in active and collaborative activities. The assignments they complete will challenge them to embrace the task of written communication and reading comprehension while receiving additional time, attention, and support from their instructor. Lab Fee: $1

ENGL 2200—Introduction to Literature (3)
Lecture: 3
Prerequisite(s): ENGL 1100 or; ENGL 2367 or; ENGL 2467 or; ENGL 2567 or; ENGL 2667 or; ENGL 2767.
The course introduces students to literary and textual study with attention to various forms of fiction, creative nonfiction, drama, poetry, and to essential literary terminology and practice. Students will learn to identify and define essential generic conventions and explain how literary texts function as examples of particular genres. Students will analyze literary texts using appropriate literary terminology and demonstrate their ability to perform original interpretations of a variety of literary texts. Lab Fee: $1

ENGL 2201—British Literature Medieval to 1800 (3)
Lecture: 3
Prerequisite(s): ENGL 1100 or; ENGL 2367 or; ENGL 2467 or; ENGL 2567 or; ENGL 2667 or; ENGL 2767.
A survey of canonical British literary works written between the Medieval period and 1800 with special attention to their literary qualities and conceptual context. Lab Fee: $1

ENGL 2202—British Literature 1800 to Present (3)
Lecture: 3
Prerequisite(s): ENGL 1100 or; ENGL 2367 or; ENGL 2467 or; ENGL 2567 or; ENGL 2667 or; ENGL 2767.
An introductory critical study of the works of major British writers of the 19th and 20th centuries. Lab Fee: $1

ENGL 2215—Magazine Publication I (2)
Lecture: 1, Lab: 3
Prerequisite(s): ENGL 1100.
Through hands-on practice with Spring Street, students learn the processes and techniques involved in the production of a literary magazine. Lab Fee: $5

ENGL 2216—Magazine Publication II (2)
Lecture: 1, Lab: 3
Prerequisite(s): ENGL 2215.
Students who have satisfactorily completed ENGL 2215, or who have comparable training and experience from another context, learn magazine production techniques using Spring Street or another college publication as a production laboratory. This practicum may be repeated once and is normally taken immediately after completing ENGL 2215. Lab Fee: $5

ENGL 2217—Writing to Publish (3)
Lecture: 3
Prerequisite(s): ENGL 2265 or; ENGL 2266 or; ENGL 2268 or; THEA 2283.
This course introduces students to procedures for preparing a manuscript for marketing and publication. Students select works for publication from a particular genre, submit to a series of peer reviews, revise and edit their work, and prepare the ancillary materials that go with a publish read manuscript. Repeatable for up to 6 total credits. Lab Fee: $5

ENGL 2220—Introduction to Shakespeare (3)
Lecture: 3
Prerequisite(s): ENGL 1100 or; ENGL 2367 or; ENGL 2467 or; ENGL 2567 or; ENGL 2667 or; ENGL 2767.
This course will examine representative works of Shakespeare, concentrating on a critical/analytical approach to the plays. Emphasis will also be placed upon Renaissance/Elizabethan dramaturgy and conventions; language and style; and the human experience represented in Shakespeare's histories, comedies, romances, and tragedies. Lab Fee: $1

ENGL 2240—Introduction to Science Fiction (3)
Lecture: 3
Prerequisite(s): ENGL 1100 or; ENGL 2367 or; ENGL 2467 or; ENGL 2567 or; ENGL 2667 or; ENGL 2767.
The historical roots and literary forms of science fiction are introduced. From their readings and viewing of films, students will write critiques, reports and research papers about science fiction as a literary genre. Lab Fee: $1

ENGL 2260—Introduction to Poetry (3)
Lecture: 3
Prerequisite(s): ENGL 1100 or; ENGL 2367 or; ENGL 2467 or; ENGL 2567 or; ENGL 2667.
ENGL 2260: Introduction to Poetry is a literature course (NOT a creative writing course) that will introduce students to the critical process of reading and responding to poetry from a historical, cultural, and gender-based perspective. Emphasis will be on traditional and nontraditional forms as well as mainstream and marginalized writers. Students will become familiar with appropriate terminology and will also encounter the poem as a whole piece of written discourse between poet and reader. Students will therefore conduct an ongoing oral and written dialogue with the poet (Who is the speaker? Who is the audience? What is the purpose?) and the poem (What is the message?). Students will articulate orally and in writing their own ideas of interpretation based on a close reading of the text and an informed perspective concerning the historical and cultural circumstances of its origin. Lab Fee: $1

ENGL 2261—Introduction to Fiction (3)
Lecture: 3
Prerequisite(s): ENGL 1100; ENGL 2367 or; ENGL 2467 or; ENGL 2567 or; ENGL 2667 or; ENGL 2767.
The course is an intensive study of selected short stories and a novel. Through critical reading, discussion and writing, students will become familiar with important themes and methodologies of fiction. In both short stories and novels, emphasis will be placed upon identifying and analyzing authors' particular uses of the traditional elements of fiction (structure, setting, point of view, etc.) to develop plot and character. Lab Fee: $5

ENGL 2265—Writing Fiction (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
This course introduces students to the art and craft of writing fiction. Emphasis is on the student's own work; however, students will also be required to study the works and writing processes of established writers, male and female, traditional and nontraditional, ancient and modern, and from diverse cultures. Students will keep a writer's journal, respond critically to the works of other students, create and revise a final long work (or combination of shorter works) of at least 4,000 words by the end of the term. In addition, students will be required to attend (virtually or in person) the public visual/auditory presentation of student fiction. Repeatable for up to 6 total credits. Lab Fee: $5

ENGL 2266—Writing Poetry (3)
Lecture: 3
Prerequisite(s): Minimum grade "C" or; ENGL 2260.
This course introduces students to the art and craft of writing poetry. Emphasis is on the student's own work; however, students will also be required to study the works, writing processes, critical commentary on, and oral delivery of established poets, male and female, traditional and nontraditional, ancient and modern, and from diverse cultures. Students will keep a writer's journal, respond critically to the works of other students, and create and revise a chapbook of 8-10 finished poems (12-20) pages by the end of the semester. Students will present selected poems from the chapbook at a public reading. Repeatable for up to 6 total credits. Lab Fee: $5

ENGL 2267—Creative Writing (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
Previously ENGL 2210. Students are introduced to the fundamental techniques of creative writing. Using peer group analysis and workshop techniques, students will develop short pieces in fiction, nonfiction, and poetry. Lab Fee: $5

ENGL 2268—Writing Creative Non Fiction (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
This course introduces students to the art and craft of writing creative nonfiction (feature writing, travel writing, memoirs, personal profiles, biographies, public relations, etc.). Emphasis is on the student?s own work; however, students will also be required to study the works, writing processes, critical commentary on, and oral delivery of established nonfiction writers, male and female, traditional and nontraditional, ancient and modern, and from diverse cultures. Students will keep a writer's journal, respond critically to the works of other students, create and revise a complete longer work (or a combination of shorter pieces) of at least 3,000-4,000 words by the end of the semester. Students will present a public reading of their work during the semester. Repeatable for up to 6 total credits. Lab Fee: $5

ENGL 2270—Introduction to Folklore (3)
Lecture: 3
Prerequisite(s): ENGL 1100 or; ENGL 2367 or; ENGL 2467 or; ENGL 2567 or; ENGL 2667 or; ENGL 2767.
This course looks at 1) oral folklore, e.g. folk music, proverbs, myths, legends, folktales; 2) customary folklore, e.g. superstitions, folk religion, folk festivals, folk customs; and 3) material and folk traditions, e.g. carving, quilting, architecture food ways, costumes. Activities include fieldwork, reading and writing assignments, group work and a special project. Lab Fee: $1

ENGL 2274—Introduction to Multicultural Literature (3)
Lecture: 3
Prerequisite(s): ENGL 1100 or; ENGL 2367 or; ENGL 2467 or; ENGL 2567 or; ENGL 2667 or; ENGL 2767.
This course introduces students to literary and textual study of both Western and Nonwestern cultures with attention to various forms of fiction, drama, poetry, and creative nonfiction, and to essential literary terminology and practice. Students will learn to identify and define essential genre conventions and explain how literary texts within those cultures function as examples of particular genres. Students will analyze literary texts within those cultures using appropriate literary terminology and demonstrate their ability to perform original interpretations of a variety of literary texts. Lab Fee: $1

ENGL 2276—Women in Literature (3)
Lecture: 3
Prerequisite(s): ENGL 1100 or; ENGL 2367 or; ENGL 2467 or; ENGL 2567 or; ENGL 2667 or; ENGL 2767.
This course surveys the works of British and American women's literature from the Middle Ages and Renaissance to the present. Students will use a comparative approach to study how women writers used a variety of themes and how they worked within the genres of essay, fiction, poetry, and drama. Topics include historical and social context of women's lives and writing; themes of gender, race, and sexuality in literature; application of popular culture to examine gender relations; critical theory application to literary analysis of text. Course activities include collaborative discussion to reconsider literary analysis of women's writing, use of academic and popular culture research in writing assignments, peer review, regular reading response assignments and class discussions, examinations on course readings, film analysis, and an exploration of underrepresented literary voices by women writers of color. Lab Fee: $1

ENGL 2280—The English Bible As Literature (3)
Lecture: 3
Prerequisite(s): ENGL 1100 or; ENGL 2367 or; ENGL 2467 or; ENGL 2567 or; ENGL 2667 or; ENGL 2767.
This course offers a literary approach to the Bible in English. Students read, in a modern English translation, much of the Old Testament and the New Testament, as well as parts of the Apocrypha. The approach is literary, historical, and cultural. The Bible is read as an anthology of writings composed, compiled, translated, and edited over several centuries, by many individuals, and as a book that has an enormous effect on our culture, art, and civilization. Lab Fee: $1

ENGL 2281—African American Literature (3)
Lecture: 3
Prerequisite(s): ENGL 1100 or; ENGL 2367 or; ENGL 2467 or; ENGL 2567 or; ENGL 2667 or; ENGL 2767.
This course is a survey of African-American Literature from 18th century beginnings to the present. It includes a study of slave narratives, folklore, drama, poetry and short fiction. Discussions will consider the literature from the perspectives of gender, history, politics, and culture. Intensive reading and writing assignments will include response journals, documented critical papers, and essay exams. Activities may include peer review and collaborations, presentations (oral and visual), and guest speaker appearances. Lab Fee: $5

ENGL 2290—Colonial and U.S. Literature to 1865 (3)
Lecture: 3
Prerequisite(s): ENGL 1100 or; ENGL 2367 or; ENGL 2467 or; ENGL 2567 or; ENGL 2667 or; ENGL 2767.
This course surveys the works of major writers in U.S. literature from the pre-colonial period to U.S. Civil War. Primary sources include nonfiction letters, journals, and histories, short fiction, drama, poetry, the novel, and other forms. Topics include basic knowledge of literary terminology and techniques of textual analysis as well as contextual examination of colonialism; political, philosophical, and theological change; aesthetic and literary movements; race, gender, citizenship, and other identity categories; slavery and Civil War. Course activities include reading and study of primary sources; contextual examination through literary research and interpretation strategies; class discussion, and regular writing assignments. This course fulfills the requirements for a Literature General Education course in the Ohio Transfer 36. Lab Fee: $1

ENGL 2291—U.S. Literature 1865 to Present (3)
Lecture: 3
Prerequisite(s): ENGL 1100 or; ENGL 2367 or; ENGL 2467 or; ENGL 2567 or; ENGL 2667 or; ENGL 2767.
This course examines significant works of U.S. literature from 1865 to the present with attention to the breadth and diversity of U.S. literary history. Lab Fee: $1

ENGL 2367—Composition II (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
English 2367 is an extension of English 1100. It is an intermediate writing-centered course that recognizes linguistic and cultural diversity through course materials and activities. Assignments invite students to analyze the contexts of writing tasks and compose for different purposes, audiences, genres, mediums, and technologies. Students further engage in critical questioning, reading, and researching as they plan, draft, review, revise, and reflect on their writing. The course helps students refine processes and habits of mind that they can apply to the diverse writing situations they'll encounter in college and beyond. Lab Fee: $1

ENGL 2467—COMP II: Writing About U.S. Race & Ethnicity (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
ENGL 2467 is an intermediate composition course that extends and refines skills in expository and argumentative writing, critical reading, and critical thinking. This course also refines skills in researching a topic, documenting sources, and working collaboratively. Course reading and writing assignments may be thematically organized. This course theme focuses on issues of race and ethnicity in the U.S. Lab Fee: $1

ENGL 2567—Comp II Writing about Gender & Identity (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
English 2567 is an intermediate composition course that extends and refines skills in expository and argumentative writing, critical reading, and critical thinking. This course also refines skills in researching a topic, documenting sources using APA or MLA style format, and working collaboratively. Course reading and writing assignments may be thematically organized. This section focuses on issues of gender and gender roles. Lab Fee: $1

ENGL 2667—Comp II American Working-Class Identity (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
ENGL 2667 is an intermediate composition course that extends and refines skills in expository and argumentative writing, critical reading, and critical thinking. This course also refines skills in researching a topic, documenting sources, and working collaboratively. Course reading and writing assignments may be thematically organized. This section focuses on the American working-class identity. Lab Fee: $3

ENGL 2767—Comp II Writing About Science/ Technology (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
ENGL 2767: Science and Technology in American Culture is an intermediate composition course that extends and refines skills in expository and argumentative writing, critical reading, and critical thinking. This course also refines skills in researching a topic, documenting sources, and working collaboratively. Course readings and writing assignments will be thematically organized to focus on science and technology in American culture. Lab Fee: $3

ENGL 2994—SPT: English (1-3)
Lecture: 1 - 3
This course offers special topics in English language or literature designed to meet specific needs Lab Fee: $0

English as a Second Language

ESL 159—Public Speaking for Non-Native Speakers (3)
Lecture: 3
Prerequisite(s): ESL 0189 or; Placement into ESL 0190.
ESL 0159 prepares students whose academic language is not English to participate effectively in classroom and career public speaking. Students will study and practice public speaking elements and techniques. Conduct some research in preparation for informative and persuasive speeches, which are presented individually and in groups. Students receive feedback from the instructor and classmates and are video-taped for self-analysis. Credit does not count toward graduation in any degree program. Lab Fee: $11

ESL 165—Navigating College in the US (2)
Lecture: 2
Prerequisite(s): Placement into ESL 0188 or higher.
ESL 0165 introduces the non-native college student to the expectations of college life and the specific campus of CSCC. Students explore topics such as student/teacher relationships, study skills, GPAs, and Blackboard. Lab Fee: $2

ESL 168—Critical Reading Skills (4)
Lecture: 4
Prerequisite(s): Placement into ESL 0188 or higher.
Critical Reading Skills is designed to help students master higher-order reading skills which will enable them to become effective and efficient academic readers. Through fiction and non-fiction readings, students will build skills in critical analysis, inferring, note taking and test-taking strategies, and vocabulary building. Lab Fee: $11

ESL 169—College Read: Non-Fiction (4)
Lecture: 4
Prerequisite(s): ESL 0188 or; Placement into ESL 0189.
College Reading: Non-Fiction helps students gain confidence in comprehending, discussing and writing about freshman- and sophomore-level academic texts. Students are exposed to a variety of college readings in different disciplines. Lab Fee: $11

ESL 170—College Reading: Fiction (4)
Lecture: 4
Prerequisite(s): ESL 0189 or; Placement into ESL 0190.
This course gives ESL students an opportunity to read various authentic (unedited) literary works in English including short stories, plays and short novels. Students will explore the plot, settings, structures and character development. Students will build vocabulary as well as analyze cultural settings. Analysis will come through journals, presentations, group discussions and class discussions. Lab Fee: $11

ESL 177—Spelling Skills (2)
Lecture: 2
Prerequisite(s): Placement into ESL 0188 or higher.
ESL Spelling Skills introduces non-native students to techniques which increase basic spelling skills in English. Students will practice spelling rules and patterns, word divisions, prefixes, roots and suffixes. Lab Fee: $7

ESL 178—College Vocabulary I (2)
Lecture: 2
ESL 0178 is the first of two courses based on the Academic Word List. Students read text containing the target vocabulary and work with the vocabulary through various oral and written exercises. Lab Fee: $7

ESL 179—College Vocabulary II (2)
Lecture: 2
ESL 0179 is the second of two courses based on the Academic Word List. Students read text containing the target vocabulary and work with the vocabulary through various oral and written exercises. ESL 0179 may be taken first, though reading and vocabulary difficulty is greater than in ESL 0178. Lab Fee: $7

ESL 188—Academic Grammar and Writing I (6)
Lecture: 6
Prerequisite(s): Placement into ESL 0188.
ESL 0188 is the first of three academic English preparation classes. It focuses on high intermediate grammar instruction to increase reading and writing proficiency. Students work at the paragraph level. Lab Fee: $13

ESL 189—Academic Grammar and Writing 2 (6)
Lecture: 6
Prerequisite(s): ESL 0188 or; Placement into ESL 0189.
ESL 0189 is the second of three academic English preparation classes. It focuses on advanced grammar instruction to increase reading and writing proficiency. Students write both paragraphs and essays. Lab Fee: $13

ESL 190—Introduction to College Composition (4)
Lecture: 4
Prerequisite(s): ESL 0189 or; Placement into ESL 0190.
ESL 0190 is the last of academic English preparation classes. It focuses on essay writing. Lab Fee: $11

ESL 193—Independent Study: ESL (1-4)

ESL 0193 provides individual study opportunities for special topics in English for non-native speakers. Lab Fee: $2

ESL 194—SPT: English as a Second Language (1-4)
Lecture: 1 - 4
ESL 0194 offers students a detailed examination of selected topics of interest in English as a Second Language. Special topics courses are offered to meet the special needs or interests of a group of students and pilot new courses. Lab Fee: $2

Environmental Science, Safety & Health

ESSH 1101—Intro to Environ Science, Safety, Health (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course provides an overview of environmental science, with an emphasis on environmental issues and solutions to environmental problems. Topics include ecological concerns, human health effects from toxic exposures, energy use, air, water and soil pollution, solid and hazardous waste issues, and occupational safety and health.

ESSH 1130—Environmental Laws & Regulations (3)
Lecture: 3
This course presents a study of American political institutions and the evolution of environmental laws, as well as a study of federal, state and local codes and regulations as they apply to the protection of the environment. Lab Fee: $15

ESSH 1140—Industrial/Municipal Pollution Control (3)
Lecture: 2, Lab: 2
This course is an overview of the management, treatment and disposal practices utilized for pollution control. It addresses the nature of pollution and provides an introduction to air pollution control devices, wastewater treatment techniques, solid and hazardous waste management, treatment and disposal, recycling and pollution prevention. Lab Fee: $18

ESSH 1160—OSHA 10 Hr Construction Safety & Health (1)
Lecture: 1
This course covers the approved Occupational Safety and Health Administration (OSHA) curriculum for the 10-hour Outreach Training Program for Construction Industry Safety and Health. Topics include introduction to OSHA, electrical safety, fall protection, personal protective and lifesaving equipment, materials handling, storage, use and disposal, equipment safety, excavation, stairways and ladder safety and other applicable OSHA standards. OSHA 10 Hour Construction Safety & Health - US Department of Labor completion cards will be issued to individuals successfully completing the class. Lab Fee: $33

ESSH 1170—OSHA 10Hr Gen Ind Safety & Health (1)
Lecture: 1
This course covers the approved OSHA curriculum for the 10-hour Outreach Training Program for General Industry Safety and Health. Topics include introduction to OSHA, walking and working surfaces, exit routes, emergency action plans, fire prevention plans, fire protection, fall protection, electrical safety, and other applicable safety topics as recommended by OSHA. U.S. Department of Labor completion cards will be issued to individuals successfully completing the class. Lab Fee: $15

ESSH 1580—Environmental Site Assessment (2)
Lecture: 1, Lab: 2
This course explores environmental site assessments, including Phase I ESAs for real estate transactions. Environmental regulations and standard practices will be applied in the analysis of a site-specific project. Additional property assessment issues addressed in this class include Environmental Impact Statements, wetlands, asbestos, lead, mold and radon. Lab Fee: $15

ESSH 1650—OSHA 30 Hr Construction Safety & Health (2)
Lecture: 1, Lab: 2
This course covers the approved Occupational Safety and Health Administration (OSHA) curriculum for the 30-hour Outreach Training Program for the Construction Industry Safety and Health. Topics include an introduction to OSHA, safety and fall protection, health hazards, material handling, equipment safety, concrete and masonry construction, welding and cutting, excavation, stairways and ladder safety and other applicable OSHA standards. U.S. Department of Labor Course completion cards will be issued to individuals successfully completing the class. Lab Fee: $15

ESSH 1700—OSHA 30 Hr General Ind Safety & Health (2)
Lecture: 1, Lab: 2
This course covers the approved OSHA curriculum for the 30-hour Outreach Training Program for General Industry Safety & Health. Topics include an introduction to OSHA, hazardous materials, walking and working surfaces, fire protection, personal protective equipment, confined space, lockout/tagout, machine guarding, welding and brazing safety, electrical safety, industrial hygiene and other applicable OSHA standards. U.S. Department of Labor completion cards will be issued to individuals successfully completing the class. Lab Fee: $15

ESSH 2111—Hazardous Materials Management (3)
Lecture: 2, Lab: 2
This course presents an overview of the management practices for hazardous materials and hazardous waste. The properties of hazardous materials are covered. An emphasis will be placed on DOT, OSHA and EPA regulatory requirements. Lab Fee: $38

ESSH 2120—Environmental Aspects of Soil (3)
Lecture: 2, Lab: 2
This course offers a multi-disciplinary overview of soil science. Topics include soil formation and development, classification systems, soil mechanics, soil chemistry, soil hydrology, soil nutrients, soil erosion, soil physics, soil contamination and soil remediation methods. Soil characteristics will be explored by means of laboratory examination and soil testing techniques. Lab Fee: $18

ESSH 2220—Drinking Water Treatment (2)
Lecture: 1, Lab: 2
Prerequisite(s): CHEM 0100 or high school chemistry; Placement into MATH 1025 or higher.
This course provides an overview of drinking water treatment, and is designed to assist in the preparation of the State of Ohio Class I Water Operator exam. The course will emphasize water quality, methods of water treatment and laboratory processes. Water treatment theory and the math involved in taking the state exam will be emphasized. Lab Fee: $20

ESSH 2230—Wastewater Treatment Techniques (2)
Lecture: 1, Lab: 2
Prerequisite(s): CHEM 0100 or high school chemistry; placement into MATH 1025 or higher.
This course provides an overview of the treatment of municipal wastewater, and is designed to assist in the preparation of the State of Ohio Class I Wastewater Operator exam. The course will emphasize wastewater treatment processes and equipment, as well as an understanding of sewer systems and laboratory processes. The wastewater treatment theory and the math involved in taking the state exam will be emphasized. Lab Fee: $20

ESSH 2240—Environmental Hydrology (3)
Lecture: 2, Lab: 2
Prerequisite(s): MATH 1025 or higher.
This course addressed the occurrence, movement, and behavior of water in the hydrologic cycle. The concepts covered include atmospheric processes, surface water and ground water, and the ways in which water resources are utilized and/or contaminated. Lab Fee: $23

ESSH 2282—Sustainable Bldg Strategies (2)
Lecture: 2
This course is an introduction to the field of environmentally-friendly construction. Sustainable architecture and building site principles will be presented, including strategies for energy-efficient heating and cooling, "green" building materials and methods, alternative energy sources, water efficiency and waste management. Topics include the need for sustainability, energy efficient design, construction and controls, site selection, passive solar heating and cooling, "green" building materials and methods, alternative energy sources and water efficiency and waste management. Lab Fee: $15

ESSH 2283—Ecological Residential Construction (2)
Lecture: 1, Lab: 2
This course addresses the important aspects of building green homes. The topics include environmentally friendly design, the use of alternative materials, and the utilization of sustainable systems. Lab Fee: $15

ESSH 2400—Environmental Analytical Methods (2)
Lecture: 1, Lab: 3
Prerequisite(s): CHEM 0100 or; CHEM 1111; MATH 1025 or higher.
This course provides an overview of the qualitative and quantitative analysis of environmental samples. An explanation of laboratory techniques will be provided. The emphasis will be on the application of certain analytical methods commonly used in the environmental industry. Lab Fee: $30

ESSH 2440—Environmental Chemistry (3)
Lecture: 2, Lab: 2
Prerequisite(s): CHEM 1111.
This course provides an understanding of the chemical processes that occur in the environment, including water, earth and atmospheric chemistry. There is an emphasis on the transport and fate of pollutants in the environment. Related laboratory exercises are performed. Lab Fee: $18

ESSH 2500—Environmental Sampling (3)
Lecture: 2, Lab: 3
Environmental sampling covers the techniques and methods used in sampling of environmental media, especially for field investigations. Emphasized is the sampling of air, surface water, ground water, soil and waste. Topics include the regulatory framework, background research, project coordination, drilling techniques, monitoring well installation, the utilization of field instruments, decontamination, and supplemental investigative techniques. Lab Fee: $20

ESSH 2520—Hlth/Safety Training for Haz Waste Ops (2)
Lecture: 1, Lab: 3
This course satisfies the OSHA training requirement in 29 CFR 1910.120(e), commonly referred to as the 40 Hour HAZWOPER training. This is a health and safety training course for individuals who may be involved in the investigation, remediation and operation of hazardous waste sites. Students that successfully complete the course will receive a certificate. Topics include hazardous materials chemistry, toxicology, air monitoring, respiratory protection, protective clothing, decontamination and appropriate hands-on activities. Students enrolled in the distance-learning version of this course will be required to come to campus for the completion of hands-on activities, and for the final exam. Lab Fee: $100

ESSH 2530—Applied Environmental Engineering (2)
Lecture: 1, Lab: 2
This course introduces engineered environmental systems and practical applications of their operation and maintenance. Topics include flow diagrams, schematics, plumbing and piping, pumps, blowers, electrical systems, instrumentation, flow measurements, process control, troubleshooting and safety for engineered systems. Lab Fee: $2

ESSH 2540—Environmental Restoration (3)
Lecture: 2, Lab: 2
Prerequisite(s): ESSH 2500.
This course addresses the ways in which environmental systems are restored, emphasizing subsurface remediation techniques. Course topics include the regulatory framework, clean-up goals, contaminant chemistry and transport, soil and groundwater remediation techniques, water and air treatment technologies, and risk assessment. Lab Fee: $20

ESSH 2550—Air Pollution and Monitoring (3)
Lecture: 2, Lab: 2
Prerequisite(s): CHEM 1111.
This course covers the fundamentals of air pollution, such as sources, important atmospheric aspects and the effects of air pollutants. It also focuses on EPA methods for stack and ambient sampling of various air contaminants. Other topics include continuous emission monitoring, air pollution control options, and applicable permitting and reporting requirements. Lab Fee: $35

ESSH 2560—Hazardous Materials Refresher Training (0.5)
Lecture: 0.5
This course provides the refresher training for hazardous waste site workers and emergency responders who have completed the 24- or 40-hour HAZWOPER courses and complies with the 29 CFR 1910.120 refresher training requirements. Emphasis is placed on a review of the standard and on relevant changes in OSHA requirements. This is a repeatable course. Lab Fee: $50

ESSH 2750—Industrial Hygiene (3)
Lecture: 2, Lab: 2
Prerequisite(s): CHEM 1111.
This course is an overview of the science of industrial hygiene and describes the process of investigating and examining workplace hazards and how those hazards are abated. The laboratory will emphasize the use of instrumentation and important calculations. Topics include introduction to industrial hygiene, principles of toxicology, occupational safety and health standards, occupational skin and noise disorders, indoor air quality, ergonomics, engineering and administrative controls, and personal protective equipment. Lab Fee: $18

ESSH 2900—ESSH Field Experience (2)
Field Experience/Internship: 24
The Field Experience course requires an off-campus work experience in the environmental or safety services industry. This augments the formal education received in the degree program with actual work conditions and job experience. "N" credit will not be allowed for this course.

ESSH 2994—SPT: Envir Sci, Safety, & Health (1-4)
Lecture: 1 - 4
This course explores special topics from the environmental or safety industry designed to meet specific needs. Lab Fee: $0

Finance

FMGT 1101—Personal Finance (3)
Lecture: 3
This course presents a lifetime program of money management for the individual. Topics such as budgets, savings, job search, buying a house, insurance, mutual funds, stock market, real estate investments, taxes, and estate planning are covered. Students will be able to write a basic personal financial plan. Lab Fee: $4

FMGT 1211—Investments (3)
Lecture: 3
This course examines investments for the individual with emphasis on the securities markets. Topics presented include risk and return tradeoffs, sources of investment information, stocks, bonds, mutual funds, options and tax considerations. Prior completion of FMGT 1101 is recommended. Lab Fee: $4

FMGT 2200—Foundations of Banking (3)
Lecture: 3
This course focuses on preparing employees to work in a branch bank or corporate headquarters of a bank, by teaching applied basics and working in a customer service role in a bank. It varies greatly from FMGT 2202, Money and Banking, which is a course that focuses more on banking theory relating to economics. Units include titles like "Banks and Their Customers", "Banks as Service Providers", "Deposit Accounts", "Lending", "Building Relationships", and "Personal Financial Planning". Lab Fee: $3

FMGT 2201—Corporate Finance (3)
Lecture: 3
Prerequisite(s): ACCT 1211.
Course is an introduction to the principles of financial management of private business firms. Topics covered include financial analysis, financial planning, working capital management, financial leverage, sources of financing, capital budgeting and capital markets. Prior completion of ACCT 1211 with a grade of "C" or better is recommended. Lab Fee: $4

FMGT 2202—Money and Banking (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
A study of the operation, organization, and economics of U.S. monetary and banking systems. Current trends, the monetary policy process, and the regulation of financial markets also are covered. Prior completion of ECON 2200 with a grade of "C" or better is recommended. Lab Fee: $4

FMGT 2232—Principles of Insurance (3)
Lecture: 3
Prerequisite(s): FMGT 1101 or; BMGT 1101.
This course introduces the principles of insurance and risk management, including terminology and definitions as used in the industry. The foundations, applications and selection of personal, life, health, and commercial insurance and liability are explored. Students must pass this course with a 'C' or better.

FMGT 2242—International Finance (3)
Lecture: 3
Prerequisite(s): FMGT 1101.
This course covers the multinational firm, globalization, balance of payments, market for foreign exchange, international monetary system, and global capital markets. Also covered is the study of global debt and equity markets to optimize a firm's financial structure while minimizing foreign exchange exposure. Lab Fee: $4

FMGT 2299—Finance Capstone (3)
Lecture: 3
Prerequisite(s): FMGT 1101 and FMGT 1211 and FMGT 2201 and FMGT 2202.
The student receives exposure to current developments in finance and economics through projects and research papers. FMGT 2299 is designed to serve as a capstone course for graduating students. It recommended that all prerequsite courses be completed with a grade of "C" or better.

FMGT 2901—Finance Practicum/Seminar (3)
Seminar: 1, Practicum: 14
Prerequisite(s): FMGT 1101 and FMGT 1211 and FMGT 2201 and FMGT 2202.
This course offers a practical work experience in which the student is expected to perform various financial procedures. Emphasis is placed upon analyzing and understanding the work environment, industry and nature of the employing organization

Fire Science

FIRE 1100—Principles of Emergency Services (3)
Lecture: 3
This course provides an overview to fire protection and emergency services; career opportunities in the fire protection and related fields; culture and history of the emergency services; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protections systems; introduction to fire strategy and tactics; life safety initiatives. Lab Fee: $0

FIRE 1102—Hazardous Material Awareness & Operation (3)
Lecture: 3
This course provides basic chemistry relating to the categories of hazardous materials including recognition, identification, reactivity and health hazards encountered by emergency services. Lab Fee: $8

FIRE 1103—Hazardous Materials Technician Level (3)
Lecture: 2, Lab: 3
Prerequisite(s): FIRE 1102; FIRE-1102.
This course is designed to build upon the training and knowledge that you have obtained from participating in the "Ohio HAZMAT & WMD Technician" courses. It is divided into two modules: Module I will address the standards established in NFPA 472 Chapter 7 "Competencies for Hazardous Materials Technicians" and will meet all the competencies as established by the Occupational Safety and Health Administration (OSHA 29 CFR 1910.120) and the US Environmental Protection Agency (EPA 40 CFR part 311). Module 2 will address the Performance Level B (Technician) guidelines for law enforcement and fire service personnel and guidelines for hazardous materials technicians as found in the Emergency Responder Guidelines published by the Office of Domestic Preparedness (ODP), and give advanced info about CBRNE weapons. Lab Fee: $150

FIRE 1104—Principles Fire & Emer Safety & Survival (2)
Lecture: 2
Prerequisite(s): FIRE 1121 and FIRE 1122 or; Documentation of Certification or Equivalency.
This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services. Lab Fee: $0

FIRE 1105—Strategies and Tactics (3)
Lecture: 3
Prerequisite(s): FIRE 1121 and FIRE 1122; FIRE-1121, FIRE-1122.
This course provides the principles of fire ground control through utilization of personnel, equipment, and extinguishing agent.

FIRE 1106—Fire Behavior & Combustion (2)
Lecture: 2
Prerequisite(s): FIRE 1121 and FIRE 1122; FIRE-1121, FIRE-1122.
This course explores the theories and fundamentals of how and why fires start, spread and are controlled.

FIRE 1107—Fire Protection Hydraulics/Water Supply (3)
Lecture: 2, Lab: 2
Prerequisite(s): FIRE 1121 and FIRE 1122; FIRE-1121, FIRE-1122.
This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems. Lab Fee: $20

FIRE 1108—Fire Prevention (3)
Lecture: 3
Prerequisite(s): FIRE 1121 and FIRE 1122 or; Documentation of Certification or Equivalency.
This course provides fundamental knowledge relating to the field of fire prevention. Topics include the following: history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use and application of codes and standards, plans review, fire inspections, fire and life safety education, and fire investigation. Lab Fee: $0

FIRE 1109—Bldg Construct Fire Service Protection (3)
Lecture: 3
Prerequisite(s): FIRE 1121 and FIRE 1122.
This course provides the components of building construction related to firefighter and life safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies. Lab Fee: $0

FIRE 1110—Fire Protection Systems (2)
Lecture: 2
Prerequisite(s): FIRE 1121 and FIRE 1122 or; Documentation of Certification or Equivalency.
This course provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers. Lab Fee: $0

FIRE 1112—Customer Service for Emergency Services (3)
Lecture: 3
This course studies the psychology of relations between public service employees and the general population. It presents the policies and practices of community relations as they apply to public service agencies. Current national and local community problems are explored. Lab Fee: $0

FIRE 1121—Firefighter I (7)
Lab: 12, Lecture: 3
Prerequisite(s): FIRE 1122.
This course covers all of the basic performance and knowledge objectives in the current NFPA Standard 1001 for Firefighter I and prepares individuals to perform duties while wearing required protective equipment. These duties include but are not limited to: fire department operations, firefighting equipment operation and maintenance, principles of combustion and fire behavior safety, recognition of types of fires and applying the correct methods for extinguishment, personal protective equipment, ventilation, forcible entry, loss prevention, operations level HAZMAT, fire and life safety initiatives, fire prevention and public relations. Completion of a Health Record is required PRIOR TO registration. Registration for FIRE 1121 requires co-registration for FIRE 1122 which runs concurrently. Successful completion of FIRE 1121 & FIRE 1122 meets the eligibility requirements to take the State of Ohio certification exam for Firefighter I & II. Lab Fee: $325

FIRE 1122—Firefighter II (5)
Lecture: 1, Lab: 8
Prerequisite(s): FIRE 1121.
This course covers all of the basic performance and knowledge objectives in the current NFPA Standard 1001 for Firefighter II, including but not limited to: fire department organization, safety, fire alarms, fire behavior, extinguishment, ropes, ladders, hose streams, fire control and rescue. Completion of a Health Record is require PRIOR TO registration. Registration for FIRE 1122 requires registration for FIRE 1121 which runs concurrently. Successful completion of FIRE 1121 & FIRE 1122 meets the eligibility requirements to take the State of Ohio certification exam for employment as a firefighter in the State of Ohio. Lab Fee: $0

FIRE 1201—Introduction to Rescue (3)
Lecture: 3
This course includes coverage of the awareness level requirements found in the 2009 Edition of NFPA 1670, Standard on Operations and Training for Technical search and Rescue Incidents, as well as some of the general job performance requirements found in the 2008 Edition of NFPA 1006, Standard for Technical Rescuer Professional Qualifications. Introduction to Rescue presents in-depth coverage of structural collapse, confined space and trench rescue, vehicle rescue, and water and wilderness rescue, allowing the student to approach any rescue situation safely and confidently. The student will learn to effectively manage the initial stages of a rescue incident without becoming a victim themselves. Lab Fee: $0

FIRE 1202—Rope Rescue Technician (3)
Lecture: 2, Lab: 3
Prerequisite(s): FIRE 1201; FIRE-1201.
This course meets Awareness, Operations and Technician level requirements outlined in NFPA 1670, Standard Operations and Training for Technical Search and Rescue Incidents, as well as Chapters 5 and 6 of NFPA 1006, Standard for Rescue Technician Professional Qualifiations Level II. The student will work as a team member while designing and executing multiple rope rescue systems for accessing and transporting a patient in the vertical environment. Lab Fee: $40

FIRE 1203—Surface & Ice Rescue Technician (2)
Lecture: 1, Lab: 2
Prerequisite(s): FIRE 1201 and FIRE 1202; FIRE-1201, FIRE-1202.
The student will understand the 3 NFPA training compliance guidelines and know the limitations of each. Incident Command System knowledge will be covered. Hypothermia card, Patient handling, Throw Bag techniques, Self-Rescue Skills and proper use of Specialized Ice Rescue Equipment are all critical components of this training, as well. This course is intended to further develop skills covered in the Level I class. Sub-Surface Recovery, Multiple Victim Rescue, Scene Assessment and Application Skills for Multiple Scenarios are covered in great detail. Each student is faced with potential rescue situations including "live victims" and allowed to handle the scene. Meets NFPA 1006 - Standard for Technical Rescuer Professional Qualifications Level II and NFPA 1670 - Standard on Operations and Training for Technical Search and Rescue Incidents Level II and the Ohio Boating Safety Course. Successful completion of FIRE 1202 to the Operations Level is contingent upon a combined score of 70%. To receive certification at the Technician Level in FIRE 1202, the student shall attain a combined score of 75% and successfully complete, prior to the final exam, a swim test as follows: swim 500 yards without stopping, swim 700 yards using mask and snorkel, swim 100 yards towing an inert mannequin, tread water for 15 minutes and retrieve a 10 pound brick from the bottom of the deep end of the pool. Lab Fee: $100

FIRE 1204—Swift Water Rescue Technician (2)
Lecture: 2, Lab: 2
Prerequisite(s): FIRE 1201 and FIRE 1202; FIRE-1201 and FIRE-1202.
This course will prepare emergency response personnel to perform rescue operations in moving water emergencies. Topics will include planning, personal protective equipment, search parameters, incident action plans, surface rescue techniques, advanced rope systems, and use of watercraft and helicopters in water rescue operations. Students will participate in moving water exercises to demonstrate proficiency in appropriate skills. This course meets Chapter 9, Technician Level, of NFPA 1670, Standards on Operations and Training for Technical Search and Rescue Incidents (2004), as well as Chapter 7, Surface Water Rescue, of NFPA 1006, Rescue Technician Professional Qualifications (2003) and the Ohio Boating Safety Course. Successful completion of FIRE 1202 is contingent upon a combined score of 70%. To receive certification at the Technician Level, the student shall attain a combined score of 75% and successfully complete, prior to the final exam, a swim test as follows: swim 500 yards without stopping, swim 700 yards using mask and snorkel, swim 100 yards towing an inert mannequin, tread water for 15 minutes and retrieve a 10 pound brick from the bottom of the deep end of the pool. Lab Fee: $40

FIRE 1205—Confined Space Rescue Technician (2)
Lecture: 1, Lab: 2
Prerequisite(s): FIRE 1201 and FIRE 1202; FIRE-1201 and FIRE-1202.
This course meets 29 CFR 1910.146 requirements, NFPA 1670, Standard for Operations and Training for Technical Search and Rescue Incidents and NFPA 1006, Standard for Rescue Technician Professional Qualifications Level II. The student will review the federal and state regulations for confined space, high angle, and hazardous materials incidents, the use of specialized equipment for atmospheric monitoring, and commercial and rescuer constructed retrieval systems. This course includes simulated rescue evolutions requiring mixture of all three disciplines, challenging the responder to deal with rescuing the rescuer in a contaminated atmosphere. Special emphasis is given to rescuer safety, patient care, decontamination, and the construction and operation of retrieval systems. Lab Fee: $30

FIRE 1206—Trench Rescue Technician (2)
Lecture: 1, Lab: 2
Prerequisite(s): FIRE 1201 and FIRE 1202; FIRE-1201 and FIRE-1202.
This course will prepare emergency response personnel to perform rescue operations in trench and excavation emergencies of depths greater than 8 feet. The following topics will be covered: identifying the construction, application, limitations , and removal of supplemental sheeting and shoring systems; manufactured trench boxes and isolation devices; adjusting protective systems based on digging operations and environmental conditions; evaluating existing and potential conditions; coordinating the use of heavy equipment; and patient management. The course meets the requirements of 29 CFR 1926 Subpart P, as well as Chapter 11.4, Technician Level, of NFPA 1670, Standard on Operations and Training for Technical Search and Rescue Incidents Levels I & II and Chapter 11, Trench Rescue, of NFPA 1006, Standard for Rescue Technician Professional Qualifications Level II. Lab Fee: $40

FIRE 1207—Structural Collapse Rescue Technician (2)
Lecture: 1, Lab: 3
Prerequisite(s): FIRE 1201 and FIRE 1202; FIRE-1201 and FIRE-1202.
This course will prepare emergency response personnel to perform rescue operations in structural collapse emergencies. The following topics will be covered: determination of potential victim location; development of an incident action plan; search methods; coordination and use of heavy equipment; and patient management. Students will participate in structure stabilization methods, search of collapsed structures, and breaching of structural components. This course meets Chapter 5.4, Technician Level I & II of NFPA 1670, Standard on Operations and Training for Technical Search and Rescue Incidents (2004) as well as Chapter 10, Structural Collapse Rescue, of NFPA 1006, Rescue Technician Professional Qualifications (2003) Levels I & II. Lab Fee: $30

FIRE 1208—Vehicle and Machinery Rescue Technician (2)
Lecture: 1, Lab: 3
Prerequisite(s): FIRE 1201 and FIRE 1202; FIRE-1201 and FIRE-1202.
This course presents the student with opportunities to develop specific rescue skills applicable to common passenger vehicles and simple small machines (Level I) as well as rescue skills applicable to commercial or heavy vehicles, incidents involving complex extrication processes or multiple uncommon concurrent hazards, and incidents involving heavy machinery (Level II). Specific rescue skills include planning for a vehicle or machinery incident, performing on-going incident size-up, establishing scene safety zones, establishing fire protection, stabilizing vehicles or machines, isolating potentially harmful energy sources, determining access and egress points, creating access and egress openings, disentangling victims, removing packaged victims, and terminating vehicle or machinery rescue incidents. This course meets Sections 6.4.1 and 6.4.2 of NFPA 1001: Chapter 4, Chapter 5 (Sections 5.1 through 5.5), and Chapter 10 of NFPA 1006 Standard for Technical Rescuer Professional Qualifications Level II and Chapters 4, 8, and 12 of NFPA 1670 Standard Operations and Training for Technical Search and Rescue Incidents Levels I & II. Lab Fee: $30

FIRE 1209—Farm Rescue Technician (2)
Lecture: 1, Lab: 3
Prerequisite(s): FIRE 1202 and FIRE 1208; FIRE-1202 and FIRE-1208.
This course addresses the unique hazards and complicated extrication of victims trapped in farm machinery and/or structures. The course includes detailed study of the classifications and incidents, proper procedures for stabilizing farm machinery, and gaining access to and extrication of farm machinery incidents. Participants will be provided opportunities to use these techniques in practical applications. This course meets NFPA 1006, Standard for Technical Rescuer Professional Qualifications Level II. Lab Fee: $30

FIRE 2001—Fire Service Company Officer (3)
Lecture: 3
Prerequisite(s): FIRE 1121 and FIRE 1122; FIRE-1121, FIRE 1122.
Introduces supervisory techniques as applied to public service personnel. Course covers the need for job descriptions and job procedures, reports, oral and written directions, work evaluation, meetings, discipline, and conference leaders.

FIRE 2002—Fire Safety Inspector (3)
Lecture: 3
Prerequisite(s): FIRE 1121 and FIRE 1122; FIRE-1121, FIRE 1122.
Participant will gain an understanding of the fire inspector's role in code enforcement, general fire prevention practices, fire safety requirements related to HAZ MAT, electrical systems and fire protections systems. The student will learn the skills necessary to conduct fire safety inspections. This class meets certification requirements established by the Ohio Department of Public Safety and NFPA 1031, Fire Inspector Professional Qualifications. Lab Fee: $10

FIRE 2003—Fire Cause and Origin Investigation (3)
Lecture: 3
Prerequisite(s): FIRE 1121 and FIRE 1122.
This course is intended to provide the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives, and types of fire causes. Lab Fee: $0

FIRE 2005—Principles of Fire Scene Command (3)
Lecture: 3
Prerequisite(s): FIRE 1121 and FIRE 1122; FIRE-1121, FIRE 1122.
This course presents NFPA Incident Management System curriculum concepts. The course content is tailored to the person looking to begin a career in firefighting, and the person at the FF level who has no direct command responsibility, but must understand the principles of incident command.

FIRE 2006—Legal Aspects of Emergency Services (3)
Lecture: 3
This course will address the Federal, State, and local laws that regulate emergency services and include a review of national standards, regulations, and consensus standards.

FIRE 2094—SPT: Emergency Services (0.5-7)
Lecture: 0.5
Prerequisite(s): FIRE-1001, FIRE-1002.
Topics or areas of professional interest within the fire science field will be explored. These offerings will introduce students to new topics and technologies supporting current trends, the needs of the students and the community, and future development of the program.

FIRE 2105—Adv Bldg Const/Collapse Prof Firefighter (3)
Lecture: 3
Prerequisite(s): FIRE 1121 and FIRE 1122; FIRE-1121, FIRE-1122.
This course provides an introduction to the present and the past practices of building construction as it relates to firefighting. Discusses the various hazards of building collapse and how to recognize warning signs of impending disaster. Looks at building construction from the Company Officer and Incident Commander's perspective.

Ford Asset

FORD 1110—Engines: Diagnosis & Repair (3)
Lecture: 1, Lab: 4
Prerequisite(s): FORD 1360.
This course presents the operation and diagnosis of Ford engines with emphasis on disassembly and reassembly, performing diagnostic tests, measuring components for diagnostic purposes, and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET students only. Lab Fee: $35

FORD 1240—Steering & Suspension: Diag & Repair (2)
Lecture: 1, Lab: 2
Prerequisite(s): AUTO 1140; FORD 1250 and FORD 1260.
This course presents the operation and diagnosis of Ford steering and suspension systems including wheel alignment and Noise Vibration and Harshness (NVH) diagnosis. Emphasis is placed on diagnosis and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET or Ford Maintenance and Light Repair Certificate students only. Lab Fee: $30

FORD 1250—Brake Systems: Diagnosis & Repair (2)
Lecture: 1, Lab: 2
Prerequisite(s): AUTO 1150; FORD 1240 and FORD 1260.
This course presents the operation and diagnosis of Ford braking systems including Antilock Brake Systems (ABS). Emphasis is placed on diagnosis and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET or Ford Maintenance and Light Repair Certificate students only. Lab Fee: $25

FORD 1260—Electrical Systems: Diagnosis & Repair (2)
Lecture: 1, Lab: 2
Prerequisite(s): AUTO 1160; FORD 1240 and FORD 1250.
This course presents the operation and diagnosis of Ford basic electrical systems including starting and charging systems. Wiring diagrams are emphasized in the diagnostic process. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET or Ford Maintenance and Light Repair Certificate students only. Lab Fee: $30

FORD 1270—Heating & AC: Diagnosis & Repair (2)
Lecture: 1, Lab: 2
Prerequisite(s): AUTO 1170; FORD 1360.
This course presents the operation and diagnosis of Ford heating and air conditioning systems including automatic temperature control systems with emphasis on performing diagnostic tests, and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET students only. Lab Fee: $35

FORD 1360—Electronic Systems: Diagnosis & Repair (3)
Lecture: 1, Lab: 6
Prerequisite(s): FORD 1260; FORD 1270.
This course presents the operation and diagnosis of Ford electronic systems including networks, multifunction modules, chassis systems, safety and security systems and convenience features. Emphasis is placed on performing diagnostic tests and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET students only. Lab Fee: $30

FORD 2120—Automatic Trans: Diagnosis & Repair (3)
Lecture: 1, Lab: 6
Prerequisite(s): FORD 1360.
This course presents the operation and diagnosis of Ford ignition, fuel, and emission systems with emphasis on performing diagnostic tests and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET students only. Lab Fee: $25

FORD 2130—Man Trans/Driveline: Diag & Repair (3)
Lecture: 1, Lab: 4
Prerequisite(s): FORD 1360.
This course presents the operation and diagnosis of Ford manual transmissions, clutches, differentials, and four-wheel drive systems with emphasis on disassembly and reassembly, performing diagnostic tests, measuring components for diagnostic purposes, and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET students only. Lab Fee: $25

FORD 2180—Engine Performance: Ops & Diagnosis (3)
Lecture: 1, Lab: 6
Prerequisite(s): FORD 2180.
This course presents the operation and diagnosis of Ford ignition, fuel, and emission systems with emphasis on performing diagnostic tests and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET students only. Lab Fee: $25

FORD 2280—Adv Eng Performance: Diagnosis & Testing (2)
Lecture: 1, Lab: 3
Prerequisite(s): FORD 2180.
This course presents the advanced diagnosis of Ford ignition, fuel, and emission systems with emphasis on performing diagnostic tests and determining repair strategies. OBDII strategies are discussed and diagnosis of non-DTC concerns and intermittent concerns are practiced. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET students only. Lab Fee: $25

FORD 2380—Diesel Engine Perf: Diagnosis & Repair (2)
Lecture: 1, Lab: 3
Prerequisite(s): FORD 1360.
This course presents the operation and diagnosis of Ford diesel engines and necessary support systems with emphasis on performing diagnostic tests and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET students only. Lab Fee: $35

FORD 2951—Cooperative Work Experience/Seminar I (2)
Seminar: 0.5, Field Experience/Internship: 15
Prerequisite(s): FORD 1360.
The Cooperative Work Experience allows students to diagnose and repair Ford vehicles in a real world setting. The student works in a sponsoring Ford or Lincoln dealership to perform tasks under the supervision of a mentor technician. The student is required to work a specified number of hours and is compensated by the dealership. The student is required to attend a weekly on-campus seminar during the co-op period. Available to Ford ASSET students only.

FORD 2952—Cooperative Work Experience/Seminar II (2)
Seminar: 0.5, Field Experience/Internship: 15
Prerequisite(s): FORD 1360.
The Cooperative Work Experience allows students to diagnose and repair Ford vehicles in a real world setting. The student works in a sponsoring Ford or Lincoln dealership to perform tasks under the supervision of a mentor technician. The student is required to work a specified number of hours and is compensated by the dealership. The student is required to attend a weekly on-campus seminar during the co-op period. Available to Ford ASSET students only.

FORD 2953—Coop Work Exp/Seminar III Cooperative Work Experience/Seminar III (2)
Lecture: 0.5, Field Experience/Internship: 15
Prerequisite(s): FORD 1360.
The Cooperative Work Experience allows students to diagnose and repair Ford vehicles in a real world setting. The student works in a sponsoring Ford or Lincoln dealership to perform tasks under the supervision of a mentor technician. The student is required to work a specified number of hours and is compensated by the dealership. The student is required to attend a weekly on-campus seminar during the co-op period. Available to Ford ASSET students only.

FORD 2954—Cooperative Work Experience/Seminar IV (2)
Lecture: 0.5, Field Experience/Internship: 15
Prerequisite(s): FORD 1360.
The Cooperative Work Experience allows students to diagnose and repair Ford vehicles in a real world setting. The student works in a sponsoring Ford or Lincoln dealership to perform tasks under the supervision of a mentor technician. The student is required to work a specified number of hours and is compensated by the dealership. The student is required to attend a weekly on-campus seminar during the co-op period. Available to Ford ASSET students only.

French

FREN 1101—Beginning French I (4)
Lecture: 4
Prerequisite(s): Placement into ENGL 1100.
FREN 1101 presents an introduction to the fundamentals of the French language with practice in listening, reading, speaking and writing. Course also includes selected studies in French culture. FREN 1101 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature Lab Fee: $10

FREN 1102—Beginning French II (4)
Lecture: 4
Prerequisite(s): FREN 1101.
This course is a continuation of FREN 1101, with further development of listening, reading, speaking and writing skills and further study of French culture. FREN 1102 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

FREN 1103—Intermediate French (4)
Lecture: 4
Prerequisite(s): FREN 1102.
FREN 1103 focuses on the reading and discussion of French short stories, novels, plays, newspapers, and magazines, emphasizing literary appreciation and the development of French culture. FREN 1103 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

FREN 1193—Independent Study in French (1-3)
Lecture: 1
Prerequisite(s): FREN 1103; FREN-1103 or Placement.
FREN 1193 offers students an individual based detailed examination of selected topics in French. Independent study courses are offered to meet the special needs or interests of an individual student and to pilot new courses. Lab Fee: $2

FREN 1194—Special Topics in French (1-3)
Lecture: 1 - 3
Prerequisite(s): FREN 1103.
FREN 1194 offers students group-based detailed examination of selected topics in French. Special Topic courses are offered to meet the special needs or interests of a group of students and to pilot new courses. Lab Fee: $2

Geographic Information Systems

GIS 1100—Introduction to GIS (3)
Lecture: 2, Lab: 3
The course introduces the fundamentals of Geographic Information Systems (GIS) including basic cartographic principles, map scales coordinate systems and map projections. Specific topics addressed include GIS terminology, raster and vector structures, data sources, data accuracy, methods of data conversion and input, requirements for metadata, an introductory look into working and interfacing with spatial databases and an introductory look into spatial analysis. These topics will be reinforced in hands-on lab exercises. There will be several tests for this course that are administered in the Testing Center.

GIS 1101—Acquiring GIS Data (2)
Lecture: 1, Lab: 3
This course introduces students to acquiring geographic data and to learning to recognize and understand different data types used in the GIS applications. This course is designed for the beginning student who has limited knowledge in accessing existing databases. Students also develop skills for participating in distance learning courses and submitting class projects using the Internet. Lab Fee: $20

GIS 1102—Mapping for Everyone (2)
Lecture: 1, Lab: 3
This course is designed as an introduction to the use of GIS in various industries. Students will be introduced to uses, techniques, and processes in various industries as they relate to geospatial technologies. Students will work with GIS tools related to each industry, testing their understanding of the materials through hands-on exercises, real-world examples and case studies, as well as quizzes and projects. Lab Fee: $15

GIS 1200—GIS Software I (2)
Lecture: 1, Lab: 3
Prerequisite(s): GIS 1100.
This course is first in a two-part series of specific application software usage training using Esri's ArcGIS Pro software. In this course, we will be focusing on the basics of using, designing, and making maps. Completion of this course is for students to successful demonstrate fundamental GIS concepts, as well as creating, working with, and editing spatial data. Students will also be introduced to geodatabases and managing data. Lab Fee: $30

GIS 1201—GIS Software II (2)
Lecture: 1, Lab: 3
Prerequisite(s): GIS 1200.
This course is the second in a two-part series of specific application software usage training using Esri's ArcGIS Pro software. The students will learn additional applications and extensions of the software and reinforce the important concepts and functionality for successfully working with ArcGIS Pro. In this course, we will be focusing on project planning, spatial data, and analyzing spatial data. Completion of this course is for students to successfully demonstrate the concepts of geodatabase management, identifying spatial data types, digitizing, geocoding, and geoprocessing. Lab Fee: $20

GIS 1202—Planning and Implementing GIS (2)
Lecture: 1, Lab: 3
This course focuses on the methodology for planning and implementing a GIS. This course examines the procedures and methods for designing a GIS, Project Management skills, evaluating system requirements & data sources, evaluating various methodologies, testing, hardware and software planning, cost benefit analysis/ROI, system implementation and project lifecycle. Lab Fee: $20

GIS 2100—Introduction to GIS Databases (3)
Lecture: 1, Lab: 4
Prerequisite(s): GIS 1200.
This course focuses on the planning, design, use and maintenance of a GIS database. Students will be introduced to the components of a Geodatabase (GDB), the GDB structure, GDB behaviors, methods for loading data, and some advanced data editing techniques. Students should have familiarity with ArcPro or ArcMap before taking this course. Lab Fee: $30

GIS 2110—Introduction to Spatial Analysis (3)
Lecture: 1, Lab: 4
Prerequisite(s): GIS 1200.
This course explores a range of spatial and analytical techniques and their implementation in GIS software. Students will apply different spatial techniques with the software and become familiar with the essential methodological and practical issues involved in spatial analysis. It recommended that the student take GIS-1201 concurrently. Lab Fee: $30

GIS 2120—Introduction to GIS Programming (3)
Lecture: 1, Lab: 4
Prerequisite(s): GIS 1200.
This course introduces GIS scripting techniques and web mapping using the following ESRI products; ArcGIS Desktop, Online, AppBuilder, and API for JavaScript. The student will learn basic and advanced customization, scripting, automation strategies, and web map development. This course covers the basic python, HTML, JavaScript language and how they are used in geospatial technologies. Students will learn how to customize the ArcMap user interface, read and write GIS scripts, model geoprocessing work flows, update map documents, create script tools, and create a web map application. Lab Fee: $30

GIS 2130—Georeferencing and Editing (2)
Lecture: 1, Lab: 3
Prerequisite(s): GIS 1200.
This course explores georeferencing existing GIS data so that it can be properly spatially referenced within your current GIS system. Students will also discover different methods of editing and creating GIS data. Students will understand different georeferencing and editing methods and errors associated with each method. Lab Fee: $30

GIS 2200—Image Management and Analysis (3)
Lecture: 1, Lab: 4
Prerequisite(s): GIS 1201.
This course focuses on concepts of imagery use in GIS. The course will include topics in photogrammetry and remote sensing as well as using the most current imagery management and analysis tools and techniques. Students will examine ways of obtaining photographic data, finding points and performing measurements on aerial photographs, and understanding the limitations and applications. Lab Fee: $45

GIS 2299—Advanced GIS Applications (4)
Lecture: 2, Lab: 6
Prerequisite(s): GIS 1201.
This is a capstone course utilizing the skills and knowledge learned throughout the curriculum. Students perform research, identify issues, find data and develop a solution to a problem or project in a specific industry or area. Lab Fee: $30

GIS 2510—Advanced Spatial Analysis (2)
Lecture: 1, Lab: 3
Prerequisite(s): GIS 2110.
This course explores advanced spatial and analytical techniques and their implementation. Students will further the knowledge they gained in the Introduction to Spatial Analysis course by exploring tools and concepts further and they will conclude with an independent project that applies some of the advanced techniques learned throughout the term. Lab Fee: $20

GIS 2520—Advanced GIS Programming (2)
Lecture: 1, Lab: 3
Prerequisite(s): GIS 2520.
This course focuses on object-oriented programming and the unique issues relating to spatial objects, customization and syntax. Students learn how to use, find and modify scripts for use in ArcGIS. Students should have some familiarity with ArcGIS Desktop and the concepts of programming. Lab Fee: $30

GIS 2530—Web GIS (2)
Lecture: 1, Lab: 3
Prerequisite(s): GIS 1200.
This course will help students to learn about, understand, and apply Web GIS. We will use the Environmental Systems Research Institute's (Esri) ArcGIS Online Platform. The course covers ArcGIS Enterprise components, ArcGIS Enterprise administration, publishing ArcGIS Online Items, and consuming ArcGIS Items using various web applications. We will also cover the process of developing web application using ArcGIS Application Programming Interface (API) for Javascript and Web App Builder, dashboards and story maps. Lab Fee: $20

GIS 2540—GIS in Service (3)
Lecture: 1, Lab: 6
This course is intended to provide the student with an opportunity to apply the science, knowledge and skills of Geographic Information Systems in a business environment or career area of GIS. This course augments formal education received in the technology, with actual work conditions and job experience. "N" credit will not be allowed for this course. This course can be taken in replacement of the GIS 2950 – GIS Practicum and Seminar course or as a technical elective for the program. Lab Fee: $20

GIS 2550—GIS in 3D (2)
Lecture: 1, Lab: 3
Prerequisite(s): GIS 1201.
This course focuses on the use of 3D data in GIS applications. Students will learn 3D visualization techniques, perform 3D analysis, 3D data creation and they will learn how to manage and use LIDAR data. Lab Fee: $20

GIS 2594—Current Topics: GIS (1-4)
Lecture: 1
This course will be offered for special topics in GIS that meets needs of the GIS community.

GIS 2950—GIS Practicum & Seminar (3)
Seminar: 1, Practicum: 14
This course is intended to provide the student with an opportunity to apply the science, knowledge and skills of Geographic Information Systems in a business environment or career area of GIS and it is the application of business knowledge to specific areas of on-the-job work experience. This course augments formal education received in the technology with actual work conditions and job experience. "N" credit will not be allowed for this course. This course can only be taken if you are performing GIS work on the job which includes but not limited to employment where GIS is used, an internship where GIS is used or where you are using GIS for a volunteer project. The work can be paid or unpaid. If you would like to take the course, please sign up and then contact the GIS Program Coordinator immediately if do not have an opportunity lined up or if you have a question about the course.

Geography

GEOG 1194—SPT: Geography (1-3)
Lecture: 1 - 3
Prerequisite(s): Placement into ENGL 1100.
A detailed examination of selected topics of interest in geography Lab Fee: $3

GEOG 1900—Introduction to Weather & Climate (4)
Lab: 2, Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course serves as an introduction to the study of weather and climate. Students will become familiar with the basic concepts and processes associated with weather (atmospheric and oceanic circulation, temperature, moisture, pressure, winds, weather systems), as well as become familiar with climate types, climate variability, and the impact of human activity on weather and climate found throughout the world today. Lab Fee: $15

GEOG 2193—Independent Study in Geography (1-3)
Lecture: 1
An individual, student-structured course that examines a selected topic in Geography through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. Lab Fee: $3

GEOG 2300—Introduction to Physical Geography (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course serves as an introduction to the basic concepts and processes associated with the study of physical geography. Students will become familiar with the primary elements associated with physical geography to include the Earth's global energy balance, atmospheric and oceanic circulation, weather systems and climates, plate tectonics, landform formation and classification, erosion processes, and soil formation. Lab Fee: $3

GEOG 2400—Economic & Social Geography (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course serves as an introduction to the study of regional geography at the global scale. Students will become familiar with the basic concepts in geography, the topic of uneven development, and the factors that affect uneven development within and among all the world's major regions. Lab Fee: $3

GEOG 2750—World Regional Geography (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course serves as an introduction to the study of regional geography at the global scale. Students will become familiar with the basic concepts in geography, the topic of uneven development, and the factors that affect uneven development within and among all the world's major regions. Lab Fee: $3

GEOG 2750—World Regional Geography (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course serves as an introduction to the study of regional geography at the global scale. Students will become familiar with the basic concepts in geography, the topic of uneven development, and the factors that affect uneven development within and among all the world's major regions. Lab Fee: $3

GEOG 2900—Elements of Cartography (3)
Lecture: 2, Lab: 2
Prerequisite(s): Placement into ENGL 1100.
This course serves as an introduction to the basic concepts and methods associated with cartography. Students will also become familiar with the basics associated with cartographic design and visualization. Lab Fee: $3

Geology

GEOL 1101—Introduction to Earth Science (4)
Lab: 2, Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course serves as an introduction to the processes working on our planet. Topics include internal and surficial processes, the water cycle, and energy resources. Related laboratory and demonstrations. Lab Fee: $22

GEOL 1101—Introduction to Earth Science (4)
Lab: 2, Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course serves as an introduction to the processes working on our planet. Topics include internal and surficial processes, the water cycle, and energy resources. Related laboratory and demonstrations. Lab Fee: $22

GEOL 1105—Geology and the National Parks (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course examines the geologic processes, materials, and history revealed in the geologic settings of the National Parks. Lab Fee: $1

GEOL 1105—Geology and the National Parks (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course examines the geologic processes, materials, and history revealed in the geologic settings of the National Parks. Lab Fee: $1

GEOL 1121—Physical Geology (4)
Lab: 2, Lecture: 3
Prerequisite(s): Placement into MATH 1050 or higher and Placement into ENGL 1100.
This course offers a detailed understanding of the processes and the materials that shape the Earth . Topics include the origin of minerals and rocks, development of landforms and structural features, and environmental changes associated with these processes. Related laboratory and demonstrations. Lab Fee: $21

GEOL 1121—Physical Geology (4)
Lab: 2, Lecture: 3
Prerequisite(s): Placement into MATH 1050 or higher and Placement into ENGL 1100.
This course offers a detailed understanding of the processes and the materials that shape the Earth . Topics include the origin of minerals and rocks, development of landforms and structural features, and environmental changes associated with these processes. Related laboratory and demonstrations. Lab Fee: $21

GEOL 1122—Historical Geology (4)
Lab: 2, Lecture: 3
Prerequisite(s): GEOL 1121.
This course covers the history of the Earth and its inhabitants throughout geologic time. Topics include important historical figures, the concepts they proposed, and the evolution of life through time. Related laboratory and demonstrations. Lab Fee: $27

GEOL 1122—Historical Geology (4)
Lab: 2, Lecture: 3
Prerequisite(s): GEOL 1121.
This course covers the history of the Earth and its inhabitants throughout geologic time. Topics include important historical figures, the concepts they proposed, and the evolution of life through time. Related laboratory and demonstrations. Lab Fee: $27

GEOL 1151—Natural Disasters (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course covers the occurrence and causes of earthquakes, volcanoes, and related hazards, and their impact on climate, society, and history. Lab Fee: $1

GEOL 1151—Natural Disasters (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course covers all the internal, surficial, and atmospheric hazards, from how they occur to how they effect society. Lab Fee: $1

GEOL 2293—Independent Study in Geology (1-3)

This course is an individual, student-structured course that examines a selected topic in geology through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. A combination of lecture and lab may be required. Lab Fee: $1

GEOL 2294—SPT: Geology (1-3)
Lecture: 1 - 3
This course provides an opportunity to explore selected topics of interest in geology. A combination of lecture and lab hours may be required. Lab Fee: $1

German

GERM 1101—Beginning German I (4)
Lecture: 4
Prerequisite(s): Placement into ENGL 1100.
GERM 1101 is an introduction to the fundamentals of the German language with practice in listening, reading, speaking and writing. It also includes selected studies in German culture. GERM 1101 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

GERM 1102—Beginning German II (4)
Lecture: 4
Prerequisite(s): GERM 1101.
This course is a continuation of GERM 1101 with further development of listening, reading, speaking, and writing skills and further study of German culture. GERM 1102 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

GERM 1103—Intermediate German (4)
Lecture: 4
Prerequisite(s): GERM 1102.
This course is designed to meet the integration of learning outcomes across Interpersonal, Interpretive, and Presentational Modes of Communication as established by the Ohio Department of Higher Education. Students accomplish real-world communicative tasks in culturally appropriate ways as they gain familiarity with products, practices, and perspectives of German language and culture. Students learn grammar, vocabulary, and structures to enable them to meet functional performance goals at this level and to build a foundation for continued language learning. Lab Fee: $10

GERM 1105—German Conversation & Composition (1)
Lecture: 1
Prerequisite(s): GERM 1103.
GERM 1105 is conversation course designed to provide students completing the 1103 level an opportunity to continue practicing the language. Students discuss current events and personal experiences in the target language. Readings are taken from literary texts, journals, magazines, and newspapers. Lab Fee: $10

GERM 1193—Independent Study German (1-4)
Lecture: 1
Designed to give the student an opportunity for a detailed study of topics of interest in German not otherwise offered. Lab Fee: $2

GERM 1194—SPT: German (1-4)
Lecture: 1 - 4
Designed to give groups of students an opportunity for a detailed study of topics of interest in German not otherwise offered. Lab Fee: $2

Health Information Management Technology

HIMT 1111—Introduction to Health Information Mgmt (2)
Lecture: 2
Prerequisite(s): HIMT 1133 and HIMT 1135.
Students are introduced to the roles of the health information management technician in a variety of healthcare settings. The educational and credentialing requirements for the HIM professional will be discussed along with an overview of the U.S. healthcare delivery system and the various reporting and accrediting requirements. Lab Fee: $0

HIMT 1121—Advanced Medical Terminology (2)
Lecture: 2
This course provides advanced study of medical terminology. Students learn how word parts determine the meaning of medical terms. Medical terminology of diseases/disorders, treatments, procedures, and pharmacological agents are also studied. Material is presented in a systems approach which includes an overview of anatomy and physiology, medical abbreviations and pronunciation of medical terms. "

HIMT 1133—Legal Aspects of Health Information (2)
Lecture: 2
Prerequisite(s): HIMT 1111 and HIMT 1135.
Students study the legal principles and regulations governing the management and disclosure of health information.

HIMT 1135—Health Data Management (3)
Lecture: 2, Lab: 2
Prerequisite(s): HIMT 1111 and HIMT 1133.
Students are introduced to categories of data collected and maintained by healthcare providers and the concept of data flow in the paper, hybrid, and electronic health record (EHR). Lab Fee: $49

HIMT 1141—Pharmacology (2)
Lecture: 2
Prerequisite(s): Recommended Prerequisite: HIMT 1121.
This course surveys the major drug classifications. Indications and contraindications for use of drugs is presented with emphasis placed on the correlation between drug therapy and disease.

HIMT 1245—ICD-10-CM/PCS Coding (3)
Lecture: 1, Lab: 4
Prerequisite(s): BIO 1101 and HIMT 1111 and HIMT 1121 and HIMT 1256 and HIMT 1274 and BIO 2300.
Students are introduced to the ICD-10-CM/PCS coding system used to code diagnoses and procedures. Basic principles of ICD-10-CM/PCS are introduced. Lab Fee: $0

HIMT 1255—CPT-4 Coding (3)
Lecture: 1, Lab: 4
Prerequisite(s): HIMT 1111 and HIMT 1121 and HIMT 1256 and HIMT 1274 and BIO 1101; BIO 2300.
Students are introduced to CPT-4 coding used to code outpatient procedures and services. Lab Fee: $0

HIMT 1256—Clinical Documentation & Disease (2)
Lecture: 2
Prerequisite(s): HIMT 1121.
Students study clinical information used to support diagnoses and services provided to patients as it pertains to healthcare data management.

HIMT 1265—Medical Reimbursement (2)
Lecture: 1, Lab: 2
Prerequisite(s): HIMT 1111 and MATH 1025 and Minimum grade of "C".
Students are introduced to revenue cycles, payers, and reimbursement systems as they apply to the payment of healthcare services. Lab Fee: $0

HIMT 1274—Intro to Medical Coding & Reimbursement (2)
Lecture: 2
This course provides an overview of hospital- and physician-based medical coding and reimbursement principles. Lab Fee: $0

HIMT 2257—Introduction to Health Statistics (2)
Lecture: 2
Prerequisite(s): HIMT 1111 and MATH 1025 and CSCI 1101.
Students study the basics of statistical computation as it relates to healthcare. Procedures for collecting, organizing, displaying, and interpreting healthcare data are presented.

HIMT 2259—Quality and Resource Management (3)
Lecture: 3
Prerequisite(s): HIMT 1111 and HIMT 1135 and CSCI 1101.
Students study internal and external requirements for establishing, operating, and maintaining quality improvement and utilization management programs. Accreditation standards pertaining to the quality of health information are discussed, along with the methods used for benchmarking, credentialing, patient outcomes monitoring and evaluation, case management, and risk management.

HIMT 2267—Principles of Management (2)
Lecture: 2
Students study the functions related to planning, organizing, controlling, budgeting, and evaluating human resources.

HIMT 2275—Intermediate Coding (2)
Lecture: 1, Lab: 2
Prerequisite(s): BIO 2300 and HIMT 1111 and HIMT 1121 and HIMT 1135 and HIMT 1245 and HIMT 1255; HIMT 1265; HIMT 2930.
This course provides students with continued experience in ICD-9-CM, ICD-10-CM/PCS, and CPT-4 Coding. An emphasis is placed on practical applications of professional coders. Students will code from case studies and patient medical records.

HIMT 2294—Spec Topics in Health Info Mgmt (1-3)
Lecture: 1
Prerequisite(s): HIMT-2870.
This course is designed to present pertinent topics and trends in the health information management field.

HIMT 2870—PPE HIM Applications (1)
Lecture: 0.5, Field Experience/Internship: 6
Prerequisite(s): HIMT 1111 and HIMT 1133 and HIMT 1135; HIMT 1245 and HIMT 1255 and HIMT 1265 and CSCI 1320 or; CSCI 2325.
This course is intended to help students bridge the gap between the classroom and the HIM work environment. Students are required to complete 90 hours of field experience. PPE hours are completed throughout the semester and vary depending on site availability. Lecture hour is completed online. Field experience focuses on basic HIM functions including storage and retrieval, record completion, and release of information along with other available HIM-related tasks or projects. Course assignments include database development, workflow redesign, and online EHR simulations that draw on concepts studied throughout the HIMT curriculum.

HIMT 2930—PPE HIM Field Experience (1)
Lecture: 0.5, Field Experience/Internship: 6
Prerequisite(s): HIMT 1111 and HIMT 1133 and HIMT 1135 and HIMT 1245 and HIMT 1255 and HIMT 1256 and HIMT 1265; HIMT 2257 and HIMT 2259 and HIMT 2267 and HIMT 2294 or; HIMT 2275.
Students are provided professional practice experience (PPE) in various field experiences which may include medical coding and revenue cycle management, HIM operations (e.g., storage and retrieval, record completion, release of information), compliance/risk management, informatics/data analysis, and information technology (IT). Students are assigned projects requiring the application of concepts studied throughout the HIMT curriculum in the professional practice experiences. This course is intended to help students bridge the gap between the classroom and the work environment. Students are required to spend 6 hours per week x 15 weeks (90 hours) in some sort of professional practice experience (PPE). These hours are completed throughout the semester and vary depending upon what sites are available. Students must complete all corequisite courses with a minimum of C grade. Lab Fee: $75

Heating, Ventilating & A/C Technology

HVAC 1120—Load Calculations I (3)
Lab: 1, Lecture: 2.5
This course is a comprehensive study of the fundamentals of environmental conditioning, energy consumption and operating cost analysis, the properties of air, insulation materials, heat loss and gain calculations, to include the methods of air conditioning, heating and ventilation. Load calculations will be performed using the applicable ACCA manuals and computer software. Lab Fee: $12

HVAC 1140—Principles of Refrigeration (3)
Lecture: 3
This course is a basic refrigeration cycle theory course covering heat thermodynamics, temperature-pressure relationships, mechanical operations of refrigeration equipment and representative application and selection data for Class I refrigerants. Lab Fee: $10

HVAC 1150—Instrumentation/Combustion Process (3)
Lab: 1, Lecture: 2.5
This is a course about basic combustion processes, using all the fossil fuels and psychrometric chart work to track the thermal heat transfer. The instruments used to test these processes will also be explained along with the fan laws and psychrometric chart procedures. Lab Fee: $15

HVAC 1160—Hand Tools/Safety (3)
Lecture: 1, Lab: 4
This course a basic safety and hand on tools course to develop the students understanding of proper tool usage along with proper shop safety. Pipe, tubing , and Sheetmetal labs will be accomplished along with meter care and usage and proper refrigerant handling and usage. State and local codes will be discussed. Lab Fee: $41

HVAC 1180—HVAC Wiring Circuits I (2)
Lab: 1, Lecture: 1.5
This course is designed to teach a new student how to read, draw, interpret and understand residential heating and cooling wiring diagram symbols, devices and wire size identification, basic circuit distribution concepts and schematic applications of same. Lab Fee: $32

HVAC 1280—HVAC Wiring Circuits II (3)
Lecture: 1, Lab: 4
Prerequisite(s): HVAC 1180 or; SKTR 1310.
This course will concentrate on lab experiments designed to teach a student how to properly wire up typical heating and cooling devices into working circuits. Devices such as motors, controllers, contactors, compressors and safety devices will be covered. Lab Fee: $46

HVAC 2094—SPT: HVAC (1-5)
Lecture: 1 - 5
This is a course that will address current issues in the HVAC industry. Lab Fee: $0

HVAC 2110—Piping Systems (2)
Lab: 1, Lecture: 1.5
Prerequisite(s): HVAC 1140.
This course is a comprehensive study of the UPC, water supply, water treatment, and distribution, to include waste water disposal and sanitation standards. Emphasis will be placed upon mechanical piping design, nomenclature, the physics of metal pipe, tubing, fittings, valves, joining methods, pumps, pump sizing, water flow principles, pressure loss, sizing and terminal units. Boilers, furnaces, chillers and refrigeration systems will be discussed in detail. Lab Fee: $12

HVAC 2140—A/C & Heat Pump (4)
Lecture: 2, Lab: 4
Prerequisite(s): HVAC 1140 and HVAC 1160 and HVAC 1180.
This course is designed for the student with a fundamental knowledge of the refrigeration cycle. Previous training in refrigeration theory, wiring diagrams, control circuits, and tools used in the trade is necessary to enroll in this course. The course is designed around hands-on training and testing of the various component parts of a vapor compression split system, split system heat pumps, and water source heat pumps. Lab Fee: $70

HVAC 2150—Heating Systems (3)
Lecture: 1, Lab: 4
Prerequisite(s): HVAC 1150 and HVAC 1160 and HVAC 1180.
This course is designed for the student with a fundamental knowledge of heat transfer characteristics and air movement properties. The course will incorporate hands-on training and testing of the various component parts and accessories that make up gas, electric and fuel oil type forced air furnaces, along with accessories such as humidifiers, air filtration systems, and set-back thermostats. Lab Fee: $20

HVAC 2160—Automatic Controls (3)
Lecture: 2, Lab: 2
Prerequisite(s): HVAC 1140 and HVAC 1150 and HVAC 1180.
This course introduces HVAC residential, light commercial, and large commercial control systems and their essential components. Control circuit logic and sequence of operation theory will be examined. Operators, sensors, controllers and various pneumatic and electrical devices used in modern control systems along with the logic used to develop their control sequences will be covered . Lab Fee: $43

HVAC 2170—Commercial A/C Systems (3)
Lecture: 1, Lab: 4
Prerequisite(s): HVAC 1140 and HVAC 1160 and HVAC 2110 and HVAC 2160.
This course uses basic piping knowledge, refrigeration cycle theory, codes, and control knowledge to build a basic understanding of the operational theory and safe operating practices for an industrial Class II ammonia refrigeration system, ice machines , and commercial chillers. Lab Fee: $10

HVAC 2180—Advanced Controls (5)
Lecture: 3, Lab: 4
Prerequisite(s): HVAC 1280 and HVAC 2160.
This course is designed to take senior level HVAC students and teach them the fundamentals, installation practices and common application parameters of representative pneumatic control and electronic control systems. Lab Fee: $47

HVAC 2190—Boiler Systems (4)
Lecture: 2, Lab: 4
Prerequisite(s): HVAC 2110 and HVAC 1150.
This course uses basic combustion knowledge from HVAC 1150 and piping system knowledge from HVAC 2110 to build a basic understanding of boiler types, systems, safety procedures and codes that will prepare a person to take the High Pressure Boiler License Examination. Lab Fee: $10

HVAC 2193—Advanced Problems in HVAC (3)
Lab: 6
This course presents a simulation that will allow the students to use their educational knowledge on a problem(s) that emphasizes the design or practical service aspects of a heating and cooling system. The instructor will need to give prior approval of the project or projects to be completed by the student. Lab Fee: $8

HVAC 2220—Load Calculations II (2)
Lab: 1, Lecture: 1.5
Prerequisite(s): HVAC 1120.
This course covers commercial heat gain/loss calculations, design of systems, and selection of equipment. The systems used in commercial applications will be discussed and compared, along with correct balancing procedures. The factor of sound as it applies to these types of systems will also be included. Lab Fee: $12

HVAC 2950—Field Experience HVAC (3)
Field Experience/Internship: 36
This course offers an opportunity for an off-campus work experience in heating, venting and air conditioning industry that augments formal education received in the technology with actual work conditions and job experience. 'N' credit will not be allowed for this course. Lab Fee: $8

History

HIST 1111—European History to 1648 (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course is a survey of the culture, ideas, and values of human civilization in western world from their origins through 1648. Emphasis is on the achievements of the Ancient Middle East, Classical Greece and Rome, the Christian and Islamic Middle Ages, the Renaissance era, and the Protestant Reformation. Students are exposed to historical methodologies and analysis through the reading of primary and secondary sources. Lab Fee: $2

HIST 1112—European History Since 1648 (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course is a survey of the culture, ideas, and values of human civilization in the western world from their origins from 1648 to the present. This course focuses on the rise of modern science, the Enlightenment, the American and French Revolutions, the Industrial Revolution, and the the theories of Karl Marx and Charles Darwin. The growth of ideologies--liberalism, socialism, capitalism, nationalism, and imperialism--will be explored. Contemporary issues and political movements will also be discussed. Students are exposed to historical methodologies and analysis through the reading of primary and secondary sources. Lab Fee: $2

HIST 1151—American History to 1877 (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course covers a wide range of topics in early American history from the age of discovery through the Civil War and reconstruction. It is an introduction to the study of history and to the political, economic, intellectual and social themes that have shaped our present society. Sections of this course are H-designated Honors classes. Lab Fee: $2

HIST 1152—American History Since 1877 (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course covers a wide range of topics in modern American history from reconstruction to the present time. It is an introduction to the study of history and to the political, economic, intellectual, and social themes that have shaped our present society. Sections of this course are H-designated Honors classes. Lab Fee: $2

HIST 1181—World Civ I Non Western to 1500 (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course is a survey of non-Western Civilization to 1500. It serves as an introduction to the study of history and to the intellectual, social, and cultural values of the Far East, India, Middle East, Africa, and South America. Lab Fee: $2

HIST 1182—World Civ II Non Western Since 1500 (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course is a survey of non-Western Civilization since 1500. It serves as an introduction to the study of history and to the intellectual, social, and cultural values of the Far East, India, Middle East, Africa, and South America. Lab Fee: $2

HIST 2223—African-American History I Before 1877 (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
The class is primarily a lecture/discussion course which includeds the history of African Americans in the New World from the time of the slave trade to the end of Reconstruction. Lab Fee: $2

HIST 2223—African-American History I Before 1877 (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
The course will examine the African American experience from the Middle Passage through the end of Reconstruction. It is arranged chronologically and thematically, and thus explores the concept of race; the institution of legal, race-based slavery; the impact of the American Revolution on slavery; the development of a distinctly African American culture; northern, urban slavery; the plantation South; the antebellum years; the Civil War and Reconstruction. Lab Fee: $2

HIST 2224—African-Amer History II Since 1877 (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
The class is primarily a lecture/discussion course which includes the history of African Americans from the end of Reconstruction to present times.

HIST 2224—African-Amer History II Since 1877 (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
The class is primarily a lecture/discussion course which includes the history of African Americans from the end of Reconstruction to present times. Lab Fee: $2

HIST 2294—SPT: History (1-3)
Lecture: 1
Students explore special topics in History designed to meet specific needs. This course is on demand.

HIST 2715—History of Western Medicine, Disease and Public Health I (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
This course focuses on the pre-modern period of Western medicine, primarily in the Near East and Europe, from about 3500 BCE to c.1700 CE, and emphasizes views of medicine and its practitioners that developed over that period. Special emphasis will be given to the connections between medicine and religion, nature, and folklore, as well as how these connections developed through cultural contact by trade, migration, and conquest. The course includes new material, traditional and digitized learning objects, and emphasizes cultural and social awareness, reasoned analysis of primary sources, and the development of critical thinking and communication skills. Lab Fee: $0

HIST 2715—History of Western Medicine, Disease and Public Health I (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
This course focuses on the pre-modern period of Western medicine, primarily in the Near East and Europe, from about 3500 BCE to c.1700 CE, and emphasizes views of medicine and its practitioners that developed over that period. Special emphasis will be given to the connections between medicine and religion, nature, and folklore, as well as how these connections developed through cultural contact by trade, migration, and conquest. The course includes new material, traditional and digitized learning objects, and emphasizes cultural and social awareness, reasoned analysis of primary sources, and the development of critical thinking and communication skills. Lab Fee: $0

HIST 2716—History of Western Medicine, Disease and Public Health II (3)

Prerequisite(s): ENGL 1100.
This course focuses on the post-Enlightenment period of Western medicine, primarily in North America and Europe, from 1700 to the present. The course places major emphasis on how disease classifications and medical and sanitation practices are framed within their social and cultural contexts, and have been associated historically with race, social class, morality, and gender. Other major themes include diverse perspectives and conflicts in the progress and triumph of modern medical science, and the identification of historical patterns in modern medical identities. The course includes new material, traditional and digitized learning objects, and emphasizes cultural and social awareness, reasoned analysis of primary sources, and the development of critical thinking and communication skills. Lab Fee: $0

History of Art

HART 1201—Ancient and Medieval Art Histories (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
The course examines art, architecture, and design from prehistory through the 15th century CE. Students will explore and analyze significant works of art and visual culture within their historical, global, and cultural contexts. Lab Fee: $7

HART 1202—Renaissance to Contemporary Art Histories (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
The course examines Western art, architecture, and design from the 15th century to the present. Students will explore and analyze significant works of art and visual culture within their historical, global, and cultural contexts. Lab Fee: $7

HART 1260—World Cinema (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
HART 1260 is a course exploring the history of world cinema through analysis of the content and structure of selected major historic examples in the genre, from the beginnings of film in the late 19th century to the present. Special attention will be given to the work of important filmmakers from around the world and to the social and philosophical context in which they worked. Lab Fee: $2

Horticulture

HORT 1130—Plant Sciences (3)
Lecture: 2, Lab: 3
This course will explore the basic physiology of plant growth and development. Also discussed will be plant anatomy, bio-history, morphology and other related topics. Lab Fee: $30

HORT 1530—Spring Plants (3)
Lecture: 1.5, Lab: 4.5
Prerequisite(s): HORT 1130.
This course will study the identification parameters, landscape features and growing conditions of trees and shrubs of the Midwest climate zone. The class will combine both in class and field experience. This course will be offered in summer semester in odd numbered years. Lab Fee: $15

HORT 1535—Arboriculture (2)
Lecture: 1, Lab: 3
Prerequisite(s): HORT 1130 and HORT 2130.
This course introduces the basic principles of tree biology and care. Arboricultural practices will be discussed and performed. Lab Fee: $23

HORT 2130—Autumn Plants (3)
Lecture: 1.5, Lab: 4.5
Prerequisite(s): HORT 1130.
This course will study the identification parameters, landscape features and growing conditions of trees and shrubs of the Midwest climate zone. The class will combine both in class and field experience. This course will be offered in summer semester in even numbered years. Lab Fee: $15

HORT 2135—Plant Healthcare (3)
Lecture: 1, Lab: 4
Prerequisite(s): HORT 2130.
This course is a complete survey of current plant health care practices in the Arboriculture profession. The focus is on multi-disciplinary use of best practices from a cultural, biological, and chemical perspective. We will explore the relationship between plants, soils, pests and the environment. Special attention will be paid to cultural practices that enhance plant vigor while minimizing pest impact. Finally, the student will gain an understanding of the daily operations involved in implementing a successful plant health care program. Lab Fee: $0

HORT 2530—Herbaceous Plant (3)
Lecture: 1.5, Lab: 4.5
Prerequisite(s): HORT 1130.
This course will study the identification parameters, landscape features, and growing conditions of herbaceous flowering plants. Additional material will include the design of perennial gardens.

Hospitality Management

HOSP 1101—Introduction to Hospitality (1)
Lecture: 0.5, Lab: 1.5
A comprehensive look at the fascinating and challenging related fields in the hospitality industry: travel & tourism, lodging, food service, meetings, conventions and expositions, leisure and recreation. Customer service is emphasized, while industry guest speakers, field trips, and study of trade publications and extensive research provide information on industry trends and career opportunities. Lab Fee: $0

HOSP 1104—Sanitation & Safety/Facilities Design (1)
Lecture: 0.5, Lab: 1
This course presents a detailed study of the HACCP (Hazard Analysis Critical Control Points) procedures which includes bacteria, materials handling and safety practices to maintain a safe and healthy environment for the consumer in the food and lodging industry. Included is an examination of laws and regulations related to safety, fire, and sanitation, as well as the importance of facility planning, design, and maintenance. To receive credit for this course, students must pass the Applied Foodservice Sanitation Examination (ServSafe) from the National Restaurant Association Educational Foundation(NRAEF). Students will receive certificates from the NRAEF and from the Ohio Department of Health. Lab Fee: $10

HOSP 1105—Professional Kitchen Fundamentals (2)
Lecture: 1, Lab: 3
Prerequisite(s): HOSP 1104.
In this course, students will learn to operate, clean, and describe preventative maintenance of commercial food service equipment and apply that knowledge in a laboratory setting. Appropriate uses for equipment and general equipment layout for safety, sanitation and efficiency will be discussed. Basic knife skills and cooking techniques, following sanitation and safety guidelines, will be practiced. Students will learn about the various food and delivery systems. Lab Fee: $125

HOSP 1107—Food Principles (2)
Lab: 2, Lecture: 1
Prerequisite(s): Placement into MATH 1104.
A course in basic food preparation including the terminology and definitions used and the scientific principles involved in procuring and preparing food products. The course includes a detailed study of the principles of preparation and selection criteria for all categories of foods served in food service operations. Lab Fee: $60

HOSP 1109—Basic Food Production & Dining Room Services (3)
Lecture: 0.5, Lab: 7.5
Prerequisite(s): HOSP 1105; HOSP 1104 and HOSP 1107.
Update change: Adding a summer course offering to this section due to increased enrollment. Beginning SU23. Students learn to operate, clean, and describe preventive maintenance of commercial foodservice equipment and apply that knowledge in a laboratory setting in which they will produce and serve marketable food products according to standardized recipes in a commercial kitchen environment. Basic knife skills and cooking techniques, following sanitation and safety guidelines, will be practiced. Appropriate uses for equipment and general equipment layout for safety, sanitation and efficiency will be discussed. Front of House training will include: fast casual table service, POS system, PCI compliance, and balancing a cash register. Lab Fee: $140

HOSP 1110—Baking Principles (2)
Lecture: 2
Prerequisite(s): MATH 1103 or; MATH 1104 placement.
A course in the fundamentals of baking terminology, baking principles, the characteristics and functions of the main ingredients used in bakery production, and an introduction to recipe adjustments and recipe costing. Lab Fee: $20

HOSP 1112—Professional Baking (3)
Lecture: 0.5, Lab: 7.5
Prerequisite(s): HOSP 1104 and HOSP 1110 and HOSP 1105 and MATH 1103 or; MATH 1104.
This laboratory course builds on the baking terminology, baking science and theory of HOSP1110. Baking processes and techniques, such as scaling, mixing and leavening methods, shaping, proofing, scoring, and baking are studied and practiced for skill development. A broad range of consumer baked good staples, such as quickbreads, basic cakes and cookies, yeast-raised breads, and complex whole grain and other artisan breads are produced. Industry standard products for commercial production will be introduced. Within the study of the various baking topics, ingredient selection considerations, conversions, recipe adjustments and recipe costing will be studied and incorporated. Principles of food safety and proper facilities and equipment safety will be emphasized. Lab Fee: $120

HOSP 1113—Pastries I (3)
Lecture: 0.5, Lab: 7.5
Prerequisite(s): HOSP 1110 and HOSP 1104 and HOSP 1105; MATH 1103 or; MATH 1104.
A laboratory course which builds on the baking terminology, baking science and theory of HOSP1110. A broad range of consumer baked goods such as specialty cakes and cookies, pies, tarts, and fundamental pastry elements such as choux paste, meringues, custards, creams and sauces are studied and produced. Both scratch and industry standard convenience products will be utilized in the production of restaurant and specialty desserts. Within the study of the various topics, ingredient selection considerations, baking calculations, conversions, recipe adjustment and recipe costing are studied and incorporated. Principles of food safety and proper facilities and equipment safety will be emphasized. Lab Fee: $120

HOSP 1123—Food Purchasing (2)
Lecture: 2
Prerequisite(s): MATH 1103 or; Placement into MATH 1104.
Provides a working knowledge of procurement methods and procedures, recordkeeping and computer applications when purchasing, receiving and storing food, equipment and non-food supplies. Special emphasis is given to writing specifications, determining order quantities, evaluating product quality and selecting suppliers. Field trips allow the student to see food processing operations and wholesale food markets. Lab Fee: $75

HOSP 1143—Hospitality & Tourism Law (2)
Lecture: 2
Provides a general knowledge of the law as it applies to the hospitality and tourism industry. Lab Fee: $20

HOSP 1144—Hospitality Contracts & Negotiations (3)
Lecture: 3
Negotiation is a critical factor in successfully running a lodging organization. This course will provide hands-on experience in the negotiations associated with the lodging industry. Through the use of case study analysis, discussions, and various writing exercises, the student will acquire the necessary skills to enter into negotiations within the lodging industry. Students will become familiar with negotiation strategies and negotiating styles. Students will also learn how to adjust their specific negotiating style to respond appropriately to others' different personalities and negotiation tactics. This course will also provide an in-depth understanding of negotiating within real estate development. Lab Fee: $5

HOSP 1145—Lodging Operations (3)
Lecture: 2, Lab: 2
This Course provides the student with a basic understanding of the lodging industry. It covers the activities of various hotel operating departments: front office, housekeeping, food & beverage, hotel purchasing, marketing, yield management, engineering, security and accounting, Emphasis will be placed on handling guest needs. Lab Fee: $20

HOSP 1147—Wedding Planning I (3)
Lecture: 3
This course will provide students with an tools necessary to become a professional wedding planner. Students will also be provided the tools necessary to plan for a successful wedding planning business. Students will understand the obligations and role of a professional wedding planner. Students will develop an understanding of the following: professionalism; wedding customs, wedding rituals, and traditions and destination wedding planning. Student will develop an understanding of the planning of all types of pre-wedding, wedding events and post-wedding events, including parties, showers, and ceremonies. Lab Fee: $10

HOSP 1154—Tourism Geography (3)
Lecture: 2, Lab: 2
Geographical and cultural study of all major regions of the world with emphasis on the most popular travel destinations. Includes lodging, points of interest, customer profile and transportation types for each destination. Lab Fee: $20

HOSP 1155—Tourism Operations (4)
Lab: 2, Lecture: 3
Prerequisite(s): HOSP 1154.
This course provides students with a basic understanding of the travel and tourism industry. Travel agency operations are covered, with students using a variety of reference material, to develop air and rail itineraries, reserve cars and hotels, calculate fares, and create tours and cruises. Government agencies and organizations that affect the industry are described. Also included is a framework for the development of tourism in the community and region. Lab Fee: $20

HOSP 2114—Pastries II (3)
Lecture: 0.5, Lab: 7.5
Prerequisite(s): HOSP 1104 and HOSP 1105; HOSP 1110 and HOSP 1113.
A laboratory course which builds on the baking terminology, baking science and theory and skill development of HOSP1113. A broad range of advanced topics in Pastry Arts such as restaurant style plated desserts and presentation components, classic European-style tortes and petits fours, specialty cakes, fillings, frostings, and decorative elements are studied and produced. Both scratch and industry standard convenience products will be studied and utilized. Within the study of the various topics, ingredient selection considerations, baking calculations, conversions, recipe adjustment and recipe costing are studied and incorporated. Principles of food safety and proper facilities and equipment safety will be emphasized. Lab Fee: $120

HOSP 2203—Beverage Management (2)
Lecture: 1, Lab: 2
This course covers the classification, history and control of beer, wines, and spirits. It includes Ohio liquor regulations, inventory control, liquor dispensing systems, cash control, drink merchandising and responsible alcohol service. The art of mixology and wine and food affinity are also explored. Lab Fee: $100

HOSP 2206—Management Accounting for Hotels (3)
Lecture: 3
Prerequisite(s): MATH 1104.
Covers accounting theory and use of the Uniform Systems of Accounting as applied to the lodging industry. Emphasizes development and use of financial statements. Provides an overview and understanding of the need for budgets and budgeting. Lab Fee: $10

HOSP 2207—Hospitality Financial Analysis (2)
Lecture: 1, Lab: 3
Prerequisite(s): MATH 1104.
This course looks at accounting theory and use of the Uniform System of Accounting as applied to the hospitality & restaurant industry. It emphasizes development and use of financial statements and provides an overview and understanding of the need for budgets and budgeting. This course covers the principles and procedures involved in an effective system of food, beverage, labor and sales control. This course emphasizes the development and use of standards and calculations of actual costs. Lab Fee: $10

HOSP 2213—Mixology (2)
Lecture: 1, Lab: 2
Learning how to interact with bar customers and providing professional efficient service. Understanding bar equipment and tools needed to perform duties and construct drink recipes, through memorization and proper construction techniques. Learning both popular trends and classic cocktails. Being efficient with their free pouring and speed service. Having general knowledge of all alcohol. Understand the inventory needed to set up bar service. Lab Fee: $125

HOSP 2214—International Cuisine (2)
Lecture: 1, Lab: 2
Prerequisite(s): HOSP 2216 and ENGL 1100.
This course focuses on the cuisines of the world. Students will research diverse countries and regions and prepare and present a written report on a specific country. Students will prepare foods using recipes that represent a variety of cultures, native ingredients, seasonings, and flavors. Instructor's consent is required. Lab Fee: $135

HOSP 2216—Food Production Lab (2)
Lecture: 0.5, Lab: 4.5
Prerequisite(s): HOSP 1107 and HOSP 1109 and HOSP 1104 and HOSP 1105.
This is a laboratory course to follow (HOSP 1109) Basic Food Production. Proper roasting, grilling, poaching, sauteing and braising of meats, seafood and poultry with appropriate sauces. Classical preparation of consomme, bisque and cream soups. Starch and vegetable preparation. Plated desserts. Principles of menu planning for a variety of food service operations, which includes layout and design, and pricing strategies. Consideration is given to food selection; nutritional requirements; food, labor, and other costs; equipment utilization. Students will research and develop recipes and prepare and serve four course menus in the required amount of time. This course is offered in an eight week format. The student will spend (5) hours, per week, with the instructor of record in a scheduled and structured environment. Lab Fee: $175

HOSP 2217—Garde Manger (2)
Lecture: 1, Lab: 3
Prerequisite(s): HOSP 1109 and HOSP 1104 and HOSP 1105.
A laboratory course including preparation of cold food items commonly produced in a garde manger station. Students will prepare garnitures, appetizers, salads, sandwiches, marinades, relishes, cold sauces and forcemeat items. An introduction to ice carving. Buffet presentation, including platters, bowls and plates, and culinary show guidelines and practices are covered. Lab Fee: $175

HOSP 2218—Baking Fundamentals (2)
Lecture: 1, Lab: 4
Prerequisite(s): HOSP 1109.
This course covers the fundamentals of baking and the function of ingredients in the production of baked goods and dessert specialties. Proper use and care of equipment and hygienic work habits are emphasized. Students will develop knowledge and competency in skills concerning the preparation and artistic presentation of items commonly produced in the baking department as outlined in the Basic Baking Section of the Log Book for the National Apprenticeship Training Program for Cooks, published by the Educational Institute of the American Culinary Federation. Lab Fee: $120

HOSP 2219—Food Production Management (3)
Lecture: 1, Lab: 6
This blended capstone course is offered in the final semester or with permission of the Instructor of record, open to students who have completed all technical requirements and graduated with a degree in Restaurant Management AAS; or a degree in Nutrition and Dietetics AAS. Principles of menu planning for a variety of food service operations, which include layout, design, and pricing strategies, are used. Consideration is given to food selection, nutritional requirements, cost of food, labor, and equipment utilization. Students will plan menus, prepare food items, and serve the public to gain experience in various managerial positions in the front and back of the house. Opportunities are provided through CSCC Mitchell Hall Retail Operations. The students will gain valuable experience as they work alongside CSCC Mitchell Hall Retail Operations industry professionals. Students registering for this course should be aware that the two-weekly lab/retail sessions may not occur within the confines of a scheduled weekly Instructor's Seminar. The "work shifts" and the work assignments are expected to fulfill the practicum hours required for this credit. As a blended course format, classroom hours (scheduled classroom meetings with the instructor, tentative meeting dates per syllabus tentative schedule) are held during stated class/semester dates/times. Online/Blackboard communications and assessment assignments will be submitted through the Blackboard portal for this class. A "C" or higher is required for graduation. This course is offered in a 16-week format. The student will spend (1) one hour, per week, with the instructor of record in a scheduled and structured environment. Additionally, the student will be responsible for completing (6) hours, per week, in the Degrees Restaurant environment within Mitchell Hall. The retail hours and workstation assignments are posted on the course schedule and a first-serve basis. These hours must be fulfilled to pass this course. Lab Fee: $150

HOSP 2220—Advanced Garde Manger (1)
Lab: 3
Prerequisite(s): HOSP 2217; HOSP 1104 and HOSP 1105.
This course is intended for students who are in the HOSP Culinary Apprenticeship program who have successfully completed HOSP2217 Garde Manger. Students will acquire knowledge and develop competency skills in the preparation and artistic presentation of savory mousse terrines, pates, galantines, and artisan sausages. The standards used in this are specified in the Knowledge & Competencies of the American Culinary Federation (ACF). Principles of food safety and proper facilities and equipment safety will be emphasized. Lab Fee: $175

HOSP 2221—Food Production Practicum (2)
Lab: 2, Practicum: 8
Prerequisite(s): HOSP 1107 and HOSP 1109.
This is a laboratory/practicum course to follow HOSP1109 Basic Food Production. Proper roasting, grilling, poaching, sautéing, and braising of meats, seafood, and poultry with appropriate sauces. Preparation of consommé , bisques, and cream soups, starches, vegetable preparation and plated desserts. This course will meet two (2) days per week. Total contact hours are ten (10). Scheduling format for this course will include course work in the lab and the on-site Degrees Restaurant. The scheduled hours are distributed as follows: Day 1: Six (6) contact hours: Two (2) hours Chef Instructor demonstration/lab work, immediately followed by four (4) hours in the on-site Degrees Restaurant. Day 2: four (4) hours in the on-site Degrees Restaurant. Students must earn a letter grade of "C" (minimum 70%) to pass this course. Lab Fee: $175

HOSP 2224—Hospitality Supervision and Quality Mgmt (2)
Lecture: 1, Lab: 2
This course applies supervisory skills and quality management principles to the hospitality/tourism industry and includes the study of organization structures, performance standards, employee selection and retention processes, orientation and training programs, employee appraisal and performance improvement, and quality improvement techniques. A grade of "C" or higher is required for graduation. Lab Fee: $20

HOSP 2225—Menu Management (2)
Lecture: 2
Prerequisite(s): HNTR 1153 and HOSP 1107.
Principles of menu planning for a variety of food service operations. Includes merchandising techniques, layout and design, and pricing strategies. Consideration is given to food selection, nutritional requirements, food and labor costs, and equipment utilization. Lab Fee: $20

HOSP 2228—Culinary Arts Practicum (2)
Practicum: 11, Seminar: 1
Prerequisite(s): HOSP 1104 and HOSP 1109 and HOSP 2214 and HOSP 2217 and HOSP 2216; HOSP 1105.
Practical application of information presented in the classroom from all required technical courses listed as prerequisites. Opportunities are provided through CSCC student operated restaurant, bakery cafe, and catering services. These experiences are supervised learning situations to demonstrate proficiency in customer relations and service. This will be demonstrated in hosting, serving customers, and preparation of food from standardized recipes. A grade of "C" or higher is required for graduation. This course is offered in an eight week format. The student will spend (1) hour, per week, with the instructor of record in a scheduled and structured environment. Additionally, the student will be responsible to complete (9) hours, per week, in a retail environment within Mitchell Hall. The retail hours will be scheduled through the student coordinator, Allison Hendricks, on a student by student basis. Students will have their pick of scheduled hours/days decided on a first come, first serve basis. These hours must be fulfilled in order to pass this course. Lab Fee: $10

HOSP 2230—Culinary Externship (2)
Lecture: 1, Field Experience/Internship: 20
Prerequisite(s): HOSP 1104 and HOSP 1105 or; HOSP 1109 and HOSP 2214 and HOSP 2216 and HOSP 2217 and HOSP 2220 and HOSP 2228.
This externship is scheduled during the last 8 instructional weeks of the program. Students have the opportunity to apply skills learned through theory and hands-on application in a practical/professional environment. The required 320 clock-hours externship experience is supervised and evaluated by personnel at the externship site and by college faculty. A grade of C or higher is required for graduation. Lab Fee: $20

HOSP 2245—Lodging Operations II (3)
Lecture: 3
Prerequisite(s): HOSP 1145.
This course is a continuation of Lodging Operations I and will provide the student with an expanded understanding of the lodging industry and the concepts of management and the role of supervisors in the hospitality industry. The course will further identify specific skill sets that are key to supervisory & managerial success. Lab Fee: $6

HOSP 2246—Hospitality Sales and Marketing (2)
Lecture: 1, Lab: 2
This course covers selling theory, including all phases of the selling process, from initial contact to closing the sale in a variety of hospitality and tourism settings. This course provides students with an overview of the marketing function associated with business organizations. This course will focus on the fundamental elements of the services marketing mix which includes the product, promotion, price and place (distribution). An extension of the traditional marketing mix known as the Extended Marketing Mix, includes People, Process, and Physical Evidence will be discussed. The concepts of effective marketing, total quality management, relationship marketing, and competitive strategy are explored in this course. Students will be presented with the basic knowledge and skills necessary to work within the marketing plan of a hospitality or tourism organization. Lab Fee: $0

HOSP 2247—Wedding Planning II (3)
Lecture: 3
Prerequisite(s): HOSP 1147.
This course will provide students with an understanding of the budget and budgeting for any sized wedding event. Students will also understand the negotiations and contracting with vendors and clients. Student will develop an understanding of the necessary elements of a contract for vendors and clients. Students will also understand the professionalism of communicating with vendors and clients as it relates to budgeting, contracting, and servicing. Student will develop a basic understanding of financial and managerial accounting functions as it relates to a financially healthy business. Lab Fee: $10

HOSP 2271—Catering & Event Services (2)
Lecture: 1, Lab: 3
Prerequisite(s): HOSP 1104 or; HOSP 1122.
This course covers the principles of and practical experiences in meeting planning and catered functions. Students will plan, organize, execute, and evaluate meeting and catering functions to meet the needs of clients and guests. Emphasis is placed on how customer service is measured. This course will be coordinated with the catering events to put into action the planning, marketing, and contracting lessons. Participation of these events is mandatory. Please note the catered events are NOT scheduled during the classroom session. This course is offered in an eight week format. Lab Fee: $75

HOSP 2272—Event Management (3)
Lecture: 2, Lab: 2
This course will describe how event managers design, plan, market and stage an event of any size. The course will describe the managing of staff and how to handle staffing problems. The course will describe the safety requirements that ensure staff and attendees' safety. This course will also describe the legal compliance, risk management, financial control, and evaluations of the success of the event. Lab Fee: $0

HOSP 2273—Casino & Gaming Operations (2)
Lecture: 2
This course will describe the history of the gaming industry. This course will provide the student with an understanding of gaming operations to include: financial management and human resource management. The student will have an understanding of the federal laws and regulation that are required for states to operate a gaming facility. The student will also understand the social and political implications that are associated with gaming operations. Lab Fee: $0

HOSP 2274—Hotel Labor Relations (3)
Lecture: 3
Focuses on the critical labor relation issues facing the hospitality industry. All students participate in simulated organizing campaigns and contract negotiations. Representatives of management and unions will address the class on key contemporary developments. Training is one of the fundamental responsibilities of almost all hospitality managers, and this HR function plays an instrumental role in managing organizational change. In this course, students learn how to design, implement, and evaluate both formal and informal training programs. In addition, students examine factors beyond design and implementation that may influence training effectiveness. A variety of instructional techniques will be used throughout the course, including experiential activities that will enliven the learning process. The course also includes the opportunity to conduct a "live case study" of one or more training problems with a real hospitality firm. Lab Fee: $5

HOSP 2275—Hospitality Facilities Management (3)
Lecture: 3
This course provides an overview of the operation and management of various hospitality facilities, specifically hotel and event management facilities. The course will include methodologies for planning and construction of new hotel and lodging facilities to include casino lodging and event space as well as guidelines for evaluating the adequacy of existing facilities. Course also includes an investigation of the functions of hotel and lodging managers in the design, operation, and financing of facilities. Lab Fee: $5

HOSP 2284—Capstone Baking Operations Practicum (2)
Seminar: 1, Practicum: 10
Prerequisite(s): HOSP 1101 and HOSP 1104 and HOSP 1105 and HOSP 1107 and HOSP 1110 and HOSP 1112 and HOSP 1113 and HOSP 2114 and HOSP 1123 and HOSP 1109 and HOSP 2224.
This blended capstone course is taken in the final semester, open to students having completed all technical requirements and graduating with a degree in Baking and Pastry Arts. Practical application of information presented in the classroom and labs from all required technical courses. Opportunities are provided through CSCC fast-paced, student operated, restaurant, bakery-cafe, and catering services in the preparation of desserts, pastries, cookies, breads, and specialty items according to the menu. Assist the chef and apply critical thinking skills performing essential tasks in the pastry arts labs and the bakery-cafe. These supervised learning experiences demonstrate proficiency in baking and pastry arts, and the learning outcomes are representative of the requisite knowledge, skill, and/or ability required. Must maintain currency in Servsafe and Ohio Department of Health Food Safety certification. Graduates of this ACF accredited program are eligible to receive the Certified Pastry Culinarian (CPC) certification offered through the American Culinary Federation (ACF). Students registering for this course should be aware that the two lab/retail sessions may not occur within the confines of a scheduled lab day and can be fulfilled by completing the stated work week requirement. That is, due to the nature of hours of operation, "shifts" should be expected to fulfill the practicum hours requirement for this credit. As a blended course format, classroom hours (scheduled classroom meetings with instructor, tentative meeting dates per syllabus tentative schedule) are held during stated class/semester dates/times. Online/Blackboard communications and assessment assignments will be submitted through the Blackboard portal for this class. A "C" or higher is required for graduation This course is offered in an eight week format. The student will spend (1) hour, per week, with the instructor of record in a scheduled and structured environment. Additionally, the student will be responsible to complete (9) hours, per week, in a retail environment within Mitchell Hall. The retail hours will be scheduled through the student coordinator, Allison Hendricks, on a student by student basis. Students will have their pick of scheduled hours/days decided on a first come, first serve basis. These hours must be fulfilled in order to pass this course. Lab Fee: $25

HOSP 2286—Apprenticeship Final Project (1)
Lab: 3
A capstone course required for students registered in the two year American Culinary Federation (ACF) National Apprenticeship Training Program. Preparation for and completion of national practical and written examinations. Evaluation of 4,000 hours on-the-job training and documentation of completion of all required training objectives. Culminating evaluation of culinary skills and competencies, based on standards established by the American Culinary Federation and current industry standards; demonstrated with the opportunity and completion of ACF certification exams both written and practical for certified Sous Chef (CSC). Lab Fee: $185

HOSP 2294—Special Topics In: Hospitality Mgmt (2)
Lecture: 2
This course provides students with an opportunity for an introduction and exploration of emerging trends in the hospitality and tourism industry. Students will examine current topics in areas such as tourism, restaurants, event/meeting planning, lodging, and casino management sectors of the industry. Lab Fee: $0

HOSP 2528—Technology in Casino & Hospitality & Recreation (3)
Lecture: 3
This course analyzes the various types of all of the technology used within a casino, hospitality, and recreation facility. Students will study the technology specific to casino organizations, hotel/resort organizations, and recreation organizations. This course will examine technology strategies used by management in casinos, hotels, resorts, recreation facilities, meeting and event spaces and facilities, and restaurants. Students will examine how the right type of technology assists in the overall success of the organization. Lab Fee: $0

HOSP 2529—Sport & Event Management (3)
Lecture: 3
This course will describe how sport and event managers design, plan, and market a sporting event of any size. This course will describe the management of revenue streams and cost identification. The course will describe sponsorship arrangements and solicitation. The course will describe the safety requirements to ensure staff and attendees safety. This course will also describe the legal compliance, risk management, financial control, and evaluation of the success of the event. Lab Fee: $0

HOSP 2711—Financial Regulations & Revenue Management (3)
Lecture: 3
This course provides students an introduction to the financial controls placed on a gaming organization. Students will also identify the various organizations, both federal and state, that provide and enforce regulations relating to the casino/gaming industry. Lab Fee: $0

HOSP 2712—Service Industry Compensation Development (3)
Lecture: 3
This course is designed to provide student with an understanding of the methods and implications of compensation development. This course will include hands-on learning experience designing and developing compensation plans for organizations within the lodging and hospitality industry. Students will learn how to design a pay plan, including base pay and pay-for-performance plans. Students taking this course will learn how to design pay ranges and grades for organizations where most jobs can be benchmarked with market data research. The development of incentive plans, merit pay, bonus structures, profit sharing, tipping, and commission systems. Lab Fee: $5

HOSP 2730—Security Mgmt Sport & Special Events (3)
Lecture: 3
This course will provide the framework to assist in planning and managing security for events that attract large numbers of spectators and participants. The focus will be on national and regional sport, recreation, leisure, and special events. Threat assessment and risk assessment will be discussed. Students will determine the variety of approaches that can be tailored to large or small events.

HOSP 2902—Hospitality Cooperative Work Experience (2)
Field Experience/Internship: 20, Seminar: 1
Work experience in the hospitality/tourism industry. A minimum of 300 hours will be spent in cooperative work experience, with one classroom hour per week in an on-campus seminar. This course is required for culinary apprentices It consists of the on-the-job training in the food service industry following the guidelines of the American Culinary Federations (ACF) national apprenticeship training program for cooks. The equivalent of one hour per week will be spent in an on-campus seminar related to the culinary profession. Students will maintain membership in the ACF as "student members". Work sites must be coordinator approved. Written agreement with hospitality/tourism organizations to offer their facilities and management personnel to provide supervised work experience. Students will be given assistance, if needed, but are ultimately responsible for securing their own employment. A student will be expected to begin this period of employment by the end of the 4th week of the semester in which enrolled, or the student should withdraw from the course. Student will provide own transportation and will adhere to the policies and procedures of the employer. Lab Fee: $260

Human Nutrition

HNTR 1153—Nutrition for a Healthy Lifestyle (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100; Placement into MATH 1025 or MATH 1050.
A study of the role of nutrition in establishing, promoting and maintaining good health. The composition and functions of foods, nutrition needs throughout the life cycle, and contemporary nutrition concerns are included in the course. The science of bioenergetics and current recommendations specific to human performance are also reviewed in this course.

HNTR 1901—DIET Practicum I (1.5)
Seminar: 1, Practicum: 3.5
Prerequisite(s): Placement into ENGL 1100 and MATH 1025 or; MATH 1050.
Practical application of information presented in the classroom related to the field of dietetics, dietetic professionals, and education pathways. Skills are developed through supervised learning situations and observations of Dietetic Technician roles in health care facilities, community agencies and schools. Lab Fee: $75

HNTR 1902—DIET Practicum II (2)
Seminar: 1, Practicum: 7
Prerequisite(s): HNTR 1901; HOSP 1109 and HOSP 1107.
Practical application of information presented in the classroom from HOSP 1122, HNTR 1153, HOSP 1109, and HOSP 1107. Skills are developed through supervised learning situations to operate and maintain foodservice equipment, to participate in food production and service, and to maintain food quality and portion control. Skills are also developed through supervised learning situations to procure and store food, supplies and equipment, to maximize fiscal outcomes, to participate in quality improvement, and to provide for the nutritional needs of the customer. Lab Fee: $30

HNTR 2275—Medical Nutrition Therapy I (3)
Lecture: 2, Lab: 2
Prerequisite(s): HNTR 1153 and BIO 2300 and BIO 2301; HNTR 2903.
An introduction to the study of nutrition assessment, diet modifications and nutrition care plans. The rationale for nutritional intervention and related medical conditions and terminology is presented. Calorie controlled and consistency and nutrient modified diets for a variety of medical conditions are studied. The student will identify and utilize appropriate nutritional assessment tools and techniques and develop care plans and chart notes for specific medical conditions using the Nutrition Care Process and model. Methods and management of clinical documentation will be emphasized. The student will plan, prepare and evaluate menus and nutritional supplements related to these diet modifications. Lab Fee: $20

HNTR 2276—Medical Nutrition Therapy II (3)
Lecture: 2, Lab: 2
Prerequisite(s): HNTR 2275; HNTR 2905.
A continuation of the study of nutrition assessment, diet modifications, nutrition care plans and documentation. The rationale for nutrition intervention and related medical conditions is presented. Nutrition interventions targeted toward various population groups throughout the human life cycle are identified. Food and nutrition requirements for specific age groups and cultural preferences for foods are examined. The student will identify and utilize appropriate nutritional assessment tools and techniques and develop care plans and chart notes for specific medical and/or life cycle related conditions using the Nutrition Care Process and model. The student will plan, prepare and evaluate menus and nutritional supplements related to these diet modifications. This course requires that students achieve a minimum grade of C for completion of the program. Lab Fee: $20

HNTR 2277—Dietetic Technician Reg Exam Review (1)
Lecture: 1
Prerequisite(s): HNTR 2905.
This course is designed to prepare dietetic technician majors for success in completing the American Dietetic Association- Commission on Dietetic Registration Examination for Dietetic Technicians. This course requires that students achieve a minimum grade of C for completion of the program.

HNTR 2903—DIET Practicum III A (1)
Seminar: 0.5, Practicum: 3.5
Prerequisite(s): HNTR 1153 and HNTR 1902 and BIO 2300 and BIO 2301; HNTR 2275.
Supervised learning situations in community based organizations develop student skills in utilization of community services, group and individual nutrition education presentations, in interviewing skills and techniques used to obtain and evaluate nutrition data from individuals, and utilization of communication skills with both clients and other personnel. Lab Fee: $120

HNTR 2904—DIET Practicum III B (1)
Seminar: 0.5, Practicum: 3.5
Prerequisite(s): HNTR 2903.
Additional client interviews, assessment of nutrition data, review of diet modification rationales and menu planning for modified diets are provided through supervised learning situations in a healthcare facility.

HNTR 2905—DIET Practicum IV (2.5)
Seminar: 1, Practicum: 10.5
Prerequisite(s): HNTR 2275 and HNTR 2904; HNTR 2276; HNTR 2277.
Practical application of information presented in the classroom from all technical courses to clients in health care facilities. Opportunities are provided through supervised learning situations to demonstrate proficiency in client interviewing, evaluation of nutritional data, rationales for dietary intervention and menu planning for modified diets. This course requires that students achieve a minimum grade of C for completion of the program. Lab Fee: $30

Human Resources Management

HRM 1121—Human Resources Management (3)
Lecture: 3
This is an introductory course in Human Resources Management including the philosophy, principles, and legal aspects of human resources management and the roles of the manager and the human resources professional/department in this management function. The course focuses on the laws governing policymaking, recruiting, selection, training, evaluation, wage and salary administration, benefit programs, representation, and safety; and the employer's obligations and the employee's rights under these laws. Students use the Internet to research human resources issues. Recommend: CRJ-2252 for Criminal Justice Majors. Lab Fee: $5

HRM 1223—Human Resource Policy and Procedure (3)
Lecture: 3
Prerequisite(s): BOA 1200; HRM 1121.
The course provides an in-depth study of employment law, the recruiting process, and the selection process. It promotes a transition from "term paper writing" to formal policy writing, using the basic application of employment law, business grammar, and policy writing skills through the development of an employment policy, procedures, and employee handbook summary of the policy.

HRM 1224—Employee Training & Development (3)
Lecture: 3
This course provides students with the tools needed to develop and present effective training programs for an organization or to identify and evaluate the services of an outside training provider to meet the needs of the organization.

HRM 1225—Employee & Labor Relations (3)
Lecture: 2, Lab: 2
Prerequisite(s): HRM 1121 and BOA 1200 and CSCI 1101 and ENGL 1100 and STAT 1400 or; MATH 1104.
The course provides a study of labor and employee relations including the history of the labor movement; the legislative history of labor law; in-depth study of the four major pieces of private sector collective bargaining legislation; a discussion of the State of Ohio collective bargaining law; the union organizing process and management responses; the collective bargaining process, grievance process, and arbitration process; and the differences in these processes in the public and private sectors. This course also examines various dimensions of an employee's relationship with an employer. Human resources personnel, managers, and supervisors determine and develop this relationship by designing and implementing employee policies that establish expectations regarding employee performance, conduct, conflict of interest and discipline. Managing employee relations issues creates a work environment where employees are positioned and empowered to be both effective and efficient in the pursuit of corporate objectives. Lab Fee: $5

HRM 1825—Compensation (3)
Lecture: 2, Lab: 2
Prerequisite(s): HRM 1121 and HRM 1223 and ENGL 1100; STAT 1400 or; MATH 1104.
The course provides an in-depth study of the history, principles, and theories of a compensation package; the laws governing monetary compensation; and the application of these principles, theories and laws through the development of internal and external equity in monetary compensation including the job analysis process, the development of job descriptions and job specifications, and the job evaluation process. The course also addresses the development of monetary compensation policies and procedures. Lab Fee: $5

HRM 1828—Benefits (3)
Lecture: 3
Prerequisite(s): HRM 1121 and HRM 1223 and ENGL 1100; STAT 1400 or; MATH 1104.
This course provides an in-depth study of voluntary and federaly mandated benefits, including The Affordable Care Act, Social Security, Worker's Compensation, Unemployment Compensation, Family and Medical Leave (FMLA), the Health Insurance Portability and Accountability Act (HIPAA), and the Consolidated Omnibus Budget Reconciliation Act (COBRA). Students examine laws, procedures, forms, and handbooks summaries for each topic. This course also provides in-depth study of voluntary benefits: those benefits employers most commonly choose to offer to help attract and retain employees. The course will focus on health insurance options (HMOs, PPOs, traditional carriers, HSAs), life insurance options (basic life, supplemental life, term life, and accidental death and dismemberment), short-term and long-term disability options, pension/retirement plan options, pay-for-time-not-worked options (holidays, vacations, sick leave, personal leave, bereavement leave, jury duty, military leave, and other PTO options), and miscellaneous benefit options (tuition reimbursement, child/elder care, safety equipment, social and sports programs).

HRM 2221—Staffing Under the Law (2)
Lecture: 1, Lab: 2
Prerequisite(s): HRM 1121 and HRM 1223 and ENGL 1101 and STAT 1400 or; MATH 1104; HRM-1121 and HRM-1223, Minimum grade C, ENGL-1101, AND STAT-1350 OR MATH-1104.
The course provides an in-depth study of the laws governing affirmative action, sexual and other forms of harassment, discipline, and termination, and the application of these laws through the development of policies, procedures, rules, regulations, and summary postings for the organization. Lab Fee: $5

HRM 2901—HR Mgmt Practicum & Seminar (3)
Seminar: 1, Practicum: 14
Prerequisite(s): HRM 1223 and HRM 1224 and HRM 1225 and HRM 1825 and HRM 1828 and HRM 2221; HRM-1223, HRM-1224, HRM-1225, HRM-1825, HRM-1828, and HRM-2221, Minimum Grade C.
As a part of the capstone sequence for the Human Resources Management Technology, the course provides a guided work experience (minimum of 14 hours per week) in a human resources office or work environment providing human resources services. The student and the employer/placement site supervisor determine exact duties. Students are responsible for securing their own practicum position. The course also provides for a discussion of the work experience and demonstration of the ability to transfer program skills to a real-world work environment through the completion of written weekly reports and the development of work related projects and assignments. HRM-2240 may be taken previously or concurrently. HRM prerequisite courses should be completed with a minimum grade of C or better.

Humanities

HUM 1100—Introduction to Humanities (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course is an interdisciplinary exploration and critical analysis of visual and performing arts through an examination of subject, matter, form, and content. A broad range of art forms, historical periods, and cultures will be presented, and students will have direct contact with a variety of works of art and experience at least one live performance. Lab Fee: $12

HUM 1160—Music & Art Since 1945 (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
A survey of the styles and subject matter of important contemporary works of music and visual art and their relationship to the major intellectual and social issues of that era. Lab Fee: $12

HUM 1270—Comparative Religions (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course introduces the study of religion through a historical overview and comparison of the major world religions of Judaism, Christianity, Islam, Buddhism and Hinduism through readings in their sacred texts in translation. Attention will be focused on the concepts, categories, theories and methods used by the various religious disciplines and how each of them addresses basic issues of the human condition. Also included will be an examination of Sectarianism and contemporary sects in America and the World. HUM 1270 meets elective requirements in the Associate of Arts degree program and distributive transfer requirements in comparative studies, religion and philosophy. Lab Fee: $2

HUM 1275—Visual Studies I:Concpts/Theories/Pract (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
This course is an introduction to the interdisciplinary field of visual studies. Through the analysis of a variety of art forms, this course explores codes, values, and meaning associated with our cross mediated experience of the visual world. Ideas and images associated with contemporary visual practices and theory will be examined in the context of ethics, aesthetics, constructs of interpretation, historical contexts, and significant art movements. Lab Fee: $7

Information Technology Support Technician

ITST 1101—IT Fundamentals + (2)
Lecture: 1, Lab: 3
Prerequisite(s): Placement into ENGL 1100; Placement into MATH 1050 or higher; Placement into No Reading Required.
This is an introductory IT Course that covers all areas of IT foundations, creating a broader understanding of IT. Topics covered: IT Concepts and Terminology, Infrastructure and Networks, Applications and Software, Database Fundamentals and Security. This course aligns with the CompTIA ITF+ Certification. Lab Fee: $32.3

ITST 1102—Industrial Network Communications (2)
Lecture: 1, Lab: 3
Prerequisite(s): ITST 1101 or; CSCI 1103 or; CSCI 1152.
An introductory Industrial Network & Data Communication course as it relates to the Engineering, Electrical Mechanical and Mechanical Program's students and Industry. The course introduces communication technologies critical to the subsequent success in studies related to Manufacturing, Distribution, and Automation Industries. Topics include, but not limited to: PLC communications, Data Highway, Machine Communication and Security. Lab Fee: $40

ITST 1123—A + Cert, Managing/Troubleshooting PCs (3)
Lecture: 1, Lab: 4
Prerequisite(s): CSCI 1152 or; ITST 1101 or; CSCI 1103.
This course covers the domains used for the A+ certification. The CompTIA A+ is the ideal foundational certification to get started on a career working with cutting-edge information technologies. It covers mobile, tablets, laptops, desktops and beyond. The exam verifies an individual can troubleshoot networking and security issues within operating systems such as Linux, Android, Windows and more. Lab Fee: $60

ITST 1130—Cloud Foundations for AWS Cloud Practitioner (3)
Lecture: 2, Lab: 2
Prerequisite(s): CSCI 1103.
ITST 1130 is designed for all students, irrespective of their chosen majors, who seek an overall understanding of cloud computing concepts, independent of specific technical roles. It provides a detailed overview of cloud concepts, AWS core services, security, architecture, pricing, and support. This course culminates in students sitting for the AWS Cloud Practitioner certification. Lab Fee: $50

ITST 1136—Linux Essentials (3)
Lecture: 1, Lab: 4
Prerequisite(s): CSCI 1103 or; ITST 1101 and ITST 2252.
This course covers the domains used for the LPI Essentials certification. You'll begin with basic principles of Open Source and the Linux way of doing things, then move on to common user programs such as the command line and text editors. With these skills in hand, you can tackle system administration tasks, such as file and user management and configuration. Lab Fee: $25

ITST 2238—Information Security Fundamentals (3)
Lecture: 2, Lab: 3
Prerequisite(s): ITST 1101 and CSCI 1152 or; ITST 1102 and ITST 1101.
This course offers in-depth coverage of the current risks and threats to an organization's data, combined with a structured way of addressing the safeguarding of these critical electronic assets. The course provides a foundation for those new to Information Security as well as those responsible for protecting network services, devices, traffic, and data. Additionally, the course provides the broad-based knowledge necessary to prepare students for further study in other specialized security fields. It is also intended to serve the needs of individuals seeking to pass the Computing Technology Industry Association's (CompTIA) Security certification exam. Cybersecurity threats and requirements are constantly evolving. The course is continuously developed to reflect current CompTIA certification exam requirements.

ITST 2252—Scripting Fundamentals (2)
Lecture: 1, Lab: 3
Prerequisite(s): ITST 1101.
This is an introductory level programming course geared at scripting for Computer Science, IT and Cyber students. Python is a dynamic object-oriented programming language that can be used for many kinds of software development. It offers strong support for integration with other languages and tools, comes with extensive standard libraries. Many Python programmers report substantial productivity gains and feel the language encourages the development of higher quality, more maintainable code. Lab Fee: $25

ITST 2258—Application Security (3)
Lecture: 2, Lab: 3
Prerequisite(s): ITST 1101 and ITST 1123 or; ITST 1102 or; CSCI 1152.
This course introduces the key software security principles, concepts and techniques that are used to create secure software applications. It focuses on how to integrate secure development practices into the software development lifecycle. Students will understand how and why software security problems are exploited. Students will learn tools and techniques for software security vulnerability discovery and management. Lab Fee: $0

Interactive Media

IMM 1100—Principles of Interactive Design (3)
Lecture: 2, Lab: 2
IMM 1100 series introduces students to the products, tools, and environment of the interactive multimedia profession. Initially, the course covers elements of communication, marketing, the Internet, Web development, digital media and graphic design. The focus is then on designing, choosing software and scripting the interactive media project. This course details how these disciplines are related to professional job responsibilities and the other team members and relies on industry Web sites to bring state-of-the-art information directly to the student in a timely manner. Lab Fee: $2

IMM 1101—Mobile App Design I (3)
Lecture: 2, Lab: 2
The Mobile App Design I Course is designed to teach students basic levels of graphics creation through the use of software programs used by design, animation, and interactive media companies worldwide. The course emphasizes vector graphic design from a mobile web-specific point of view and provides students with a thorough understanding of the basic techniques and tools used for designing compelling interfaces for mobile applications. Lab Fee: $10

IMM 1110—Mobile App Design II (3)
Lecture: 2, Lab: 2
Prerequisite(s): IMM 1101.
The Mobile Media Design II Course teaches students advanced levels of graphics creation through the use of software programs used by design, animation, and interactive media companies worldwide. The course emphasizes raster graphic design from a mobile web-specific point of view and expands the knowledge of digital color models and interface composition to create a more visual compelling aesthetic optimized for handheld delivery. Lab Fee: $10

IMM 1115—Survey of Gaming Industry (3)
Lecture: 2, Lab: 2
IMM 1115 is an introduction to the video game industry. Students will learn about the history of the game industry. They will also learn about its effect on culture, commerce, and politics. During the last half of this course, they will learn the process of game development through the creation of a Game Design Document. For majors, the document will provide a foundation for their future projects. Lab Fee: $2

IMM 1116—Storytelling for Games (3)
Lecture: 2, Lab: 2
IMM 1116 deals with common writing principles and theories used in the video gaming industry. In addition to basic writing principles students will learn the history of the story, game storytelling devices, character types, and verbal character development. Students will develop an appropriate story line for a game and a three act structured game story with appropriate cut-scenes and dialogue. Lab Fee: $2

IMM 1120—Fundamentals of Interactive Media (4)
Lab: 2, Lecture: 3
IMM 1120 deals with the basics of interactive media software including Fireworks, Dreamweaver and Flash. In Fireworks, students learn how to use the tools of Fireworks to create and edit web graphics, both vector and bitmap, work with layers, interactive buttons, components, symbols, optimization and web page layout. In Dreamweaver, students will learn how to use tables, basic CSS, layout and design for web. In Flash, students will learn to develop a working knowledge of various tools plus critical interface elements such as layers, scenes, nested symbols, and movie clips. Lab Fee: $8

IMM 1140—Cascading Style Sheets (3)
Lecture: 2, Lab: 2
Prerequisite(s): CSCI 1145.
IMM 1140 deals with basic and intermediate understanding of developing sites using Cascading Style Sheets. Components include CSS essentials, learning to build effective navigation and page layouts, working with typography, colors, backgrounds, and white space. The basics of HTML should be understood before entering this class. Lab Fee: $6

IMM 1160—Media Graphics/Optimization (3)
Lecture: 2, Lab: 2
Prerequisite(s): IMM 1100.
IMM 1160 provides the students with a deeper understanding of the industry standard Adobe Photoshop/Fireworks graphics software. The focus of this course enables students to create graphics, understand extensions, slice, animate and optimize. Students get to understand the process of creating graphics for multiple mediums including web, CD and DVD. In class projects as well as out of class assignments push the students to use both written, verbal and graphic communication skills. Lab Fee: $8

IMM 1201—3D Modeling 1 (3)
Lab: 3, Lecture: 2
IMM 1201 teaches the students about the 3D production pipeline. Using industry standard 2D and 3D software, they will model, texture, rig, animate, and render their projects. At the end of the course, students will be introduced to game engine implementation. Lab Fee: $13

IMM 1202—3D Modeling 2 (3)
Lecture: 1, Lab: 4
Prerequisite(s): IMM 1201.
IMM 1202 is the second of three 3D modeling courses. The focus is on level content creation. Students learn about level structure creation, normal maps, specular maps, referencing, and many other principles. It will also teach students about what is expected in level creation of game development. Lab Fee: $19

IMM 1210—Mobile User Interface Design (3)
Lecture: 2, Lab: 2
The Mobile User Interface Design Course teaches students the concepts and strategies needed to create usable interfaces optimized for handheld devices. In this course, students examine the foundation of creating logical, intuitive, and clear interfaces. The course examines interaction principles, experiential, and gestural design patterns relating from usability, visualization, and functionality constructs associated with human factors that drive touch screen interfaces. Lab Fee: $10

IMM 1220—Digital Media Preparation (2)
Lecture: 1, Lab: 2
IMM 1220 overviews the required disciplines needed to function in the interactive multimedia profession. Primary focus in this course centers on planning, design and the software required in the completion of a multimedia project. This course is not intended for Interactive Media majors.

IMM 1500—Digital Video Production I (3)
Lecture: 2, Lab: 2
IMM 1500 is designed to introduce students about how to use the power of audio and video to communicate. Topics covered include basic digital audio and video editing in a non-linear environment, basic shooting and camera work, production planning, importing of assets, and exporting to the Web. Lab Fee: $9

IMM 1510—Digital Audio Recording & Production (3)
Lecture: 2, Lab: 2
Prerequisite(s): IMM 1500.
IMM 1510 is designed to develop an understanding of the relationship of audio production to various related media including multimedia and internet streaming (Podcasting). Sound design and the creation and recording of audio assets are stressed. The course is structured around editing in a non-linear environment and the associated standard digital editing practices. Students will learn how to utilize a digital audio workstation and field recording devices in a typical production environment. Lab Fee: $10

IMM 1520—Digital Video Production II (3)
Lecture: 2, Lab: 2
Prerequisite(s): IMM 1500.
IMM 1520 provides students with a comprehensive overlook and advanced application of the production process. Students will analyze specific genres; write an appropriate script for the genre, storyboard, and produce a genre-focused video in a collaborative setting. In addition to genre storytelling, students will learn the proper audio and video aesthetics using a single camera for telling a specific story. Image capture and editing at a digital workstation will be highlighted. Students will also be responsible for using graphic elements in the video as well as creating a promo aimed at a specific target audience. Lab Fee: $10

IMM 1530—Writing for Digital Media & Video Production (3)
Lecture: 2, Lab: 2
IMM 1530 teaches students the method for creating content and writing in the correct language and established format for each visual medium, including commercial communication such as ads and PSAs, corporate communications, digital storytelling and training videos. In addition to basic writing principles, students will learn to develop a treatment, plan characters, write effective scenes, scripts and storylines for use in both audio and video production. Students will develop an improved foundation for understanding interactive media and writing for non-linear content while gaining the tools to effectively connect with your audience. Lab Fee: $0

IMM 1580—Motion Graphics/AfterEffects (2)
Lecture: 1, Lab: 2
Prerequisite(s): IMM 1500.
IMM 1580 students will learn fundamentals of how to use Adobe After Effects to create motion graphics and titling by integrating interactive media, sound, and video into interesting compositions. Students will learn how to set keyframes on a timeline and work with transform properties, motion paths, masks, and effects. Students will need to have Adobe Premiere Pro knowledge before taking this class. Lab Fee: $10

IMM 2010—Mobile User Experience Design (3)
Lecture: 2, Lab: 2
Prerequisite(s): IMM 1210; IMM 1110.
The Mobile User Experience Design Course focuses on the overall experience and satisfaction rating users have while interacting with a product or computer based system. As users interact with these systems via a collection of combined interfaces, the process for accomplishing a task or achieving a goal is created. In this course, students learn to approach each problem by identifying its parts and then break up those parts into a collection of smaller tasks. Through closer examination of each task, students leverage their understanding of usability and interaction design. The results improve users' experiences by increasing the efficiency and productivity of handheld devices. Lab Fee: $10

IMM 2110—Mobile Project Management (3)
Lecture: 2, Lab: 2
Prerequisite(s): IMM 1110; IMM 1210; IMM 1110.
The Mobile Project Management course teaches students with the development, management, and assessment of mobile app and web projects. The course provides an opportunity for students to apply analysis skills, create strategic plans, and foster professional workflow practices. As a mobile designer, understanding the Product Life Cycle (PLC) is critical in getting your mobile product out on time and on budget. The goal of this course ensures all mobile team members are on the same page, is great for collaboration and saves money and time. Lab Fee: $10

IMM 2201—3D Modeling 3 (3)
Lecture: 1, Lab: 4
Prerequisite(s): IMM 1202.
IMM 2201 is the final 3D modeling course. It focuses on animation and character modeling. Students will use the skills that they have already developed and apply them to a more technical aspect of content development, with the learning of rigging for animation. They will also learn to take the skills that they have learned and apply them in the creation of an organic character model. Lab Fee: $26

IMM 2210—Mobile Analytics (3)
Lecture: 2, Lab: 2
Prerequisite(s): IMM 1101.
Understanding the actions customers take while using mobile applications is essential for developing a communication strategy. By analyzing traffic data for mobile applications, students gain rich insights into marketing effectiveness. Students appreciate the differences between poor metrics, such as "page views" and good metrics such as "liking", "sharing", "watching" and "purchasing". Applications are written and modified to target audiences more successfully. Lab Fee: $10

IMM 2370—Interactive Animation (3)
Lecture: 2, Lab: 3
Prerequisite(s): IMM 1160 or; IMM 1201.
IMM 2370 provides the students with an overview of how to begin, storyboard, create and design a fully functional Animate Web site. Topics covered include becoming familiar with the palettes and tool box, new design, and drawing techniques, using Animate as an authoring tool, and understanding and applying Animate's expanded actions and scripting capabilities. Scripting is an accessible and powerful form of computer programming that designers and multimedia developers can use to increase the level of interactivity, optimize, and enhance their multimedia web projects. Lab Fee: $16

IMM 2372—Hybrid App Development (3)
Lecture: 2, Lab: 2
Prerequisite(s): CSCI 2447.
IMM 2372 provides the students with an overview of the Hybrid App Development. Using React Native a cross platform native app development platform. Designers/developers can build native mobile apps using standard JavaScript, and CSS, and then deploy those apps to every leading mobile platform. Through realistic examples, the student will master APIs for everything from GPS to the file system, contacts to camera, device to events, and more. Lab Fee: $8

IMM 2390—Interactive 2D Games (3)
Lecture: 1, Lab: 4
Prerequisite(s): IMM 1160 or; IMM 1201.
IMM 2390 introduces students to 2D sprite development, and implementation into 2D game production. Students will learn the history of sprite development, as well as modern applications in "Retro" style games. Students will learn the various types of sprites used in games and will develop their own characters, environments, props, particles, and User Interfaces. Students will work collaboratively on developing retro style 2D games. Lab Fee: $8

IMM 2520—Advanced Video Editing/Adobe Premiere (3)
Lecture: 2, Lab: 2
Prerequisite(s): IMM 1510.
IMM 2520 provides students with an overview of advanced video storytelling. Students will write appropriate scripts for a client, storyboard, and produce a professional video that has relevance to the local area or non-profit organization. In addition to advanced storytelling, students will learn the proper video and audio aesthetics for telling the story: interviewing, developing a narrative from footage, framing shots, framing, steadicam movement, costumes, casting, acquiring assets. Image capture/digitizing, editing at a digital workstation, and high-definition video will be highlighted. Lab Fee: $0

IMM 2601—Game Development 1 (3)
Lecture: 1, Lab: 4
Prerequisite(s): IMM 1115 and IMM 1116 and IMM 1202.
IMM 2601 is the first of two courses. It teaches the skills necessary in actual game production by using an industry standard game engine. Through experience, students will learn the difficulties of game creation, as well as the tools and resources necessary overcome them. They will discover the difference between just creating art assets, and actually making functional game play elements. Lab Fee: $0

IMM 2603—Collaborative Project (3)
Lab: 4, Lecture: 1
Prerequisite(s): IMM 2601.
IMM 2603 capstone course will combine the students in a setting that will simulate a realistic, collaborative production environment. Students will have to use all of the skills that they have developed through the program in a unique way to develop their group project. Rather than doing a little bit of everything, students will have the opportunity to focus on specific areas of the production process. Lab Fee: $10

IMM 2620—Website Design Creation (3)
Lecture: 1, Lab: 4
Prerequisite(s): IMM 1160.
IMM 2620 provides the student with an overview of how to begin, storyboard, create and design a fully functional Web site. The software Dreamweaver is a professional authoring tool for creating and managing Web pages. Topics covered include becoming familiar with the palettes and tool box, design techniques, templates, understanding and applying Dreamweaver?s expanded scripting capabilities using Cascading Style Sheets. Lab Fee: $8

IMM 2622—WordPress (3)
Lecture: 2, Lab: 2
IMM 2622 provides the students with an overview of the software -- WordPress. Legions of web designers and developers are choosing WordPress for building sites. That's because it's powerful, reliable, flexible, scalable and more. This class is the complete guide to mastering WordPress theme development covering everything from installation to leveraging the community and resources to improve your WordPress skills for years to come. Lab Fee: $8

IMM 2710—Interactive Portfolio (3)
Lecture: 2, Lab: 2
Prerequisite(s): IMM 2370.
Interactive Portfolio will assist students in building confidence and focus when marketing themselves using Flash. Students will take that knowledge and author their own interactive CD resume for external use in locating a professional job. Other marketing uses include web, social media and print versions. Lab Fee: $9

IMM 2802—IMM Seminar (1)
Seminar: 1
Prerequisite(s): IMM 2902.
IMM 2802 offers supervised, on-the-job application of knowledge and skills acquired in the classroom. Student must be a IMM major, who has completed 12 hours in the technology and has permission of the instructor.

IMM 2902—Interactive Media Practicum (1)
Practicum: 7
Prerequisite(s): IMM 2802.
IMM 2902 explores the application of business knowledge to specific areas of on-the-job practicum experience. Student must be a IMM major, who has completed 12 hours in the technology and has permission of the instructor. Lab Fee: $1

IMM 2950—Game Studio (3)
Lecture: 1, Lab: 4
Prerequisite(s): IMM 2601 or; CSCI 2551.
IMM 2950 Game Studio course acts as an internal internship. The course will be for large project, and for individual skill progression in a game studio setting. Students will be allowed to select which portion to opt into at the beginning of the semester, and work will be individually tailored based on student portfolio needs. The assignments and outcomes will be individually tailored and agreed upon between the student and the faculty each week as they progress towards their end goals. The organization of the course is similar to IMM 2603, with the replicated studio experience, but will be tailored to support a student's portfolio development goals rather than primarily targeting the group development experience. Lab Fee: $10

IMM 2994—IMM Current Topics (1-3)
Lecture: 1
IMM 2994 course is a detailed examination of a selected current topic in Interactive Media. This course can be repeated.

IMM 2999—Mobile Capstone (3)
Lecture: 2, Lab: 3
Prerequisite(s): IMM 2010; IMM 2110.
Utilizing a high-end mobile device lab as the setting, both Mobile App Design degree seeking students as well as Mobile App Developers from the Computer Science area will engage in group project based learning that involves external businesses and the completion of a mobile app. Lab Fee: $10

Interpreter Education Program

IEP 1120—Intro to Interpreting Professions (2)
Lecture: 1, Lab: 3
Prerequisite(s): Placement into ENGL 1100; ASL 1103.
This course provides students with a general overview of the practice profession of interpreting. Students will explore the following topics: introductory discourse analysis; diverse consumers of interpreting services; the historical development and current best practices of interpreters; identity, culture and power; and interpreting competencies and attributes. This course requires students to shadow a working interpreter outside of class time. Requires admission to IEP through Mandatory Information Session.

IEP 1194—Special Topics in Interpreting (1-5)
Lecture: 1
This course is offered for interpreters who are employed, or are pre-practice interpreters, interested in exploring or developing an issue or skill related to the interpreting profession. This course is repeatable up to six hours and fulfills the Technical Elective requirement. Lab Fee: $5

IEP 1294—SPT: American Sign Language (1-5)
Lecture: 1
This course is offered for interpreters who are employed, or are pre-practice interpreters, interested in exploring or developing an issue or skill related to ASL. This course is repeatable up to six hours and fulfills the Technical Elective requirement.

IEP 1301—Beginning Interpreting (2)
Lecture: 1, Lab: 3
Prerequisite(s): Placement into ENGL 1100; ASL 1103 and ASL 1150 and IEP 1120.
This course is a theoretical and practical "hands-on" approach to the process of consecutive and simultaneous interpreting. The student will be actively learning how to identify the message and intent in the source language, both ASL and English, and convey it accurately into the target language, both ASL and English. Lab Fee: $15

IEP 1302—Intermediate Interpreting I (2)
Lecture: 1, Lab: 3
Prerequisite(s): IEP 1301 and IEP 1120 and ASL 1103 and ASL 1150; ASL 1100 and ASL 1104 and IEP 1601 and IEP 1401.
This course is a continuation of IEP 1301. Students continue the process of actively learning how to identify the intent of the source message for both ASL and English and convey it accurately into the target language, both ASL and English. Students will learn effective teamwork strategies. Students will apply both ASL to English and English to ASL skills simultaneously. Lab Fee: $15

IEP 1394—Special Topics in Deaf Studies (1-5)
Lecture: 1 - 5
This course is offered for interpreters who are employed, or are pre-practice interpreters, interested in exploring or developing an issue or skill related to deaf studies. This course is repeatable up to six hours and fulfills the Technical Elective requirement. Lab Fee: $5

IEP 1401—Theoretical Foundations of Interpreting (3)
Lecture: 3
Prerequisite(s): IEP 1120; ASL 1104.
In this course, the most significant and relevant theoretical approaches to interpreting will be explored and practiced. Specifically, students will consider the social, cultural and linguistic complexities of processing messages within dynamic contexts. They will learn to apply various approaches to discourse analysis to enhance their understanding of these complexities.

IEP 1601—ASL to English Interpreting I (3)
Lecture: 2, Lab: 2
Prerequisite(s): IEP 1120 and IEP 1301 and ASL 1150 and ASL 1103; IEP 1302 and IEP 1401 and ASL 1100 and ASL 1104.
This course will introduce students to ASL to English skills. Students will learn how to use appropriate English grammar and register. A variety of signed texts will be used to assist students with professional behaviors in a variety of settings. Lab Fee: $15

IEP 2303—Intermediate Interpreting II (2)
Lecture: 1, Lab: 2
Prerequisite(s): IEP 1302 and IEP 1401 and IEP 1601 and ASL 1100; ASL 1104; MULT 2403 and IEP 2403.
This course is a continuation of IEP-1302. The students continue the process of actively learning how to identify the intent of the source message for both ASL and English, and convey it accurately into the target language, both ASL and English in a monologue setting. Lab Fee: $15

IEP 2304—Advanced Interpreting I (3)
Lecture: 2, Lab: 3
Prerequisite(s): MULT 2403 and IEP 2303 and IEP 2403 and IEP 2405.
This course is a continuation of IEP-2303. The students continue the process of actively learning how to identify the intent of the source message for both ASL and English, and convey it accurately into the target language, both ASL and English in a monologue setting. Students will continue to work in teams. Students will apply both ASL to English and English to ASL skills consecutively and simultaneously and will interpret for unrehearsed assignments, both in class and in the community. Lab Fee: $15

IEP 2305—Advanced Interpreting II (4)
Lecture: 3, Lab: 3
Prerequisite(s): IEP 2304 and IEP 2405 and ASL 1105 and IEP 2404.
This course is a continuation of IEP-2304. The students will interpret in the following specialized settings: mental health, AA, legal, deaf-blind, platform and conference. Lab Fee: $15

IEP 2403—Educational Interpreting I (3)
Lecture: 2, Lab: 2
Prerequisite(s): IEP 2303; IEP 1302; IEP 1601; IEP 1401.
This course provides in-depth information on interpreting in K-12 educational settings. Students will explore the linguistic, psychosocial and cognitive developmental needs of children along with classroom discourse patterns as they impact interpreting practice. During this exploration, they will consider past and present practices associated with interpreter ethics and responsibilities, the role of the interpreters as members of an educational team, and the importance of establishing working conditions that foster effective interpreting practice. They will also examine school organization, laws, certification, licensure, and other issues that will impact their success as educational interpreters. Lab Fee: $15

IEP 2403—Educational Interpreting I (3)
Lecture: 2, Lab: 2
Prerequisite(s): IEP 2303; IEP 1302; IEP 1601; IEP 1401.
This course provides in-depth information on interpreting in K-12 educational settings. Students will explore the linguistic, psychosocial and cognitive developmental needs of children along with classroom discourse patterns as they impact interpreting practice. During this exploration, they will consider past and present practices associated with interpreter ethics and responsibilities, the role of the interpreters as members of an educational team, and the importance of establishing working conditions that foster effective interpreting practice. They will also examine school organization, laws, certification, licensure, and other issues that will impact their success as educational interpreters. Lab Fee: $15

IEP 2404—Specialized Interpreting (2)
Lecture: 1, Lab: 2
Prerequisite(s): IEP 2305; ASL 1105; IEP 2304; IEP 2405.
This course allows students to explore context-specific demands that are often unique to particular types of interpreting assignments, specifically VRS settings, medical and mental health settings, artistic settings and working with people who are deaf and blind. Students will learn the requisite skills, knowledge and ethical considerations critical to working effectively in these unique situations.

IEP 2405—Interpreting in Healthcare Settings (2)
Lecture: 1, Lab: 3
Prerequisite(s): IEP 2304; MULT 2403; IEP 2303; IEP 2403.
This course introduces students to the unique knowledge, skills, and attributes necessary for interpreting in diverse medical and mental healtcare settings. Students explore healthcare interpreting from a variety of perspectives, including linguistic, legal, ethical, cultural, social, and personal. This course requires students to engage in a service-learning project outside of class time.

IEP 2701—Processing (1)
Lecture: 1
This course will provide students with a review of current approaches to interpreting processing theory and the opportunity to enhance their processing skills through the applications of processing theories and various assessment methods to live and pre-recorded interpreting scenarios. Students will analyze monologue- and dialogue-based source texts and practice effective interpretations in both English to ASL and ASL to English. Attention will be given to discourse analysis, effective decision-making during the interpretation and assessment of the target.

IEP 2703—Advanced Fingerspelling (1)
Lecture: 1
Prerequisite(s): IEP-1109, minimum grade C.
This course is a theoretical and practical hands-on approach to the process of receptive fingerspelling. The student will actively learn how to identify the methods of improving receptive fingerspelling.

IEP 2704—Religious Interpreting (1)
Lecture: 1
This course will increase students' knowledge and skills of religious interpreting. An increased focus is placed on Christian religious settings including weddings, funerals, and Christian church settings. They also must have been accepted into the interpreting program to register.

IEP 2901—Community Interpreting Practicum I (3)
Seminar: 1, Practicum: 14
Prerequisite(s): IEP 2303 and IEP 2403 and MULT 2403.
Students participate in a 160 hour practicum supervised experience in a community setting where utilization and practice of the knowledge and skills in the corresponding courses are required. In addition, students participate in a 1 hour a week seminar for additional personal/professional support, supervision, feedback and exploration of field-related experiences. The opportunity to enhance/augment knowledge and skills related to specific interpreting settings is available. Adherence to the NAD/RID Code of Professional Conduct is required. This course must be completed with a B or higher to fulfill IEP AAS graduation requirements.

IEP 2902—Community Interpreting Practicum II (3)
Seminar: 1, Practicum: 14
Prerequisite(s): IEP 2303 and IEP 2403 and MULT 2403; IEP 2901.
Students participate in a 160 hour practicum supervised in a community setting where utilization and practice of the knowledge and skills in the corresponding courses are required. In addition, students participate in a 1 hour a week seminar for additional personal/professional support, supervision, feedback and exploration of field-related experiences. The opportunity to enhance/augment knowledge and skills related to specific interpreting setting is available under the supervision of a qualified field interpreter. Adherence to the NAD/RID Code of Professional Conduct is required. This course must be completed with a B or higher to satisfy the IEP AAS graduation requirements.

IEP 2903—K-12 Educational Interpreting Practicum (3)
Seminar: 1, Practicum: 14
Prerequisite(s): IEP 2303 and IEP 2403 and MULT 2403.
Students participate in a 160 hour practicum supervised experience in an educational setting where utilization and practice of the knowledge and skills in the corresponding courses are required. In addition, students participate in a 1 hour a week seminar for additional personal/professional support, supervision, feedback and exploration of field-related experiences. The opportunity to enhance/augment knowledge and skills related to specific interpreting settings is available under the supervision of a qualified field interpreter. Adherence to the NAD/RID Code of Professional Conduct is required. This course must be completed with a B or higher to fulfill IEP AAS graduation requirements. Students who complete this course with a B or higher and fulfill all IEP AAS graduation requirements are eligible to apply for the K-12 Interpreter for the Hearing Impaired Licensure awarded by the Ohio Department of Education.

Italian

ITAL 1101—Beginning Italian I (4)
Lecture: 4
Prerequisite(s): Placement into ENGL 1100.
ITAL 1101 presents language instruction through the use of texts, audio/visual, and other selected materials to actively and proficiently communicate in the targeted language. This course also operates on developing student's historical, and cultural consciousness through the use of film, art, music and a wide range of cultural activities particular to the Italian culture. Encourages analytical thinking, individual and group participation and strengthens writing, reading and comprehension skills. Lab Fee: $10

ITAL 1102—Beginning Italian II (4)
Lecture: 4
Prerequisite(s): ITAL 1101.
This course is a continuation of ITAL 1101, with further development of listening, reading, speaking, and writing skills and further study of Italian culture. It meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

ITAL 1103—Intermediate Italian (4)
Lecture: 4
Prerequisite(s): ITAL 1102.
ITAL 1103 focuses on the reading and discussion of Italian short stories, novels, plays, newspapers, and magazines, emphasizing literary appreciation and the development of Italian culture. Course meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature programs. Lab Fee: $10

ITAL 1193—Independent Study in Italian (1-3)
Lecture: 1
Prerequisite(s): ITAL 1103.
ITAL 1193 offers individual students an opportunity to examine selected topics in Italian in detail. Independent study courses are offered to meet the special needs or interests of an individual student and to pilot new courses. Lab Fee: $2

ITAL 1194—Special Topics in Italian (1-3)
Lecture: 1 - 3
Prerequisite(s): ITAL 1103.
ITAL 1194 offers groups of students an opportunity to examine selected topics in Italian in detail. Special Topic courses are offered to meet the special needs or interests of a group of students and to pilot new courses. Lab Fee: $2

Japanese

JAPN 1101—Beginning Japanese I (4)
Lecture: 4
Prerequisite(s): Placement into ENGL 1100.
Course introduces elements of standard modern colloquial Japanese grammar, with emphasis on oral communications and culture. Students will learn to hear and reproduce the sounds of modern Japanese accurately; handle basic interactive skills such as greetings, invitations and apologies; and learn about cultural factors that are reflected in the language. Lab Fee: $10

JAPN 1102—Beginning Japanese II (4)
Lecture: 4
Prerequisite(s): JAPN 1101.
This course is a continuation of JAPN 1101, with further development of reading and writing skills and further study of culture. JAPN 1102 meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

JAPN 1103—Intermediate Japanese (4)
Lecture: 4
Prerequisite(s): JAPN 1102.
JAPN 1103 is a continuation of JAPN 1102, with further development of reading and writing skills and further study of culture. JAPN 1103 meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

JAPN 1193—Independent Study in Japanese (1-3)
Lecture: 1
Prerequisite(s): JAPN 1103.
JAPN 1193 offers individual students an opportunity to examine selected topics in Japanese in detail. Independent study courses are offered to meet the special needs or interests of an individual student and to pilot new courses. Lab Fee: $2

Landscape Design/Build

LAND 1100—Introduction to the Landscape Profession (2)
Lecture: 2
This course is an overview of landscape professions in the green industry, with emphasis in environnmental, design and horticultural applications. This course is not offered for degree credit. Lab Fee: $15

LAND 1160—Landscape Principles (2)
Lecture: 1, Lab: 3
A verbal, written and illustrative investigation in understanding the basic components contained within the landscape design process. Exploring and defining Form vs. Function, Spatial Relationships, 2D vs. 3D, Horticultural Functions and numerous other design principles and how they are combined.

LAND 1165—Landscape Survey (1)
Lab: 3
This course explores various company structures through on site visits of Landscape companies. Lab Fee: $17

LAND 1545—Landscape Computer Applications (2)
Lecture: 1, Lab: 3
Prerequisite(s): LAND 1560.
This course will explore current computer applications and digital representations as they relate to landscape projects. Computer Aided Design (CAD) techniques needed to produce landscape designs, plant lists, construction details and specifications. Lab Fee: $22

LAND 1560—Residential Design (3)
Lecture: 1, Lab: 6
Prerequisite(s): LAND 1160.
This course will study the application of landscape design principles to large and small residential construction situations, design vs. style, the various functional uses of plant material, performing site inventory and analysis and drafting basic projects. Lab Fee: $40

LAND 1565—Landscape Graphics (2)
Lecture: 1, Lab: 3
Prerequisite(s): LAND 1160; LAND-1160.
This course will study the graphic symbols used to create plan view, elevation and perspective landscape drawings. Included will be such information as color rendering, graphic representation of trees and shrubs, and the application of shade and shadow to create a two dimensional representation of the three dimensional landscape. Lab Fee: $22

LAND 1590—Landscape Management I (3)
Lecture: 1.5, Lab: 4.5
Prerequisite(s): HORT 1130 and LAND 1160.
Basic landscape management principles will be discussed with an emphasis on procedures best suited to promote optimum growth and aesthetic qualities of landscape plants. Lab Fee: $25

LAND 2160—Landscape Construction (3)
Lecture: 1, Lab: 6
Prerequisite(s): MATH 1101 and LAND 1560.
This course will study the technical design and specification of landscape structures (decks, stairs, pavements, retaining walls, and site fixtures). Projects for designer-contractor documentation will be developed. Lab Fee: $25

LAND 2165—Landscape Irrigation (3)
Lecture: 1, Lab: 3
Prerequisite(s): MATH 1101 and LAND 1560.
This course will study water and lighting systems, with the emphasis on landscape irrigation. Principles of irrigation design, installation and management will be developed with class projects. Lab Fee: $17

LAND 2175—Sustainable Sites (4)
Lecture: 1, Lab: 6
Prerequisite(s): LAND 1560.
This course will study the ecological design issues for good site planning processes, principles, and methods of site analysis. The application of landscape site design principles for sustainable sites will be implemented with class design projects. Lab Fee: $33

LAND 2190—Landscape Management II (3)
Lecture: 1.5, Lab: 4.5
Prerequisite(s): LAND 1590.
Basic landscape management principles will be discussed with an emphasis on procedures best suited to promote optimum growth and aesthetic qualities of landscape plants. Lab Fee: $40

LAND 2560—Planting Design (3)
Lecture: 1, Lab: 6
Prerequisite(s): HORT 2130 and LAND 1565 and LAND 2160.
This course will study the composition and design characteristics of plant materials. Technical considerations for selection, climate, cultural suitability, availability, costs, and maintenance will be discussed. Students will develop landscape documents with planting plans, plant lists, details and specifications. This course will be offered in summer semester in even numbered years. Lab Fee: $33

LAND 2590—Landscape Operations (3)
Lecture: 1.5, Lab: 4.5
Prerequisite(s): LAND 2160; LAND 2560.
This is a comprehensive course for the landscape program and students will receive an overview of the business principles for a landscape contractor. Students will work on projects simulating the operations of a landscape business. Lab Fee: $26

LAND 2900—LAND Field Experience (3)
Field Experience/Internship: 40
This course provides an opportunityfor an off-campus experience. It will reinforce the formal education received in the program with actual work conditions. "N" credit will not be accepted. Instructor permission is required for enrollment into this class.

LAND 2994—SPT: LAND (1-3)
Lecture: 1
This course will allow for special topics to be offered in a timely and responsive manner.

Latin

LATN 1101—Beginning Latin I (4)
Lecture: 4
Prerequisite(s): Placement into ENGL 1100.
LATN 1101 is an introduction to the fundamentals of Latin with practice in reading and writing. It includes selected studies in culture. LATN 1101 meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

LATN 1102—Beginning Latin II (4)
Lecture: 4
Prerequisite(s): LATN 1101.
This course is a continuation of LATN 1101, with further development of reading and writing skills and further study of culture. LATN 1102 meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

LATN 1103—Intermediate Latin (4)
Lecture: 4
Prerequisite(s): LATN 1102.
This course is a continuation of LATN 1102. It Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

LATN 1193—Independent Study in Latin (1-3)
Lecture: 1
Prerequisite(s): LATN 1103.
LATN 1193 offers individual students an opportunity to examine selected topics in Latin in detail. Independent study courses are offered to meet the special needs or interests of an individual student and to pilot new courses. Lab Fee: $2

Linguistics

LING 2000—Introduction to Linguistics (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
This course presents a general survey of linguistics, with emphasis on five dimensions of the human production and use of language; physiological, grammatical, psychological, social/cultural, and historical. Students learn how their native language shapes their perception of self and the world, and how to understand the perceptions of other language-speakers. Lab Fee: $5

Marketing

MKTG 1105—Retailing (3)
Lecture: 3
MKTG 1105 provides the student with an overview of current and evolving retailing trends and practices. Merchandising, sales promotion, finance, store operations and control are addressed. Special emphasis is given to the growing importance of international retailing, e-Commerce and multi-channel retailing. In addition, the course examines the impact of innovative technologies and methods used by retailers to improve store operating efficiencies and improve customers' shopping experiences. Lab Fee: $1

MKTG 1110—Marketing Principles (3)
Lecture: 3
Prerequisite(s): ECON 2200.
MKTG 1110 involves the study of marketing activities, analysis, strategies, and decision making in the context of other business functions. Topics include: integration of product, price, promotion, and distribution activities; research and analysis of markets, environments, competition, and customers; market segmentation and selection of target markets; and emphasis on behavior and perspectives of consumers and organizational customers. Planning and decision making for products and services in profit and nonprofit, domestic and global settings are analyzed in this course. Lab Fee: $1

MKTG 1120—Branding (3)
Lecture: 3
MKTG 1120 provides the student with an overview of current and evolving branding trends and practice. The primary focus is on the importance of brands,their impact on corporate profitability, and effective principles of brand management. In addition, the course describes a disciplined process to create and implement effective brand design, identity and positioning. Lab Fee: $1

MKTG 1125—Introduction to Social Media (3)
Lecture: 3
MKTG 1125 is an overview of the social media mix: Facebook, LinkedIn, Google+, Twitter, blogs, and other social media marketing sites. This course will focus on how businesses use these social media tools to enhance their exposure, sales, and customer retention. Students will also learn how businesses measure results and analyze metrics derived from their use of social media tools. This course provides an introduction to social media concepts as a required tool in today's business environment. Lab Fee: $1

MKTG 1230—Customer Service & Sales (3)
Lecture: 3
MKTG 1230 provides an introduction to the sales process and the key role that sales activities play in any consumer or commercial business endeavor. The course deals with the basic components of selling including understanding customer psychology, building customer relationships. This course also emphasizes the important issues facing customer service providers and customer service managers in business. Special emphasis is placed on the mastery of specific skills and analyzing customer attitudes and behaviors to determine the tasks required to deliver excellent customer service. Lab Fee: $2

MKTG 1230A—Customer Service & Sales-A (1)
Lecture: 1
MKTG 1230A emphasizes the important issues facing customer service providers and customer service managers in business. Special emphasis is placed on the mastery of specific skills and analyzing customer attitudes and behaviors to determine the tasks required to deliver excellent customer service. Lab Fee: $0

MKTG 1230B—Customer Service & Sales-B (2)
Lecture: 2
MKTG 1230B provides a more extensive introduction to the sales process and the key role that sales activities play in any consumer or commercial business endeavor. The course deals with the basic components of selling including understanding customer psychology and building customer relationships This course also touches on the important issues facing customer service providers and constomercustomer service managers in business Lab Fee: $2

MKTG 2200—Digital Marketing (3)
Lecture: 3
MKTG 2200 describes how to use the Web for various marketing functions: gathering and evaluating primary and secondary sources of information, market research, sales, advertising and promotion, and customer service/retention. Introduction to emerging Web 2.0 technologies with particular emphasis on the role of the various social networking tools used in the process of marketing to and communicating with consumers. Examples of Web 2.0 features and tools to be explored include online communities, wikis, blogs, vlogs, podcasts, RSS feeds, and mobile communication devices. An overview of the marketing and technical aspects of e-Commerce will be examined and how various markets use e-Commerce in product, pricing, distribution and promotion decisions. Lab Fee: $3

MKTG 2299—Marketing Capstone (3)
Lecture: 3
Prerequisite(s): MKTG 2400.
Upon successful completion of this course, the student should be able to identify marketing problems, develop and describe the situational analysis, formulate alternative solutions, and reach and explain a decision for each issue. In addition, the student should be able to apply the knowledge of marketing and management concepts and techniques in the analysis of cases and marketing plan creation. The student will finalize a resume and marketing portfolio. Lab Fee: $18

MKTG 2360—Direct and Database Marketing (3)
Lecture: 3
Prerequisite(s): MKTG 1110.
MKTG 2360 presents a survey of the direct marketing process including the theory and practice of direct marketing, its function and organization. Topics covered include direct response television/radio, database marketing, list selection and evaluation, direct marketing media and planning. This course provides students with an overview of the use of databases in consumer and business-to-business marketing to both acquire and retain customers. Particular emphasis is placed on developing in-house databases, purchasing lists and managing a marketing database. Special emphasis is given to how direct and database marketing can be integrated into the overall marketing mix. Lab Fee: $2

MKTG 2400—Advertising and Promotion (3)
Lecture: 3
Prerequisite(s): MKTG 1110.
The role of advertising and promotion in the marketing communications program and as part of an integrated marketing communications perspective is analyzed from both a traditional and an electronic media perspective. Other promotional areas covered include direct marketing, sales promotion, public relations, and personal selling. Regulatory, social and economic factors that influence, and are in turn influenced by, an organization's advertising and promotional program will be examined. Media buying and selling are explored focusing on the role of the various participants in the process: clients, advertising and media agencies, media sales companies, media companies, etc. Lab Fee: $4

MKTG 2500—Intro to Marketing Analysis (3)
Lecture: 3
Prerequisite(s): MKTG 1110; STAT 1400.
Introduction to Marketing Analytics will focus on the principles and strategic concepts of marketing analytics. Digital marketing analytics uses digital models and metrics to improve marketing decisions and return on marketing investment (ROMI). Students will analyze current technologies in digital data analytics, automated marketing, database management and CRM, as well as the role of business intelligence based on data in this process. Furthermore, the student will interpret the value of analytics and CRM in uncovering the human element in data and discovering behavioral insights that lead to higher profits. At the core of this class is the application of database marketing and maintaining profitable customer relationships. Lab Fee: $2

MKTG 2550—Consumer Behavior (3)
Lecture: 3
Prerequisite(s): MKTG 1110.
MKTG 2550 course introduces the field of market research with particular emphasis on how to use research data to make better marketing decisions and to provide a framework for understanding the consumer decision-making process and purchasing behavior. Topics covered include the market research process, research design and data sources, data collection, and the analysis of marketing research data. Emphasis is placed on why consumers behave as they do, and how marketers, consumer activists, and public officials use this knowledge to influence consumer behavior. Lab Fee: $2

Massage Therapy

MASS 1236—Massage Therapy Law & Ethics (2)
Lecture: 2
This course provides a general overview of the legal system, including criminal and civil law. An in-depth review of the statutes and administrative rules that govern massage therapy in Ohio are provided. The professional practice of health care including the role of the massage therapy professional/practitioner, relationships with other health care providers, stress and self-care of health care professionals, health care ethics, role fidelity, and confidentiality is also discussed.

MASS 1261—Massage Techniques (4)
Lecture: 2, Lab: 6
This course is an introduction to the professional practice of massage therapy including hygiene, and the seven (7) basic techniques of massage. The student will study the therapeutic applications and physiological effects of the basic techniques and begin to develop a systematic approach to the application of these techniques. Lab Fee: $75

MASS 1273—Massage Pathophysiology (4)
Lecture: 2, Lab: 6
Prerequisite(s): BIO 1107 and MASS 1261.
This course provides the student with the indication and contraindication for conditions, disorders and dysfunctions of the human body and provides student with the appropriate application of massage techniques for indicated treatment. Lab Fee: $40

MASS 2200—Myology (2)
Lecture: 1, Lab: 2
Prerequisite(s): BIO 1107;.
This course will be an in-depth review of the musculoskeletal system. Lab Fee: $30

MASS 2240—Fundamentals of Massage Therapy Practice (2)
Lecture: 2
Prerequisite(s): MASS 1236 and MASS 1261.
This course provides the student with an in-depth look at building and maintaining a successful business practice, with a direct focus on massage and bodywork. Strategies for goal setting, time management, professionalism, therapeutic communications, and employment fundamentals are presented. Practice and financial management skills, various marketing fundamentals, and client retention strategies will be topics presented. The student will create marketing and business plans. Lab Fee: $0

MASS 2280—Nationwide Children's Hosp Adv Studies (2)
Lecture: 1, Lab: 6
The student will have the opportunity to work with the massage therapy staff of Nationwide Children's Hospital in the care and treatment of patients of the hospital in a variety of the clinical specialty units. The care unit students may work in include but are not limited to; General Surgery, Burns, Hematology/ Oncology, Pulmonary Rehabilitation, Cardiac Rehabilitation, Heart & Lung Transplant, Pediatric Intensive Care, Physical Medicine & Rehabilitation and Pain Clinic. The course will also discuss issues surrounding death and dying of patients. Lab Fee: $0

MASS 2281—Hot Stone Massage (2)
Lecture: 1, Lab: 2
Prerequisite(s): MASS 1261 and BIO 1107.
This course is designed to offer the massage therapist the opportunity to gain skill and understanding in the efficient, systematic use of hot and cool stones in a full body therapeutic massage, as well as the specified use of stones for deep tissue work. Tools and equipment are discussed in detail to instill confidence in it's use, safety and sanitary procedures. Lab Fee: $40

MASS 2282—Trigger Point Therapy (4)
Lecture: 2, Lab: 4
Prerequisite(s): MASS 1261 and BIO 1107.
Course includes physiology of trigger point therapy and treatment modalities including fascial release, stretch and spray, post isometric muscle release, and advanced Swedish techniques. Lab Fee: $40

MASS 2284—Sports Massage (2)
Lecture: 1, Lab: 2
Prerequisite(s): MASS 1261 and BIO 1107.
This course is an exploration of the various aspects of sports massage. It will include Event Sports Massage, including pre-event, post-event and inter-competition. Clinical sports massage including assessment and treatment of common sports related injuries by use of a variety of techniques is also discussed. Techniques may include but are not limited to Swedish, specific sports massage techniques, hydrotherapy, stretching, trigger points, and myofascial release. Lab Fee: $40

MASS 2285—Aromatherapy Therapy Basics for Massage (2)
Lecture: 1, Lab: 2
Prerequisite(s): MASS 1261 and BIO 1107.
This course is designed for the massage therapist/ massage student that has an interest in aromatherapy in combination with massage. Lab Fee: $40

MASS 2286—Spa Services for Massage Therapy (2)
Lecture: 1, Lab: 2
Prerequisite(s): MASS 1261 and BIO 1107.
This course is designed to familiarize the massage therapist with treatments offered in a spa setting. Wet-room techniques and equipment are discussed, but the focus is on the delivery of spa treatments in a dry-room setting allowing the student to use spa treatments in a variety of settings (i.e. private practice or day spa) without the need for expensive wet-room equipment. Lab Fee: $40

MASS 2287—Introduction to Oncology Massage (2)
Lecture: 1, Lab: 2
Prerequisite(s): MASS 2891.
This course provides students with an introduction to key concepts for understanding various types of cancer and aspects of a cancer diagnosis. Additionally, common medical interventions, and methods for safely applying massage therapy to individuals with the diagnosis are presented. The student will learn new techniques and be exposed to various massage modalities with specific applications for clinical situations among various populations in oncology massage. Lab Fee: $40

MASS 2296—Massage Therapy Board Review (2)
Lecture: 2
Prerequisite(s): MASS 2891.
This course provides an overview of the Basic Sciences and Limited Branch sections of the Massage Therapy Program. The course is designed to assist in a massage student's preparation for the State of Ohio Medical Board licensure exam for Massage Therapy.

MASS 2298—Special Topics in Massage Therapy (2)
Lecture: 1, Lab: 2
Prerequisite(s): MASS 1261 and BIO 1107.
This course brings together concepts discussed in previous program courses. Topics of discussion will revolve around massage therapy techniques other than Swedish massage. Also covered will be the development and modification of institutional programming based on individual and group needs. Lab Fee: $40

MASS 2891—Massage Clinical (4)
Lecture: 2, Lab: 6
Prerequisite(s): MASS 1261 and BIO 1107.
This course provides the student with clinical practice of massage therapy. The student will learn new techniques and be exposed to various massage modalities with specific applications for clinical situations. The student will have the opportunity to hone their clinical skills with the experience gained in the student clinic. Lab Fee: $75

Mathematics

MATH 114—Basic Math and Pre-Algebra (3)
Lecture: 2, Lab: 2
Prerequisite(s): By placement.
This course includes standard basic mathematics and pre-algebra content including whole numbers, fractions, decimals, integers, expressions, linear equations, and application problems. Computer technology is used in a laboratory environment for assessments and to support active learning. Not open to students with credit for MATH1024 or higher. Lab Fee: $5

MATH 1024—Mathematics of Measurement (2)
Lecture: 1, Lab: 2
Prerequisite(s): MATH 0114 or; MATH 1099 and ENGL 0140 or; ENGL 0145 or; ENGL 1100.
MATH 1024 introduces the fundamentals of measurement, including the operation of tools for obtaining measurements. MATH 1024 provides an elementary understanding of the basic structure of measurements including types, arithmetic, accuracy, precision, representations, and application of measurements. Lab Fee: $5

MATH 1025—Quantitative Literacy (3)
Lecture: 3
Prerequisite(s): MATH 0114 or; MATH 1099 or; by placement equivalent.
This is a first course in algebra specifically designed for students enrolled in programs that do not require college algebra. Traditional beginning algebra topics including basic numeric/algebraic skills and reasoning, linear equations, application modeling, and data literacy are addressed in a contextualized format using a pedagogy that promotes problem solving and critical thinking through collaborative learning and online tools. Lab Fee: $4

MATH 1050—Elementary Algebra (5)
Lecture: 5
Prerequisite(s): MATH 0114 or; MATH 1099.
First of a two-semester sequence. Includes the study of the real number system including properties of real numbers, order of operations, operations on algebraic expressions, solving linear equations and inequalities in one variable, the rectangular coordinate system, graphs of linear equations and inequalities in two variables, systems of equations and inequalities in two variables, applications and modeling, properties of exponents, scientific notation, polynomial arithmetic, factoring, solving polynomial equations. Includes applications and activities to build skills in problem solving. Not open to students with credit for MATH 1020 and 1030, or 1075 and above. This course is taught via Distance Education and is recommended for self-motivated students with limited access to campus and strong math and computer skills. This course requirement can also be completed by taking MATH 1099. Lab Fee: $4

MATH 1075—Intermediate Algebra (5)
Lecture: 5
Prerequisite(s): MATH 1050 or; MATH 1099.
Second of a two-semester sequence. Includes the study of rational expression arithmetic and simplification and complex fraction simplification; operations on radical expressions and expressions containing rational exponents; the complex number system; solving absolute value, rational, radical, and quadratic equations; solving absolute value and polynomial inequalities in one variable; solving compound inequalities in one and two variables; graphs, relations, and functions including quadratic functions; the distance and midpoint formulas and circles. Includes applications and activities to build skills in problem solving. This course is taught via Distance Education and is recommended for self-motivated students with limited access to campus and strong math and computer skills. This course requirement can also be completed by taking MATH 1099. Lab Fee: $4

MATH 1099—Bridge to College Math (3)
Lab: 6
Prerequisite(s): Placement score which allows for MATH 0114 or MATH 1050 or MATH 1075 registration.
Through Bridge to College Math, students can earn credit for MATH 0114, MATH 1050, and/or MATH 1075 in a modularized format using technology, allowing students to begin at the appropriate level based on course placement and allowing them to move through as many course modules as they can within the time limits of the course. This modularized, mastery approach will pre-test students, provide a prescriptive study plan, and post-test students from one module to the next. Emphasis will be placed on individualized pace with a greater time period of active learning. At the end of the course, based on proficiency of the modules, students will earn a grade of "S" for satisfactory progress and gain permission to enter subsequent courses in their plan of study. This course is intended for students who have an appropriate placement score and are enrolled in a plan of study that requires College Algebra or Precalculus. Lab Fee: $7

MATH 1101—Math Construction Sciences/Applied Tech (3)
Lecture: 2, Lab: 2
Prerequisite(s): MATH 1024 or; MATH 1050 or; MATH 1099 and ENGL 0140 or; ENGL 0145 or; ENGL 1100.
This college level mathematics course is designed for students seeking degrees in Automotive Technology, Construction Sciences, Heating Ventilating and Air Conditioning Technology, Skilled Trades Technology, and Landscape Design and Management. Topics include: mathematics of measurement, function concepts and representations, basic elementary functions, right angle trigonometry, systems of linear equations, quadratic equations, and mathematical modeling. All topics are delivered in the construction context of Automotive Technology(AUTO), Construction Sciences(CMGT), Heating Ventilating and Air Conditioning Technology(HVAC), Skilled Trades Technology(SKTR), and Landscape Design and Management(LAND). This course focuses on building problem solving and critical thinking skills and the supporting algebraic and analytical skills. Excel labs are included to support and extend the course topics. The course fulfills the mathematics requirement for designated AAS degree programs at CSCC. Transfer credit is not guaranteed. Lab Fee: $5

MATH 1103—Mathematics for Hospitality and Culinary Arts (3)
Lecture: 2, Lab: 2
Prerequisite(s): Placement equivalent or; MATH 1025.
This course is specifically for Culinary Apprenticeship, Baking and Pastry Arts, and Restaurant and Foodservice Management majors. This course will develop the mathematical reasoning needed for advanced unit conversions, determining and applying edible product yield percent, costing of food, beverage, and recipes, recipe size conversion, bakers scaling (of liquid verses dry weights), edible product yield percentages, menu cost cards, and hotel rates. Students will apply learned concepts and mathematical knowledge to draw conclusions and make decisions relevant to problem solving in hospitality related fields. Lab Fee: $5

MATH 1104—Mathematical Concepts for Business (3)
Lecture: 2, Lab: 2
Prerequisite(s): MATH 1025 or; MATH 1050 or; MATH 1099 or; placement equivalent.
This is a college level course which will provide students with the fundamental mathematical content knowledge necessary for employment in a diverse array of entrepreneurial fields and skilled professions. These concepts are intended to broaden and deepen students' mathematical knowledge and understanding from a business perspective. Topics including foundations and business basics, interest, personal finance, and business finance are addressed in a contextualized format using a pedagogy that promotes problem solving and critical thinking through the use of collaborative learning and online tools. Lab Fee: $4

MATH 1109—Mathematics for Emergency Services (3)
Lecture: 2, Lab: 2
Prerequisite(s): ENGL 0145 and MATH 1025.
This college level mathematics course is designed for students seeking degrees in Fire Science or Emergency Medical Services. Topics include: development, interpretation, and use of graphical, tabular, and formulaic relations; rates; geometry of shapes; statistics; and mathematical modeling. All topics are delivered in the context of Fire Science (FS) and Emergency Medical Services (EMS). This course focuses on building problem solving and critical thinking skills. Excel labs are included to support and extend the course topics. Just-in-time mathematics remediation is provided to support student success. This course fulfills the mathematics requirement for designated AAS degree programs at CSCC. Transfer credit is not guaranteed. Lab Fee: $6

MATH 1111—Discrete Mathematics for Computing (3)
Lecture: 2, Lab: 2
Prerequisite(s): MATH 1025 or; MATH 1050 or; MATH 1099 or; placement equivalent.
This college level mathematics course is designed for students seeking degrees in Computer Science (CSCI), Information Technology Support Technician (ITST), and Geographic Information Systems (GIS), and introduces students to the logic and mathematical structures required for computer programming. Elementary logic, set theory and Boolean algebra are introduced. Functions and relations are emphasized, along with types of functions common in business or scientific applications, properties of functions such as domain, range, and one-to-one functions, and recursion. Mathematical structures like summations and sequences, elementary probability and vectors are also introduced. Data types, number systems such as binary and hexadecimal, right angle trigonometry, and applications of algebra are introduced in a contextualized framework that emphasizes collaborative problem-solving and applications to branches of programming practice. Lab Fee: $5

MATH 1115—Mathematics for Engineering Technologies (4)
Lab: 2, Lecture: 3
Prerequisite(s): MATH 1024 or; MATH 1050 and ENGL 0140 or; ENGL 0145 or; ENGL 1100.
This college level mathematics course is designed for students seeking degrees in Mechanical Engineering Technology, Electronic Engineering Technology, and Electro-Mechanical Engineering Technology. Topics include: mathematics of measurement, function concepts and representations, basic elementary functions, right angle trigonometry, sine and cosine transformations, vectors, and mathematical modeling. All topics are delivered in the engineering context of Mechanical Engineering Technology(MECH), Electronic Engineering Technology(EET), and Electro-Mechanical Engineering Technology(EMEC). This course focuses on building problem solving and critical thinking skills and the supporting algebraic and analytical skills. Labs are included to support and extend the course topics. This course fulfills the mathematics requirement for designated AAS degree programs at CSCC. This course meets the TMM014 ODHE learning outcomes. Lab Fee: $5

MATH 1120—Precalculus with Review I (5)
Lecture: 4, Lab: 2
Prerequisite(s): MATH 1050 or; MATH 1099.
MATH 1120 is the first course in a Precalculus sequence consisting of MATH 1120 & MATH 1121. The concepts, skills, reasoning, and rigor expected of successful Calculus students is developed in this sequence. MATH 1120 will begin by outlining the analytical structure of the Elementary Functions (linear, quadratic, absolute value, root, polynomial, rational, exponential, logarithmic, trigonometric, and piecewise.) with special emphasis on communication: language, notation, representation, and rigor. The general concept of function will be fully developed from definition, extensively investigated, and used as an analytical tool. Calculus situations and descriptions will be used to motivate the application of Elementary Functions and inspire an analysis, which includes function behavior and characteristics, function arithmetic, and modeling. Supporting algebraic concepts and skills are included in the curriculum as necessary. Lab Fee: $3

MATH 1121—Precalculus with Review II (5)
Lecture: 4, Lab: 2
Prerequisite(s): MATH 1120.
MATH 1121 is the second course in a Precalculus sequence. The concepts, skills, reasoning, and rigor expected of successful Calculus students is developed in this sequence. MATH 1121 concludes outlining the analytical structure of the Elementary Functions (linear, quadratic, absolute value, root, polynomial, rational, exponential, logarithmic, trigonometric, and piecewise.) with considerable emphasis on the Trigonometric functions, structure, and relationships. Calculus situations and descriptions will be used to motivate and inspire analysis, which includes function behavior and characteristics, function arithmetic, and modeling. Supporting algebraic concepts and skills are included in the curriculum as necessary. This course, along with MATH 1120, is specifically designed as preparation for Calculus. Lab Fee: $3

MATH 1122—Foundations of Quantitative Reasoning (5)
Lecture: 4, Lab: 2
Prerequisite(s): MATH 1025 minimum grade of “C” or MATH 1050 minimum grade of “C” or MATH 1099 (MATH 1050 module) or placement equivalent..
This college level mathematics course is designed for students seeking non-STEM degrees. It is a quantitative reasoning course focusing on thought processes involved when investigating situations described by measurements. Three threads define the curriculum: 1) Numeracy. Students will develop and use the concepts of numeracy to investigate and explain quantitative relationships and solve problems in a variety of real-world contexts. 2) Mathematical Modeling. Students will make decisions by analyzing mathematical models, including situations in which the student must recognize and/or make assumptions. 3) Probability and Statistics. Students will use the language and structure of statistics and probability to investigate, represent, make decisions, and draw conclusions from real-world contexts. The classroom is designed to be an active learning experience supported by student communication. This course will provide the necessary co-requisite support as needed by students. Lab Fee: $3

MATH 1122—Foundations of Quantitative Reasoning (5)
Lecture: 4, Lab: 2
Prerequisite(s): MATH 1025 minimum grade of “C” or MATH-1040 minimum grade of “C" or MATH 1050 minimum grade of “C” or MATH 1099 (MATH 1050 module) or placement equivalent..
This college level mathematics course is designed for students seeking non-STEM degrees. It is a quantitative reasoning course focusing on thought processes involved when investigating situations described by measurements. Three threads define the curriculum: 1) Numeracy. Students will develop and use the concepts of numeracy to investigate and explain quantitative relationships and solve problems in a variety of real-world contexts. 2) Mathematical Modeling. Students will make decisions by analyzing mathematical models, including situations in which the student must recognize and/or make assumptions. 3) Probability and Statistics. Students will use the language and structure of statistics and probability to investigate, represent, make decisions, and draw conclusions from real-world contexts. The classroom is designed to be an active learning experience supported by student communication. This course will provide the necessary co-requisite support as needed by students. Lab Fee: $3

MATH 1123—Quantitative Reasoning (3)
Lecture: 2, Lab: 2
Prerequisite(s): MATH 1075 minimum grade of "C" or MATH 1099 (MATH 1060 module or MATH 1075 module) or placement equivalent..
This college level mathematics course is designed for students seeking non-STEM degrees. It is a quantitative reasoning course focusing on thought processes involved when investigating situations described by measurements. Three threads define the curriculum: 1) Numeracy. Students will develop and use the concepts of numeracy to investigate and explain quantitative relationships and solve problems in a variety of real-world contexts. 2) Mathematical Modeling. Students will make decisions by analyzing mathematical models, including situations in which the student must recognize and/or make assumptions. 3) Probability and Statistics. Students will use the language and structure of statistics and probability to investigate, represent, make decisions, and draw conclusions from real-world contexts. The classroom is designed to be an active learning experience supported by student communication.
Lab Fee: $3

MATH 1123—Quantitative Reasoning (3)
Lecture: 2, Lab: 2
Prerequisite(s): MATH 1075 minimum grade of "C" or MATH 1099 (MATH 1060 module or MATH 1075 module) or placement equivalent..
This college level mathematics course is designed for students seeking non-STEM degrees. It is a quantitative reasoning course focusing on thought processes involved when investigating situations described by measurements. Three threads define the curriculum: Numeracy-students will develop and use the concepts of numeracy to investigate and explain quantitative relationships and solve problems in a variety of real-world contexts. Mathematical Modeling-students will make decisions by analyzing mathematical models, including situations in which the student must recognize and/or make assumptions. Probability and Statistics-students will use the language and structure of statistics and probability to investigate, represent, make decisions, and draw conclusions from real-world contexts. The classroom is designed to be an active learning experience supported by student communication.
Lab Fee: $3

MATH 1125—Conceptual Mathematics for Teachers I (5)
Lecture: 5
Prerequisite(s): MATH 1075 or; MATH 1099 or; placement equivalent.
This course is designed as an in-depth study of the basic concepts of number systems, binary operations, number theory, algebraic thinking, and problem-solving as appropriate for primary and middle school teachers. Development of these concepts will be based on the current Common Core State Standards for Mathematics. Instruction will focus on the development of these concepts through demonstration, exploration, and discussion using hands-on manipulatives and appropriate technology.
Lab Fee: $5

MATH 1126—Conceptual Mathematics for Teachers II (5)
Lecture: 5
Prerequisite(s): MATH 1125.
MATH 1126 is a continuation of MATH 1125. This course is designed as an in-depth study of the basic concepts of ratio, geometric proof, transformations, measurement, counting, probability, and problem solving as appropriate for primary and middle school teachers. Development of these concepts will be based on the current Common Core State Standards for Mathematics. Instruction will focus on the development of these concepts through demonstration, exploration, and discussion using hands-on manipulatives and appropriate technology.
Lab Fee: $5

MATH 1130—Business Algebra (5)
Lecture: 5
Prerequisite(s): MATH 1075 or; MATH 1099 or; placement equivalent; MATH-1075, Minimum grade C.
This course focuses on college algebra topics for students majoring in the economics and business. Presents a review of applications of equations, inequalities and function notation. Course serves as an introduction to: graphs of functions; translations and reflections of graphs of functions;, asymptotic behavior; algebra of functions including function composition and inverses; difference quotients and average rates of change; direct and inverse variation; behavior and modeling of functions including linear, quadratic, higher degree polynomials, rational, radical, exponential, logarithmic and piecewise functions; matrices (addition, subtraction, multiplication, row reduction, and solving systems using row reduction); and the mathematics of finance (compound interest, annuities, amortization and sinking funds.) Business applications throughout. Not open to students with credit for MATH 1116 or 1148 and above. Lab Fee: $3

MATH 1131—Calculus for Business (6)
Lecture: 6
Prerequisite(s): MATH 1130 or; MATH 1146 or; MATH 1148 or; MATH 1149 or; MATH 1150 or; placement equivalent; MATH-1130 or MATH-1148 or MATH-1149 or MATH-1150 Minimum grade C.
An introduction to calculus: limits, continuity, derivatives, rules of differentiation, derivatives of logarithmic and exponential functions, derivative as a limit, slope, and rate of change, increasing and decreasing, extrema, concavity, points of inflection, antiderivatives, definite integrals, area, fundamental theorem of calculus, techniques of integration, differential equations, functions of several variables, partial derivatives, extrema of functions of two variables. Business applications throughout. Not open to students with credit for MATH 1151 and above.

MATH 1146—College Algebra Plus (5)
Lecture: 4, Lab: 2
Prerequisite(s): MATH 1050 minimum grade of “C” or MATH 1099 (MATH 1050 module) or placement equivalent..
College Algebra is a course in the study of the elementary functions. The concept of function is developed from definition and notation through an analysis of the elementary functions: linear, quadratic, absolute value, reciprocal, square root, polynomial, rational, exponential, and logarithmic, as well as piecewise, composite and inverse functions. The analysis includes function behavior with an introduction to the concepts of continuity and limits, extrema, and zeros, as well as corresponding graphical characteristics. The topic of average rate of change of a function is included. Analytic techniques include the Rational Zeros Theorem, Intermediate Value Theorem, and Conjugate Pairs Theorm, as well as factoring and transformations. The course includes solving systems of non-linear equations and partial fraction decomposition and concludes with an introduction to arithmetic and geometric sequences and partial sums. This course is designed to support and strengthen algebraic proficiency within the study of the elementary functions and emphasizes the conceptual framework of the elementary functions and the quantitative reasoning to apply them. This course meets the TMM001 ODHE guidelines and serves as preparation for calculus. Lab Fee: $3

MATH 1146—College Algebra Plus (4)
Lecture: 2, Lab: 4
Prerequisite(s): MATH 1050 minimum grade of “C” or MATH 1099 (MATH 1050 module) or placement equivalent..
College Algebra Plus is a course in the study of the elementary functions. The concept of function is developed from definition and notation through an analysis of the elementary functions: linear, quadratic, absolute value, reciprocal, square root, polynomial, rational, exponential, and logarithmic, as well as piecewise, composite and inverse functions. The analysis includes function behavior with an introduction to the concepts of continuity and limits, extrema, and zeros, as well as corresponding graphical characteristics. The topic of average rate of change of a function is included. Analytic techniques include the Rational Zeros Theorem, Intermediate Value Theorem, and Conjugate Pairs Theorem, as well as factoring and transformations. The course includes solving systems of non-linear equations and partial fraction decomposition and concludes with an introduction to arithmetic and geometric sequences and partial sums. This course is designed to support and strengthen algebraic proficiency within the study of the elementary functions and emphasizes the conceptual framework of the elementary functions and the quantitative reasoning to apply them. This course meets the Ohio Department of Higher Education TMM001 Guidelines. Lab Fee: $3

MATH 1148—College Algebra (4)
Lecture: 4
Prerequisite(s): MATH 1075 Minimum grade of "C" or MATH 1099 (completion of MATH 1075 module) or placement equivalent; not open to students with MATH 1146 or MATH 1149 or above.
College Algebra is a course in the study of the elementary functions. The concept of function is developed from definition and notation through an analysis of the elementary functions: linear, quadratic, absolute value, reciprocal, square root, polynomial, rational, exponential, and logarithmic, as well as piecewise, composite and inverse functions. The analysis includes function behavior with an introduction to the concepts of continuity and limits, extrema, and zeros, as well as corresponding graphical characteristics. The topic of average rate of change of a function is included. Analytic techniques include the Rational Zeros Theorem, Intermediate Value Theorem, and Conjugate Pairs Theorem, as well as factoring and transformations. The course includes solving systems of non-linear equations and partial fraction decomposition and concludes with an introduction to arithmetic and geometric sequences and partial sums. This course emphasizes the conceptual framework of the elementary functions and the quantitative reasoning to apply them. This course meets the TMM001 ODHE guidelines and serves as preparation for calculus. Lab Fee: $3

MATH 1149—Trigonometry (4)
Lecture: 4
Prerequisite(s): MATH 1148 or; MATH 1146 or; placement equivalent.
This course is a study of the trigonometric functions, vectors, and related applications. Topics include right triangle trigonometry; trigonometry of general angles; the unit circle; the graphs of the trigonometric functions; analytical trigonometry; inverse trigonometric functions; verifying identities; solving trigonometric equations; the Law of Sines; the Law of Cosines; applications of trigonometry; polar coordinates and the graphs of polar equations; geometric and algebraic vectors; vector applications; plane curves and parametric equations, trigonometric form of complex numbers, and DeMoivre's Theorem. The conic sections are defined and analyzed algebraically and graphically. Not open to students with credit for MATH 1150 and above
Lab Fee: $3

MATH 1150—Precalculus (6)
Lecture: 6
Prerequisite(s): By placement only. Not open to students with MATH-1146 or MATH-1148 or MATH-1149 or above..
This is an accelerated course intended for well prepared students going on to take calculus. Topics included polynomial and rational functions, exponential and logarithmic functions, trigonometric and inverse trigonometric functions. Such functions are graphed and analyzed and related equations and inequalities are solved. Problem solving with related applications occurs throughout. Sequences and series are introduced. This course is intended for students with strong mathematics preparation. Students should have completed four years of high school mathematics including Algebra II or above. Not open to students with credit for MATH 1148 and 1149, or 1151 and above. Lab Fee: $3

MATH 1151—Calculus I (5)
Lecture: 5
Prerequisite(s): MATH 1121 or; MATH 1149 or; MATH 1150 or; placement equivalent.
Introduction to differential calculus: functions, limits, continuity, derivatives, differentiation rules, derivatives of the trigonometric, exponential, and logarithmic functions, related rates, extrema, curve sketching, and optimization. Introduction to integral calculus: antiderivatives, definite integral, Riemann sums, area under a curve, Fundamental Theorem of Calculus, numerical integration, integration by substitution, and derivatives and integrals of inverse trigonometric functions. Applications to problems in science and engineering. Sections of this course are H-designated Honors classes. Lab Fee: $2

MATH 1152—Calculus II (5)
Lecture: 5
Prerequisite(s): MATH 1151.
Continue introduction to integral calculus: integration of exponential, logarithmic, trigonometric, inverse trigonometric functions, volume and surface area of solids of revolution, arc length, and methods of integration. Also includes Improper Integrals. Analyze plane curves given parametrically or in polar coordinates, and their differential and integral calculus. Infinite sequences and series, and their sum and/or convergence, Taylor polynomials, and Taylor series. Applications to problems in science and engineering. Not open to students with credit for MATH 1172 and above. Lab Fee: $2

MATH 1172—Engineering Mathematics A (5)
Lecture: 5
Prerequisite(s): MATH 1151.
Integration techniques, sequences & series, Taylor series, vectors and parametric curves, several variables, partial derivatives, chain rule, max-min. Not open to students with credit for any higher numbered math class, or for MATH 1152.

MATH 1193—Independent Study in Mathematics (1-5)
Lecture: 1
Designed to give students an opportunity for a detailed study of topics of interest in mathematics.

MATH 1194—SPT: Mathematics (1-5)
Lecture: 1
Designed to give groups of students an opportunity for a detailed study of topics of interest in mathematics not otherwise offered.

MATH 2153—Calculus III (5)
Lecture: 5
Prerequisite(s): MATH 1152.
Introduction to multivariable calculus: Vector valued functions and motion in the plane and in space, functions of several variables, partial derivatives, directional derivatives, gradients, extrema, multiple integrals, line integrals, Green's theorem, parametric surfaces, divergence theorem, and Stokes theorem. Applications to problems in science and engineering. Lab Fee: $2

MATH 2173—Engineering Mathematics B (5)
Lecture: 5
Prerequisite(s): MATH 1172.
Multiple integrals, line integrals, vector fields, second order constant coefficient ODEs.

MATH 2174—Linear Algebra & Diff Equations for Eng (5)
Lecture: 5
Prerequisite(s): MATH 2173.
Matrix theory, eigenvectors and eigenvalues, ordinary and partial differential equations.

MATH 2177—Mathematical Topics for Engineering (6)
Lecture: 6
Prerequisite(s): MATH 1172 or; MATH 2153.
This course covers multiple integrals, line integrals, matrix theory, linear (ordinary and partial) differential equations, with applications to science and engineering. Lab Fee: $5

MATH 2193—IS Mathematics II (1-5)
Lecture: 1
Designed to give students an opportunity for a detailed study of topics of interest in mathematics.

MATH 2194—SPT: Mathematics II (1-5)
Lecture: 1 - 5
Designed to give groups of students an opportunity for a detailed study of topics of interest in mathematics not otherwise offered Lab Fee: $0

MATH 2255—Elementary Differential Equations (4)
Lecture: 4
Prerequisite(s): MATH 2153.
This course is a study of the basic concepts and methods of solving ordinary differential equations. Topics include slope fields; separable, linear, exact, Bernoulli, and homogeneous first order equations; homogeneous and nonhomogeneous second and higher order linear equations; Laplace transforms; series solutions; numerical methods; applications to physical sciences and engineering. Lab Fee: $2

MATH 2366—Discrete Math Structures (5)
Lecture: 5
Prerequisite(s): MATH 1130 or; MATH 1148 or; MATH 1150.
This course covers mathematical formalization and reasoning; logic; sets, mappings, and functions; methods of proof, recursive definitions; mathematical induction; elementary counting techniques, probability theory; relations and equivalence relations; Boolean algebra, logic gates; graphs, directed graphs, and trees; with applications to computer science.

MATH 2415—Ordinary Partial Differential Equations (4)
Lecture: 4
Prerequisite(s): MATH 2153 or; MATH 1172 and MATH 2568.
A study of the basic concepts and methods of solving ordinary and partial differential equations; slope fields; separable, linear, exact, Bernoulli, and homogeneous first order equations; systems of first order differential equations; homogeneous and nonhomogeneous second order linear equations; Fourier Series, Heat Equation and other separable partial differential equations; applications to physical sciences and engineering.

MATH 2568—Elementary Linear Algebra (4)
Lecture: 4
Prerequisite(s): MATH 1172 or; MATH 2153.
Systems of linear equations, matrices, and determinants; vector spaces and their subspaces, Rn, coordinate systems and bases; linear transformations; eigenvalues including complex eigenvalues, eigenvectors; inner product and orthogonality, orthogonal matrices; geometric and real-world applications. Lab Fee: $2

Mechanical Engineering Technology

MECH 1130—Statics (3)
Lecture: 2, Lab: 2
Prerequisite(s): or; MATH 1148 or; MATH 1115.
This course deals with the principles of trusses, frames, machines and machine components. The course will offer the student experience in dealing with coplanar load systems that are concurrent, parallel and nonparallel. It is recommended, but not required, that PHYS 1200 be taken before this course. Lab Fee: $23

MECH 1145—CAD I (3)
Lecture: 1, Lab: 5
Prerequisite(s): ENGT 1115.
This course will cover non-parametric based CAD in 2D and 3D. Course presents fundamental and intermediate Computer Aided Design concepts to produce detailed mechanical drawings and models. Offer on demand in addition to semesters listed. Lab Fee: $23

MECH 1145—CAD I (3)
Lecture: 1, Lab: 5
Prerequisite(s): ENGT 1115.
This course will cover non-parametric based CAD in 2D and 3D. Course presents fundamental and intermediate Computer Aided Design concepts to produce detailed mechanical drawings and models. Offer on demand in addition to semesters listed. Lab Fee: $23

MECH 1150—Engineering Materials (3)
Lecture: 2, Lab: 2
Prerequisite(s): Placement into 'no reading required'.
This is a course that will acquaint the technician with the nature, properties, performance, characteristics, and practical uses of various engineering materials. Materials including ferrous and nonferrous metals as well as a variety of non-metals will be covered. Lab Fee: $19

MECH 1240—Machine Tools (3)
Lecture: 1, Lab: 5
Prerequisite(s): placement into MATH 1020 or higher.
This course features hands-on operation of mills, lathes, shapers, and grinders in addition to instruction in safety practices and related theory needed for operating these machines. Additional instruction will be given on cutting tool materials and geometry, feeds and speeds, and associated bench practices. Offered on demand in addition to semesters listed. Lab Fee: $48

MECH 1500—Manufacturing Processes (3)
Lecture: 2, Lab: 2
Prerequisite(s): ENGT 1115 or; ENGT 1101.
This is a course that will acquaint the technician with common major manufacturing processes and their effect(s) on material properties. Included are metal casting and forming methods, additive manufacturing, fabrication of polymers, composites and ceramics, and nano and micro processes. Additionally, joining and measurement and inspection methods will be covered. Lab Fee: $22

MECH 2215—Parametric CAD (3)
Lecture: 1, Lab: 5
Prerequisite(s): ENGT 1115.
This Course will cover Multiple Parametric CAD platforms used in the production of complete drawing sets for the Manufacturing field. Students will create production drawings and documentation required to take a product from concept to design, sales, prototyping, production, and final assembly. Offered on demand in addition to semester listed. Lab Fee: $23

MECH 2242—Strength of Materials (3)
Lecture: 2, Lab: 2
Prerequisite(s): MECH 1130.
This course is a study of the application of external loads to rigid bodies and the analysis of the resulting stresses and deflections produced in those bodies. Study will be devoted to normal stress and strain, shear stress and strain in joints and shafts, beam stresses and deflection, beam design, column buckling. Considerations such as safety factors, thermal expansion, fatigue, stress concentrations, material properties, and combined stresses are also covered. Lab Fee: $23

MECH 2243—Robotics (2)
Lecture: 1, Lab: 2
"This course presents robotic operations and system configurations. Students are required to flowchart, code, compile, and debug programs using the Fanuc Karel programming language. Hands-on experience with robotic systems is gained through teaching and executing the programs on an articulated 6 axis Fanuc robot." Lab Fee: $19

MECH 2253—Computer Numerical Control (2)
Lecture: 1, Lab: 2
Prerequisite(s): ITST 1101 and ENGT 1115 and MECH 1240 and placement into MATH 1020 or higher.
This course covers manual computer numerical control programming. Each student will prepare numerical control programs in both absolute and incremental positioning systems using standard industrial G and M codes. Students will program for state-of-the-art computerized numerical control equipment including mills and lathes. Each student will prepare and debug programs and setup and operate computer numerical controlled equipment in the lab. Lab Fee: $27

MECH 2270—Engineering Statistics (3)
Lecture: 2, Lab: 2
Prerequisite(s): MATH 1050.
This course provides a broad overview of statistics and statistical process control practices in the industrial environment. This course includes presentation of the philosophy and practices of modern quality control principles, data presentation techniques, basic statistics, basic probability, control chart applications, process capability measures, and inference and hypothesis testing. Lab Fee: $23

MECH 2299—Machine Design/CAM (3)
Lecture: 1, Lab: 5
Prerequisite(s): MECH 1240 and MECH 2215 and MECH 2242.
This Course covers elements of Machine design and digital Prototyping using Parametric Based CAD platforms. Students will incorporate knowledge, gained through their course work at Columbus State, in physical and digital prototypes. Offered on demand in addition to semester listed. Lab Fee: $30

Medical Assisting

MAT 1100—Clinical Medical Assisting I (2)
Lecture: 2
Prerequisite(s): Placement into MATH 1024 or higher and acceptance into the program. and MAT 1200.
This course introduces the student to the entry-level skills performed by the medical assistant in the clinical area of the medical office. Discussion of standard precautions and compliance with federal regulatory agencies is included. Competency-based skills are instructed through theoretical presentations and will include infection control, sanitization, sterilization, hand-washing, measuring height and weight, setting up the physical examination tray, positioning patients and assisting the physician in examinations. The guidelines for OSHA compliance and emergency preparedness are discussed. Student must be accepted into the Medical Assisting Technology program before scheduling this course. Student must be admitted to the MAT program. Lab Fee: $0

MAT 1122—Administrative Medical Assisting (4)
Lecture: 4
Prerequisite(s): Placement into MATH 1024 or higher and acceptance into the program and MAT 1123.
This course introduces students to administrative skills expected of the entry-level medical assistant. Topics to be covered include communications, medicolegal and ethical responsibilities, telephone procedures, medical records management, scheduling, office inventory and supplies, operating office equipment, managing practice finances, and managed care policies and procedures. Application of ICD (diagnosis) and CPT (procedural) coding and insurance claim submission will be included. Discussion and application of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) will be included as well as the importance of patient confidentiality. Student must be accepted into the Medical Assisting Technology program before scheduling this course. Student must be admitted to the MAT program. Lab Fee: $0

MAT 1123—Administrative Medical Assisting Lab (1)
Lab: 3
Prerequisite(s): Placement into MATH 1024 or higher and acceptance into the program. and MAT 1122.
This course provides demonstration of entry level administrative skills for the medical office. Topics include communications, medical records management, telephone procedures, participation in telehealth interactions, scheduling and monitoring appointments, coaching patients with office policies and medical encounters, HIPAA, precertification and preauthorization, utilizing medical necessity guidelines, application of ICD & CPT coding, managed care policies and procedures, insurance and managing practice finances. Student must be accepted into the Medical Assisting Technology program before scheduling this course. Student must be admitted to the MAT program. Lab Fee: $18

MAT 1200—Clinical Medical Assisting I Lab (1)
Lab: 3
Prerequisite(s): Placement into MATH 1024 or higher and acceptance into the program. and MAT 1100.
This course provides demonstration of the medical assistant's entry-level skills and requires students to perform all skills at competency level. The students will be expected to explain the theory and demonstrate the practical aspects of the clinical skills following a check-off format outlined by the instructor. Student must be accepted into the Medical Assisting Technology program before scheduling this course. Student must be admitted to the MAT program. Lab Fee: $45

MAT 1230—Pharmacology (2)
Lecture: 2
Prerequisite(s): MAT 1100 and MAT 1122 and MAT 1123 and MAT 1200 and MAT 1300 and MAT 1400; MAT 1231.
This course will introduce students to the pharmacology of commonly prescribed drugs in the medical office. The topics included in this lecture include prescription legalities, prescription abbreviations, prescription format, maintenance of medication and immunization records, drug therapy, screening and follow-up patient procedures. The theory and principal of drug administration is discussed. The accuracy of recording medications in the medical record is emphasized. Lab Fee: $0

MAT 1231—Pharmacology Lab (1)
Lab: 3
Prerequisite(s): MAT 1100 and MAT 1122 and MAT 1123 and MAT 1200 and MAT 1300 and MAT 1400; MAT 1230.
This course provides demonstration and technique of administration of medications in the medical office setting; included will be intradermal, subcutaneous, and intramuscular routes as well as oral, topical, sublingual, vaginal and rectal administration. Students will be expected to perform to competency level the pharmacological skills in check-off format outlined by the instructor. Lab Fee: $60

MAT 1238—Comp Apps for the Medical Office Lab (1)
Lab: 3
Prerequisite(s): MAT 1100 and MAT 1122 and MAT 1123 and MAT 1200 and MAT 1300 and MAT 1400.
This course introduces students to the medical office computer package. The theory of the utilization of a medical office computer package is demonstrated and includes creating a physician database, preparing patient demographics and daily appointment scheduling. A complete review of coding diagnosis and procedures and insurance claim submissions is included. This lab allows the students to practice the principals of the medical office computer package through hands-on production of office simulations. Lab Fee: $10

MAT 1240—Lab Techniques for the Med Office (2)
Lecture: 2
Prerequisite(s): MAT 1100 and MAT 1122 and MAT 1123 and MAT 1200 and MAT 1300 and MAT 1400; MAT 1241.
This course introduces students to the procedures utilized to collect and process specimens. Emphasis is placed on methods of collection, processing of specimens and quality control. Additionally, the student is introduced to CLIA guidelines, cardiopulmonary procedures, the microscope, the techniques of capillary puncture and venipuncture (vacutainer, syringe, and butterfly method), CLIA waived procedures, urinalysis, blood typing, microbiology procedures, and understanding the normal ranges and the various laboratory reports. Lab Fee: $0

MAT 1241—Physician's Office Laboratory (2)
Lab: 6
Prerequisite(s): MAT 1100 and MAT 1122 and MAT 1123 and MAT 1200 and MAT 1300 and MAT 1400; MAT 1240.
This course provides demonstration and techniques utilized to collect and process specimens in the medical office setting; included will be EKG, PFT, capillary puncture, venipuncture, urinalysis, CLIA waived procedures, and microbiology procedures. Students will be expected to perform to competency level the laboratory skills in check-off format outlined by the instructor. Lab Fee: $150

MAT 1300—Clinical Medical Assisting II (2)
Lecture: 2
Prerequisite(s): MAT 1100 and MAT 1200 and MAT 1400.
This course introduces medical assisting students to theories beyond the basic entry-level knowledge. The advanced skills will include vital signs, telephone, in-person screenings, minor surgery in the medical office, physical agents to promote tissue healing, and assistance with both routine and specialty examinations. Medical conditions and disease treated in the medical office by the various medical specialties will be studied. Student must be accepted into the Medical Assisting Technology program before scheduling this course. Student must be admitted to the MAT program. Lab Fee: $0

MAT 1400—Clinical Medical Assisting II Lab (1)
Lab: 3
Prerequisite(s): MAT 1100 and MAT 1200 and MAT 1300.
This course provides demonstration of the advanced level skills for the medical assistant and requires students to perform all advanced level skills at competency level . The students will be expected to explain the theory and demonstrate the practical aspects of the clinical skills following a check-off format outlined by the instructor. Student must be admitted to the MAT program. Lab Fee: $70

MAT 2800—Seminar: Medical Assisting (1)
Seminar: 1
Prerequisite(s): MAT 1100 and MAT 1122 and MAT 1123 and MAT 1200 and MAT 1230 and MAT 1231 and MAT 1300 and MAT 1400 and MAT 1238 and MAT 1240 and MAT 1241; MAT 2950.
This seminar course includes group discussion of topics related to practicum experiences, current trends and topics, and future employment strategies for the medical assistant. Students will present a professional portfolio of individual competency check-off sheets and completed projects. Review of topics included in the certifying medical assisting exam will be discussed. Lab Fee: $0

MAT 2950—Clinical Practium: Medical Assisting (2)
Practicum: 14
Prerequisite(s): MAT 1100 and MAT 1200 and MAT 1122 and MAT 1123 and MAT 1230 and MAT 1231 and MAT 1238 and MAT 1240 and MAT 1241 and MAT 1300 and MAT 1400; MAT 2800.
This course provides opportunity for practical experience in a physician's office combining the administrative, clinical and laboratory skills of patient care under the supervision of a licensed physician or a certified medical assistant. Students will be placed in various health care facilities and will serve 210 unpaid externship hours. Lab Fee: $0

Medical Imaging/Radiography

IMAG 1101—Intro RAD Equipment/Patient Care (0.5)
Lecture: 0.2, Lab: 0.6
Prerequisite(s): IMAG 1190; IMAG-1190.
This is a module course, which introduces the student to radiography equipment utilization, basic patient care procedures, applied radiation protection practices, and processing techniques using film and digital imaging.

IMAG 1102—Rad Positioning of Upper Extremities (0.5)
Lecture: 0.2, Lab: 0.6
Prerequisite(s): IMAG 1101.
This module introduces the student to radiographic positioning of the upper extremities.

IMAG 1103—Rad Positioning of Lower Extremities (0.5)
Lecture: 0.2, Lab: 0.6
Prerequisite(s): IMAG 1101.
This module introduces the student to radiographic positioning of the lower extremities

IMAG 1104—Rad Positioning Chest & Abdomen (0.5)
Lecture: 0.2, Lab: 0.6
Prerequisite(s): IMAG 1118 and MULT 1110.
This module introduces the student to radiographic positioning of the chest and abdomen.

IMAG 1104—Rad Positioning Chest & Abdomen (0.5)
Lecture: 0.2, Lab: 0.6
Prerequisite(s): IMAG 1101.
This module introduces the student to radiographic positioning of the chest and abdomen. Lab Fee: $0

IMAG 1105—Rad Positioning Spine, Skull & Sinuses (0.5)
Lecture: 0.2, Lab: 0.6
Prerequisite(s): IMAG 1101.
This module introduces the student to radiographic positioning of the spine, skull and sinus.

IMAG 1110—Introduction to Medical Imaging (1)
Lecture: 0.5, Lab: 1.5
This course will provide students with an overview of the history and foundations of medical imaging and the practitioner’s role in health care delivery. Principles, practices, and policies of health care organizations are examined in addition to the professional and legal responsibilities of the medical imaging professional. Lab Fee: $5

IMAG 1113—Radiologic Science (2)
Lecture: 2
Prerequisite(s): BIO 2300 and IMAG 1110; MATH 1148.
The course begins with a review of basic concepts of electricity, electromagnetism, and electrical circuits. The student is then introduced to the theory of x-ray production, x-ray emissions, and x-ray interactions. Specialized x-ray equipment applications of equipment are discussed. Lab Fee: $0

IMAG 1118—Radiographic Exposure & Processing (2)
Lecture: 1, Lab: 3
Prerequisite(s): IMAG 1113 and BIO 2301; IMAG-1113, BIO-2232.
This course consists of a study of radiographic image formation and technical factor manipulation. Film and digital image receptors are discussed. Image properties are evaluated to ensure production of an acceptable quality radiographic image. Technical conversions necessary to maintain proper image receptor exposure while minimizing patient dose are discussed. Methods are presented to reduce image artifacts and equipment malfunction. Lab Fee: $44

IMAG 1120—Patient Care in Medical Imaging (1)
Lecture: 0.5, Lab: 1.5
This course is designed to prepare the imaging student with basic information regarding patient care for a person undergoing a radiologic procedure. It is a combination of lecture, demonstration and practice in a laboratory setting. Students will learn skills related to sterile technique, infection control, isolation procedures, vital signs and transfer techniques for a patient undergoing imaging procedures. Lab Fee: $14

IMAG 1131—Radiographic Procedures 1A (1.5)
Lecture: 1, Lab: 1.5
The student is introduced to radiologic terms specific to imaging, equipment operation, and patient positioning. Radiographic anatomy, positioning, and procedures for Chest, Abdomen, Upper Extremity, and Shoulder are studied. Lab simulation provides the opportunity for skill practice and demonstration of proficiency in each area. Lab Fee: $15

IMAG 1132—Radiographic Procedures 1B (1.5)
Lecture: 1, Lab: 1.5
Prerequisite(s): IMAG 1131.
The student is introduced to radiologic terms specific to imaging, equipment operation, and patient positioning. Radiographic anatomy, positioning, and procedures for Lower Limb, Pelvis, Upper Gastrointestinal tract, Lower Gastrointestinal tract, Biliary system, and Genitourinary tract are studied. Lab simulation provides the opportunity for skill practice and demonstration of proficiency in each area. Lab Fee: $15

IMAG 1141—Radiographic Procedures I (3)
Lecture: 2, Lab: 3
The student is introduced to radiologic terms specific to imaging, equipment operation, and patient positioning. Specific areas of study include physician assisting, and radiographic anatomy to include gastrointestinal system, basic fluoroscopic procedures, the vertebral column, bony thorax,, upper and lower extremities, chest, abdomen, and basic urography. Lab provides the opportunity for practice and demonstration of proficiency. Lab Fee: $97.6

IMAG 1142—Radiographic Procedures II (3)
Lecture: 2, Lab: 3
Prerequisite(s): MATH 1148 and BIO 2300 and IMAG 1131; IMAG 1132.
This course serves as a continuation of RAD 1132, with progression through the positioning categories and radiographic anatomy. Course topics include basic the vertebral column, bony thorax, pediatric radiography, surgical radiography, skull radiography, tomography, and interventional radiography of the Skeletal, Digestive, and Biliary systems. Lab Fee: $97.6

IMAG 1143—Radiographic Special Procedures (2)
Lecture: 2
Prerequisite(s): IMAG 1142.
This course is designed to familiarize the student with common procedures performed in Interventional Radiography and Cardiac Catheterization. Labs will be scheduled to provide familiarity with intervention/cath lab equipment and as an introduction to sterile procedures. Upon completion of this course students should have a comprehensive understanding of vascular anatomy and familiarity with common interventional procedures. Students should also be familiar with the basics of medical sepsis as it applied to minimally invasive procedures. Lab Fee: $5

IMAG 1190—Rad Protection General Machine Operators (1.5)
Lecture: 1.5
This course is designed to prepare non-radiographers with a specific background in radiation protection and radiation biology necessary to be eligible to apply for the State of Ohio, Radiology Technology Division, General Operator Examination. Areas of instruction include radiation physics, radiographic technique, darkroom processing and film handling, radiation health, safety and protection and radiation biology. Basic radiographic positioning skills and terminology are also presented.

IMAG 1803—Medical Imaging Seminar 3 (1)
Seminar: 1
Prerequisite(s): IMAG 1903.
This course has a three-fold focus: 1) Review of medical images and case studies relevant to student performance in the clinical setting; 2) Discussion of current issues in Medical Imaging; and 3) Discussion of Advanced Fluoroscopic Procedures. Lab Fee: $0

IMAG 1901—RAD Field Experience/Internship I (0.5)
Field Experience/Internship: 8
Prerequisite(s): IMAG 1110; IMAG 1120; IMAG 1131.
This field experience/internship in the clinical area provides an opportunity for the student to become familiar with the care and positioning of the patient. Proficiency requirements are completed using a competency-based educational format over the course material presented in Radiologic Procedures I. Film critique is incorporated to provide a correlation of all factors that comprise a finished radiograph to include an analysis of anatomic structures, patient positioning, radiation protection, and fundamental exposure techniques. Lab Fee: $49.6

IMAG 1902—RAD Field Experience/Internship II (1)
Field Experience/Internship: 14
Prerequisite(s): IMAG 1901; IMAG-1901.
This field experience/internship in the clinical area provides the practical experience necessary to function as a radiographer and is designed to enhance and complement didactic studies. Experience is gained in the general diagnostic and fluoroscopic areas, the emergency department, and on portable radiography rotations. Film critique is continued to provide a correlation of all factors that comprise a finished radiograph. Case presentations are introduced. Lab Fee: $49.6

IMAG 1903—RAD Field Experience/Internship III (1)
Field Experience/Internship: 14
Prerequisite(s): IMAG 1902; IMAG-1902.
This field experience/internship provides the practical experience necessary to function as a radiographer and is designed to enhance and complement the didactic studies. Experience is gained in the general diagnostic and fluoroscopic areas, the emergency department, the operating room, tomography, portable radiography, the computed tomographic area, to include an evening rotation. In addition, each student is required to observe a radiologist during film reading and dictation. Film critique and case presentations are continued. Lab Fee: $31

IMAG 2126—Radiographic Biology & Protection (2)
Lecture: 2
Prerequisite(s): IMAG 1113; IMAG-1113.
This advanced science course examines human responses to ionizing radiation. Early and late effects of radiation exposure are discussed, as well as an in-depth analysis of radiation protection standards and practices. Lab Fee: $30

IMAG 2212—Radiographic Sectional Anatomy (2)
Lecture: 2
Prerequisite(s): IMAG 1142; IMAG-1142.
Sectional anatomy is introduced, with an emphasis on head, chest, abdomen and pelvis. Students will be required to give a presentation demonstrating correlations between different sectional imaging modalities. Lab Fee: $3

IMAG 2620—Radiographic Pathology (2)
Lecture: 2
Prerequisite(s): IMAG 1143; IMAG-1143.
This course begins with a review of common terms relating to pathology. Using a survey approach, this course continues with a study of various disease processes and their effect on body systems as they relate to radiography and allied imaging modalities. Students are required to write a term paper on a specific pathologic process. Lab Fee: $3

IMAG 2800—Radiography/Medical Imaging Seminar (1)
Seminar: 1
Prerequisite(s): IMAG 2904; IMAG-2904.
This course offers an evaluation and review of radiography cases and discussion of current issues in the radiologic sciences.

IMAG 2804—Medical Imaging Seminar I (1)
Seminar: 1
Prerequisite(s): IMAG-1903, IMAG-2904.
This course offers an evaluation and review of radiography cases and discussion of current issues in the radiologic sciences.

IMAG 2806—IMAG Post Primary Seminar I (1)
Seminar: 1
This course is designed to help the student/technologist prepare for the didactic portion of post primary examination in either C.T., M.R.I., I.R., or Cardiac Catheterization. This course is designed to provide knowledge about care giving skills specific to patients undergoing post primary modality examinations. The role of the technologist to effectively communicate and maintain patient safety and comfort will be discussed. Patient preparation and monitoring, image acquisition, and all content specified for A.R.R.T. examination specific to the selected modality will be covered. Lab Fee: $50

IMAG 2807—IMAG Post Primary Seminar II (1)
Seminar: 1
This course is designed to help the student/ technologist prepare for the didactic portion of post primary examination in either C.T., M.R.I., I.R., or Cardiac Catheterization. This course is designed to provide knowledge about care giving skills specific to patients undergoing post primary modality examinations. The role of the technologist to effectively communicate and maintain patient safety and comfort will be discussed. Patient preparation and monitoring, image acquisition, and all content specified for A.R.R.T. examination specific to the selected modality will be covered. Lab Fee: $50

IMAG 2904—IMAG Field Experience/Internship IV (3)
Directed Practice: 21
Prerequisite(s): IMAG 1903; IMAG-1903.
Provides the practical experience necessary to function as a radiographer and is designed to enhance and complement didactic studies. Experience is gained in the general radiographic and fluoroscopic areas, emergency department, operating room, portable radiography, tomography, computed tomography, cardiovascular and interventional radiology, digital imaging and special area (one day) rotations in nuclear medicine, radiation oncology, diagnostic medical sonography, cardiac catheterization laboratory, and extra-corporeal shock wave lithotripsy. Film critique and case presentations are continued. Lab Fee: $49.6

IMAG 2905—IMAG Field Experience/Internship V (3)
Directed Practice: 21
Prerequisite(s): IMAG 2904; IMAG-2904.
In this second directed practice, students are required to complete the Final Competency Examination during this semester. Clinical rotations are scheduled in the general radiographic and fluoroscopic areas, the operating room, the emergency room, mammography, and magnetic resonance. Once the Final Competency Examination has been satisfactorily completed, the student may custom design individual specific clinical rotations. Film critique and case presentations are continued. Lab Fee: $49.6

IMAG 2906—Post Primary Imaging I (1-2)
Practicum: 7 - 14
Provides the practical experience necessary to function as a radiographer and is designed to enhance and complement didactic studies. Experience is gained in the general radiographic and fluoroscopic areas, emergency department, operating room, portable radiography, tomography, computed tomography, cardiovascular and interventional radiology, digital imaging and special area (one day) rotations in nuclear medicine, radiation oncology, diagnostic medical sonography, cardiac catheterization laboratory, and extra-corporeal shock wave lithotripsy. Film critique and case presentations are continued.

IMAG 2907—Post Primary Imaging II (2)
Practicum: 14
Prerequisite(s): IMAG-2906, IMAG-2807.
Provides the practical experience necessary to function as a radiographer and is designed to enhance and complement didactic studies. Experience is gained in the general radiographic and fluoroscopic areas, emergency department, operating room, portable radiography, tomography, computed tomography, cardiovascular and interventional radiology, digital imaging and special area (one day) rotations in nuclear medicine, radiation oncology, diagnostic medical sonography, cardiac catheterization laboratory, and extra-corporeal shock wave lithotripsy. Film critique and case presentations are continued.

Medical Laboratory Technology

MLT 1100—Basic Concepts in Health Care (2)
Lecture: 2
Prerequisite(s): Placement into ENGL 1100 and Placement into No Reading Required.
This course provides a general introduction to health care in the U.S. General topics such as health care past and present, legal and ethical issues, diversity in health care, safety topics, and health industry systems will be covered. Professional attributes, skills, and qualities needed for success in a health care career are also discussed. Lab Fee: $0

MLT 1110—Introduction to MLT Lecture (1-1)
Lecture: 1
Prerequisite(s): MLT 1100 and MLT 1112 and MLT 1113 and HIMT 1274 and MULT 1916 and MLT 1111.
This course will provide an in-depth examination of the role and responsibilities of the Medical Laboratory Technician as an important professional in the delivery of quality health care. Discussions will include such topics as: quality assurance, the general organization, operational activities of a clinical laboratory, and career opportunities for MLT graduates. In addition, students will be introduced to specimen collection and processing techniques, equipment used in the clinical laboratory, safety policies and procedures, and the application of laboratory mathematics. Lab Fee: $0

MLT 1111—Introduction to MLT Lab (1)
Lab: 2
Prerequisite(s): MLT 1100 and MLT 1112 and MLT 1113 and HIMT 1274 and MULT 1916 and MLT 1110.
This course provides a lab component to complement MLT 1110. Students will be introduced to specimen collection and processing procedures, principles of lab math, quality assurance, safety, and the laboratory operational activities. Lab Fee: $50

MLT 1112—Laboratory Theory for Health Industries (2)
Lecture: 2
Prerequisite(s): Placement into ENGL 1100 and No Reading required and High school biology with a grade of "C" or higher in the last 5 years or; BIO 0100.
This course is designed to provide theoretical concepts for individuals in the health related industries who may be interested in learning an additional set of medically related skills. This knowledge and skill set is intended to enhance current job proficiency or for potentially increasing employability in entry-level health related position. The course is designed to encourage phlebotomists, medical assistants, nursing assistants, and other health-oriented industry personnel to achieve competencies requiring basic laboratory testing as a part of the facility's services. Lab Fee: $0

MLT 1113—Laboratory Techniques for Health Industries (1)

Prerequisite(s): Placement into ENGL 1100 and No Reading required and Completion of High School biology with a grade of "C" or higher in the last 5 years or; BIO 0100; MLT 1112.
This course provides the application of theoretical concepts for individuals in the health related industries who may be interested in learning an additional set of medically related skills. This knowledge and skill set is intended to enhance current job proficiency and for potentially increasing employability in an entry-level health related position. The course is designed to encourage phlebotomists, medical assistants, nursing assistants, and other health-oriented industry personnel to achieve competencies requiring basic laboratory testing as a part of the facility's services. Since students will be performing lab procedures on their own specimens, students must be willing to submit their own blood and fluid specimens for testing. Lab Fee: $300

MLT 1120—Hematology I Lecture (2)
Lecture: 2
Prerequisite(s): MLT 1100 and MLT 1112 and MLT 1113 and HIMT 1274 and MULT 1916 and MLT 1121.
This course is an introduction to theoretical concepts in Hematology that includes basic laboratory techniques and procedures; the study of the origin, formation, and differentiation of blood formed elements, and an introduction to the process of hemostasis. Included are the manual and automated techniques and principles used in evaluating red blood cells, white blood cells, platelets, reticulocytes, erythrocyte sedimentation rate, hemoglobin, hematocrit, and normal white blood cell differentials. The basic process of coagulation will be discussed, and will include the principles and methods of the prothrombin time (INR), and activated partial thromboplastin time screening tests. Lab Fee: $0

MLT 1121—Hematology I Lab (2)
Lab: 6
Prerequisite(s): MLT 1100 and MLT 1112 and MLT 1113 and HIMT 1274 and MULT 1916 and MLT 1120.
This course presents the application of introductory Hematology laboratory skills that include basic laboratory techniques and procedures; the study of the origin, formation, and differentiation of blood formed elements, and an introduction to the process of hemostasis. Included are techniques (manual and automated) used in evaluating red blood cells, white blood cells, platelets, hematocrit, hemoglobin, and normal white blood cell differentials. Reticulocytes, erythrocyte sedimentation rate, and the basic coagulation screening tests prothrombin time (INR), and activated partial thromboplastin time are also included. Lab Fee: $175

MLT 1130—Immunology Lecture (1)
Lecture: 1
Prerequisite(s): MLT 1100 and MLT 1112 and MLT 1113 and HIMT 1274 and MULT 1916 and MLT 1131.
This course studies the immune system, the nature of immune responses, and the application of immunological reactions to a variety of diagnostic laboratory procedures including but not limited to: Serological tests for syphilis, viral infections, streptococcal infections, pregnancy, C-Reactive Protein, and the Rheumatoid Factor. Discussions will include the etiology and diagnosis of immunologically mediated diseases and the theoretical principles of testing techniques such as: agglutination, precipitation, labeled immunoassays, and molecular diagnostics. Lab Fee: $0

MLT 1131—Immunology Lab (1)
Lab: 2.5
Prerequisite(s): MLT 1100 and MLT 1112 and MLT 1113 and HIMT 1274 and MULT 1916 and MLT 1130.
This course provides a lab component to complement MLT 1130. Emphasis is placed on commonly performed serological tests including but not limited to: Heterophile Testing, Serological Tests for Syphilis, Anti-Streptolysin O Tests, Tests for C-Reactive Protein, Rheumatoid Factor, and various tests for pregnancy. Students will also learn the basics of laboratory glassware, pipetting, dilutions, automated serological and molecular diagnostic techniques. Lab Fee: $175

MLT 1140—Clinical Chemistry Lecture (1)
Lecture: 1
Prerequisite(s): MLT 1100 and MLT 1112 and MLT 1113 and HIMT 1274 and MULT 1916 and MLT 1141.
This course presents the theory of biochemistry to laboratory medicine and the understanding of the human in health and disease. Analytical procedures utilized to determine chemical constituents in blood, urine, and other body fluids will be presented. The chemical principles of the methods will be discussed as well as the correlation of test results as indicators of presence or absence of disease. Lab Fee: $0

MLT 1141—Clinical Chem Lab (1)
Lab: 3
Prerequisite(s): MLT 1100 and MLT 1112 and MLT 1113 and HIMT 1274 and MULT 1916 and MLT 1140.
This course presents the application of biochemistry to laboratory medicine and the understanding of the human in health and disease. Analytical procedures utilized to determine chemical constituents in blood, urine and other body fluids will be presented. The chemical principles of the methods will be discussed as well as the correlation of test results as indicators of presence or absence of disease. Lab Fee: $250

MLT 2250—Body Fluids Lecture (2)
Lecture: 2
Prerequisite(s): MLT 1100 and MLT 1112 and MLT 1113 and HIMT 1274 and MULT 1916 and MLT 2251.
This course presents the theoretical study of the physical, chemical, and microscopic evaluation of urine, feces, cerebrospinal fluid, synovial fluid, serous fluid, amniotic fluid, and seminal fluid. Results of the physical, chemical, and microscopic evaluation of these body fluids will be correlated clinically. Lab Fee: $0

MLT 2251—Body Fluids Lab (1)
Lab: 2
Prerequisite(s): MLT 1100 and MLT 1112 and MLT 1113 and HIMT 1274 and MULT 1916 and MLT 2250.
This course presents the application of the physical, chemical, and microscopic evaluation of urine, feces, cerebrospinal fluid, synovial fluid, serous fluid, amniotic fluid, and seminal fluid. Results of the physical, chemical, and microscopic evaluation of these body fluids will be correlated clinically. Lab Fee: $100

MLT 2260—Clinical Micro Lecture (3)
Lecture: 3
Prerequisite(s): BIO 2215 and MLT 1100 and MLT 1112 and MLT 1113 and HIMT 1274 and MULT 1916 and MLT 2261.
This course presents an introduction to the theoretical study of laboratory identification and correlation of microbial agents associated with disease in man. Techniques utilized to isolate, identify, and evaluate the presence of clinically significant microorganisms will be presented. The course also includes an introduction to the study of medical mycology, parasitology, and virology. Lab Fee: $0

MLT 2261—Clinic Micro Lab (3)
Lab: 9
Prerequisite(s): BIO 2215 and MLT 1100 and MLT 1112 and MLT 1113 and HIMT 1274 and MULT 1916 and MLT 2260.
This course is a practical introduction to the laboratory identification of microbial agents associated with disease in man. Techniques utilized to isolate, identify, and evaluate the presence of clinically significant microorganisms will be presented and practiced. The course also includes an introduction to the study of medical mycology, parasitology, and virology. Lab Fee: $250

MLT 2270—Immunohematology Lecture (2)
Lecture: 2
Prerequisite(s): MLT 1100 and MLT 1112 and MLT 1113 and MLT 1130 and MLT 1131 and HIMT 1274 and MULT 1916 and MLT 2271.
This course presents the theory (lecture) portion of Immunohematology that must accompany the laboratory skills used to accurately perform, interpret, and report the routine serological procedures used in pretransfusion testing according to AABB (American Association of Blood Banks) standards. Donor blood collection and storage, component therapy, investigation of transfusion reactions, Hemolytic Disease of the Newborn, and the administration of Rh Immune Globulin are also studied in this course. Lab Fee: $0

MLT 2271—Immunohematology Lab (2)
Lab: 6
Prerequisite(s): MLT 1100 and MLT 1112 and MLT 1113 and MLT 1130 and MLT 1131 and HIMT 1274 and MULT 1916 and MLT 2270.
This course presents the application portion of Immunohematology to teach the laboratory skills needed to accurately perform, interpret, and report the routine serological procedures used in pretransfusion testing according to AABB (American Association of Blood Banks) standards. In addition, students perform and interpret case studies involving antibody identification, the investigation of transfusion reactions, Hemolytic Disease of the Newborn, and the administration of Rh Immune Globulin. Lab Fee: $400

MLT 2280—Hematology II Lecture (1)
Lecture: 1
Prerequisite(s): MLT 1100 and MLT 1112 and MLT 1113 and MLT 1120 and MLT 1121 and HIMT 1274 and MULT 1916 and MLT 2281.
This course presents an advanced theoretical study of Hematology. Anemias, hemoglobin disorders, benign disorders of leukocytes, leukemias, cytochemistry, and hemostasis will be covered. Abnormal morphologic characteristics of cells will be correlated with other laboratory results and disease processes. The study of Hematology instrumentation will include interpretation of abnormal histograms and scatterplots that are correlated clinically. Clinical interpretation and correlation is also included in the study of instrumentation that evaluates coagulation status and platelet function.

MLT 2281—Hematology II Lab (1)
Lab: 2
Prerequisite(s): MLT 1100 and MLT 1112 and MLT 1113 and MLT 1120 and MLT 1121 and HIMT 1274 and MULT 1916 and MLT 2280.
This course presents the application of the advanced study of Hematology. Anemias, hemoglobin disorders, benign disorders of leukocytes, leukemias, cytochemistry, and hemostasis will be covered. Abnormal morphologic characteristics of cells will be correlated with other laboratory results and disease processes. The study of Hematology instrumentation will include interpretation of abnormal histograms and scatterplots that are correlated clinically. Clinical interpretation and correlation is also included in the study of instrumentation that evaluates coagulation status and platelet function. Lab Fee: $150

MLT 2290—Med Lab Case Correlations (1)
Lecture: 1
Prerequisite(s): MLT 1100 and MLT 1112 and MLT 1113 and HIMT 1274 and MULT 1916 and MLT 1110 and MLT 1111 and MLT 1120 and MLT 1121 and MLT 1130 and MLT 1131 and MLT 1140 and MLT 1141 and MLT 2250 and MLT 2251 and MLT 2260 and MLT 2261 and MLT 2270 and MLT 2271 and MLT 2280 and MLT 2281.
This capstone course provides a cumulative review of clinical laboratory procedures and theoretical concepts from all phases of laboratory testing. Emphasis is placed on recall and application of theory, correlation, and evaluation of all areas of clinical laboratory science. Upon completion, students should be prepared for national certification examinations and for the clinical practicum. Lab Fee: $0

MLT 2800—MLT Clinical Seminar (1)
Seminar: 1
Prerequisite(s): MLT 1100 and MLT 1112 and MLT 1113 and HIMT 1274 and Completion of MULT 1916 Venipuncture for Health Care Providers with a grade of "C" or better and MLT 1110 and MLT 1111 and MLT 1120 and MLT 1121 and MLT 1130 and MLT 1131 and MLT 1140 and MLT 1141 and MLT 2250 and MLT 2251 and MLT 2260 and MLT 2261 and MLT 2270 and MLT 2271 and MLT 2280 and MLT 2281 and MLT 2290 and MLT 2900.
This course surveys professional issues in preparation for career entry. Students share selected case studies and other problem solving experiences they have encountered during their practicum. In addition, students prepare for credentialing examinations, postgraduate studies, and employment opportunities. Lab Fee: $0

MLT 2900—MLT Clinical Practicum (2)
Practicum: 14
Prerequisite(s): MLT 1100 and MLT 1110 and MLT 1111 and MLT 1120 and MLT 1121 and MLT 1130 and MLT 1131 and MLT 1140 and MLT 1141 and MLT 2250 and MLT 2251 and MLT 2260 and MLT 2261 and MLT 2270 and MLT 2271 and MLT 2280 and MLT 2281 and MLT 2290; MULT 1916; MLT 2800.
This course provides students with entry-level clinical laboratory experience in a supervised laboratory setting. Students participating in the on-campus program will be placed in one of several clinical affiliates within an approximate 60 mile radius of Columbus. Students will be required to provide their own transportation. Upon completion, students should be able to demonstrate competency in career entry-level areas. Lab Fee: $0

Multi-Skilled Health

MULT 1110—Medical Terminology (2)
Lecture: 2
Prerequisite(s): Placement into ENGL 1100.
This introductory course provides an overview of medical language. Emphasis will be placed on terms that are practical and commonly found in the day-to-day work of all allied health professions. This concise course gives basic principles for understanding the language with an overview of terms from many areas of medicine. Lab Fee: $5

MULT 1114—Introduction to Addiction Studies (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This introductory course provides an overview of the addiction studies field including: theories of addiction, the impact of use of psychoactive drugs of abuse on individuals, families and communities, the evaluation and assessment of substance use disorders, individual and group treatment interventions, and legal and ethical issues. Social, political and legal dynamics and prevention of substance use are explored. This course meets the chemical dependency specific content required by the Ohio Dependency Professional Board for the Chemical Dependency Counselor Assistant Phase I Certification (CDCA I). This course must be completed with a "C" or higher. Lab Fee: $5

MULT 1115—Helping Skills Allied Hlth & Human Serv (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This introductory course assists students in developing rapport building, basic interviewing, and active listening skills. Through role-play simulations and self-evaluation opportunities, students enhance their engagement skills. Simulated interactions and multi-media productions allow students to practice behavioral writing and progress notes utilizing a variety of documentation requirements, formats and styles. These skills can be applied to a variety of practice areas, including addiction agencies, medical settings, mental health organizations and agencies that serve people with disabilities. State, federal and HIPAA guidelines are reviewed. This course must be completed with a “C” or higher. Lab Fee: $5

MULT 1120—Cardiopulmonary Resuscitation (0.5)
Lecture: 0.5
Prerequisite(s): Placement into Engl 1100.
MULT 1120 covers cardiopulmonary resuscitation and foreign body airway obstruction removal for adults, children and infants. This course includes training on the use of bag valve masks, automated external defibrillators (AED) and cricoid pressure. Students completing this course are eligible for American Heart Association Healthcare Provider certification. This course follows 2010 Emergency Cardiac Care (ECC) guidelines and is professional level CPR. Lab Fee: $40

MULT 1130—Responding to Emergencies (2)
Lecture: 1, Lab: 2
Prerequisite(s): Placement into ENGL 1100.
Requirements for Red Cross Certification including artificial respiration, bleeding control, treatment of shock, and care of fractures are presented This course includes MULT 1120. American Heart Association CPR-Basic Life Support. Lab Fee: $55

MULT 1140—Adult & Pediatric CPR (0.5)
Lecture: 0.5
This course is based on the 2010 guidelines and standards set forth by the American Heart Association (AHA) in Heartsaver AED CPR. This course covers Adult and Pediatric Cardiopulmonary Resuscitation (CPR), Automated External Defibrillation (AED) and care to relieve a foreign body airway obstruction (FBAO) for the non-health care professional audience. Lab Fee: $40

MULT 1160—Exploring Healthcare Professions (1)
Lecture: 1
Prerequisite(s): Placement into ENGL 1100.
Because the health care industry has many career pathways to consider, this course is designed to help the student explore and understand his/her personal and professional interest as a health professional.

MULT 1170—Current Issues:HIV Infection (1)
Lecture: 1
Prerequisite(s): Placement into ENGL 1100.
This is an introductory course covering the psychological, social, legal, and epidemiological issues surrounding HIV infection.

MULT 1180—Family & Aging Services (2)
Lecture: 2
Prerequisite(s): ENGL 1100.
This course explores the ever-changing definition of family, factors that influence families and the impact of and resources available to family members of individuals with a developmental disability, mental health disorder and / or substance abuse disorders. In addition, this course provides the student with an overview of the aging process. Needs and resources for the growing number of individuals in later life and their family members are discussed. This course must be completed with a "C" or higher. Lab Fee: $5

MULT 1194—SPT: Multi-Competency (1-4)
Lecture: 1
Various topics covered as an opportunity to respond to community needs and meet industry standards.

MULT 1401—Integrated Healthcare (2)
Lecture: 2
Prerequisite(s): Placement into ENGL 1100.
This course focuses on the purpose, models and applicability of Integrated Healthcare (IHC). Students will examine the rationale for IHC. Focus on IHC models, funding, and exploration of the correlation between mental health and/or substance use issues and physical health problems. Students will learn and apply skills to work effectively with people with healthcare issues. This course must be completed with a 'C' or higher. Lab Fee: $5

MULT 1402—Selfcare for Allied Health/Human Service (2)
Lecture: 2
This course provides an overview of the importance of managing stress and burnout in professional practice as health and human services workers. The impact of compassion fatigue, self-care, utilizing natural support systems and available resources will be presented and discussed. In addition, students will develop a self-care plan that can be practically applied as participants move into the profession. This course must be completed with a 'C'or higher. Lab Fee: $9

MULT 1500—Concepts for the Pharmacy Technician (4)
Lecture: 4
Prerequisite(s): MULT 1525.
This course prepares students to work under the supervision of a registered Pharmacist in preparing medications for dispensing to patients according to physician orders. Topics covered include reading and interpreting prescriptions, dosage calculations, aseptic technique, drug compounding, dose conversions, inventory control, billing and reimbursement. This course prepares students for the Pharmacy Technician Certification Board Exam. Lab Fee: $10

MULT 1525—Calculations for the Pharmacy Technician (2)
Lecture: 2
This course provides students with the mathematical skills and strategies required to successfully work in various pharmacy practice settings. Topics covered include: an introduction to the metric and apothecary systems of measure, dose conversions, strengths of solutions, unit conversions between Fahrenheit and Celsius scales, ratio and proportion calculations, common abbreviations used in interpreting prescriptions, and dosage calculations. Lab Fee: $0

MULT 1550—Pharmacology for the Pharmacy Technician (2)
Lecture: 2
This course introduces the student to current concepts in pharmacology. Topics include basic drug actions, drug classification, brand and generic drug name nomenclature, common drug therapy associated with various disease states, indications for drug therapy, toxicity, and side effects. Lab Fee: $0

MULT 1805—Pharmacy Technician Seminar (1)
Seminar: 1
Prerequisite(s): MULT 1500; MULT 1525; MULT 1550; MULT 1900.
This course prepares students for the required national pharmacy certification examination taken upon completion of the Pharmacy Technician program. Emphasis is placed on pharmacy technician law, practice settings, calculations, and compounding. Also covers identification of potential career opportunities and job search preparation. Lab Fee: $139

MULT 1900—Pharmacy Technician Lab and Practicum I (2)
Practicum: 3.5, Lab: 4.5
The first half of this course will introduce students to the skills and abilities needed to function as a pharmacy technician within a variety of pharmaceutical settings. This course will expand on the didactic teaching completed in other congruent courses and give the student’s simulated experience before entering their experiential rotations. The second half of this course will introduce students to the practical skills requi red of pharmacy technicians in a community/retail environment. The clinical experience is performed under professional supervision. This practicum experience is the fist of a two-course sequence required for accreditation through ASHP/ACPE. Students will complete 50 of the required 130 clinical hours at this placement. Lab Fee: $50

MULT 1900—Pharmacy Technician Lab and Practicum I (2)
Practicum: 3.5, Lab: 4.5
The first half of this course will introduce students to the skills and abilities needed to function as a pharmacy technician within a variety of pharmaceutical settings. This course will expand on the didactic teaching completed in other congruent courses and give the student's simulated experience before entering their experiential rotations. The second half of this course will introduce students to the practical skills required of pharmacy technicians in a community/retail environment. The clinical experience is performed under professional supervision. This practicum experience is the fist of a two-course sequence required for accreditation through ASHP/ACPE. Students will complete 50 of the required 140 clinical hours at this placement. Lab Fee: $50

MULT 1905—Community Pharmacy Practice Practicum (1)
Practicum: 7
Prerequisite(s): MULT 1500; MULT 1525; MULT 1550; MULT 1900.
This course develops the practical skills for pharmacy technicians in a community/retail environment. The clinical experience is performed under professional supervision. This practicum experience is the second of a two-course sequence required for accreditation through ASHP/ACPE. Students will complete 80 of the required 130 clinical hours at this placement. Lab Fee: $0

MULT 1905—Community Pharmacy Practice Practicum (1)
Practicum: 7
Prerequisite(s): MULT 1500; MULT 1525; MULT 1550; MULT 1900.
This course develops the practical skills for pharmacy technicians in a community/retail environment. The clinical experience is performed under professional supervision. This practicum experience is the second of a two-course sequence required for accreditation through ASHP/ACPE. Students will complete 90 of the required 140 clinical hours at this placement. Lab Fee: $0

MULT 1910—Basic Electrocardiography (3)
Lab: 1, Lecture: 2.5
Prerequisite(s): Placement into ENGL 1100.
This course is designed to provide the necessary information to correctly perform the twelve lead EKG, instrumentation source of error, explanation of result, introduction to health care, anatomy and physiology of the heart, and basic dysrhythmia recognition. In addition, this course provides CPR training in accordance with the American Heart Association Healthcare Provider guidelines. This course includes 16 hours clinical experience. Lab Fee: $38

MULT 1910—Basic Electrocardiography (3)
Lab: 1, Lecture: 2.5
Prerequisite(s): Placement into ENGL 1100.
This course is designed to provide the necessary information to correctly perform the twelve lead EKG, instrumentation source of error, explanation of result, introduction to health care, anatomy and physiology of the heart, and basic dysrhythmia recognition. In addition, this course provides CPR training in accordance with the American Heart Association Healthcare Provider guidelines. This course includes ten successful live EKG tracings. Lab Fee: $38

MULT 1916—Venipuncture for Health Care Providers (2)
Lecture: 1, Lab: 1
Basic blood collection techniques by venipuncture will be covered and practiced in the student laboratory and clinical settings. Emphasis is on basic skills, safety and infection control. Lab Fee: $28

MULT 1950—Phlebotomy (4)
Lecture: 2, Lab: 4
Prerequisite(s): MULT 1110 or; HIMT 1121 and Placement into ENGL 1100, and Placement into No Reading Required.
This course is the first of a 2 course sequence required to be eligible for a national exam to become a certified phlebotomist. The course will include various blood collection and handling procedures, using a variety of techniques and equipment. To support these skills, other topics included in this course are: safety, the healthcare system, point of care testing, quality assurance and medical legal issues. A 60 hour clinical experience is required in this course. Lab Fee: $55

MULT 2070—HR Mgmt for Health Services (2)
Lecture: 2
Prerequisite(s): Placement into ENGL 1100.
The focus of this course is the application, analysis, synthesis, and evaluation of human resource management principles and practices for healthcare managers

MULT 2072—Health Care Resource Management (2)
Lecture: 2
Prerequisite(s): Placement into ENGL 1100.
This course is designed to provide management approaches to health care resources (budget, equipment, supplies, etc.). It is intended for healthcare managers with limited financial skills.

MULT 2074—TQM/UM/Accreditation (2)
Lecture: 2
Prerequisite(s): Placement into ENGL 1100.
This course prepares healthcare professionals to apply, analyze, synthesize, and evaluate principles and practies of Total Quality Management, Utilization Management, and accreditation.

MULT 2076—Legal Aspects and Risk Management (2)
Lecture: 2
Prerequisite(s): Placement into ENGL 1100.
This course provides a basic overview of the legal aspects of health services management and develops a general framework for managers to understand the legals dimension of problems.

MULT 2114—Addiction Studies II (2)
Lecture: 2
Prerequisite(s): MULT 1114.
This course provides the thirty (30) hours of required addictions specific content for the advancement of the temporary Chemical Dependency Counselor Assistant (CDCA Preliminary), to the renewable Chemical Dependency Counselor Assistant (CDCA – Renewable) as required by the Ohio Chemical Dependency Professionals Board. The following areas of content are included: Theories of addiction, addiction and treatment knowledge, assessment, treatment planning, individual and group counseling and ethics/professionalism. This course can be taken as a technical elective for MULT or SAHS. AAS degree seeking or certificate students. This course must be completed with a “C” or higher. Lab Fee: $5

MULT 2234—Therapeutic & Applied Humor (2)
Lecture: 2
Prerequisite(s): Placement into ENGL 1100.
This technical elective course focuses on the benefits of humor and laughter as an adjunctive approach to working with individuals throughout the human services spectrum. Planning and facilitating a community based "laughter sessions" is a required component of this course. Successful completion of this course meets the academic and experiential requirements for the Certified Laughter Leader set by the World Laughter Tour. This course can be taken as one of the SAHS technical electives or can be taken as a stand alone course by any college student. Lab Fee: $8

MULT 2403—Ethics & Decision Making for Interpreter (3)
Lecture: 2, Lab: 2
Prerequisite(s): IEP 1120; IEP 1401.
This course addresses professional, social, cultural, interpersonal and intrapersonal complexities as they impact an interpreter's decision-making processes and professional development. Students learn strategies for developing more self-reflective, culturally-aware approaches to their relationships with potential consumers and colleagues. Best practices in the field of interpreting are explored through a critical lens. This course requires students to shadow a working interpreter outside of class time. Lab Fee: $5

MULT 2950—Phlebotomy Practicum II (1)

Prerequisite(s): MULT 1950.
This course is designed to be a continuation of MULT 1950 by providing an additional 75 hours clinical phlebotomy experience and requiring an additional 60 successful blood collections in an inpatient setting. Phlebotomy Practicum II is designed for students who intend to be a professional phlebotomist and will be arranged individually. MULT 1950 and MULT 2950 completes the NAACLS approved program.

Music

MUS 1101—Introduction to Vocal Techniques I (1)

An introduction to vocal technique for nonmusic majors. This class will develop basic skills for both solo and group singing through the use of traditional song materials. Course is repeatable for a total of 2 credits. Lab Fee: $7

MUS 1102—Introduction to Vocal Techniques II (1)

Prerequisite(s): Audition.
A continuation of MUS 1101. An introduction to vocal technique for nonmusic majors. This class will develop basic skills for both solo and group singing through the use of traditional song materials. Course is repeatable for a total of 2 credits. Lab Fee: $7

MUS 1103—Class Piano I (2)
Lecture: 1
Introduction to the fundamentals of keyboard technique combined with the development of music reading and basic aural skills. This course is for those without prior keyboard experience. Lab Fee: $7

MUS 1104—Class Piano II (2)
Lecture: 1
Prerequisite(s): MUS 1103.
Continuation of MUS 1103. This course continues the development of fundamentals of keyboard technique combined with music reading and basic aural skills. This course is for those who have taken MUS 1103 and wish to continue improving their skills. Lab Fee: $7

MUS 1120—Introduction to Electronic Music (3)
Lecture: 2
Prerequisite(s): MUS 1103.
This course will introduce students to the fundamentals of synthesized music. The origin, development and present day applications of computerized sound manipulations will be studied. Lab Fee: $2

MUS 1121—Fundamentals of Music Theory (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
Introduces the elements of music for non music majors, including notation and the basic skills necessary for listening and performance. The class is designated to acquaint students with the elements and procedures necessary for the composition and performance of music. This course is on demand. Lab Fee: $2

MUS 1122—Beginning Musical Composition (3)
Lecture: 3
Prerequisite(s): MUS 1121.
This course offers a course in basic techniques and principles of standard musical composition in the 21st century. Building upon foundational music theory, formal compositional methods of contemporary music will be explored and creative expressions developed. This course is on demand. Lab Fee: $7

MUS 1203—Vocal Ensemble (1)

Large conducted choral ensemble, admission by audition. Participants prepare a variety of music for concert performance. Repeatable for up to 4 total credits. Lab Fee: $2

MUS 1204—Concert Band (1)

Prerequisite(s): Audition.
Large conducted instrumental ensemble, admission by audition. Participants prepare a variety of music for concert performances. Repeatable for up to 4 total credits. Lab Fee: $2

MUS 1205—Small Instrumental Ensemble (1)

Prerequisite(s): Audition.
Placement is through audition. Allows a specialized ensemble to concentrate on specific instrumental techniques and to explore specialized musical literature. Prior experience in instrumental music is expected. Repeatable for up to 4 total credits. Lab Fee: $2

MUS 1206—Gospel Vocal Ensemble (1)
Studio: 2
Prerequisite(s): Audition.
Admission is by audition. Participants practice and prepare for concert performance of music from the gospel and African-American vocal/choral traditions. Music reading ability not required. Repeatable for up to 4 total credits. Lab Fee: $7

MUS 1208—Electronic Music Ensemble (1)

Admission is through audition or permission of instructor. Class consists of a select group of musicians rehearsing arranging and performing music on electronic instruments. This course is on demand. Lab Fee: $2

MUS 1221—Musicianship I (4)
Lecture: 3
Prerequisite(s): MUS 1121.
Course covers the elements of music and musical notation; analytical concepts and terminology; major and minor scales; fundamentals of harmony and melody as well as the development of basic aural skills, sight singing and dictation. Lab Fee: $2

MUS 1222—Musicianship II (4)
Lecture: 3
Prerequisite(s): MUS 1221.
This course continues with the study of diatonic modulation and secondary dominants, modal and pentatonic harmonic patterns and pentatonic and blues scales. Continued development of aural skills is also emphasized. Lab Fee: $2

MUS 1251—Survey of Music History (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This is an introductory course within the context of the liberal arts, offering a history of the Western art music tradition from early times to the present, with an introduction to major composers, styles, and representative works. Music will be discussed with historical perspective providing a thorough understanding and the ability to define and describe terms, elements and characteristics of music Lab Fee: $7

MUS 1271—Business of Music (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course surveys the business aspects of music with an emphasis on recording companies and artists, music publishers and writers, contracts, unions and guilds, agents and managers, records, markets, artists' recording contracts, record production, promotion, distribution and merchandising. This course is on demand. Lab Fee: $2

MUS 2221—Audio Productions I (3)
Lecture: 2
This course teaches students how to produce music and audio using Pro Tools, the industry-standard digital audio workstation (DAW). Students will have the opportunity to compose music, conduct interviews, create audio for video, and more. This course emphasizes creativity, critical thinking, and problem-solving skills within the realm of digital audio. It is a blended course with both online and in-person components. Lab Fee: $2

MUS 2222—Audio Production II (3)
Lecture: 2
Prerequisite(s): MUS 2221.
This course builds on the skills and knowledge learned in Audio Production 1, this time using Ableton Live to record and produce a variety of music and media projects. Topics include synthesis, sampling, envelopes, LFOs, sound design, remixing, and more. It is a blended course with both online and in-person components. Required Text- none; Required Software- trial version of Ableton Live Suite

MUS 2294—Special Topics in Music (1-5)
Lecture: 1
Students explore special topics in Music designed to meet specific needs. This course is on demand. Lab Fee: $2

Nursing

NURS 1109—Cultural Immer-Health Promo Family/ Comm (1)
Lab: 3
Nursing elective: This course provides students an opportunity to gain exposure to different cultures and clinical settings. Students work with primary health care providers in ambulatory care clinics. Travel expenses are paid by the student. Students must have a valid US passport. This course may be used to fulfill the elective requirement for nursing. This course may be offered in the Summer term on an On Demand basis. Lab Fee: $5

NURS 1109—Cultural Immer-Health Promo Family/ Comm (1)
Lab: 3
Nursing elective: This course provides students an opportunity to gain exposure to different cultures and clinical settings. Students work with primary health care providers in ambulatory care clinics. Travel expenses are paid by the student. Students must have a valid US passport. This course may be used to fulfill the elective requirement for nursing. This course may be offered in the Summer term on an On Demand basis. Lab Fee: $5

NURS 1113—Advanced Standing Transition to RN (2)
Seminar: 1, Lab: 1.8, Clinical: 1.2
Prerequisite(s): BIO 2300.
This course is designed for the student who has advanced standing into the Associate Degree Nursing Program. The components of the course include orientation into the associate degree nursing student role and professional expectations. The focus of this course will be on selected nursing skills, communication, health assessment and introduction to the nursing process as a foundation in caring for patients with basic health care needs. Lab Fee: $109

NURS 1113—Advanced Standing Transition to RN (2)
Seminar: 1, Lab: 1.8, Clinical: 1.2
Prerequisite(s): BIO 2300.
This course is designed for the student who has advanced standing into the Associate Degree Nursing Program. The components of the course include orientation into the associate degree nursing student role and professional expectations. The focus of this course will be on selected nursing skills, communication, health assessment and introduction to the nursing process as a foundation in caring for patients with basic health care needs. Lab Fee: $104.6

NURS 1140—Pharmacology Concepts in Nursing I (1)
Lecture: 1
This course focuses on the nurse's role in the safe administration of medications to persons of all ages with a focus on selected drug classifications, over-the-counter medications and supplements. Dosage and calculation principles will be introduced.

NURS 1140—Pharmacology Concepts in Nursing I (1)
Lecture: 1
This course focuses on the nurse's role in the safe administration of medications to persons of all ages with a focus on selected drug classifications, over-the-counter medications and supplements. Dosage and calculation principles will be introduced.

NURS 1141—Pharmacology Concepts in Nursing II (1)
Lecture: 1
Prerequisite(s): BIO 2300 and NURS 1871 and NURS 1140 and NURC 1104.
This course builds upon NURS 1140 and focuses on classifications of drugs and prototypes including parenteral drug calculations. Nursing implications associated with the administration of medications used for patients of all ages experiencing common physical problems will be emphasized.

NURS 1150—Pharmacology Concepts in Nursing I (1)
Lecture: 1
This course focuses on the nurse's role in the safe administration of medications to persons of all ages with a focus on selected drug classifications, over-the-counter medications and supplements. Dosage and calculation principles will be introduced. Lab Fee: $0

NURS 1194—SPT: Nursing (1-4)
Lecture: 1
This course is designed for special course topics in the field of Nursing.

NURS 1871—Fundamental Concepts of Nursing Care (6)
Lecture: 2, Lab: 0.8, Seminar: 2, Clinical: 1.2
Prerequisite(s): NURS 1140 and NURC 1104 and BIO 2300.
This course introduces the role of the nurse in the delivery of safe patient care across the lifespan. The focus of the course will be on selected nursing skills, health assessment and introduction to the nursing process as a foundation in caring for patients with basic health care needs. Lab Fee: $99.9

NURS 1871—Fundamental Concepts of Nursing Care (6)
Lecture: 2, Lab: 0.8, Seminar: 2, Clinical: 1.2
Prerequisite(s): NURC 1104 and BIO 2300 and NURS 1140 or; NURS 1150.
This course introduces the role of the nurse in the delivery of safe patient care across the lifespan. The focus of the course will be on selected nursing skills, health assessment and introduction to the nursing process as a foundation in caring for patients with basic health care needs. Lab Fee: $119.4

NURS 1873—Concepts of Nursing Care Related to Health Problems (8)
Lecture: 2, Lab: 4.5, Clinical: 6, Seminar: 2.5
Prerequisite(s): NURS 1871 and NURS 1140 and NURC 1104 and BIO 2300 or; NURS 1141 and BIO 2301.
This course focuses on developing nursing judgment in delivery of patient-centered care for individuals with physical health problems. Students will be introduced to the safe administration of parenteral medications and solutions. Lab Fee: $131.8

NURS 1873—Concepts of Nursing Care Related to Health Problems (8)
Lecture: 2, Lab: 4.5, Clinical: 6, Seminar: 2.5
Prerequisite(s): NURS 1871 and NURC 1104 and BIO 2300 or; BIO 2301; or; or; NURS 1150 or; NURS 1151.
This course focuses on developing nursing judgment in delivery of patient-centered care for individuals with physical health problems. Students will be introduced to the safe administration of parenteral medications and solutions. Lab Fee: $169.8

NURS 2042—Concepts of Pharmacology III (1)
Lecture: 1
Prerequisite(s): NURS 1141 and BIO 2301 and NURS 1873.
This course emphasizes classifications, prototypes, and nursing implications of medications used for patients of all ages experiencing complex physical and behavioral problems. Lab Fee: $0

NURS 2864—Concepts of Nursing Care Related to Children and Families (3)
Lecture: 0.5, Seminar: 1, Clinical: 3, Lab: 1.5
Prerequisite(s): NURS 1872 or; NURS 1873 and NURS 1141 and BIO 2301.
This course will focus on the integration of concepts related to family centered nursing care of the child. Students will focus on Health and illness concepts; oxygenation, perfusion, cellular regulation, elimination, protection and metabolism while integrating the concepts of health promotion, development and professionalism. QSEN concepts will be applied to all methods of instruction. Students will apply the nursing process using age appropriate aspects as related to health promotion and care of the hospitalized child. Lab Fee: $73.6

NURS 2864—Concepts of Nursing Care Related to Children and Families (3)
Lecture: 1, Seminar: 1, Clinical: 1.5, Lab: 1.5
Prerequisite(s): NURS 1873; BIO 2301; NURS 1141 or; NURS 1151.
This course will focus on the integration of concepts related to family centered nursing care of the child. Students will focus on Health and illness concepts; oxygenation, perfusion, cellular regulation, elimination, protection and metabolism while integrating the concepts of health promotion, development and professionalism. QSEN concepts will be applied to all methods of instruction. Students will apply the nursing process using age appropriate aspects as related to health promotion and care of the hospitalized child. Lab Fee: $101.6

NURS 2866—Concepts of Nursing Care Related to Reproductive Health and the Newborn (3)
Lecture: 1, Lab: 1.5, Seminar: 1, Clinical: 1.5
Prerequisite(s): NURS 1872 or; NURS 1873 and NURS 1141 and BIO 2301.
The student will focus on the role of the nurse as a provider of care in the promotion of health for women and families. The influence of cultural diversity and health care economics on women and families will be included. The student will use the nursing judgment in providing care and promoting self-care activities. Emphasis will be placed on the teaching/learning process. Concepts of mental and spiritual health, in regards to women and families, will be incorporated. Community resources available to women and families will be examined. Lab Fee: $52.8

NURS 2866—Concepts of Nursing Care Related to Reproductive Health and the Newborn (3)
Lecture: 1, Lab: 1.5, Seminar: 1, Clinical: 1.5
Prerequisite(s): NURS 1873; BIO 2301; NURS 1141 or; NURS 1151.
The student will focus on the role of the nurse as a provider of care in the promotion of health for women and families. The influence of cultural diversity and health care economics on women and families will be included. The student will use the nursing judgment in providing care and promoting self-care activities. Emphasis will be placed on the teaching/learning process. Concepts of mental and spiritual health, in regards to women and families, will be incorporated. Community resources available to women and families will be examined. Lab Fee: $91.4

NURS 2871—Nsg Cre Patients Complx Physcl Problems (5)
Lecture: 1, Lab: 2, Seminar: 2, Clinical: 4
Prerequisite(s): NURS 1141 and NURS 1872 and BIO 2300 and BIO 2301 and PSY 1100 and ENGL 1100 and STAT 1350.
This course focuses on the nursing management and collaborative care of patients across the lifespan with complex physical problems. The student will refine skills in nursing judgement, prioritization, delegation, and supervision in the delivery of safe, patient-centered care. Lab Fee: $128.2

NURS 2871—Nsg Cre Patients Complx Physcl Problems (5)
Lecture: 1, Lab: 2, Seminar: 2, Clinical: 4
Prerequisite(s): NURS 1141 and NURS 1872 and BIO 2300 and BIO 2301 and PSY 1100 and ENGL 1100 and STAT 1350.
This course focuses on the nursing management and collaborative care of patients across the lifespan with complex physical problems. The student will refine skills in nursing judgement, prioritization, delegation, and supervision in the delivery of safe, patient-centered care. Lab Fee: $128.2

NURS 2872—Nursing Care Behavioral Health Problems (3)
Lecture: 1, Seminar: 1, Clinical: 2.1, Lab: 0.9
Prerequisite(s): NURS 1873 and NURS 1141 and BIO 2301.
This course focuses on the nursing management and collaborative care of patients across the lifespan with complex behavioral problems. The student will refine skills in nursing judgement, prioritization, delegation, and supervisioin in the delivery of safe, patient-centered care. Lab Fee: $62.6

NURS 2872—Nursing Care Behavioral Health Problems (3)
Lecture: 1, Seminar: 1, Clinical: 2.1, Lab: 0.9
Prerequisite(s): NURS 1873; BIO 2301; NURS 1141 or; NURS 1151.
This course focuses on the nursing management and collaborative care of patients across the lifespan with complex behavioral problems. The student will refine skills in nursing judgement, prioritization, delegation, and supervisioin in the delivery of safe, patient-centered care. Lab Fee: $75

NURS 2873—Ldrshp & Nsg Care Multiple Hlth Problms (8)
Clinical: 10, Lecture: 2, Lab: 2, Seminar: 2
Prerequisite(s): NURS 2864 and NURS 2866 and NURS 2872 and NURS 2042 and PSY 2340 and BIO 2215.
The course is designed to address the nurse's role related to emerging health care issues and safe, patient-centered care for individuals experiencing multi-system disorders across the lifespan. Students will be provided with the opportunity to synthesize clinical and theoretical learning from previous nursing courses through a role-transition experience. Lab Fee: $84.9

NURS 2873—Ldrshp & Nsg Care Multiple Hlth Problms (8)
Clinical: 10, Lecture: 2, Lab: 2, Seminar: 2
Prerequisite(s): NURS 2864; NURS 2866; NURS 2872; NURS 2042 or; NURS 2052; PSY 2340; BIO 2215; STAT 1350; ENGL 1100.
The course is designed to address the nurse's role related to emerging health care issues and safe, patient-centered care for individuals experiencing multi-system disorders across the lifespan. Students will be provided with the opportunity to synthesize clinical and theoretical learning from previous nursing courses through a role-transition experience. Lab Fee: $124.7

Nursing Certificate Program

NURC 1001—Nurse Aide Training Program (3)
Lecture: 1.5, Lab: 4.5
Prerequisite(s): Placement into ENGL 1100 and Placement into No Reading Required or college transcript with previous ENGL coursework.
The Nurse Aide Training Program is designed to instruct the student in the knowledge and skills needed to provide basic care for patients in the long-term care setting. Because this is a skills based course, classroom, clinical and laboratory attendance is mandatory. This course is recognized by the Ohio Department of Health as a State Approved Nurse Aide Course. The student who successfully completes the class with an 80% or better will receive a "certificate of class completion" and will be eligible to take the state test for nurse aides. This standard is mandated by the Ohio Administrative Code (3701-18-13). Effective autumn semester 2019, the student will be required to complete a background check and drug screen in addition to the current health requirement. Lab Fee: $28

NURC 1104—Basic Care Skills (2)
Lecture: 1, Lab: 3
Prerequisite(s): NURS 1871.
The student will be introduced to and utilize basic care skills in a laboratory setting. The student will learn the rationale for and practice of skills necessary to provide patient care in a healthcare setting. This course is a combination of lecture, laboratory skills, demonstration and practice. The student will incorporate concepts and skills related to perfusion, protection, and elimination in a lab setting. Basic care skills taught in this course are cardiac monitoring, sterile technique, wound care, specimen collection, urinary elimination and ostomy care. Because this is a skills-based course, classroom and laboratory attendance is mandatory. Students must earn a grade of "C" or better in this course. Lab Fee: $30

NURC 1104—Basic Care Skills (2)
Lecture: 1, Lab: 3
Prerequisite(s): NURS 1871.
The student will be introduced to and utilize basic care skills in a laboratory setting. The student will learn the rationale for and practice of skills necessary to provide patient care in a healthcare setting. This course is a combination of lecture, laboratory skills, demonstration and practice. The student will incorporate concepts and skills related to perfusion, protection, and elimination in a lab setting. Basic care skills taught in this course are cardiac monitoring, sterile technique, wound care, specimen collection, urinary elimination and ostomy care. Because this is a skills-based course, classroom and laboratory attendance is mandatory. Students must earn a grade of "C" or better in this course. Lab Fee: $70.5

NURC 1250—Train the Trainer Program (2)
Lecture: 2
This course prepares the qualified nurse to teach, coordinate, and supervise a Nurse Aide Training Program and meets federal and state requirements. The following eligibility requirements must be met to enroll in this course: current RN licensure in Ohio; minimum of two years experience, one of which must be in a long-term care facility, letter of verification documenting employment history. Lab Fee: $0

Nutrition

NUTR 2310—Fund Human Nutrition & Metabolism (3)
Lecture: 3
Prerequisite(s): BIO 2301 and CHEM 1112 or; CHEM 1200 or; CHEM 1113 or; BIO 1122 or; BIO 1114.
A study of nutrient and food energy needs of humans throughout the life cycle with consideration of socio-psychological factors. Content includes processes, chemistry, digestion, absorption, metabolism, and utilization of nutrients. An on-line review of biological chemistry, anatomy, physiology, and pathophysiology relevant to nutrition is also included in this course. A one-time techniques session including analysis of blood for nutrients is required of all students. Distance Learning students are required to take their exams at a proctored testing facility. Course is team-taught by faculty with advanced degrees limited to nutrition. Lab Fee: $4

Paralegal Studies

LEGL 1101—Intro to Paralegal Studies & Ethics (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course focuses on the responsibilities and duties of paralegals. The student will learn the history and growth of the paralegal occupation, educational options and the professional organizations which impact the paralegal. The course contains an extensive overview of the basic legal processes in the United States with an emphasis placed on the ethical duties, obligations and responsibilities of the paralegal. Finally the student will be given an opportunity to explore an introduction to legal research and writing and technology and how it impacts the paralegal profession. Lab Fee: $40

LEGL 1102—Law Office Technology (3)
Lecture: 2, Lab: 2
This course is an introduction to office management procedures unique to law offices, including computerized time keeping and billing programs. Emphasis will be placed on the development of accurate record-keeping and organizational skills. The course will provide hands-on experiences by utilizing various legal software packages for students to apply to typical legal office situations. Lab Fee: $100

LEGL 1105—Torts and Contracts (3)
Lecture: 3
The two cornerstones of legal practice, torts and contracts, will be extensively reviewed with the elements, theories and principles studied and their impact on the everday practice of law. Lab Fee: $40

LEGL 1111—Research and Writing (3)
Lecture: 2, Lab: 2
Prerequisite(s): LEGL 1101 and LEGL 1102.
An introduction to conducting legal research and the proper methods for preparing briefs, pleadings and memoranda of law. Locating, analyzing, and checking of case law is emphasized. Students will learn proper citation methods and legal writing style, as well as become familiar with the Ohio Rules and Federal Rules of Appellate Procedure. Students will be taught primary and secondary sources The Lexis legal database will be introduced. Lab Fee: $60

LEGL 2005—Civil Practice & Procedure (3)
Lecture: 3
The student will learn the civil process of a typical trial utilizing a study of the Ohio Rules of Civil Procedure, the Federal Rules of Civil Procedure, and Federal and State Rules of Evidence. The elements of a tort claim will be discussed with the drafting of pleading and how e-discovery and other pretrial processes impact the legal process and the paralegal. Lab Fee: $60

LEGL 2010—Criminal Law & Procedure (3)
Lecture: 3
The Ohio Criminal Code and Rules of Criminal Procedure will be the foundation of this examination of the pretrial and post-trial procedures in a criminal case. Students will be exposed to the criminal justice system from the elements of the offenses through post-conviction remedies. The drafting of motions and other documents associated with criminal matters will be included. Lab Fee: $40

LEGL 2012—Advanced Legal Research (3)
Lecture: 2, Lab: 2
Prerequisite(s): LEGL 1111.
This course is an intense production-oriented research and writing course designed to prepare the student to function under the requirement of rapid completion of research and writing assignments commonly made in law offices and other legal environments. The student will encounter a variety of opportunities including motions, pleadings and briefs, the production of which will require both speed and accuracy and will incorporate both printed and computer-based research strategies. Lab Fee: $60

LEGL 2014—Family Law (3)
Lecture: 3
This course explores domestic relations matters including marriage, divorce, dissolution, child custody and support, visitation and adoption. The law regulating such matters, and the drafting of appropriate documents, will be emphasized. Lab Fee: $40

LEGL 2015—Electronic Discovery (3)
Lecture: 3
This course is designed to familiarize the student with the basic principles of electronic discovery in the course of legal proceedings. Additionally, the student will become familiar with sources of potential evidence and the technical, procedural, and evidentiary rules that regulate locating, retrieving, and reviewing those sources. Lab Fee: $40

LEGL 2018—Probate Law (3)
Lecture: 3
This course is a study of the law of wills, trusts, living wills, health care power of attorney forms, estates and estate administration including estate taxation. The student will draft basic wills trust and plan a living will. Testate and intestate estates, law of descent and distribution, estate planning and other probate processes will be discussed. Lab Fee: $40

LEGL 2019—Real Estate (3)
Lecture: 3
In this course the student will study the law governing real property, its ownership, sale, lease and other conveyances. Student will draft basic real estate documents utilized in the transfer of interest in real estate. The student will also study the concepts of tenant landlord law. The course will examine the title search of real estate as well as title insurance. Lab Fee: $40

LEGL 2023—Immigration Law (3)
Lecture: 3
This course is an overview of federal Immigration Law and practices for assisting immigrants and illegal aliens. The student will learn the origins of immigration law and explore current developments. The classification of aliens-their legal rights and the various administrative and judicial processes involving immigration cases. Lab Fee: $40

LEGL 2024—Business Organizations (3)
Lecture: 3
This class covers the fundamentals of the formation of business entities including sole proprietorships, partnerships, and corporations, limited liability entities and non profits. Students will prepare documents regarding the formation of such organizations, learn how statutes regulate and control the formation and operation business entities on the state and federal level. Lab Fee: $40

LEGL 2026—Administrative Law (3)
Lecture: 3
In this class student will study the history and origins of administrative agencies on the federal and state level. An examination of statutory law, case law, and current administrative rules and actions will be utilized to develop an understanding of the role and authority of administrative agencies. Particular attention will be paid to due process, formal and informal agency actions and their rulemaking procedures. The paralegal's role in administrative adjudication will be emphasized. Lab Fee: $40

LEGL 2029—Certified Paralegal Exam Review (3)
Lecture: 3
This course is designed as a review course for the student wishing to take the Certified Paralegal Exam. The student will intensively review and complete practice exercises encompassing all areas of procedural and substantive law and ethics included on the Certified Paralegal Exam. A mock CP exam will be administered. Lab Fee: $40

LEGL 2038—Insurance Law (2)
Lecture: 2
LEGL 2038 is an introduction to insurance law. The course will include principles of indemnity, interests protected, the transfer of risk, and claims processes. The student will be taught the impact of administrative law and civil litigation as it relates to insurance. Lab Fee: $40

LEGL 2043—Alternative Dispute Resolution (3)
Lecture: 3
This course examines the legal, ethical, and policy issues that arise in the use of negotiation, mediation, arbitration, mini-trials, summary jury trials and conciliation. The student will have the opportunity to learn mediation skills for personal and professional situations. Lab Fee: $40

LEGL 2044—Debtor/Creditor Relations (2)
Lecture: 2
This course will ensure that the student is aware of the respective legal rights of creditors and debtors provided under federal and state law debt collection procedures. Also, the student will learn the statutory and regulatory structure, location and jurisdiction of bankruptcy law and bankruptcy courts and their nonjudicial officers. Parties and proceedings will be discussed and students will receive an overview of the different bankruptcy chapters, forms and PACER filing system. Lab Fee: $40

LEGL 2050—Intellectual Property (3)
Lecture: 3
This course explores the world of patents, trademarks, copyrights and trade secrets, as well as the history and origins of federal, state and foreign law which regulates the registration and ownership of these business assets. The course will discuss case law that covers these areas. Special emphasis will be given to the impact of the digital, electronic and Internet world in this specialized legal area. The student will learn the processes to register and protect these assets and the role of the legal professional in assisting the intellectual property client. Lab Fee: $40

LEGL 2051—Computer Assisted Legal Research (2)
Lecture: 1, Lab: 2
Prerequisite(s): LEGL 2012; LEGL-2012.
This course will expose the Paralegal student to the ever expanding role of computer-assisted research, an alternative to traditional, manual legal research. The student will explore Web resources techniques and sites to obtain both legal and non legal information. The student will be required to complete a series of projects on Lexis and Westlaw Skills sets in which the student will become proficient with the various uses and functions of electronic legal information retrieval. Lab Fee: $100

LEGL 2061—Business Law I (3)
Lecture: 3
This course offers students a survey of the legal framework of business, the nature of legal systems and the law, including contracts, criminal, and the law of tort, intellectual property and cyber law. It also explores the law of agency, corporation, partnerships, and property.

LEGL 2064—Legal Environment of Business (3)
Lecture: 3
This course presents an overview of the American legal system with an introduction to the legal concepts and principles that form its foundation as they relate to business. The course will examine the judicial system and methods of dispute resolution, while focusing on business crimes, torts, property, ethics, contract formation and enforcement, consumer protection, employment law, employment discrimination, regulations, and business organizations—particularly partnerships, LLCs, and corporations. Students will be able to understand the legal ramifications of their business decisions and identify legal risks in the business world.

LEGL 2072—Mediation (2)
Lecture: 2
Prerequisite(s): LEGL 2043.
This course is an intensive overview of the mediation process. Students will study both statutory and private mediation processes. Students will review domestic relations mediation, employment fact-finding and labor mediation processes. Additionally, the student will learn the different models of mediation with particular emphasis on the Seven Step Model. Each student will be involved in preparing and conducting several mediation role playing sessions as both mediator and participant. Each student will conduct a mediation in class and prepare a mediation notebook as a final project.

LEGL 2194—SPT: Paralegal Studies (1-3)
Lecture: 1
This course is a special topics course designed to allow the student to research and develop an understanding of legal-assisting issues unique to the interest of the student and for which there is no other course available.

LEGL 2815—LEGL Practicum & Seminar (2)
Seminar: 1, Practicum: 7
This course offers a guided internship work experience in an office, agency or business providing legal services. Exact duties are decided upon by agreement of the student and administrators of the placement site. The seminar discusses the work experiences and explores strategies to improve work performance. The development of an e-portfolio and preparation of resumes, interviewing and electronic job searching will be explored. Lab Fee: $40

Philosophy

PHIL 1101—Intro to Philosophy (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course offers an introduction to the problems, methods and terminology of philosophy, the types of questions addressed by philosophers, and the pivotal thinkers and systems of Western civilization from the Greeks to the 20th century. PHIL 1101 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in philosophy and humanities. Lab Fee: $2

PHIL 1130—Ethics (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course introduces students to moral reasoning, examining theories of right and wrong, good and bad, justice and injustice as they have been viewed in the past and as they shed light on contemporary ethical issues. PHIL 1130 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in philosophy and humanities. Sections of this course are H-designated Honors classes. Lab Fee: $2

PHIL 1150—Introduction to Logic (3)
Lecture: 3
Prerequisite(s): MATH 1075 and Placement into ENGL 1100.
PHIL 1150 is an introduction to critical thinking and the methods of inductive, deductive and symbolic logic. PHIL 1150 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in philosophy, humanities, and, in some instances, mathematics and science. Check with an academic advisor. Lab Fee: $2

PHIL 2250—Symbolic Logic (3)
Lecture: 3
Prerequisite(s): MATH 1075 and Placement into ENGL 1100.
This course offers a presentation of deductive logic focused on propositional logic, natural deduction and predicate logic. Symbolic Logic develops in greater detail the principles of deductive logic covered in PHIL 1150. This course meets elective requirements in the Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in philosophy, humanities, and in some cases, mathematics and sciences. Check with academic advisor. Lab Fee: $2

PHIL 2270—Philosophy of Religion (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course presents an introduction to the major issues in the philosophy of religion, including the existence of God, faith and reason, the problem of evil, miracles, death and immortality, and God and morality. PHIL 2270 meets elective requirements in the Associate of Arts and Associate of Science Degree programs. Lab Fee: $2

PHIL 2294—SPT: Philosophy (1-3)
Lecture: 1 - 3
Students explore special topics in Philosophy designed to meet specific needs. This course is on demand. Lab Fee: $0

Physics

PHYS 100—Introduction to Physics (4)
Lab: 2, Lecture: 3
Prerequisite(s): Writing: Eligibility for Composition I and Math: Qualifying math placement score or completion of MATH 1025 or higher.
This course is a survey of the basic concepts of physics. Topics include mechanics, electrostatics, nuclear physics and electromagnetism. Lab Fee: $11

PHYS 1103—World of Energy (3)
Lecture: 3
Prerequisite(s): Writing: Eligibility for Composition I and Math: Qualifying math placement score or completion of MATH 1025 or higher; MATH-1020 or higher and Placement into ENGL-1100.
This course explores the basic principles of physics in the context of energy use. It covers the topics of forces, electricity, magnetism and machines. Lab Fee: $1

PHYS 1200—Algebra-Based Physics I (5)
Lab: 2, Lecture: 4
Prerequisite(s): Writing: Eligibility for Composition I and Math: Qualifying math placement score or completion of MATH 1146 or higher or completion of MATH 1115 and Science: Qualifying science placement score or completion of PHYS 0100 or higher.
A laboratory course in classical mechanics (kinematics, Newton's laws, gravitation, energy, momentum, rotational motion, and angular momentum) as well as oscillations, waves, and sound. Lab Fee: $17

PHYS 1201—Algebra-Based Physics II (5)
Lab: 2, Lecture: 4
Prerequisite(s): PHYS 1200.
A laboratory course in classical electromagnetism (electric charge, field, and potential, DC circuits, magnetic forces & fields, induction, and electromagnetic waves), geometric and physical optics, and nuclear physics. Lab Fee: $16

PHYS 1250—Calculus-Based Physics I (5)
Lab: 2, Lecture: 4
Prerequisite(s): Writing: Eligibility for Composition I and Science: Qualifying science placement score or completion of PHYS 0100 or higher; MATH 1151; PHYS-0100, (or high school physics), Placement into ENGL 1100, MATH-1151.
This is a laboratory course in classical mechanics (kinematics, energy, momentum, rotation, simple harmonic motion, etc.) as well as mechanical waves and sound. It is recommended the student complete PHYS 0100 before enrolling in this course. Lab Fee: $17

PHYS 1251—Calculus-Based Phys II (5)
Lab: 2, Lecture: 4
Prerequisite(s): Science: Completion of PHYS 1250 AND Math: Completion of MATH 1151 or higher; MATH 1152 or; MATH 1172.
This is a laboratory course in classical electromagnetism (electric charge, field, and potential, DC and AC circuits, magnetic forces and fields, induction, and electromagnetic waves), geometric and physical optics, and topics in modern physics (special relativity and quantum, atomic, and nuclear physics). Lab Fee: $16

PHYS 2293—Independent Study in Physics (1-3)
Lecture: 1
This course is an individual, student-structured course that examines a selected topic in physics through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. Lab Fee: $1

PHYS 2294—SPT: Physics (1-3)
Lecture: 1 - 3
This course provides an opportunity to explore selected topics of interest in physics. Lab Fee: $1

PHYS 2300—Dynamics of Particles & Waves I (4)
Lecture: 4
Prerequisite(s): PHYS 1251; MATH 2153; PHYS-1251, MATH-2153.
This course covers vectors and kinematics; the foundations of Newtonian mechanics; momentum, work, and energy; conservative and nonconservative forces; potentials; angular momentum; and rotations about a fixed axis. Lab Fee: $1

PHYS 2301—Dynamics of Particles & Waves II (4)
Lecture: 4
Prerequisite(s): PHYS 2300 and MATH 2153; PHYS-2300, MATH-2153.
This course covers rigid body motion; noninertial systems and fictitious forces; central force motion; the special theory of relativity; relativistic kinematics; and relativistic momentum and energy. Lab Fee: $1

Political Science

POLS 1100—Introduction to American Government (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course introduces students to the nature, purpose and structure of the American political system. Attention is given to the institutions and processes that create public policy. The strengths and weaknesses of the American political system are discussed, along with the role of citizens in a democracy. Lab Fee: $3

POLS 1194—SPT: Political Science (1-3)
Lecture: 1
A detailed examination of selected topics of interest in political science. Lab Fee: $3

POLS 1200—Comparative Politics (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course is designed as an introductory survey class for the student interested in the field of comparative politics. Students will analyze what comparative politics is; explore a theoretical framework that helps the student understand the basic principles found within comparative politics; and will study specific countries by analyzing their history, institutions, political culture, and economy. Lab Fee: $3

POLS 1250—State & Local Government (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course introduces the student to the nature, purpose and structure of state and local governments, especially in Ohio. Attention is given to the institutions and processes that create public policy, including fiscal policy and the court system. The strengths and weaknesses of the state and local government system are discussed along with the everyday role of citizens in a democracy - especially at these levels of government.

POLS 1300—International Relations (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course examines the origin, nature, and development of the post-Cold War international system. It explores how individuals, Nation-States, nongovernmental and international organizations interact with one another. Basic concepts include knowledge of actors such as Nation-States, international organizations like the United Nations, transnational corporations, nongovernmental organizations (NGOs) and social movements. The course further examines theoretical frameworks for interaction such as idealism, realism, and nationalism. The course considers aspects of foreign policy including political economy, isolationism, and interventionism. It also explores strategies for enhancing international security, conflict resolution, diplomacy, military intervention, and the role of international law. Lab Fee: $3

POLS 2193—Independent Study in Political Science (1-3)
Lecture: 1
An individual, student-structured course that examines a selected topic in Political Science through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. Lab Fee: $3

Practical Nursing

PNUR 1100—Practical Nursing Fundamentals (2)
Lecture: 1, Lab: 3
Prerequisite(s): NURC 1102.
This course introduces the student to the role, responsibilities and scope of practice for the practical nurse. It explores the foundations of practical nursing based on the program's conceptual framework of person, health, environment and nursing. The nature of a professional relationship with its boundaries between nurse and client is also explored. Cultural, developmental, spiritual and end of life aspects of care, legal and ethical issues, and concepts of communication including documentation will be introduced within the framework of the nursing process. The principles of critical thinking are introduced. Nutritional concepts will be discussed as they relate to wellness. Basic nursing skills including vital signs, pain concepts and evaluation, and data collection to contribute to the client assessment will be reviewed and practiced in the laboratory. Review of basic skills such as safety using restraints, and body mechanics, are reviewed as well as infection control practices. Math review is included in the course as independent study. Lab Fee: $74.7

PNUR 1102—Patient Care Skills (3)
Lecture: 1.5, Lab: 4.5
Prerequisite(s): PNUR 1100 or; NURC 1001.
This course introduces the performance of nursing skills to the Practical Nursing student. The combination of lecture, laboratory skills, demonstration, and practice will cover major topics such as: wound care, specimen collection, airway care, oxygen administration, enteral nutrition, and elimination assistance. Prior Learning Assessment (PLA) credit for NURC 1101 Nurse Aide Training may be available to a student with a valid State of Ohio Nurse Aide Registry Card. Lab Fee: $147.8

PNUR 1200—Mental Health Concepts for the PN (2)
Lecture: 2
Prerequisite(s): PNUR 1100.
This course introduces the student to the role, responsibilities and the scope of practice for the practical nurse in dealing with patients who have mental health alterations. The concepts of therapeutic milieu and communication and the use of the nursing process in relation to various mental health disorders will be addressed. An emphasis will be placed on students actively choosing to optimize their own mental health in order to provide optimal care for patients.

PNUR 1201—Introduction to Relaxation Techniques (1)
Lecture: 1
Prerequisite(s): PNUR 1100.
The student will be introduced to various relaxation, stress reduction and coping techniques.

PNUR 1202—Care of the Older Adult (1)
Lecture: 1
The student will explore selected issues relevant to the licensed practical nurse working with older adults in a variety of settings.

PNUR 1203—Transcultural Nursing (1)
Lecture: 1
Students will explore how their interactions with patients are affected by their own culturally-influenced values and communication styles, the values of the nursing subculture, and the patient's own cultural values and communication styles. They will also explore the values and traditions of immigrant cultures most commonly found in the Central Ohio area.

PNUR 1204—Ethical Issues in Healthcare and Nursing (1)
Lecture: 1
The student is introduced to major ethical theories and principles as they relate to issues in healthcare and nursing. Case studies are used to illustrate strategies for ethical decision making.

PNUR 1205—PN Role with ECGs (1)
Lecture: 1
This course includes content related to beginning interpretation skills of 5-lead cardiac monitor strips for normal and selected abnormal cardiac rhythms. Correct procedures to obtain 5-lead and 12-lead ECG tracings will be demonstrated and practiced.

PNUR 1206—Care of the Immobile Patient (1)
Lecture: 1
Students will explore physiological and psychosocial factors that relate to immobility. This includes causes of immobility as well as effects of immobility. Students will discuss how they can contribute to the care of patients at risk for, and/or who actually have limited mobility. Some issues include changes in circulation, pulmonary function and skin integrity, obesity, depression and social isolation. In skills lab, students will practice techniques related to caring for patients with impaired mobility including body mechanics, pressure reduction devices, modalities for supporting circulation and pulmonary function, and complex dressing changes.

PNUR 1294—Special Topics in Practical Nursing (1)
Lecture: 1
Prerequisite(s): PNUR 1100.
The student will examine current topics and issues as they relate to practical nursing practice and roles.
Lab Fee: $0

PNUR 1300—Pharmacology I for the Practical Nurse (2)
Lecture: 1, Lab: 3
Prerequisite(s): PNUR 1100 and BIO 2300 and NURC 1102; PNUR 1766 and PNUR 1866.
This course focuses on the practical nurse's role in medication administration to persons across the lifespan. This course introduces students to basic concepts of drug classifications, and nursing implications for medications prescribed to affect various body functions. Vitamins, minerals, and herbs will be discussed in relation to interactions with prescribed medications. Concepts of health care economics and cultural awareness are threaded through the course. Using the nursing process to develop critical thinking skills and safe patient care practices is encouraged. Safe administration and documentation of oral and g-tube, topical and parenteral medications will be presented in the laboratory. Math dosages and calculations practice and evaluations will be included. Lab Fee: $97.5

PNUR 1400—Pharmacology II For the Practical Nurse (2)
Lecture: 1, Lab: 3
Prerequisite(s): PNUR 1300; PNUR 1767 and PNUR 1867.
This course continues to build on the student's understanding of medication classifications and the nursing implications associated with administration of selected medications commonly prescribed across the health-illness continuum. Intravenous therapy theory and regulations governing this therapy will be presented. An emphasis will be placed on using the nursing process to develop critical thinking skills and safe patient care practices. Lab Fee: $144.4

PNUR 1765—PN Maternal/Child Care (3)
Lecture: 2, Lab: 3
Prerequisite(s): PNUR 1100 and BIO 2300 and NURC 1102; PNUR 1865.
This course applies the practical nursing concepts to the care of women and children. Health promotion related to the stages of pregnancy will be a focus along with the complications which can occur during pregnancy and delivery. Issues related to the care of women and their families will be discussed. Medications related to these populations will be introduced in lecture and laboratory experiences. Developmental stages of infants through adolescents will be covered. Information on the practical nurse's role in caring for children with altered health will be included. Laboratory practice and simulator experience pertinent to those skills related to care of maternal and pediatric clients will be included. The concepts of critical thinking, communication, and promotion of safety and self-care will be threaded throughout. Math dosages and calculations practice and evaluations will be included. Additionally, students who are taking this course MUST also complete PNUR 1865 in the same semester. Failure of one equals failure of both. Lab Fee: $77.9

PNUR 1766—PN Health Promotion & Restoration I (2)
Lecture: 1, Lab: 3
Prerequisite(s): PNUR 1100 and BIO 2300 and NURC 1102; PNUR 1300 and PNUR 1866.
This course focuses on the application of the nursing process by the practical nurse with emphasis on health promotion of clients. Nursing concepts related to fluid balance, cancer, oxygenation, and perfusion will be presented. Skills learned in the laboratory will consist of nursing interventions that assist patients in achieving optimal health. The student is expected to apply the concepts of critical thinking, communication, and promotion of safety throughout the course. Math dosages and calculations practice and evaluations will be included. Students must take and pass both PNUR 1766 and PNUR 1866 in the same semester. Failure of one equals failure of both. Lab Fee: $73.1

PNUR 1767—Concepts Rel to Health Promo/Rest II (2)
Lecture: 1, Lab: 3
Prerequisite(s): PNUR 1766 and PNUR 1866; PNUR 1400 and PNUR 1867.
This course continues to focus on application of the nursing process by the practical nurse to promote and restore health of clients with commonly occurring alterations of specific body functions. The goal of care is to promote use of self-care activities to assist clients in attaining an optimal level of health. Skills learned in the laboratory will consist of nursing interventions that assist clients in achieving optimal health. The student is expected to apply the concepts of critical thinking, communication and promotion of safety in the skills lab setting. Math dosages and calculations practice and evaluations will be included. Students must take and pass both PNUR 1767 and PNUR 1867 in the same semester. Failure of one equals failure of both. Lab Fee: $110.1

PNUR 1865—PN Maternal/Child Clinical (1)
Clinical: 2
Prerequisite(s): PNUR 1100 and BIO 2300 and NURC 1102; PNUR 1765.
This course applies the practical nursing concepts from PNUR 1765 to the care of women and children in the clinical setting. The concepts of critical thinking, communication andpromotion of safety and self-care will be applied in practice. Lab Fee: $144.4

PNUR 1866—PN Health Promo & Rest I Clinical (1)
Clinical: 3
Prerequisite(s): PNUR 1100 and BIO 2300 and NURC 1102; PNUR 1300 and PNUR 1766.
The practical nurse role in observation and collection of data is presented with emphasis on observing the physical, psychosocial and developmental components of adult and geriatric clients. The concepts of critical thinking, communication and promotion of safety and self-care taught in PNUR 1766 will be applied in the clinical setting. Clinical experiences will be conducted in a variety of geriatric settings. Students must take and pass both PNUR 1766 and PNUR 1866 in the same semester. Failure of one equals failure of both. Lab Fee: $144.4

PNUR 1867—PN Hlth Promo & Restoration Clinical II (2)
Clinical: 6
Prerequisite(s): PNUR 1300 and PNUR 1766 and PNUR 1866; PNUR 1400 and PNUR 1767.
This course continues to focus on application of the nursing process by the practical nurse in the clinical setting to promote and restore health of clients with commonly occurring alterations of specific body functions. The goal of care is to promote use of self-care activities to assist clients in attaining an optimal level of health. The student is expected to apply the concepts of critical thinking, communication and promotion of safety in the clinical setting.Clinical experiences will be conducted in a variety of adult acute or sub-acute health care facilities. Math dosages and calculations practice and evaluations will be included with medication administration experiences in the clinical setting. Students must take and pass both PNUR 1767 and PNUR 1867 in the same semester. Failure of one equals failure of both. Lab Fee: $144.4

PNUR 1900—PN Transition to Practice (2)
Lecture: 0.5, Seminar: 1, Lab: 1.5
Prerequisite(s): PNUR 1906; PNUR 1767; PNUR 1867; PNUR 1400.
This course builds on previous course concepts of leadership and management looking at specific theories of leadership, change and management. It focuses on skills utilizing communication, delegation, conflict management, motivation and team building. Course content and discussion also includes the legal scope of practice of the LPN in Ohio and transition to practice skills. Specific information about applying for licensure and taking the NCLEX-PN is included. Time is spent each week discussing the student experience in the clinical area with focus on what works and how to improve. Math dosages and calculations practice and evaluations will be included. Lab Fee: $93.6

PNUR 1906—PN Transition to Practice Practicum (1)
Practicum: 7
Prerequisite(s): PNUR 1400 and PNUR 1767 and PNUR 1867; PNUR 1900.
The student is expected to demonstrate ability to apply the concepts of critical thinking, communication and promotion of safety with groups of patients in the clinical setting. The practicum provides the opportunity for students to apply concepts of leadership and management while under the supervision of an RN instructor or RN/PN preceptor. The concepts of critical thinking, communication and promotion of safety and self-care taught in PNUR 1900 will be applied in the clinical setting. Clinical experiences will be conducted in a variety of geriatric settings. Lab Fee: $144.4

Psychology

PSY 1100—Introduction to Psychology (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This introductory course provides a broad survey of psychological science including biological bases of behavior, sensation, perception, consciousness, memory, learning, cognition, motivation, emotion, human development, diversity, stress, personality, social psychology, psychological disorders, and therapies. Students will explore how psychological principles relate to the daily human experience, with an emphasis on individual and cultural differences and similarities. Sections of this course are H-designated Honors classes. Lab Fee: $2

PSY 2193—IS in Psychology (1-3)
Lecture: 1
Prerequisite(s): PSY 1100.
PSY 2193 is an individual, student-structured course that examines a selected topic in psychology through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program.

PSY 2200—Educational Psychology (3)
Lecture: 3
Prerequisite(s): PSY 1100.
This course offers students interested in becoming teachers an opportunity to consider practical, education-related applications of basic introductory psychology concepts. Teaching and learning topics include effective teaching skills; classroom management; the cognitive, social, and emotional development of learners; learner diversity; teacher- and student-centered instructional approaches;assessment of student learning; learning theories;creating optimal learning environments; student motivation; and the technology revolution in education. Methods may include interactive small group work, team presentations, educator communication skill building exercises, and computer lab experiences, including the use of presentation software. Lab Fee: $2

PSY 2245—Children With Exceptionalities (3)
Lecture: 3
Prerequisite(s): PSY 1100.
This course is an introductory course that offers teachers, teaching assistants and students interested in becoming teachers an opportunity to study both the characteristics of children with special needs and the educational practices and programs that work to meet these learners' needs in inclusive settings. Course topics include causes, prevalence and assessmentof specific exceptionalities; historic and current theories, issues, trends,legal rights and responsibilities in special education; student placement and service options; teaching strategies, modifications and accommodations; classroom organization and management; and professional andhome-school collaboration for lifelong learning. Lab Fee: $2

PSY 2261—Child Development (3)
Lecture: 3
Prerequisite(s): PSY 1100.
This course examines the nature, nurture and development of children from conception through middle childhood. The traditional child development approach is used with emphasis upon physical, cognitive, social, emotional, and language development. Sections of this course are S-designated Service-Learning classes. Lab Fee: $2

PSY 2325—Social Psychology (3)
Lecture: 3
Prerequisite(s): PSY 1100.
Social Psychology is how our thoughts, feelings, and actions are influenced by other people. Through this course we will examine why people think and act the way they do. This course will be broken down into the following topics: the self, social cognition, attitudes and persuasion, social influence, and social behaviors. By the end of the course, students should have a better understanding of themselves and their social world. Lab Fee: $2

PSY 2331—Psychopathology (3)
Lecture: 3
Prerequisite(s): PSY 1100.
This course provides an examination of the various psychological disorders as well as theoretical, clinical, and experimental perspectives on the study of psychopathology. Emphasis is on terminology, classification, etiology, assessment, and treatment of the major disorders. Research, major perspectives, and myths in the field of mental health are explored in light of diverse cultural norms. Lab Fee: $2

PSY 2340—Human Growth and Development Over the Life Span (3)
Lecture: 3
Prerequisite(s): PSY 1100.
This is a social justice course that surveys developmental change from conception through death. The following stages of human growth and development are covered: conception and prenatal growth, infancy and toddlerhood, early childhood, middle and late childhood, adolescence, and early, middle, and late adulthood. This course focuses on the three global domains of development: Physical, Cognitive, and Socioemotional development. Sections of this course are S-designated Service Learning classes. Lab Fee: $2

PSY 2530—Psychology of Personality (3)
Lecture: 3
Prerequisite(s): PSY 1100.
Psychology of Personality is an exploration of major personality theories. Topics include: trait, biological, psychodynamic, humanistic, socio-cultural, behavioristic, social learning, and cognitive theories. By the end of the course, students should have a better understanding of the structure, dynamics, development, and assessment of personality. Lab Fee: $2

PSY 2551—Adolescent Psychology (3)
Lecture: 3
Prerequisite(s): PSY 1100.
This course examines human development from puberty to young adulthood from a variety of perspectives. The course emphasizes the physical, cognitive, moral, identity and career development of adolescents in contemporary society. Although the emphasis is on major theories of development and the normal development sequence, problems arising at this stage, and means of dealing with these problems, will be addressed. Topics to be covered include education, academic performance and cognitive development; variations in physical and sexual maturation; social, emotional and moral development; parent-child relationships; identity and self-image; work and leisure behavior; and transition to adulthood and independence" Lab Fee: $2

Real Estate

REAL 1011—Real Estate Principles and Practices (3)
Lecture: 3
This course is an introduction to the language of real estate, the economics of the real estate business, and the general practices performed in the listing and selling of real estate. It provides a basic knowledge of the real estate business by addressing the physical, legal, locational, and economic characteristics of real estate, real estate markets, regional and local economic influences on real estate values, evaluation, financing, licensing, and professional ethics. This course meets all state requirements for licensing. State of Ohio Department of Commerce only accepts course work taken within the last 10 years towards educational requirements to sit for the state real estate licensing exam. Lab Fee: $2

REAL 1012—Real Estate Law (3)
Lecture: 3
Real Estate Law includes all areas of law of common concern to the typical real estate practitioner and investor-consumer. Among topics covered are the law of agency, law of fixtures, freehold and leasehold, estates, conveyance of real estate, real estate managers, licensure laws of Ohio, zoning, cooperatives and condominiums. This course meets all state requirements for licensure. State of Ohio Department of Commerce only accepts course work taken within the last 10 years towards educational requirements to sit for the state real estate licensing exam. Lab Fee: $2

REAL 1013—Real Estate Finance (2)
Lecture: 2
REAL 1013 covers four major concerns of real estate financing: financing instruments and creative financing techniques; in-depth mortgage payment patterns and concepts, economic characteristics and standards, and financing of single and income-producing properties; sources and availability of mortgage money and credit and the impact of various factors on the mortgage market; and special government activities having an impact on real estate financing. This course meets state requirements for licensing. State of Ohio Department of Commerce only accepts course work taken within the last 10 years towards educational requirements to sit for the state real estate licensing exam. Lab Fee: $2

REAL 1014—Real Estate Appraisal (2)
Lecture: 2
REAL 1014 stresses the methodology of appraising the single-family residential property and the theory underlying appraisal techniques. This course covers the three basic techniques of appraising: market comparison, penalized cost of replacement, and income approach (GMRM). A term appraisal project is assigned to give the student practical experience in applying these techniques. This course meets state requirements for licensing. State of Ohio Department of Commerce only accepts course work taken within the last 10 years towards educational requirements to sit for the state real estate licensing exam. Lab Fee: $2

REAL 1221—Residential Sales Practices (2)
Lecture: 2
This is a "how to" course providing a step-by-step approach for success as a real estate professional based on sound principles and acceptable techniques. This course sets forth basic fundamentals which must be mastered by real estate practitioners, regardless of their specialization or type of property involved. The underlying theme is communication. See advisor to find out if course might meet continuing education requirement. Lab Fee: $2

REAL 2220—Real Estate Ethics & Etiquette (2)
Lecture: 2
This course is intended to educate real estate licensees and potential licensees on the importance of etiquette and professionalism in the real estate practice. This course covers etiquette between agents and clients, be they English-speaking or foreign-born. Students will learn basic customs and traditions in the real estate industry and will learn appropriate conduct for a variety of settings that they will experience in the real estate field. Lab Fee: $2

REAL 2221—Professional Property Management (2)
Lecture: 2
This is a course studying decision-making as it affects management of residential, commercial and industrial property. The emphasis shall be on the practical application of theory to actual management problems. Specific topics include the Ohio Tenant Landlord Act, forcible entry and detainer, typical leases, office management, hiring, merchandising, advertising, collection problems, taxes, insurance and maintenance. See advisor to find out if course might meet continuing education requirement. Lab Fee: $2

REAL 2250—Commercial Real Estate (2)
Lecture: 2
This course introduces students to commercial real estate practice including basic vocabulary, various compliance requirements, tools, and training to proceed with commercial listing or sales activity. Students will learn to establish market value and return for investments in a variety of commercial buildings as well as a broad selection of financing options for commercial real estate. Lab Fee: $2

REAL 2270—Introduction to Real Estate Investing (2)
Lecture: 2
This course offers a practical approach to understanding the steps necessary to purchase real property as part of an investment portfolio. Students will use case studies to develop investment plans that achieve financial wealth through real property investment. Investment property will include single family, multi-family, and small commercial ventures. It is recommended that the student be familiar with Excel spreadsheets or similar software. Lab Fee: $2

REAL 2275—Introduction to Property Renovation (2)
Lecture: 1, Lab: 2
This course is designed to introduce students to a broad overview of roofing, electrical, basements, septic systems, framing construction (and more) and how to build, maintain or renovate in regard to residential buildings. Students will cover issues in homes from the 1890's through the present and discuss future and evolving construction trends. A review of architectural styles as well as topics on permits, warranties, and architectural review boards are part of the course work. On completion a student will be able to discuss the common construction as well as failures based on the age of the property, and assess typical repairs required. This course will review the scope, material, and labor investments required for common residential repairs. Students will learn to recognize and use basic materials, build small mock ups, and learn how to evaluate materials on price and performance as well as how to evaluate contractors and estimates Lab Fee: $15

REAL 2950—Real Estate Seminar/Practicum (2)
Lecture: 1, Practicum: 7
This course introduces students to the real estate profession and daily activities of a real estate agent. The course will provide a foundation of the real estate process and an opportunity for students to apply classroom information, theories, and skills in a real estate office environment. Students will participate in an actual real estate office environment. Program coordinator's approval needed. Lab Fee: $2

Respiratory Care

RESP 1110—Introduction to Respiratory Care (2)
Lecture: 1, Lab: 2
This course introduces students to the role and responsibilities of the respiratory therapist. Emphasis will be placed physical examination techniques and general respiratory therapeutics. Fundamental concepts including effective communication skills, legal and ethical principles, and infection control will be presented. Lab Fee: $10

RESP 1220—Cardiopulmonary A&P (3)
Lecture: 2, Lab: 2
Prerequisite(s): BIO 2300.
This course provides an integrated approach to the anatomy and physiology of the cardiopulmonary system. Basic pathological concepts related to the pulmonary system will be introduced. Normal and abnormal function will be compared.

RESP 1230—Respiratory Pharmacology (2)
Lecture: 2
Prerequisite(s): RESP 1220; RESP 1861 and RESP 2472.
This course provides an introduction to the basic principles of therapeutic drug administration. Classification of drugs included are bronchodilators, anti-inflammatory agents, anti-asthma agents, mucus controlling agents, surfactants, antimicrobial agents, and other drugs used in the treatment of cardiopulmonary patients. Special emphasis will be placed on safety issues and the application of drug administration in respiratory care practice.

RESP 1360—Therapeutic Procedures I (4)
Lecture: 3, Lab: 3
Prerequisite(s): RESP 1220; RESP 2452 and RESP 2442 and RESP 2482 and RESP 1862.
This course is focused on the basic therapeutic and diagnostic procedures performed by the respiratory therapist. Topics included are medical gas therapy, lung expansion therapy and basic airway care. Special emphasis will be placed on the indications, contraindications, techniques and effectiveness of each. The student will practice procedures in a simulated patient care environment. Lab Fee: $118

RESP 1861—Intro to the Clinical Experience (1)

Prerequisite(s): RESP 1220; RESP 1230 and RESP 2472.
This course is focused on introducing the student to the clinical setting. Emphasis is placed on patient safety and patient confidentiality. Lab Fee: $50

RESP 1862—Clinical Practice I (1.5)
Directed Practice: 8
Prerequisite(s): RESP 1861; RESP 1360 and RESP 2442 and RESP 2452 and RESP 2482.
This course is focused of conducting general therapeutic respiratory care procedures in the general medical surgical and intermediate care units in the acute care setting. This course will expose students to adult, pediatric, and neonatal patients. Lab Fee: $48

RESP 2442—Pulmonary Diagnostics (2)
Lecture: 1, Lab: 2
Prerequisite(s): RESP 1220; RESP 1360 and RESP 1862 and RESP 2452 and RESP 2482.
This course focuses on the role of the respiratory therapist in advanced patient assessment. Topics included are flexible fiberoptic bronchoscopy examination, cardiac output measurement, hemodynamic assessment, nutritional assessment and neurologic assessment. Lab Fee: $18

RESP 2452—Respiratory Pathophysiology (3)
Lecture: 2, Lab: 2
Prerequisite(s): RESP 1220; RESP 1360 and RESP 1862 and RESP 2442 and RESP 2482.
This course focuses on the role of the respiratory therapist in the assessment of patients with cardiopulmonary disease. Topics included are pulmonary functions, clinical laboratory studies, imaging studies, electrocardiography, sleep studies, bronchoscopic and hemodynamic assessment. Lab Fee: $40

RESP 2462—Therapeutic Procedures II (4)
Lecture: 3, Lab: 3
Prerequisite(s): RESP 1360; RESP 2870.
This course is focused on advanced therapeutic procedures performed by the respiratory therapist. Topics include advanced airway care and continuous mechanical ventilation. Special emphasis will be placed on the indications, contraindications, techniques and effectiveness of each. This course will also provide a study of the theory and principles of operations of mechanical ventilators used in the treatment of adult patients. An introduction to pediatric and neonatal care will be provided. Emphasis will be placed on manipulation, troubleshooting, infection control, and quality control. The student will practice procedures in a simulated patient care environment. Lab Fee: $36

RESP 2472—Respiratory Equipment (2)
Lecture: 1, Lab: 3
Prerequisite(s): RESP 1220; RESP 1230 and RESP 1861.
This course provides a study of the operating principles of equipment used to administer respiratory therapy in the general medical-surgical care settings. Equipment used in the administration of medical gases, humidity and aerosol therapy, lung expansion therapy, and bronchial hygiene will be emphasized. Additional topics will include equipment used in pulmonary diagnostics and patient monitoring. Emphasis will be placed on troubleshooting, infection control and quality control. Lab Fee: $44

RESP 2482—Neonatal Pediatric Respiratory Care (3)
Lecture: 2, Lab: 2
Prerequisite(s): RESP 1220; RESP 1360 and RESP 1862 and RESP 2452 and RESP 2442.
This course will provide a study of respiratory care to the neonatal pediatric population. Course content will include the assessment and management of pulmonary disorders in the newborn, infant and pediatric patient with emphasis on application of respiratory therapy. Students will complete the American Heart Association Neonatal Resuscitation Program and the American Heart Association Pediatric Advanced Life Support Program. Lab Fee: $10

RESP 2530—Therapeutic Procedures III (3)
Lecture: 2, Lab: 3
Prerequisite(s): RESP 2462; RESP 2890.
This course is focused on the respiratory management of the critically ill patient. Emphasis will be placed on the initiation and maintenance of mechanical ventilation of the adult and neonate. The student will practice in a simulated patient care environment. Lab Fee: $66

RESP 2870—Clinical Practice II (1.5)

Prerequisite(s): RESP 1862; RESP 2462.
This course is focused on conducting respiratory care in the acute care, long-term acute care, and critical care settings. Experience with the pediatric and neonatal patient will be provided. Lab Fee: $25

RESP 2890—Clinical Practice III (1.5)

Prerequisite(s): RESP 2870; RESP 2530.
This course is focused on conducting respiratory care procedures in the critical care settings. Experience with the pediatric and neonatal patient will be provided with an emphasis on caring for the critically ill adult. Lab Fee: $25

RESP 2950—Clinical Practicum (1.5)
Seminar: 1, Practicum: 10
Prerequisite(s): RESP 2530.
This course provides the student the opportunity to apply previously learned skills. Most time will be spent in the critical care setting. The student will have the opportunity to select specialty rotations in their area of interest. The students will complete the Advanced Cardiac Life Support provider course. Lab Fee: $90

Skilled Trades

SKTR 1101—Survey of the Construction Industry (2)
Lecture: 1, Lab: 2
This seminar course provides an overview of the vast array of opportunities in the construction industry. Students will be exposed to careers ranging from the many administrative and management career opportunities available in the industry (e.g., construction management, architecture, and civil engineering) as well as the wide range of skilled trades careers needed to build America (e.g., electrician, carpenter, operating engineer, plumber, HVAC, and welder). Also covered will be a wide range of construction operations: residential, commercial, industrial, and public works, and how Green Construction affects and influences these projects. A General overview of Job Site Safety will also be covered. Lab Fee: $10

SKTR 1110—Electrical: Fundamentals (2)
Lecture: 1, Lab: 2
Prerequisite(s): MATH 1024 or higher.
This course introduces the learner to the electrical profession, basic electrical theory and circuits, standard electrical safety, installation tools, electrical formulas, selection of proper wiring size and methods of installation. The learner will experience an introduction to wiring methods, wiring devices and their installation. This course will cover essential electrical test equipment. Lab Fee: $40

SKTR 1120—Carpentry: Fundamentals (2)
Lecture: 1, Lab: 2
Prerequisite(s): MATH 1024 or higher.
This course introduces the learner to the varied complex systems that make-up the Carpentry Trade and the history of the trade, career opportunities, and different types of Construction is discussed. Safety for job-site working conditions will be covered. Wood building materials, fasteners and adhesives for wood framing are covered. Basic Carpentry formulas will be covered. This class gives the learner an introduction to proper and safe use of hand, pneumatic, and power tools typically used by carpenters. Learners will experience hands on projects building wall sections. Lab Fee: $30

SKTR 1140—Plumbing: Introduction to Supply Systems (2)
Lecture: 1, Lab: 2
Prerequisite(s): MATH 1024 or higher.
This course introduces learners to the plumbing profession, plumbing safety, tools, plumbing formulas, and drawings. CPVC, copper, steel pipe and relative fittings are discussed. This course will cover sizing requirements, flow rates, and unit usages for different plumbing fixtures. The learning will engage in the installation of plumbing supply systems and proper usage of required tools and installation methods. Lab Fee: $90

SKTR 1180—Welding: Introduction to Stick (2)
Lecture: 1, Lab: 2
Prerequisite(s): MATH 1024 or higher.
This course introduces the learner to the welding profession, welding tools, welding safety, Oxy-Fuel setup, cutting, and heating, base metal preparation, weld quality, and several aspects of Shielded Metal Arc Welding (SMAW) (known as "Stick Welding") including equipment setup, and basic electrode selection. Through this course the learner will be able to assess what other welding skills and knowledge they desire and/or need for the work place. Lab Fee: $70

SKTR 1280—Welding: Oxyfuel Methods and Plasma Cutt (2)
Lecture: 1, Lab: 2
Prerequisite(s): MATH 1024 or higher.
This course introduces the learning to Oxy-Fuel welding (OFW) of mild steel and aluminum, this course will expand on Oxy-Fuel cutting and setup procedures taught in SKTR 1180. This course will cover equipment, setup, limitations, proper operation and methods used for plasma arc cutting and gouging, along with the basic nomenclature and use of the Carbon Arc Cutting (CAC) process. The learner will engage in lab activities pertaining to Oxy-Fuel welding and cutting, Plasma Arc cutting, Carbon Arc gouging and proper fit up and preparation of materials for joining by the Oxy-Fuel process. Lab Fee: $95

SKTR 1285—Welding: Automation (4)
Lecture: 2, Lab: 4
Prerequisite(s): SKTR 1380.
This Automation course is designed to teach computer and programming applications to professionals that monitor, support, and run Automated Welding work cells. This 4-semester hour course is designed to teach a student how to program, operate and assess performance and acceptance standards for an Automated Welding work cell. This blended learning experience will consist of online lessons as well as in person lab projects. This course will introduce the learner to the following welding and cutting processes, Gas Metal Arc Welding and CNC Plasma Arc cutting. The student will demonstrate how to follow and interpret safety standards, welding procedure specifications, welding design issues, and visual inspection techniques. Computer programming practices and techniques used for robotic welding and CNC plasma cutting will be an emphasis in this course. Lab Fee: $520

SKTR 1300—Const Industry Employability Skills (2)
Lecture: 2
Prerequisite(s): Placement into ENGL 1100.
This seminar course covers a wide range of life and employability/employee skills. These skill sets are essential to successfully enter the workforce and build a career with a clear upward path. Proper preparation of resumes, cover letters, and on line applications as well as job search techniques suited specifically for construction and maintenance job placements are covered. Lab Fee: $5

SKTR 1310—Electrical: Wiring I (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1110.
This course introduces the learner to electrical blueprints, wiring of single pole, three-way, and four-way switches, standard and GFCI receptacles, outlet boxes, and branch circuits. Learners will start their studies of the National Electrical Code (NEC), proper methods of conductor termination, splices, and properly sizing conductors. This course will introduce learners to basic concepts of raceway installations. Lab Fee: $45

SKTR 1320—Carpentry: Structural Framing I (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1120.
This course introduces the learner to various wood framing methods and systems used in carpentry. Learners will use Blueprint reading, plans for construction of projects. Floor, wall, and foundation systems are the principle focus of this course. Learners will engage in building floor and wall sections, perform foundation layout, and Transit setup for establishing elevations and project positioning. Lab Fee: $50

SKTR 1340—Plumbing: Introduction to Dwv Systems (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1140.
This course introduces the learner to proper installation of Drain Waste and Vent (DWV) systems for installing sink, tub, roof, floor, and area drains. Coverage of building standards for proper and safe installation of DWV will be covered. Different types of materials and methods used for code compliant DWV and proper sizing of DWV systems, and DWV Isometric drawing / reading will be covered. The learning will engage in the installation of DWV systems and proper usage of required tools and installation methods. Lab Fee: $65

SKTR 1380—Welding: Introduction to MIG (2)
Lecture: 1, Lab: 2
Prerequisite(s): MATH 1024 or higher.
This course introduces the learner to additional welding symbols and drawings, all aspects of Gas Metal Arc Welding (GMAW) and Flux Cored Arc Welding (FCAW), including equipment set-up, gas selection, usage of both solid core and flux core welding wire, using both fillet and multiple-pass welds. Through this course the learner will be able to assess what other welding skills and knowledge they desire and need for the various trades in the work force. The learner will engage in lab projects joining metals in Lap, Tee, Butt, and V-groove configurations using gas-shielded (GMAW) and flux core (FCAW) methods and materials. Lab Fee: $75

SKTR 1470—Welding: Layout & Fit Up (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1380.
This course introduces the learner to shop fabrication equipment, layout, and fit-up principles. This course will teach the learner to set up, operate and select equipment needed to perform fabrication techniques in a production environment. Lab Fee: $55

SKTR 1480—Welding: Specifications and Drawings (2)
Lecture: 1, Lab: 2
Prerequisite(s): MATH 1024 or higher and SKTR 1180 and ENGT 1115; SKTR-1180, ENGT-1115 and MATH-1020.
This course will cover welding symbol fundamentals used to build all complex welding symbols. Students will engage in the interpretation and drawing of welding symbols. Welding symbols will be analyzed to determine specifications for rod, flux, joint design, and side of joint to be welded. Symbols will be evaluated to determine weld position relative to weldment and other essential criteria. Lab Fee: $10

SKTR 1510—Electrical:low Volt Systems I (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1310.
This course introduces the learner to the fundamentals of Plain Old Telephone (POT) lines, CAT 3 through 6 Data topologies and terminations, 59 Ohm, and 6 Ohm Coaxial dual shield and quad shield cabling. Students will learn proper industry standard termination methods, tool usage, and methods for proper installation, maintenance, and repair of TeleData / Coaxial Systems. The learner will engage in lab projects installing, terminating, and testing of these communication systems. Lab Fee: $55

SKTR 1520—Carpentry: Steel Framing Construction (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1320.
This course introduces the learner to Steel Framing Technology and Fundamentals. This course will cover the materials, tools, and methods of installation for steel framing. This course will cover sizing and gauge of framing members for both structural and non-structural construction applications. The learner will engage in building wall systems, floor systems, ceiling systems and metal grid drop ceiling installations using steel framing materials, tools, and methods. Lab Fee: $50

SKTR 1570—Welding: Codes & Inspection (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1470 and SKTR 1480.
This course will focus on teaching the learner to interpret welding codes and standards. The learner will engage in activities that require the learner to interpret welding procedures and welder qualifications. This course will introduce common testing methods used in the welding profession when qualifying welders for certification. Lab Fee: $10

SKTR 1580—Welding: Introduction to TIG Process (3)
Lecture: 2, Lab: 2
Prerequisite(s): SKTR 1280 and SKTR 1380.
This course will introduce the student, who is already proficient in basic SMAW, GMAW, and Oxy-Fuel Welding skills to the cursory skill sets and knowledge of the GTAW welding process. The learner will cover skills for equipment selection, set-up, techniques, theories and applications of the GTAW welding process. The learner will engage in lab projects welding mild steel plate utilizing mild steel filler metal using the GTAW process. This process will include lap, tee, and butt joints on mild steel plate and sheet metal. Lab Fee: $105

SKTR 1670—Welding: Metallurgy (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1470 and SKTR 1480.
This course will focus on how materials react to chemicals, heat, stress, strain and alloying. The learner will engage in activities that promote awareness to how metals change in both structure and property as a result of welding. This course will emphasize the fundamental properties of metals and related welding metallurgy principles. Lab Fee: $10

SKTR 1675—Welding: Basic of Principles NDT (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1570 and SKTR 1670.
This course introduces the learner to visual, dye penetrant and dry magnetic particle nondestructive testing methods. This course will teach the learner to set up, operate and interpret results from nondestructive testing equipment needed for inspection in a fabrication and production environment. This course also introduces the learner to destructive testing methods for welds such as section, polish and etch; fillet-break test; and arc spot tests in accordance with American Welding Society specifications D1.1, D1.3 or equivalent. Lab Fee: $45

SKTR 1770—Welding: GTAW PLATE (3)
Lab: 6
Prerequisite(s): SKTR 1580.
This course will focus on GTAW using aluminum, stainless steel, and carbon plate. The learner will perform 3G and 4G weldments that conform to the AWS QC7 program. The learner will perform a workmanship qualification test on aluminum, stainless steel and carbon steel plate at the conclusion of the course. Lab Fee: $140

SKTR 1894—Special Topics Skilled Trades I (1-4)
Lecture: 1
Special topic course for year one type content

SKTR 1994—Special Topics Skilled Trades II (1-4)
Lecture: 1 - 4
Special topic course for year one type content Lab Fee: $0

SKTR 2010—Electrical: Wiring II (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1310.
This course will continue with instructions for installing conduit raceway systems, conductors, devices, and branch circuits. Covering commercial wiring, grounding, circuit breakers, electrical services, and over current equipment are covered. Learners will continue to broaden their knowledge of the National Electric Code and its requirements. This course introduces the learner to intermediate levels of residential and commercial wiring methods, materials, and related applications. Lab Fee: $46

SKTR 2020—Carpentry: Structural Framing II (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1320.
This course introduces the learner to ceiling, and roof framing concepts and methods. This course will cover rafter types and angle calculations for building roof framing systems. This course introduces the learner to insulation, sheeting, vapor barriers, roofing materials, windows, and doors. The learner will cover energy conservation methods, materials, and "green building" methodologies. The learner will engage in lab projects building and installing various roofing systems and coverings, as well as sheeting and insulation. Lab Fee: $50

SKTR 2040—Plumbing:Intermediate Supply & DWV Syst (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1340.
This course will cover PEX type supply systems, hammer effects, expansion tanks, return loop systems, and Natural Gas supply methods and materials. The learner will engage in sizing and installing DWV materials for horizontal and vertical stack systems. This course introduces the learner to additional plumbing codes, sump pump and lift station systems. This course will introduce the learner to plumbing system testing tools and method required for successful plumbing installations. The learning will engage in the installation of and testing of plumbing supply systems and proper usage of required tools and installation methods. Lab Fee: $100

SKTR 2070—Welding: GTAW PIPE I (3)
Lecture: 1, Lab: 4
Prerequisite(s): SKTR 1580.
This course will focus on using aluminum, stainless steel and carbon steel tubing. The learner will perform 2G and 5G weldments that conform to the AWS QC7 program. The learner will perform a workmanship qualification test on aluminum, stainless steel and carbon steel tubing at the conclusion of the course. Lab Fee: $285

SKTR 2080—Welding: Intermediate Stick MIG (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1380; SKTR 1180.
Using welding methods, materials, and techniques of SMAW, GMAW,and FCAW the student will be instructed in methods that are best suited for welding metals in a wide range of real-world applications and positions. This includes "in-position" and "out-of-position" welding on both flat work and round work materials. The learner will be engaged in lab projects using the SMAW, GMAW and FCAW processes welding: Tee, Lap, and Square Groove joints, in and out-of-position. Lab Fee: $75

SKTR 2110—Electrical: Repair and Service Practices (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1101 and SKTR 1300 and SKTR 2010.
This course provides learners with additional residential and commercial wiring methods, and materials. Learners will be introduced to motor maintenance, load calculations, feeder circuits, and over-current protection. The learner will be introduced to distribution equipment, fire alarm systems, and arc flash electrical hazards. This course helps the learner to apply their knowledge of wiring and circuitry for diagnoses and repair of common wiring problems. Lab Fee: $46

SKTR 2120—Carpentry: Interior/Exterior Finish Syst (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1101 and SKTR 1300 and SKTR 2020.
This course introduces the learner to interior and exterior finish systems including: drywall installation and finishing, wall coverings, siding, soffit materials, primers, paints, ceilings, and floorings. The learner will cover energy conservation methods, materials, and "green building" methodologies. The learner will engage in lab projects installing and repairing various interior and exterior finish materials. Lab Fee: $45

SKTR 2140—Plumbing: Repair and Service Practices (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1101 and SKTR 1300 and SKTR 2040.
This course introduces the learner to service processes, service tools, service methods, and replacement methods of plumbing equipment. This course introduces the learner to additional plumbing codes and their application. The learner will engage in lab projects replacing, retrofitting plumbing fixtures, equipment, and common repair and/or adjustment procedures. Lab Fee: $100

SKTR 2180—Welding: Intermediate Applications I (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1180; SKTR 1380.
Using techniques learned in SKTR 1180 and SKTR 1380 courses that utilized the SMAW, GMAW and FCAW processes, the student will be instructed in more advanced methods for welding metals in a wide range of real-world applications and positions. This course will focus on overhead welding positions. The learner will be engaged in lab projects using the SMAW, GMAW and FCAW processes while welding: Tee, Lap, and V-Groove joints in the 4G and 4F positions. Lab Fee: $85

SKTR 2185—Welding: Intermediate Applications II (2)
Lecture: 1, Lab: 2
Prerequisite(s): SKTR 1480 and SKTR 1580 and SKTR 2180.
This class will introduce the learner to intermediate out of position SMAW, GMAW, FCAW, GTAW, and Oxy-Fuel Welding for Horizontal, Vertical, and Overhead applications, the effects of differing enveloping gases and using flux core with enveloping gasses. The learner will be introduced to aluminum preparation, set-up and fit-up for GMAW. The learner will engage in lab projects covering Out of Position SMAW, GMAW, FCAW, GTAW, and Oxy-Fuel Welding, for Horizontal, Vertical, and Overhead situations. Lab Fee: $80

SKTR 2210—Electrical: Photovoltaic Systems (3)
Lecture: 2, Lab: 2
Prerequisite(s): SKTR 2010 and EMEC 1251.
This course will provide the learner with hands on instructional training needed to develop the skills required for designing, building, installing, troubleshooting and maintaining photovoltaic systems. The course is designed to introduce design concepts, tools, equipment and methods of installation used for photovoltaic systems. Fully operational systems are available for hands-on training that interface with battery and real time utility grid tied systems. Lab Fee: $100

SKTR 2280—Welding: Intermediate V Groove & Pipe (3)
Lecture: 1, Lab: 4
Prerequisite(s): SKTR 2180.
This course introduces the learner to advanced welding techniques specific to V-Groove welding of flat materials and pipe. This course will cover V-Groove welding using the SMAW, GMAW, FCAW, and GTAW processes. The learner during this course will hone their metal joining skills. This course will focus on multi-pass applications for both in and out of position work and introduce learners to pipe welding and the challenges it encompasses. Learners will engage in lab projects for fitting up and selecting the proper welding process for performing both vertical up, vertical down travel progressions, horizontal welding of pipe and flat materials required for meeting different welding specifications. Lab Fee: $95

SKTR 2370—Welding: SMAW PIPE I (3)
Lecture: 1, Lab: 4
Prerequisite(s): SKTR 2080.
This course will each the learner to weld carbon steel pipe in the 2G and 5G positions. The learner will learn how to make minor repairs to surface flaws on welds and base metals. The learner will engage in learning activities that prepare them to pass a workmanship qualification test. Lab Fee: $695

SKTR 2410—Electrical: NFPA 70E Workplace Safety (1)
Lecture: 1
Prerequisite(s): APPL 2010 or; SKTR 2010.
This course introduces the learner to electrical safety and the NFPA 70E Standard for providing safe working areas for employees relative to the hazards arising from the use, service, and maintenance of electricity and related electrical equipment. This course will cover the procedures required to work on energized equipment, its associated boundaries, the proper types and/or levels of PPE required for working about energized electrical equipment, and methods for determining the level of potential exposure.

SKTR 2470—Welding: SMAW PIPE II (3)
Lecture: 1, Lab: 4
Prerequisite(s): SKTR 2370.
This course will focus on SMAW out of position pipe welding. The learner will engage in learning activities that prepare them for a 6G unlimited thickness qualification test on carbon steel. The qualification test will conform to AWS QC7 program guidelines. Lab Fee: $695

SKTR 2570—Welding: GMAW PIPE I (3)
Lecture: 1, Lab: 4
Prerequisite(s): SKTR 1380.
This course will focus on GMAW short circuit transfer using 3" and 6" schedule 40 and 80 carbon steel pipe. The learner will perform 2G and 5G weldments that conform to the AWS QC7 program. Lab Fee: $255

SKTR 2670—Welding: FCAW PIPE I (3)
Lecture: 1, Lab: 4
Prerequisite(s): SKTR 1380.
This course will focus on the FCAW self-shielded and gas-shielded processes using 3" and 6" schedule 40 and 80 carbon steel pipe. The learner will be required to perform fillet welds, 2G and 5G welding procedures that conform to the AWS QC7 program. The learner will take a workmanship qualification test at the completion of the course. Lab Fee: $785

SKTR 2710—Electrical: NEC&Electrical Contracting (4)
Lab: 2, Lecture: 3
Prerequisite(s): Placement into MATH 1024 or higher.
This course introduces the learner to understanding and developing a proper interpretation of the National Electric Code. This seminar course will introduce the learner to understanding NEC divisions, hierarchy, proper application of exceptions, and default rules for all electrical installations. This course will review electrical theory fundamentals, electrical formulas used for branch circuits, feeders and equipment calculations. This course will also cover contractor's business law and job site safety requirements for proper preparation for a State of Ohio Electrical Contractors License. Lab Fee: $25

SKTR 2780—Welding Certification Preparation I (1)
Lab: 2
Prerequisite(s): SKTR 2280.
This course will cover the requirements for passing an AWS certification for flat and out of position work in structural applications. This course will help to fine tune the learners understanding of welding inspection methods, specifications, standards, and procedures for successful structural welding. Lab Fee: $100

SKTR 2894—Special Topics in Skilled Trades III (1-4)
Lecture: 1
Special topic course for year two type content

SKTR 2994—Special Topics in Skilled Trades IV (1-4)
Lecture: 1 - 4
Special topic course for year two type content Lab Fee: $0

Social Sciences

SSCI 1798—Study Tour/Social Sciences (1-3)
Lecture: 1
This course is a required component of a student's participation in a planned study tour. Course content relates to the destination and educational focus of the scheduled study tour, and to the application of relevant social science concepts and theories. The coinciding study tour allows students an opportunity to gain firsthand knowledge of groups within and outside the United States. A mandatory pre-tour orientation is required.

Social & Human Services

SAHS 1111—Introduction Social Work & Mental Health (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
This course introduces students to the field of human services and the study of social work including its history and fields of practice. This course includes an introduction to the various practice settings, roles of the social worker and social work assistant, NASW code of ethics as well as the knowledge base and skills required to be a culturally competent, critical thinker within generalist social work practice. Students will also explore the spectrum of human service agencies in the community and the role of social and economic justice in serving a diverse cross-section of at-risk, oppressed, and vulnerable societal groups. Special emphasis on the mental health population will be included. This course will introduce students to technical writing, APA style, and research. This course must be completed with a 'C' or higher. Lab Fee: $5

SAHS 1112—Introduction Developmental Disabilities (2)
Lecture: 2
Prerequisite(s): Placement into ENGL 1100.
This course provides the student with an overview of the developmental disability field as it relates to current and historical issues impacting persons with disabilities and the service delivery system. Students will gain knowledge of definitions, causes and characteristics of a variety of developmental disabilities as well as the services available. Principles of self-determination, behavior supports, teaching and supporting strategies and community connections will be discussed. This course must be completed with a "C" or higher. Lab Fee: $5

SAHS 1113—Introduction to Child Protective Services (2)
Lecture: 2
Prerequisite(s): ENGL 1100.
This course introduces students to the child protective services area of social work and human services. This course will provide students with an overview of the structure of Child Protective Services (CPS) in the state of Ohio. Additionally, students will gain an understanding of the history of CPS in the United States, including past and current legal requirements. Students will explore the various types of child abuse, maltreatment, and neglect. Lab Fee: $0

SAHS 1120—Service Delivery & Ethics in Human Services & Social Work (2)
Lecture: 2
Prerequisite(s): SAHS 1111 and MULT 1114 and MULT 1115 and ENGL 1100 and COLS 1100.
This course prepares students for their practicum experiences by reviewing clinical expectations, supervision, professionalism, and ethics. Diversity in the client populations served and in the practice settings at agencies that provide social work, mental health treatment, treatment of substance use disorders, and work with individuals with developmental disabilities are discussed. Professional ethics in the human services, social work, and the chemical dependency fields are covered. The importance of giving and receiving feedback and engaging in reflective practice are discussed. Students are prepared to interview with their practicum agency. Licensure requirements are reviewed. Students will read the SAHS Student Handbook and Practicum Manual and sign a Handbook Acknowledgement form. This course must be completed with a "C" or higher. Lab Fee: $4

SAHS 1120—Service Delivery & Ethics in Human Services & Social Work (2)
Lecture: 2
Prerequisite(s): SAHS 1111 and MULT 1114 and MULT 1115 and ENGL 1100 and COLS 1100; SAHS 1130.
This course prepares students for their practicum experiences by reviewing clinical expectations, supervision, professionalism, and ethics. Diversity in the client populations served and in the practice settings at agencies that provide social work, mental health treatment, treatment of substance use disorders, and work with individuals with developmental disabilities are discussed. Professional ethics in the human services, social work, and the chemical dependency fields are covered. The importance of giving and receiving feedback and engaging in reflective practice are discussed. Students are prepared to interview with their practicum agency. Licensure requirements are reviewed. Students will read the SAHS Student Handbook and Practicum Manual and sign a Handbook Acknowledgement form. This course must be completed with a "C" or higher. Lab Fee: $0

SAHS 1130—Intervention Strategies (2)
Lecture: 2
This course focuses on understanding individual behavior. Topics include building healthy relationships, proactive interaction, the crisis cycle, effects of trauma, trauma informed care, success plans, teaching healthy choices and the stages of change. Students will learn skills and strategies for de-escalating, resolving, and preventing conflict, aggression and violence. Must be completed with a "C" or higher. NEW DESCRIPTION: DESCRIPTION OF COURSE: This course focuses on understanding individual behavior. Topics include building healthy relationships, proactive interaction, the different types of trauma, effects of trauma, trauma-informed care, and teaching healthy choices. Students will learn skills and strategies for de-escalating, resolving, and preventing conflict, aggression and violence. Lab Fee: $4

SAHS 1130—Intervention Strategies (2)
Lecture: 2
Prerequisite(s): SAHS 1120.
This course focuses on understanding individual behavior. Topics include building healthy relationships, proactive interaction, the different types of trauma, effects of trauma, trauma-informed care, and teaching healthy choices. Students will learn skills and strategies for de-escalating, resolving, and preventing conflict, aggression and violence. Lab Fee: $0

SAHS 1150—Pharmacology in Human Services (2)
Lecture: 2
The course provides an overview of the pharmacology of psychoactive drugs and psychotropic medications that are frequently used by individuals who seek services in human services. Medications used in the treatment of opiate and other substance use disorders will be covered. Herbal drugs of abuse will also be explored. This course must be completed with a "C" or higher. Lab Fee: $2

SAHS 1301—Supportive Housing (2)
Lecture: 2
Prerequisite(s): Placement into ENGL 1100.
This course provides an overview of supportive housing programs and the service linkages and supports offered to ensure successful community living. This course can be taken as a part of a certificate program, technical elective as a part of the MHAD.AAS degree program or independent from certificate or degree programs. This course must be completed with a "C" or higher. Lab Fee: $5

SAHS 2194—SPT: SAHS (1-4)
Lecture: 1
Prerequisite(s): Varies.
These courses are designed to meet specific needs of students who wish to pursue in-depth training in the SAHS field. Typical subject areas include theory and skills in helping individuals who have substance use, mental health and/or co-occurring disorders, or persons with developmental disabilities, service learning and rehabilitation employment. Students enroll in these courses with permission of faculty. These courses must be completed with "C" or higher. Courses may include content required during transition from quarters to semesters. Lab Fee: $5

SAHS 2236—Prevention Services (3)
Lecture: 3
This course provides the 45 hours of prevention specific content required by the Ohio Chemical Dependency Professionals Board for the Ohio Certified Prevention Specialist Assistant. Content covers the foundations and domains of chemical use/abuse/dependency, foundations in prevention of OAD issues, ethics, planning and evaluation, education and skill development, community organization, public policy and environmental changes and professional growth and responsibility. This course can be taken as a SAHS AAS technical elective or for the Prevention Services Certificate. Students must receive a "C" or better in this course. Lab Fee: $5

SAHS 2241—Advanced Helping Skills (2)
Lecture: 2
Prerequisite(s): SAHS 1120; SAHS 2861 and SAHS 2901.
This course focuses on various aspects of effective helping through the professional relationship with clients who have developmental disabilities, mental health concerns, have addiction issues, or those who are seeking supportive services. Trauma-Informed Care, Motivational Interviewing, Cognitive Behavioral Therapy, and other evidence-based treatment approaches are utilized throughout this course. This course must be completed with a "C" or higher. Lab Fee: $5

SAHS 2251—Social Welfare & Policy (3)
Lecture: 3
Prerequisite(s): ENGL 1100 and PSY 1100.
This course examines the history and structure of social welfare institutions in the United States. Students will examine a variety of social problems that include those who are impacted by poverty, oppression and discrimination and will explore their own values and beliefs related to social issues. Specific areas to be explored include homelessness, mental illness, substance abuse, health care access, abuse and aging. The student gains an understanding of the change process on a micro, mezzo and macro level as related to at-risk and vulnerable populations. This course must be completed with a grade of 'C' or higher. Lab Fee: $5

SAHS 2261—Advanced Addiction Studies (2)
Lecture: 2
Prerequisite(s): SAHS 2861.
This technical elective course explores each of the 12 core functions of a substance abuse counselor: screening, intake, orientation, assessment, treatment planning, counseling (individual, group, and family), client education, crisis intervention, case management, referral, documentation;record keeping, and consultation with other professionals. Students practice the associated tasks and skills during an elective field practicum. This course is offered summer term only to ensure practicum experiences in the addictions treatment field. This course must be completed with a "C" or better. Lab Fee: $5

SAHS 2261—Advanced Addiction Studies (2)
Lecture: 2
Prerequisite(s): MULT 1114.
This course provides the advanced student with an opportunity to explore sophisticated and emergent concepts in addiction-focused treatment. The course builds upon foundational knowledge from the Introduction to Addiction Studies course and expands its application to related topics such as harm reduction, gambling, internet gaming disorder, food addiction, and sexual impulsivity. Students review and interpret scholarly literature on emerging trends in addiction studies and apply those insights to course assignments. The course content also includes key strategies for effective leadership and public advocacy in behavioral healthcare. The course must be completed with a “C” or better. Lab Fee: $0

SAHS 2271—Assessment & Treatment Problem Gambling (2)
Lecture: 2
This technical elective course provides students with the thirty (30) hours of gambling related content required by the Ohio Chemical Dependency Professionals Board. Licensed professionals may also take this course to demonstrate meeting the required training. Content includes: Basic gambling knowledge, screening, assessment, treatment planning, counseling strategies for individuals with problem gambling, and co-occurring disorders. Additionally, cultural competence, financial implications and ethics are included. This course can be taken as part of the SAHS AAS degree or by professionals in the community. This course must be completed with a "C" or higher Lab Fee: $4

SAHS 2861—Fundamentals in Social Work and Human Services (4)
Lecture: 4
Prerequisite(s): SAHS 1120; SAHS 2901 and SAHS 2241.
This course provides the knowledge and skills that are the foundation for working in the Social Work and Human Services field. It covers ethics, working with diverse populations, client observation, data gathering, bio-psycho-social assessment, person-centered/individualized treatment planning, case management/service coordination, crisis intervention, and documentation. The Twelve Core Functions of an addictions counselor are also interwoven throughout the course. Services that promote self-determination and utilization of community supports are emphasized. This course integrates classroom learning with practicum objectives. This course must be completed with a "C" or higher. Lab Fee: $5

SAHS 2862—Treatment Approaches SAHS (3)
Lecture: 3
Prerequisite(s): SAHS 2861 and SAHS 2901 and SAHS 2241; SAHS 2922.
This course provides the advanced student with greater opportunity to explore and enhance skills necessary to effectively work with individuals, family members and groups. Content includes: individual, group and family related treatment services, teaching and supporting strategies, stage-wise treatment approaches, community integration supported living, and supported employment. This course integrates class content with practicum objectives. The identification of the 12 core fuctions occurs throughout the course. This course must be completed with a "C" or higher. Lab Fee: $5

SAHS 2901—Practicum/Seminar I in SAHS (3)
Seminar: 1.5, Practicum: 10.5
Prerequisite(s): SAHS 1120; SAHS 2861 and SAHS 2241.
Students participate in a 157.5 hour supervised practicum experience in a community agency where utilization and practice of the knowledge and skills in the corresponding courses are required. Students will be placed at practicum sites where addiction, social work, mental health, and/or developmental disabilities treatment services are provided. Students participate in a 1.5-hour per week seminar experience for additional personal/professional support, supervision, feedback and exploration of field-related experiences. The opportunity to enhance/augment knowledge and skills related to specific client populations is available. Confidentiality, professionalism, ethical principles, self-awareness and critical thinking skills are emphasized. Each component, the practicum and the seminar, must be completed with a “C” or higher. Lab Fee: $23

SAHS 2905—Intervention Strategies Practicum/Semina (4)
Practicum: 14, Seminar: 2
Prerequisite(s): SAHS 1120; SAHS 1130; MHAD 1120, MHAD-1135 OR SAHS-1130.
Students participate in a 210 hour practicum experience in a community agency that provides services to individuals with a developmental disability where utilization and practice of the knowledge, skills and intervention techniques in the corresponding course are required. Students demonstrate professional conduct and appropriate work habits. In addition, students participate in a 2-hour a week seminar experience for additional personal/professional support, supervision, feedback and exploration of field-related experiences. The opportunity to enhance/augment knowledge and skills related to specific client population is available. Confidentiality, professionalism, ethical principles and conduct are emphasized. Students enroll in this course with permission of faculty. This course must be completed with 'C' or higher.

SAHS 2922—Practicum & Seminar II in SAHS (3)
Seminar: 1.5, Practicum: 10.5
Prerequisite(s): SAHS 2241 and SAHS 2901; SAHS 2862; SAHS 2861.
This course provides the advanced student with greater opportunity to explore and enhance skills necessary to effectively work with individuals, family members and groups. Content includes: individual, group and family related treatment services, case management/service coordination, stage-wise treatment approaches, community integration, supported living, supported employment, recovery management, and trauma informed care. This course integrates class content with practicum objectives. This course must be completed with a "C" or higher. Lab Fee: $23

SAHS 2936—Practicum in Prevention Services (3.5)
Practicum: 10.5, Seminar: 2
Prerequisite(s): SAHS 1120; SAHS 2236.
This course provides the 157.5 hours of prevention specific experience content required by the Ohio Chemical Dependency Professionals Board for the Ohio Certified Prevention Specialist Assistant. Experience occurs in the specified foundations and domains of Chemical Use/Abuse/Dependency, foundations in prevention of AOD issues, ethics, planning and evaluation, education and skill development, community organization, public policy and environmental changes and professional growth and responsibility. Students also participate in a 2-hour per week seminar with the focus of professional development and ethics. This course can be taken as a SAHS.AAS technical elective or for the Prevention Services Certificate. Instructor permission required. Students must receive a "C"or better in this course. Lab Fee: $23

Sociology

SOC 1101—Introduction to Sociology (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course introduces the basic concepts, methods and findings of sociology as a scientific discipline. The sociological perspective, emphasizing social interaction and structure, is used to explore the following topics: culture; socialization; social groups, including organizations; deviance; various types of social inequality; major social institutions; collective behavior, social movement and social change. Sections of this course are H-designated Honors classes. Students with credit (grade of D or above) for SOC 1500 can not register for this course. Lab Fee: $3

SOC 1194—SPT: Sociology (1-3)
Lecture: 1
A detailed examination of selected topics of interest in sociology. Lab Fee: $3

SOC 1500—Intro to Rural Sociology (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
As an introduction to rural sociology and development, this course will survey contemporary issues in rural society throughout the world, paying special attention to the United States and developing countries. We will introduce sociological concepts and apply them to agriculture, natural resources, rural institutions and communities, population growth and change, globalization, environment, and development. Students with credit (grade of D or above) for SOC 1101 can not register for this course. Lab Fee: $4

SOC 1500—Intro to Rural Sociology (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
As an introduction to rural sociology and development, this course will survey contemporary issues in rural society throughout the world, paying special attention to the U.S. and developing countries. This course will introduce sociological theories, methods and concepts and apply them to agriculture, natural resources, rural social institutions and communities, population growth and change, globalization, environment, and development. Students with credit (grade of D or above) for SOC 1101 can not register for this course. Lab Fee: $4

SOC 2193—Independent Study in Sociology (1-3)
Lecture: 1
An individual, student-structured course that examines a selected topic in Sociology through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. Lab Fee: $3

SOC 2202—Social Problems (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course examines how various conditions within society come to be defined as social problems. Individual, social, cultural, economic and political causes and consequences of such problems are analyzed with contemporary social science research. Possible intervention strategies are also assessed. Problems covered include health and well being; social and interpersonal violence; conformity and deviance; social and economic inequality associated with poverty, minority status, aging and sex roles; institutional change; and future issues and trends. Lab Fee: $3

SOC 2209—Sociology of Criminal Justice System (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course is an introduction to the criminal justice system as a social institution in society. Topics covered include an overview of the historical development and functions of the criminal justice system in the United States, theories of justice and punishment, the emergence and development of the modern police and court systems, and the structure and function of the correctional system. The social roles of personnel in the criminal justice system, including police, lawyers, judges, correctional officers, and parole officers will also be examined. Lab Fee: $3

SOC 2210—Sociology of Deviance (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course explores the major sociological perspectives and theories of deviance. This introductory course includes the study of the definition, identification, treatment and management of types of deviance, such as crime, mental illness, alcoholism and other pathologies. Lab Fee: $3

SOC 2309—Law and Society (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course examines the interrelationships between law and other social structures and processes. The structure of law, the origin of laws, the organization and function of the legal system, the impact of the law, and the relationship between law and social change will be examined. Lab Fee: $3

SOC 2330—Marriage and Family Relations (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course examines the impact of modern society upon the family as it relates to courtship, size of family, member relationships, economic problems, and marital stability. This course compares alternative life styles and marriage and family relations throughout the life span. Lab Fee: $3

SOC 2380—American Race & Ethnic Relations (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course explores racial and ethnic relations in the United States. The current and past experiences of selected American racial and ethnic groups are examined with respect to theories and patterns of intergroup relations and issues of prejudice and discrimination (both individual and institutional). Possible future trends in American intergroup relationships are addressed. Lab Fee: $3

SOC 2410—Criminology (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100.
This course is an introduction to the sociological study of criminology and examines fundamental issues of the discipline such as the nature and social distribution of crime, criminal law, and theories of crime. The primary focus of the course is on understanding theories surrounding the causes and correlates of criminal behavior and developing a critical perspective from which social policies on crime can better be understood. Lab Fee: $3

Spanish

SPAN 1101—Beginning Spanish I (4)
Lecture: 4
Prerequisite(s): Placement into ENGL 1100.
SPAN 1101 is an introduction to the fundamentals of the Spanish language with practice in listening, reading, speaking and writing. Course includes selected studies in Hispanic culture. SPAN 1101 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

SPAN 1102—Beginning Spanish II (4)
Lecture: 4
Prerequisite(s): SPAN 1101.
This course is a continuation of SPAN 1101, with further development of listening, reading, speaking and writing skills and further study of Hispanic culture. SPAN 1102 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

SPAN 1103—Intermediate Spanish (4)
Lecture: 4
Prerequisite(s): SPAN 1102.
SPAN 1103 focuses on the reading and discussion of Spanish and Latin American short stories, novels, plays, newspapers, and magazines, emphasizing literary appreciation and the development of Hispanic culture. It meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature. Lab Fee: $10

SPAN 1105—Spanish Conversation & Composition (1)
Lecture: 1
Prerequisite(s): SPAN 1103.
This is a conversation/composition course designed to provide students completing the 1103-level with an opportunity to continue practicing the language. Students discuss current events and personal experiences in the target language. Readings are taken from literary texts, journals, magazines and newspapers. Lab Fee: $10

SPAN 1120—Spanish for Law Enforcement (2)
Lecture: 2
Prerequisite(s): ENGL 1100.
In this course, students learn basic Spanish phrases and the questions necessary to carry out specific protocols in the law enforcement profession. Discussions also cover cross-cultural issues pertinent to relationships between non-Hispanic professionals and members of the Hispanic community. This course is useful for students interested in pursuing a career in law enforcement that has frequent contact with the Hispanic population. Lab Fee: $10

SPAN 1121—Spanish for Landscaping (2)
Lecture: 2
Prerequisite(s): ENGL 1100.
In this course, students learn basic Spanish phrases and the questions necessary to carry out specific protocols in the landscaping profession. Discussions also cover cross-cultural issues pertinent to relationships between non-Hispanic professionals and members of the Hispanic community. This course is useful for students interested in pursuing a career in the landscaping profession that has frequent contact with the Hispanic population. Lab Fee: $10

SPAN 1193—Independent Study Spanish (1-4)
Lecture: 1
Prerequisite(s): Varies, minimum grade of "C".
Designed to give the student an opportunity for a detailed study of topics of interest in Spanish not otherwise offered. Lab Fee: $2

SPAN 1194—SPT: Spanish (1-4)
Lecture: 1
Prerequisite(s): Varies, minimum grade "C".
Designed to give groups of students an opportunity for a detailed study of topics of interest in Spanish not otherwise offered. Lab Fee: $2

Speech & Hearing Science

SHS 2230—Introduction to Communication Disorders (3)
Lecture: 3
Prerequisite(s): Placement into ENGL 1100; Placement into ENGL-1100.
This course provides a survey of the topics, methodologies, and applications of speech and hearing science in normal and disordered hearing, speech, and language. This includes an introduction to the components of normal communication, including anatomy and physiology of speech and hearing mechanisms and physical components of sound and language. Major emphasis is on specific communication disorders, including fluency disorders, stuttering, swallowing disorders, aphasia, reading disorders, and different types of hearing loss. Course material will also address the Speech Pathology and Audiology professions and communication therapies. Lab Fee: $2

Sports & Exercise Studies

SES 1100—Personal Fitness Concepts (3)
Lecture: 3
This course of study focuses on fitness issues which affect Americans today and in the future. Emphasis is placed on establishing a basis for positive fitness through a consideration of the various factors which influence fitness. Personal Fitness Concepts will focus attention on the need for each person to arrive at informed conclusions about how to take responsibility for his or her personal fitness. Lab Fee: $10

SES 1101—Intro Sport & Exercise Studies (3)
Lecture: 3
A survey of the health and fitness arena both private and public, to include the study of facilities, recreational fitness options for the client, profiles, daily operations, legal aspects, personnel issues, and program administration. Lab Fee: $2

SES 1102—Recreation and Leisure Operations (3)
Lecture: 3
Explores and analyzes sport and leisure management from historical and organizational perspectives. Course will also explore the use of urban commercial recreation with special emphasis on travel and tourism; sport and athletics, theaters, fitness centers, amusement and theme parks, aquatic areas, risk recreation, and historical areas, as well as the travel and tourism industry. Lab Fee: $2

SES 1104—Yoga (1)
Lab: 2
An introduction to yoga to include breathing, strength, balance and flexibility. Lab Fee: $2

SES 1105—Intro Strength & Resistance Training (1)
Lab: 2
An introduction to weight room use for the individual exerciser. Investigation of various types of resistance exercise devices, proper techniques and programs, and weight room safety. An introduction to basic anatomical and exercise concepts and their application in the use of resistance exercise modalities as a part of a total conditioning and exercise program. Lab Fee: $10

SES 1106—Golf (1)
Lab: 2
This course provides an introduction to playing the game of golf. Laboratory experiences to include introduction to the golf swing, club selection, driving range experience and game/course experience. Lab Fee: $150

SES 1108—Women's Self Defense (1)
Lab: 2
Instruction in the ideas of Self-defense with special concentrations on the self-defense needs of women It will include Self-defense techniques at the beginning level with an emphasis on the Self-defense needs of women. Lab Fee: $2

SES 1109—Bowling (1)
Lab: 2
Instruction in the methods of teaching and participation of Bowling to include a thorough understanding of the scoring, techniques, skills, and fundamentals of the sport. This class allows students to participate in an individual sport and experience success in an independent environment. Lab Fee: $50

SES 1110—Fitness Kick Boxing (1)
Lab: 2
This course will introduce the student to cardio kickboxing. Each week new basic body moves and techniques will be introduced. Basic punches, kicks and stances will be taught as well as choreographed patterns. Techniques will be taken from various martial arts such as karate, taekwondo and boxing as ways to improve the individual's cardiovascular fitness. Lab Fee: $2

SES 1112—Total Body Conditioning (1)
Lab: 2
Participation in a fitness program to include cardio-respiratory fitness muscle strength and endurance, strength training and flexibility. Lab Fee: $2

SES 1327—Individual Sport & Activity (2)
Lecture: 1, Lab: 2
Prerequisite(s): SES 1101.
A survey of individual activities/sports to include equipment, safety concerns, breakdown of skills and game play. Lab Fee: $5

SES 1328—Team Sport & Activity (2)
Lecture: 1, Lab: 2
Prerequisite(s): SES 1101.
A survey of team activities/sports to include equipment, safety concerns, breakdown of skills and game play. Lab Fee: $5

SES 2217—Tae Kwon Do (2)
Lecture: 1, Lab: 2
Instruction in the methods of teaching and participation in Advance Tae Kwon Do to include a thorough understanding of the skills, fundamentals, and techniques of the sport. Marketing Tae Kwon Do, advanced self-defense strategies, weaponry, and concepts of Olympic competition events. Lab Fee: $2

SES 2410—Conditioning & Training Youth Athlete (3)
Lecture: 2, Lab: 2
Prerequisite(s): SES 1105.
This course provides the science of safe and effective strength and conditioning for youth athletes ages 6 to 17. This course will emphasize the psychological and physiological development of children and how this affects conditioning strategies. This course will also explore safe exercise design and prescription based on age and development of the youth athlete.

SES 2415—Adv Strength & Resistence Training Con (4)
Lab: 2, Lecture: 3
Prerequisite(s): SES 1101.
This course presents an analysis of the resistance training field to include types of resistance equipment used, resistance training methods for the client, proper lifting and spotting techniques for the various equipment, and assessment of clients. Also covered is goal setting for clients based on assessment findings and the use of periodization techniques in planning resistance training activities. Risk management aspects of the weight area and proper care and maintenance of equipment is explained. Lab Fee: $20

SES 2426—Athletic Injury Control & First Aid (3)
Lecture: 2, Lab: 2
Prerequisite(s): SES 2440.
This course covers the recognition, treatment, management and prevention of basic injuries sustained by individuals while participating in athletic activities. It includes basic taping and treatment procedures introduced and applied in the athletic environment. Lab Fee: $20

SES 2437—Health Promotion (3)
Lecture: 3
This course of study focuses on current health and wellness issues related to the worksite environment. Course work will emphasize the major wellness components of fitness, nutrition, prevention, safety, and behavior modification and how these wellness components can be introduced into the worksite. Health Promotions will also focus on financial and administrative issues associated with Worksite Health Promotion.

SES 2438—Fitness Concepts Across the Lifespan (3)
Lecture: 3
A survey of the response of children, seniors, and physically challenged persons to exercise. Emphasis to be placed on choosing appropriate and challenging activities that will result in a positive physiological response while accommodating the social, developmental, and physical needs of potential clients.

SES 2440—Exercise Physiology (4)
Lab: 2, Lecture: 3
Prerequisite(s): BIO 2300.
Human anatomy and physiology as related to physical activity, exercise and work. A study of the musculoskeletal and cardiovascular systems; bioenergetics; body composition and behavior modification; as well as the health-related benefits associated with training adaptations. Course content will be supported by exercise and fitness studies including the measurement of vital signs, aerobic and anaerobic capacity, body composition, muscular strength, endurance, and flexibility in the laboratory. Lab Fee: $20

SES 2441—Kinesiology (4)
Lab: 2, Lecture: 3
Prerequisite(s): SES 2440.
Introduction to the fundamentals of kinesiology and biomechanics with discussion of both anatomical and mechanical principles. These concepts will be applied in the analysis of a wide variety of basic motor skills, exercise, and sport activities. Lab Fee: $20

SES 2442—Exercise Prescript&quantitative Analysis (3)
Lecture: 2, Lab: 2
Prerequisite(s): SES 2440.
This course provides the art and science of using fitness-related data to make informed individual exercise prescriptions. Course work will emphasize calculating and estimating metabolic demand of exercise, normal physiological response to exercise, and the abnormal physiological response to exercise. This course will also focus on the appropriate selection of fitness protocols for those clients who suffer from compromised health. Lab Fee: $2

SES 2443—Advanced Athletic Assessment (3)
Lecture: 2, Lab: 2
Prerequisite(s): SES 2415.
This course covers the assessment of athletic conditioning, skills and functional movement with corrective strategies applied based on test data. Students will learn testing protocols and data interpretation along with strategies to improve athletic conditioning and performance based on assessment results. Lab Fee: $20

SES 2444—Advanced Athletic Conditioning (3)
Lecture: 2, Lab: 2
Prerequisite(s): SES 2415.
This course will provide the scientific foundation necessary for the development of advanced exercise prescription for athletes. Data interpretation, exercise science foundations, and advance prescription guidelines will be covered in this class. The class will also focus on appropriate exercise selection and programming for the athlete.

SES 2524—Sport Management Foundations (3)
Lecture: 3
An advanced study of sport and business management theory applied in the sport environment. An analysis of organizational structure/theory and management style application. An overview of the budgeting, personnel process, staffing requirements and staff development procedures to include an advanced budgetary practice. Study of activity programming/facility needs and customer service protocol for the sport environment, to include ethics, leadership strategies, risk management, evaluation procedures, as well as proper equipment care and storage. Lab Fee: $2

SES 2534—Sport Marketing (3)
Lecture: 3
Prerequisite(s): SES 1101.
An advanced study of sport marketing strategies for the sport environment both internal and external. Promotional guidelines and discussion of concepts of promotional activity. Study of the budgetary process, differentiation of budget styles, and implementation of the budgetary process in both the private and public sector. Lab Fee: $2

SES 2535—Sport Law (3)
Lecture: 3
This course presents a survey of the legal framework of the athletic environment. It includes study of the nature of the legal system and the law pertaining to sports, tort law, contractual agreements and civil law.

SES 2544—Rec Admin & Programming in Sport (3)
Lecture: 3
Prerequisite(s): SES 1101.
A study of the recreational environment. An overview of program delivery, facilities, maintenance and equipment. A study of various avenues sport can be offered to include: intramural/extramural sport, informal/club sport, instructional sport and fitness.

SES 2548—Adapted Physical Educ Programming (3)
Lecture: 3
Prerequisite(s): SES 1101.
The Adapted Physical Education Programming course is based upon the concept of service-learning. The course and students therein is built to serve the annual Nationwide Children's Hospital Myelo Camp.

SES 2625—Concepts of Coaching (3)
Lecture: 3
Prerequisite(s): SES 1101.
This course will be a discussion based instructional program facilitated by a faculty member. It is designed to train sport managers to help athletes avoid or deal with the challenges and pressures often presented in the athletic realm. The program allows sport managers to develop rules and expectations about drug and alcohol usage, communication with parents and guardians, and behavior monitoring skills. Lessons on development of policies related to athlete usage and consequences and or interaction guidelines.

SES 2626—Coaching the Young Athlete (3)
Lecture: 3
Prerequisite(s): SES 1101; SES-1101.
This course is a discussion-based instructional program facilitated by a faculty member. It is designed to help sport coaches develop an understanding of all aspects of coaching the youth athlete, including training coaches to help student athletes recognize and avoid or deal with the problems, issues and pressures faced in today's sport realm. The course encourages the coach to explore various aspects of youth coaching and develop key components of the role such as philosophy, policy and procedure development, intervention and behavior modification techniques, and communication skills.

SES 2660—Ethics in Sports (3)
Lecture: 3
Prerequisite(s): SES 1101.
This course is a discussion-based instructional program facilitated by a faculty member. It is designed to help sport coach, administrator and others develop an understanding of the array of ethical issues in sport. The course will encourage and empower the student to think for themselves and recognize the ethics inherent in their own decision making and behavior, as well as that of others. This in turn, will provide the student with guideposts for making ethical decisions in the sport world and life.

SES 2670—Sport Psychology (3)
Lecture: 3
Prerequisite(s): SES 1101.
This course is a discussion-based instructional program facilitated by a faculty member. It is designed to help sport coaches, administrators and others develop an understanding of all aspects of the psychological side of sport. The course encourages the student to explore various aspects of sport psychology, as well as bridging the science of sport psychology to the practice of sport psychology.

SES 2680—History Physical Education/Sport (3)
Lecture: 3
Prerequisite(s): SES 1101.
An in-depth study of the history of sport in the United States and the impact of sport on society.

SES 2690—Sport Governance & Society (3)
Lecture: 3
This course will examine the structure of governance within sport organizations. Examining the multiple levels and sectors of the sport industry. Students will explore the structures and functions of regulatory agencies for sport at the local, state, national, regional, and global levels. Students will gain an appreciation for how agencies vary, as well as the differences in for-profit, nonprofit, and quasi-public sport organizations at the various levels. Students will examine the various aspects of sport: Professional sport, amateur sport, sport media, sporting goods and licensing. Students will examine the emerging and rapidly evolving sectors of legalization of sport wagering, and esports for a realistic look at how governance is applied across different sectors. Knowledge to prepare students to practice principles of good governance and ethical decision making within the sport industry.

SES 2694—Special Topics: Sport & Exercise Studies (1-3)
Lecture: 1
This course brings together concepts discussed in previous program courses. Topics revolve around exercise prescription for special populations, some disease states or social aspects of sport such as homophobia in sport. Also, explored will be the development and modification of institutional programming based on individual and group needs as well as resources, content and delivery of health promotion programs.

SES 2700—Sport Tourism (3)
Lecture: 3
This course explores and highlights the growth in the sport tourism industry. This course will provide insight into the government regulations associated with the sport tourism industry. Basic concepts pertaining to sport, tourism and sport tourism.

SES 2710—Sport Finance (3)
Lecture: 3
Prerequisite(s): SES 2524.
This course is designed to provide the prospective sport manager with an overview of the major financial issues facing sport managers and the sport industry. An analysis of the following areas will be undertaken: sources of revenue for sport organizations and leagues, a comparison of public and private sector funding in sports, and investment of public resources into private sporting facilities. Discussed will also be auditing and budgeting as it relates to a successful sport organization.

SES 2712—Promotion & PR in Sport & Events (3)
Lecture: 3
This course provides the student with an introduction of promotions and public relations in sport and events. This course will define sport public relations as a managerial, communication-based function designed to identify a sport organization's key publics, evaluate its relationships with its publics, and foster desirable relationships between the organization and its publics.

SES 2720—Facilities Management (3)
Lecture: 3
Prerequisite(s): SES 1101.
This course discusses the elements of managing sport facilities, including arenas, stadiums and athletic complexes. The course will include methodologies for planning and construction of new recreation, leisure and sport facilities as well as guidelines for evaluating the adequacy of existing facilities. An investigation of the functions of recreation and leisure managers (arts and entertainment) in the design, operation, and financing of facilities. Students will examine the issues pertaining to management of public and private arenas, stadiums, theaters, and multipurpose facilities. Management of temporary facilities for special events will also be considered.

SES 2740—Dimension of Wellness (3)
Lecture: 3
Prerequisite(s): SES 1100.
In this course, students will ask the question: What is the definition of wellness? More than ever before we hear this word in the news, on billboards, in conversation and even at work. Interestingly, there is no universally accepted definition of wellness. For this reason students will explore a set of common wellness characteristics and learn about the multidimensional states of wellness.

SES 2750—Chronological & Physiological Wellness (3)
Lecture: 3
Prerequisite(s): SES 1100.
This course is designed to develop knowledge and awareness of the major physiological changes that occur in humans as it relates to chronological aging. Students will use a dimensional wellness approach to design chronological wellness programming.

SES 2760—Clinic/Corporate Wellness (3)
Lecture: 3
Prerequisite(s): SES 1100.
This course is designed to develop knowledge and awareness of the major issues in the field of work site health promotion and clinical care. The focus of the course is on planning, administering and evaluating wellness and health promotion programs based in clinical, industrial and corporate environments. The cost of unhealthy lifestyle choices for the individual and employer and their relationship to the workplace will be explored.

SES 2770—Society and Wellness (3)
Lecture: 3
Prerequisite(s): SES 1100.
The purpose of this course is to increase student understanding of various wellness issues facing America and the world today. This course introduces students to the field of wellness and health promotion as a discipline and profession with a specific focus on contemporary topics facing all wellness professionals based on social divides.

SES 2950—SES Practicum/Seminar (2)
Seminar: 1, Practicum: 7
This course presents an opportunity for practical training in the sport profession to include activity preparation, personnel evaluation and budget analysis. This course also includes an on-campus seminar which will discuss issues relating to the profession. Summative assessment will include a combination of objective tests, performance checklists and evaluation by the on-site supervisor.
Lab Fee: $2

Statistics

STAT 1350—Elementary Statistics (3)
Lecture: 3
Prerequisite(s): MATH 1025 or; MATH 1050 or; MATH 1099 or; by placement equivalent.
STAT 1350 is designed to acquaint students with statistical methods used in gathering and analyzing data. The course includes survey methods, graphical displays of data, descriptive statistics, the Normal distribution, correlation and linear regression, basic concepts in probability and simulation, sampling distributions and the Central Limit Theorem, confidence intervals, and significance testing. Lab Fee: $2

STAT 1375—Introduction to Data Science (4)
Lecture: 3, Lab: 2
Prerequisite(s): MATH 1025.
STAT 1375 is designed to acquaint students with statistical methods used in gathering and analyzing data. Data science topics include data curation; visualization; analysis including modeling, estimation, and prediction; data science applications including machine learning, supervised and unsupervised learning, and sentiment analysis; and data ethics. Lab Fee: $7

STAT 1400—Statistical Concepts for Business (3)
Lecture: 2, Lab: 2
Prerequisite(s): MATH 1025 or; MATH 1050 or; MATH 1099 or; by placement equivalent.
This course is designed to introduce students to statistical concepts focusing primarily on business applications. The course contains techniques in descriptive and inferential statistics and includes sampling techniques; data types; experiments; measures of central tendency; measures of dispersion; graphical displays of data; basic probability concepts; binomial and normal probability distributions; sampling distributions and Central Limit Theorem; estimating population parameters and hypothesis tests of population parameters for one sample; linear regression and forecasting with exponential smoothing. STAT 1400 is intended primarily for students pursuing an AAS degree in the business programs. Lab Fee: $7

STAT 1450—The Practice of Statistics (4)
Lab: 2, Lecture: 3
Prerequisite(s): MATH 1116 or; MATH 1122 or; MATH 1123 or; MATH 1130 or; MATH 1146 or; MATH 1148; Placement equivalent.
This course is designed to acquaint students with statistical methods used in gathering and analyzing data. The course includes: sampling methods and data classification; descriptive statistics; percentiles and z-scores; basic concepts in probability; binomial and normal probability distributions; the Central Limit Theorem; estimating population parameters; hypothesis testing; linear correlation and regression; interval estimation and hypothesis testing with two samples; and chi-square tests of independence. STAT 1450 is intended primarily for students needing a college level, non-calculus based course in probability and statistics. Lab Fee: $7

STAT 2430—Business Statistics (4)
Lab: 2, Lecture: 3
Prerequisite(s): MATH 1131 or; MATH 1151.
STAT 2430 is designed to acquaint students with statistical methods used in gathering and analyzing data. The course includes: designing samples and experiments; describing data with graphs and numerical summaries; correlation and regression; concepts in probability; probability distributions including the binomial, normal, uniform, exponential, and other continuous probability distributions; the Central Limit Theorem; confidence intervals and hypothesis testing for means and proportions; inference for comparing two populations; and Chi-square test of independence. Applications in business, management, and economics are emphasized. Lab Fee: $7

STAT 2450—Introduction to Statistical Analysis (4)
Lab: 2, Lecture: 3
Prerequisite(s): MATH 1131 or; MATH 1151.
This course is designed as a calculus-based introduction to data analysis, experimental design, sampling, probability, and inference. Stat 2450 is intended primarily for students needing an integral calculus-based statistics course for majors in the social and behavioral sciences and other fields. Lab Fee: $7

STAT 2460—Principles of Stats for Engineers (4)
Lab: 2, Lecture: 3
Prerequisite(s): MATH 1152 or; MATH 1172; MATH-1152, MATH-1157, or MATH-1172, Minimum grade C.
This course introduces descriptive statistics; probability theory; discrete and continuous random variables; expected value and variance; the normal distribution; sampling distributions and the Central Limit Theorem; confidence intervals and hypothesis testing for means and proportions; simple linear regression; analysis of variance; multiple linear regression; model selection; and selected topics from quality control and experimental design. Applications to problems in science, engineering, computer science, and related areas are explored. STAT 2460 is intended primarily for students needing a calculus-based course in probability and statistics.

STAT 2470—Intro Probability Statistics Eng & Sci (4)
Lab: 2, Lecture: 3
Prerequisite(s): MATH 1152 or; MATH 1172.
This course introduces probability theory; discrete and continuous random variables; probability distributions; expected value and variance; the normal distribution; point estimation; sampling distributions, one and two sample confidence intervals; one and two sample hypothesis testing; simple linear regression and correlation; chi-square goodness-of-fit- test; analysis of variance; and multiple linear regression. Applications to problems in science, engineering, computer science, and related areas are explored. STAT 2470 is intended primarily for students needing a calculus-based course in probability and statistics. Lab Fee: $7

Sterile Processing Technology

SPT 1861—Sterile Processing Tech I (6)
Lecture: 1.5, Clinical: 13.5
Presentation and discussion of development and history of a modern Sterile Processing Department. Roles and responsibilities of Sterile Processing Technicians. Review of the anatomy and physiology of the human body in relation to processing of medical devices and patient care equipment. Discussion of basic Microbiology and identification of common microbes and diseases found in today's healthcare environment. Admission to the Sterile Processing Technology Program is required before enrolling in this course. Lab Fee: $87.5

SPT 1862—Sterile Processing Technology II (6)
Clinical: 12, Lecture: 2
Prerequisite(s): SPT 1861; SPT-1861.
The techniques and protocol of processing patient care equipment are presented. Review and demonstration of the various packaging methods currently in use in today's healthcare environment for sterile processing of critical medical devices. Discussion and identification of surgical instruments including techniques for recognizing damage and/or poor working condition to allow technicians to remove for preventive maintenance. Discussion and identification of the various methods of sterilization currently used in healthcare. Demonstration of appropriate monitoring techniques to achieve required degree of sterile assurance level. Identification of sterile storage procedures and concepts. Review and demonstration of appropriate distribution methods and affect each has on the cost of med/surgical supplies. Presentation and discussion of history, development and current trends in the daily operations of modern hospitals. Hospital governance, administration and management. Continued review of functions of clinical patient care areas of inpatient care, outpatient care, surgery, emergency services, ancillary diagnostic and rehabilitation services. Review of patient, facility and administrative support services. Discussion of critical interrelated functions of all departments of hospital to insure quality patient care is delivered. Introduction to hospital budgeting, marketing, financing, billing, quality improvement and accreditation. Presentation of case studies to emphasize actual ethical concerns that may be experienced in performance of duties. Clinical experience in central service/materials management department of health care facility covering principles and practices of cleaning, decontamination and sterilization of medical instruments and apparatus. Fundamentals of wrapping, sterile set-ups, safety rules and regulations, inventory control, record-keeping and quality assurance Lab Fee: $87.5

SPT 1863—Sterile Processing Tech BIO OHIO (2)
Lecture: 2
This course will provide an introduction to the Central Service areas of a major hospital system. Orientation for the various roles and responsibilities of the Sterile Processing technologist will be presented. Introduction to the basic sciences to include medical terminology, anatomy, physiology and microbiology. Introduction to the regulations and standards for the successful function of a Sterile Processing Technology Unit are explored. Infection Prevention and Safety considerations are related to the duties of decontamination, disinfection and sterilization of supplies and equipment associated with the duties of the Central Service or Sterile Processing Department. Surgical patient care concepts are related to the sterilization of instrumentation and equipment to include pre/intra/post-operative routines for inventory management and tracking systems, point of care processing for various high and low temperature sterilization systems. Lab Fee: $111.9

SPT 2530—Sterile Processing Exam Review (2)
Lecture: 2
Prerequisite(s): SPT 1861; SPT 1862.
The purpose of SPT 2530 is to prepare students to successfully pass the Central Services Technician (CRST) examination. The Central Services Department provides key support to all areas of patient care. Further, it is the hub of all activity involving supplies and equipment required for surgery and other patient care areas (www.iahcsmm.org). Course includes completion of the IAHCSMM certification examination. Lab Fee: $125

Supply Chain Management

SCM 1100—Supply Chain Mgmt Principles (3)
Lecture: 3
SCM 1100 provides an overview of the key processes, concepts, and methodologies of supply chain management. Emphasis is given to the study of the impact that the supply chain management framework, (that includes distribution, procurement, inventory, transportation and information technology components) has on business and the economy. The decision making process within supply chain is of particular importance as the interrelationships (cost and service trade-offs) between logistics and other areas of business will be covered. The overall focus is the strategic and financial significance the supply chain has on the firm's ability to add customer value. Lab Fee: $1

SCM 1101—Transportation & Traffic Mgmt (3)
Lecture: 3
Prerequisite(s): SCM 1100.
SCM 1101 is designed to provide the student with a practical learning experience based on what a person in traffic management may encounter in his or her daily work schedule and also review some of the transition of the manager's job from past to present. The traffic manager's job will be analyzed with regard to his or her daily dealings with others in the supply chain management and how the manager is involved with and must work with each of the other areas Lab Fee: $1

SCM 1190—International Commerce (3)
Lecture: 3
SCM 1190 focuses on the political, economic, social and cultural considerations in doing business globally. The course explores the factors that allow organizations to be successful in the globalization of markets and the growth of overseas business ventures. The need to develop varied techniques for managing the organizations resources from other cultural backgrounds, the means of minimizing risks in financial transactions, and development of systems for coordinating and controlling the value chain is stressed. Techniques to overcome international business barriers are examined. Lab Fee: $1

SCM 1501—IT in Logistics (3)
Lecture: 3
Prerequisite(s): SCM 1100.
SCM 1501 introduces students to the I T Systems Operations and Applications of supply chain management. The purpose is to provide greater understanding of Information Systems and Information Technology (IS/IT) and its contribution to the business enterprise and the importance of IS/IT in embracing the complex and time saving processes in supporting the logistics operational processes. Lab Fee: $1

SCM 1501—Business Technology & Automation (3)
Lecture: 3
Prerequisite(s): SCM 1100.
SCM 1501 introduces students to the IT Systems Operations, Applications, and Automation used in Supply Chain Management. The purpose is to provide greater understanding of current technology and its contribution to the business enterprise, as well as the importance of using technology to make operations more efficient, less complex, and more automated. Lab Fee: $1

SCM 1510—Strategic Procurement (4)
Lecture: 4
Prerequisite(s): SCM 1100.
SCM 1510 is designed to teach the principles of world class supply chain management to the newly appointed buyer or to non-purchasing personnel looking to broaden their business knowledge. It focuses on how the basic and advanced purchasing management can be used effectively to meet the challenges and responsibilities of today's constantly changing business climate. Topics include the challenge of purchasing and materials management, objectives and organization, function, specification, quality control and inspection, computerization, international purchasing, and the establishment of teams to support complex supply chain and logistic programs. Lab Fee: $2

SCM 2110—Warehouse Management (4)
Lecture: 4
Prerequisite(s): SCM 1100.
SCM 2110 a basic warehouse management procedures and skills course that focuses on "nuts & bolts" warehousing skills including basic warehousing functions, e.g., receiving; storage; order picking; and shipping; and support skills, e.g., performance measurement; documentation; powered industrial truck operator safety training; inventory control; hiring, firing, and employee motivation; handling returns; automated identification technology; basic unitization practices; freight claims; hazardous materials; and auditing both private and third-party warehouse operations. The need for close working relationships among the warehouse and other departments of the business is also covered. Lab Fee: $2

SCM 2111—Inventory Management (3)
Lecture: 3
Prerequisite(s): SCM 1100.
SCM 2111 Discusses inventory management and control function(s) covering such topics as material management; purchasing; forecasting; inventory fundamentals; order quantities; independent demand; physical and cycle count inventories; warehouse management; physical distribution; just-in-time manufacturing; and total quality management. Lab Fee: $1

SCM 2250—International Shipping (3)
Lecture: 3
Prerequisite(s): SCM 1100.
SCM 2250 discusses - from the perspective of logistical services users, e.g., importers, exporters, and international firms - the history and development of international trade; trade terms; payment terms and methods; currency exchange risks; commercial documents; international insurance; ocean, air, and multi-modal transport; packaging; international logistics infrastructure; international contracts; and the 2010 revision of the Incotermsr Lab Fee: $1

SCM 2290—Intro Import/Export Regs & Comp (4)
Lecture: 4
Prerequisite(s): SCM 1100.
SCM 2290 an overview of the major international transportation and logistical regulatory compliance requirements with which logistics managers are most likely to be confronted while either exporting or importing their company's products. These include U.S. common and statutory laws; regulation of air, motor, and ocean carriers; various export/import documentation; third-party intermediaries, e.g., forwarders, brokers, and consultants; and export and import regulations. Emphasis placed on developing a company export management procedures guide. Lab Fee: $3

SCM 2450—Transportation Rates & Claims (3)
Lecture: 3
Prerequisite(s): SCM 1100.
SCM 2450 Transportation rates and claims, will present the student with the various methods of rating transportation charges and the mathematical calculations for both rating and other situations in the supply chain. The course will also cover the financial liability and general legal implications of freight claims on the traffic manager and the impact and possible avoidance of such claims. Lab Fee: $2

SCM 2460—Procurement Planning & Negotiation (3)
Lecture: 3
Prerequisite(s): SCM 1510; SCM-1510.
SCM 2460 a capstone course is designed for the purchasing major. It focuses on the skills required to prepare for and conduct purchasing negotiations, and it utilizes a case study approach to be used to understand purchasing as the primary materials procurement activity while integrating purchasing with other materials management activities. Topics covered include legal considerations, public purchasing, the acquisition planning process, customer relations and control functions such as inventory control, budgeting, and production in today?s business environment. Lab Fee: $2

SCM 2601—Performance Mgmt SCM Managers (3)
Lecture: 3
Prerequisite(s): SCM 1510 and SCM 2110 and ACCT 1211.
SCM 2601 is designed around developing the skills required to plan, implement and evaluate performance competencies of an organization. Emphasis is placed on the interdependencies between the corporate strategic planning process and the role performance management plays in managing individual and group performance. Special emphasis is place on performance as it relates to the planning, and managing of the supply chain. The student will explore topics such as: how to proactively approach and resolve performance issues; developing and managing a balanced score card, selecting metrics to measure business and supply chain performance; creating positive relationships to ensure effective communication. Lab Fee: $1

SCM 2802—SCM Seminar (1)
Seminar: 1
Prerequisite(s): SCM 2902.
SCM 2802 focuses on the application of logistics knowledge to specific areas of on-the-job experience. Open to Supply Chain Management Technology students only who have completed 12 hours in the technology and have permission of the instructor. Lab Fee: $1

SCM 2902—SCM Practicum (1)
Practicum: 7
Prerequisite(s): SCM 2802.
SCM 2902 course presents an opportunity for supervised, on-the-job application of knowledge and skills acquired in the classroom. Open to Supply Chain Management Technology students who have completed 12 hours in the technology and have permission of the instructor. Lab Fee: $1

SCM 2910—CLA Certification (1)
Lecture: 1
SCM 2910 is designed to prepare students to take the Manufacturing Skill Standards Council's (MSSC) Certified Logistics Associate (CLA) examination. It focuses on the material handling portion of global supply chain logistics and covers (reviews) the foundational knowledge required of front-line material handling workers. Global supply chain logistics, a modern concept, also embodies the evolution of logistics as one of the earliest activities of mankind with a profound influence on the course of history. Lab Fee: $1

SCM 2911—CLT Certification (1)
Lecture: 1
SCM 2911 is designed to prepare students to take the Manufacturing Skill Standards Council's (MSSC) Certified Logistics Technician (CLT) examination. It focuses on the knowledge and skills that mid-technical workers in global supply chain logistics should understand. The technical level requires a higher level of knowledge by front-line supervisors, i.e., higher than that required by CLA-level workers. Mid-level technicians are expected to have a competency in supply chain logistics operations including product receiving and storage, order processing, packaging and shipment, inventory control, safe handling of hazardous materials, evaluation of transportation modes and dispatch and tracking operations. Lab Fee: $1

SCM 2994—SCM Current Topics (1-3)
Lecture: 1 - 3
SCM 2994 gives students an opportunity to examine, in detail, special topics of interest in supply chain management (logistics). Topics will vary. Lab Fee: $2

Surgical Technology

SURG 1861—Surgical Technology I (7)
Lab: 15, Lecture: 2
This course will provide an in-depth introduction to the role and responsibilities of the Surgical Technologist as an important professional in the delivery of surgical health care services. Introduction to the surgical environment will include professional responsibilities, legal and ethical considerations and basic surgical environment safety. Introduction to the principles of aseptic technique to include surgical asepsis, scrubbing, gowning, gloving, sterilization, disinfection, and operating room sanitation are explored. Direct patient care interventions to include positioning, prepping, draping techniques, and related operative procedures. Introduction to anesthesia and pharmacological considerations for patient surgical care are investigated. The surgical use of instrumentation and common surgical supplies are investigated. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based surgery units. Lab Fee: $150

SURG 1862—Surgical Technology II (7)
Lab: 15, Lecture: 2
Prerequisite(s): SURG 1861.
Principles of asepsis and the patient care concepts of positioning, prepping, draping, and procedural techniques are directly applied to the investigation of General (GEN), Gastrointestinal (GI), Obstetrics (OB), Gynecological (GYN), and Genitourinary (GU) surgical services. The role and responsibilities of the Surgical Technologist as the "scrub" member and the "circulator" member of the surgical team will focus on maintaining the integrity, safety, and efficiency of the sterile and nonsterile areas throughout various surgical procedures. Investigation of instrumentation, sutures, needles, dressings, packings, drainage tubes/systems, and auto-stapling devices will continue along with a focus on endoscopy use in GEN, GI, OB, GYN, and GU surgical services. Students will integrate theories of sterile conscience and critical thinking in each role of standard X-Ray, fluoroscopy and radionuclide procedures, including proper utilization of monitoring devices and implementation of the concepts of time, distance and shielding. Students will be exposed to lectures, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based surgery units. Lab Fee: $150

SURG 1863—Surgical Technology III (7)
Clinical: 15, Lecture: 2
Prerequisite(s): SURG 1862.
The principles of asepsis and the patient care concepts of positioning, prepping, draping, and procedural techniques are directly applied to the investigation of Orthopedic (Ortho) and Neurosurgery (Neuro) surgical services. The role of the surgical technologist as the "scrub" member and the "circulator" member of the surgical team continues to focus on maintaining the integrity, safety, and efficiency of the sterile and nonsterile areas throughout various surgical procedures. Investigation of instrumentation, sutures, needles, dressings, packings, and drainage tubes/systems will continue with a focus on selected internal and external fracture stabilization devices, cast immobilization, spinal fixation implants, and neurosurgical shunts. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based surgery units Lab Fee: $150

SURG 2864—Surgical Technology IV (7)
Clinical: 15, Lecture: 2
Prerequisite(s): SURG 1863.
This course will provide the Surgical Technology student with a continuing introduction to the following surgical services: General, Gynecology, Obstetrics, Cardiovascular, Peripheral Vascular, Thoracic, Oral, ENT, Opthamalogic Maxillofacial, Orthopedics, Plastic/Reconstructive, and Neurosurgery. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a hospital-based surgery units. The role and responsibilities of the Surgical Technologist as the "scrub" and assisting "circulator" member of the surgical team will focus on maintaining the integrity, safety, and efficiency of the sterile and non-sterile areas throughout various surgical procedures. Investigation of instrumentation, sutures, needles, dressings, packing, and drainage tube systems specific to surgical services will continue, with an additional focus on selected auto-stapling devices and the use of endoscopic instrumentation. Investigation of instrumentation, sutures, needles, dressings, packings, and drainage tubes/systems will continue with a focus on endoscopy use, chest tubes, cardiopulmonary bypass, vascular autografts and allografts, intra-aortic balloon pumps, and vascular shunts. Additional investigation into special patient populations to include geriatric and the terminal ill and transplant patient care needs will be presented. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based and ambulatory surgery units. Lab Fee: $150

SURG 2865—Surgical Technology V (4)
Lecture: 1, Clinical: 9
Prerequisite(s): SURG 2864.
This course will provide the Surgical Technology student with an in-depth analysis, recognition, and medical/surgical treatment for a variety of advanced surgical specialty areas. These areas include Orthopedic Total Joint Replacement, Laser Therapy, Endoscopy, Ophthalmic, Oncology, Obstetrics, Pediatrics, Cardiovascular, Ambulatory Surgery, and Organ Procurement. Additional surgical specialty areas of interest will be investigated and offered to students, alumni, and surgical health care professionals as they become available. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based and ambulatory surgery units. Lab Fee: $150

Surveying

SURV 1410—Introduction to Surveying (3)
Lecture: 1, Lab: 6
Prerequisite(s): MATH 1075.
This course offers a comprehensive study in performing measurements for the collection of data and for construction layout. The course elements include application of the English and metric (SI) measurement systems in performing angular and distance measurement. Elements of differential leveling are used for establishing the elevations of new bench marks, topographic mapping by grid method, and cut/fill calculations to finish floor elevations of proposed structures. Data manipulation includes taping corrections, precision and accuracy determination, traverse closures, traverse adjustments, local and state plane coordinate systems, level circuit reductions, radial building staking notes and boundary line determination by inverse coordinates. This course also explores emerging surveying technologies in construction sciences. Lab Fee: $18

SURV 1410A—Introduction to Surveying I (1)
Lab: 3
Prerequisite(s): MATH 1075.
This course offers a comprehensive study in performing measurements for the collection of data and for construction layout. The course elements include application of the English and metric (SI) measurement systems in performing angular and distance measurement. Elements of differential leveling are used for establishing the elevations of new bench marks, topographic mapping by grid method, and cut/fill calculations to finish floor elevations of proposed structures. Data manipulation includes taping corrections, precision and accuracy determination, traverse closures, traverse adjustments, local and state plane coordinate systems, level circuit reductions, radial building staking notes and boundary line determination by inverse coordinates. This course also explores emerging surveying technologies in construction sciences. Lab Fee: $18

SURV 1410B—Introduction to Surveying II (2)
Lab: 3, Lecture: 1
Prerequisite(s): SURV 1410A.
This course offers a comprehensive study in performing measurements for the collection of data and for construction layout. The course elements include application of the English and metric (SI) measurement systems in performing angular and distance measurement. Elements of differential leveling are used for establishing the elevations of new bench marks, topographic mapping by grid method, and cut/fill calculations to finish floor elevations of proposed structures. Data manipulation includes taping corrections, precision and accuracy determination, traverse closures, traverse adjustments, local and state plane coordinate systems, level circuit reductions, radial building staking notes and boundary line determination by inverse coordinates. This course also explores emerging surveying technologies in construction sciences. Lab Fee: $0

SURV 1420—Historical Surveying (2)
Lecture: 1, Lab: 3
Prerequisite(s): MATH 1075; MATH 1075 or higher.
This is a historical review of the surveying profession from classical time to the mid-20th Century. Emphasis is placed on the three major United States governmental surveying and mapping agencies or bureaus from the late 18th Century to mid 20th Century (Dawn of the Digital Age). Field exercises with period original and reproduction surveying equipment supports the subject material. It also includes a review of current surveying and mapping technologies. Integrated topics include drafting, surveying, cartography and geographic information systems. Lab Fee: $23

SURV 1460—Computer Apps in Construction Science (2)
Lecture: 1, Lab: 3
Prerequisite(s): MATH 1148 and SURV 1410.
This course involves the integrated use of word processing, spreadsheet, database management, graphic and computer assisted drafting software to solve problems associated with the surveying industry and to produce formal engineering reports using the most current version of MS Office, Autodesk and Adobe Photoshop software products. Lab Fee: $20

SURV 2410—Engineering Surveying (4)
Lecture: 2, Lab: 6
Prerequisite(s): SURV 1410.
This class is a comprehensive study of the elements of route alignment including horizontal circular and spiral curves, combinations of circular and spiral curves, vertical curves, centerline and offset staking for rough and finished grade. The course includes the application of all elements of route design, construction staking and earthwork volume determination in a comprehensive integrated project format. Manual calculations are reinforced with the use of computer software such as Autodesk Civil 3-D. To improve student success, it is recommended that students complete MATH 1148 prior to or concurrently with this course. Lab Fee: $23

SURV 2410A—Engineering Surveying I (2)
Lecture: 1, Lab: 3
Prerequisite(s): MATH 1148 and SURV 1410 or; SURV 1410B; MATH 1148 or higher, SURV 1410 or SURV 1410B.
This class is a comprehensive study of the elements of route alignment including horizontal circular and spiral curves, combinations of circular and spiral curves, vertical curves, centerline and offset staking for rough and finished grade. The course includes the application of all elements of route design, construction staking and earthwork volume determination in a comprehensive integrated project format. Manual calculations are reinforced with the use of computer software such as Autodesk Civil 3-D. Lab Fee: $23

SURV 2410B—Engineering Surveying II (2)
Lecture: 1, Lab: 3
Prerequisite(s): SURV 2410A; SURV 2410A.
This class is a comprehensive study of the elements of route alignment including horizontal circular and spiral curves, combinations of circular and spiral curves, vertical curves, centerline and offset staking for rough and finished grade. The course includes the application of all elements of route design, construction staking and earthwork volume determination in a comprehensive integrated project format. Manual calculations are reinforced with the use of computer software such as Autodesk Civil 3-D. Lab Fee: $0

SURV 2450—Legal Principles in Surveying (3)
Lecture: 2, Lab: 3
Prerequisite(s): SURV 1410 and SURV 1420.
This course presents a study of statute and common law, as pertains to land surveying and real property rights and the methods to describe real property. Current practices, current court decisions and applicable laws and Ohio Surveying Laws are examined and applied to real world scenarios. Lab Fee: $23

SURV 2480—Geodetic Surveying (4)
Lecture: 2, Lab: 6
Prerequisite(s): MATH 1148 and SURV 1410.
This covers planning and execution of control surveying, cadastral surveying, network adjustment and topographic surveying using total stations and data collections, satellite positioning (Global Navigation Satellite System) and advanced imagery system. Elements also include remote sensing such LIDAR and laser scanning. Lab Fee: $23

SURV 2480A—Geodetic Surveying I (2)
Lecture: 1, Lab: 3
Prerequisite(s): MATH 1148 and SURV 1410 or; SURV 1410B; MATH 1148 or higher, SURV 1410 or SURV 1410B.
This covers planning and execution of control surveying, cadastral surveying, network adjustment and topographic surveying using total stations and data collections, satellite positioning (Global Navigation Satellite System) and advanced imagery system. Elements also include remote sensing such LIDAR and laser scanning. Lab Fee: $23

SURV 2480B—Geodetic Surveying II (2)
Lecture: 1, Lab: 3
Prerequisite(s): SURV 2480A; SURV-2480A.
This covers planning and execution of control surveying, cadastral surveying, network adjustment and topographic surveying using total stations and data collections, satellite positioning (Global Navigation Satellite System) and advanced imagery system. Elements also include remote sensing such LIDAR and laser scanning. Lab Fee: $0

SURV 2490—Land Development Systems (3)
Lecture: 2, Lab: 3
Prerequisite(s): SURV 1410.
This course covers advanced surveying, including section and subdivision lines and residential property lines. Major topics include reestablishment of property boundaries and legal considerations for boundary descriptions, including local municipal record. This course also involves the development of preliminary plats, detailed plans and a final plat in accordance with State of Ohio minimum standards and local conveyance standards. Lab Fee: $23

SURV 2495—UAS Remote Imagery/3D Scan (3)
Lecture: 1.5, Lab: 4.5
Prerequisite(s): SURV 1410 or; SURV 1410A.
This course will prepare the student to take the FAA Part 107 (Commercial UAS Pilot License) Exam. Along with how to properly plan and execute an UAS flight for topographic data collecting. Comparing data using ground control versus no ground control. Using Trimble Business Center (TBC) and UAS Mastery for planning, downloading and processing data collected. The course will cover using the Trimble SX10 Robotic/3D Scanner Total Station, downloading and processing 3D scanning for topographic data. This course experience provides student the opportunity to demonstrate, present, and simulate methods and techniques used to obtain and manage UAS and surveying projects. The methods and techniques studied include project data collection, schedule development, organizational forms, schedule adjustment, drawing coordination, along with correspondence and tracking techniques. Student teams are selected jointly by the students and approved by the instructor to prepare for and simulate the process of obtaining project data, management and some field operational concerns by the teams. Lab Fee: $70

SURV 2499—Surveying Capstone I (2)
Lecture: 1, Lab: 3
Prerequisite(s): SURV 2490; SURV-2490.
This course is part one of a two part Capstone course. This Capstone experience provides student the opportunity to demonstrate, present, and simulate methods and techniques used to obtain and manage a surveying project. The methods and techniques studied include project data collection, schedule development, organizational forms, schedule adjustment, drawing coordination, along with coorespondence and tracking techniques. Student teams are selected jointly by the students and approved by the instructor to prepare for and simulate the process of obtaining project data, management and some field operational concerns by the teams. The students will be evaluated by reviewing the completeness of the project data collected which will be used in SURV 2599 Capstone II course. Lab Fee: $35

SURV 2599—Surveying Capstone II (1)
Lecture: 1
Prerequisite(s): SURV 2499.
This course is the second part of the Capstone course. The data collected in SURV 2499 Surveying Capstone I will be organized by the teams and presented as if making a presentation to a potential customer as a final exercise for the course. This Capstone experience provides students the opportunity to demonstrate, present, and simulate methods and techniques used to obtain and manage a survey project. The methods and techniques studied throughout the entire program and surveying courses to comprise a final product to be presented to the potential customer. Including project data collection, schedule development, organizational forms, schedule adjustment, drawing coordination, along with coorespondence and tracking techniques. Some computer simulations will be used to demonstrate project management activities and processes. Lab Fee: $0

SURV 2994—Special Topics in Surveying (1-3)
Lecture: 1 - 3
Special topics in surveying technology industry designed to meet specific needs. Lab Fee: $0

Theatre

THEA 1100—Introduction to Theatre (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
Designed to help students bring critical thinking skills into their experience as theatre goers. Lab Fee: $2

THEA 1115—Oral Interpretation (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
Students explore literature through oral performance, critical listening and analytical writing. Emphasis is placed on the effective use of both voice and body language in public performance. Individual presentations, including at least three major performances, are required. Video taping of selected projects will occur. Lab Fee: $3

THEA 1180—Theatre Practicum (3)
Lecture: 1, Lab: 6
Prerequisite(s): THEA 1100.
Supervised practical experience in acting in a theatre production. Repeatable for up to 9 total credits. Lab Fee: $2

THEA 2205—Technical Production Practicum (2)
Lab: 4
Prerequisite(s): THEA 1100.
Supervised practical experience in technical area(s) of a theatre production. Repeatable for up to 6 total credits. Lab Fee: $2

THEA 2210—Technical Production: Stage Lighting (2)
Lecture: 1, Lab: 3
Prerequisite(s): THEA 1100.
Introduction to the basic principles and functions of stage lighting. Lab Fee: $2

THEA 2215—Fund Script Analysis (3)
Lecture: 3
Prerequisite(s): THEA 2280.
Intensive study of the play script as a basis for production. Techniques for assessing a script from the diverse perspectives of a designers, directors, and performers. Lab Fee: $3

THEA 2230—Intro Dramatic Literature (3)
Lecture: 3
Prerequisite(s): ENGL 1100.
Students will study selected masterpieces of Western drama and discuss their social, political and cultural influences. Lab Fee: $2

THEA 2231—Literature for Theatre I (3)
Lecture: 3
Prerequisite(s): THEA 1100.
A survey of representative world drama and theatre from the classical Greek period through the 18th Century with a focus on plays as potential theatre. Lab Fee: $2

THEA 2232—Literature for the Theatre II (3)
Lecture: 3
Prerequisite(s): THEA 1100.
A survey of representative world drama and theatre from the 19th Century to the present with a focus on plays as potential theatre. Lab Fee: $2

THEA 2280—Fundamentals of Acting (3)
Lecture: 1, Lab: 4
Basic principles of stage acting. Areas of emphasis include stage movement, vocal delivery, body language, concentration techniques, and basic script analysis and scoring. Lab Fee: $2

THEA 2281—Adv Acting: Styles of Performance (3)
Lecture: 1, Lab: 4
Prerequisite(s): THEA 2280.
Second-level acting course. Focused on stylistic demands of acting in various genres and historical styles, including Shakespeare. Lab Fee: $2

THEA 2283—Writing Plays (3)
Lecture: 2, Lab: 2
Prerequisite(s): ENGL 1100.
Introduction to the art and craft of writing plays. Emphasis on student's own work. Lab Fee: $2

THEA 2293—IS: Theatre (1-3)
Lecture: 1
Prerequisite(s): THEA 1100.
Individual topics and projects in theatre designed to meet specific needs. Lab Fee: $2

Veterinary Technology

VET 1103—Intro to Small Animal Medicine (1)
Lab: 2
This course will familiarize the student with common business procedures used in veterinary practices, including fundamental record-keeping and medicolegal requirements. The role of the veterinary technician as a member of the veterinary health care team and client educator is addressed. Handling, restraint, patient assessment and medicating techniques for canine and feline species will be covered. An overview of USDA regulations and ethical use of animals will be explored. The student will learn basic animal training methods and how to assist clients with the resolution of common animal behavior problems. Lab Fee: $107

VET 1105—Veterinary Parasitology (2)
Lecture: 1, Lab: 2
Prerequisite(s): VET 1103.
An introduction to the common internal and external parasites of domestic animals, including scientific nomenclature, life cycles, common methods of identification, and the treatment and/or prevention of these parasites. Lab Fee: $94.3

VET 1324—Principles of Veterinary Radiology (1)
Lecture: 1
Prerequisite(s): BIO 1121 and BIO 1122.
In this course, students learn the basic principles of x-ray production, radiographic positioning, x-ray machine operation, radiographic technique, and film processing. Radiation safety and proper use of protective equipment is emphasized. Special radiographic procedures and technique evaluation are thoroughly explored. Lab Fee: $19

VET 1331—Veterinary Anatomy & Physiology (2)
Lecture: 2
Prerequisite(s): BIO 1121 and BIO 1122.
This course will provide a clinically relevant systems approach to the comparative anatomy and physiology of the canine, bovine, equine and feline species, including the circulatory, respiratory, digestive, muscular, skeletal, nervous, endocrine, exocrine, and urogenital systems. A brief presentation of avian anatomy and physiology is included. Lab Fee: $16

VET 1335—Clinical Pathology I (3)
Lecture: 1, Lab: 4
Prerequisite(s): BIO 1121 and BIO 1122.
This course is designed to acquaint students with the equipment and techniques required to utilize body fluid and tissue samples as a diagnostic tool. Students will perform complete blood counts, chemistry profiles and cytologic evaluation on a variety of domestic animal species. Recognition of normal and abnormal clinical parameters will be stressed. Lab Fee: $224.8

VET 1338—Veterinary Surgical Techniques (2)
Lecture: 2
Prerequisite(s): VET 1103 and BIO 1121 and BIO 1122.
In this course, students learn the fundamentals of routine veterinary surgical procedures, including patient preparation, identification of instruments, preparation of surgical packs, methods of sterilization, suture materials, and suture patterns. Pre-anesthetic laboratory testing, postoperative patient care, and client follow-up instructions are discussed. Lab Fee: $12

VET 1426—Principles of Veterinary Anesthesia (2)
Lecture: 1, Lab: 2
Prerequisite(s): BIO 1121 and BIO 1122.
An introduction to veterinary anesthesia that correlates principles of animal physiology as it pertains to anesthetic agents. Students will learn patient preanesthetic evaluation, properties and uses of preanesthetic and general anesthetic agents, pain recognition and management, principles of fluid therapy, and dosage calculations. Patient monitoring, safe anesthetic equipment utilization, and handling anesthetic emergencies will also be emphasized. Lab Fee: $80.2

VET 1501—Animal Nutrition (1)
Lecture: 1
Prerequisite(s): BIO 1121 and BIO 1122.
This course focuses on fundamental animal nutrition for domestic species, including caloric and nutrient requirements, and feeding techniques. The student will learn to educate clients on the nutritional needs of various animal species and explain the necessity and purpose of veterinary prescription diets in the management of diseases. Lab Fee: $15

VET 1502—Laboratory and Exotic Animal Medicine (1)
Lecture: 0.5, Lab: 1
This course is an introduction to laboratory animal medicine and management, including basic husbandry, common diseases, and treatment protocols for various laboratory animal species, pocket pets, avian and exotic species. The student will learn the scientific names and primary use of common laboratory animals and will practice restraint, sexing, appropriate methods of venipuncture, administration of medications, and anesthetic techniques. Lab Fee: $165.9

VET 1533—Clinical Application I (2)
Lab: 4
Prerequisite(s): VET 1324 and VET 1331 and VET 1338 and VET 1426.
This course involves laboratory exercises for VET 1338, VET 1324 and VET 1426. In VET 1533, students learn how to perform fundamental techniques commonly used in small animal veterinary practices, including physical examination, surgical preparation, anesthesia, radiology, venipuncture, dental prophylaxis, bandaging and splint application, administration of medical treatments, and record-keeping. Lab Fee: $303.2

VET 1536—Small Animal Health & Disease (2)
Lecture: 2
Prerequisite(s): VET 1103.
Using a systems approach, the student will learn the more frequently encountered diseases of dogs and cats, including the disease name, etiology and pathogenesis, history and clinical signs, diagnosis and treatment, prevention, and zoonotic potential. Vaccination protocols commonly used in small animal veterinary practices will be covered. Lab Fee: $35

VET 2535—Clinical Pathology II (2)
Lecture: 0, Lab: 4
Prerequisite(s): VET 1335.
The urinalysis portion serves as an introduction to the physical, chemical, and microscopic evaluation of urine. Students will perform routine veterinary urinalysis procedures on a variety of animal species, and determine normal versus abnormal constituents. The microbiology portion serves as a practical introduction to the laboratory identification of microbial agents associated with diseases in various animal species. Students perform techniques necessary to isolate, identify, and evaluate the presence of clinically significant microorganisms. Lab Fee: $297.4

VET 2562—Veterinary Pharmacology (2)
Lecture: 2
Prerequisite(s): VET 1331 and VET 1426.
This course will provide an overview of veterinary pharmacology and therapeutics, including a basic understanding of pharmacokinetics, terminology, prescription writing, drug classifications, indications for drug use, and methods of administration. Pharmacy management, controlled substance use and regulations, and ethical behavior when handling pharmaceutical agents will be stressed. Lab Fee: $30

VET 2563—Clinical Application II (2)
Lab: 4
Prerequisite(s): VET 1105 and VET 1335 and VET 1501 and VET 1502 and VET 1533 and VET 1536.
This course is a continuation of Clinical Application I designed for the student to practice skills and techniques commonly used in small animal veterinary practices. Lab Fee: $293.8

VET 2566—Large Animal Health and Disease (2)
Lecture: 2
Prerequisite(s): VET 1103.
This course familiarizes the student with the most common diseases of horses, food animals, and camelid species. Husbandry, vaccination protocols, nutrition, breeding, and management for preventive health care are also covered.

VET 2599—Clinical Application III (2)
Lab: 4
Prerequisite(s): VET 1105 and VET 1335 and VET 1501 and VET 1502 and VET 1533 and VET 1536 and VET 2563.
This is a capstone course designed to demonstrate proficiency in small animal techniques performed in Clinical Application I & II, including medical record maintenance, physical examination, administration of fluids and medications, pre-anesthetic evaluation, general anesthetic administration and recovery, surgical preparation, splint application, dental prophylaxis, radiographic procedures, phlebotomy and laboratory techniques. A portion of this class will be devoted to student preparation for the Veterinary Technician National Exam. Lab Fee: $251.8

VET 2800—Veterinary Seminar I (1)
Seminar: 1
Prerequisite(s): VET 1105 and VET 1335 and VET 1501 and VET 1502 and VET 1533 and VET 1536; VET 2900.
This course focuses on issues related to the students? clinical experiences, including pet loss, client grief, euthanasia, problem solving models and change strategies. Companion animals as family members and the importance of the human-companion animal bond are explored.

VET 2821—Veterinary Seminar A (0.5)
Seminar: 0.5
Prerequisite(s): VET 1105 and VET 1335 and VET 1501 and VET 1502 and VET 1533 and VET 1536; VET 2921.
This course focuses on issues related to the students' clinical experiences, including pet loss, client grief, euthanasia, and client assistance during pet loss. Companion animals as family members and the importance of the human-companion animal bond are explored. Special topics in veterinary medicine and client communication are addressed.

VET 2822—Veterinary Seminar B (0.5)
Seminar: 0.5
Prerequisite(s): VET 1105 and VET 1335 and VET 1501 and VET 1502 and VET 1533 and VET 1536; VET 2922.
This course explores the legal and ethical issues related to euthanasia of animals, including the pharmaceutical action and regulations for use of euthanasia drugs. Species differences that determine euthanasia methods and other special considerations related to euthanasia of large animals are explained. Special topics in veterinary medicine and client communication are addressed.

VET 2831—Veterinary Seminar C (0.5)
Seminar: 0.5
Prerequisite(s): VET 1105 and VET 1335 and VET 1501 and VET 1502 and VET 1533 and VET 1536; VET 2931.
This course addresses preparation for future employment as veterinary technician through discussion of employment strategies, job interviewing technique and resume preparation. Identifying stress factors that may occur in the workplace and methods for coping with job burnout are explored.

VET 2832—Veterinary Seminar D (0.5)
Seminar: 0.5
Prerequisite(s): VET 1105 and VET 1335 and VET 1501 and VET 1502 and VET 1533 and VET 1536; VET 2932.
This course explores the role of the veterinary technician in the field of veterinary medicine and the community. Laws, regulations and ethics that govern the practice of veterinary medicine and veterinary technology credentialing in Ohio are addressed. Course content from across the curriculum will be reviewed in preparation for the Veterinary Technician National Examination.

VET 2850—VET Seminar II (1)
Seminar: 1
Prerequisite(s): VET 2800; VET 2950.
A continuation of VET 2800, that addresses issues emanating from the students' clinical experiences. Students are prepared for employment as veterinary technicians through simulated job interviews, resume preparation, and discussion of employment strategies. The role of the veterinary technician in the community is explored. Applications for registration with the Ohio Veterinary Medical Licensing Board are distributed and the Ohio Veterinary Practice Act pertaining to veterinary technicians is discussed.

VET 2900—Veterinary Practicum I (2)
Practicum: 14
Prerequisite(s): VET 1105 and VET 1335 and VET 1501 and VET 1502 and VET 1533 and VET 1536.
Observation and practical application of techniques used in veterinary medicine. Students are assigned to various veterinary facilities, including The Ohio State University Veterinary Teaching Hospital, private veterinary practices, veterinary emergency hospitals, research centers, diagnostic laboratories, and zoos. Lab Fee: $178

VET 2921—Veterinary Practicum A (1)
Practicum: 7
Prerequisite(s): VET 1105 and VET 1335 and VET 1501 and VET 1502 and VET 1533 and VET 1536.
Observation and practical application of techniques used in veterinary medicine, designed for the evening Veterinary Technology program. Students are assigned to various veterinary facilities, including The Ohio State University Veterinary Teaching Hospital, private veterinary practices, veterinary emergency hospitals, research centers, and diagnostic laboratories. Lab Fee: $103

VET 2922—Veterinary Practicum B (1)
Practicum: 7
Prerequisite(s): VET 1105 and VET 1335 and VET 1501 and VET 1502 and VET 1533 and VET 1536.
This course is a continuation of VET 2921 designed for the evening program student. Lab Fee: $103

VET 2931—Veterinary Practicum C (1)
Practicum: 7
Prerequisite(s): VET 1105 and VET 1335 and VET 1501 and VET 1502 and VET 1533 and VET 1536.
This course is a continuation of VET 2922 designed for the evening program student. Lab Fee: $103

VET 2932—Veterinary Practicum D (1)
Practicum: 7
Prerequisite(s): VET 1105 and VET 1335 and VET 1501 and VET 1502 and VET 1533 and VET 1536.
This course is a continuation of VET 2931 designed for the evening program student. Lab Fee: $103

VET 2950—Veterinary Practicum II (2)
Practicum: 14
Prerequisite(s): VET 1105 and VET 1335.
This course is a continuation of VET 2900.