

CATALOG 2015-2016



COLUMBUS STATE
COMMUNITY COLLEGE

Columbus State Community College makes every effort to present accurate/current information at the time of this catalog's publication. However, the college reserves the right to make changes to information contained herein as needed. Such changes will be reflected in the online college catalog, which is deemed the official college catalog and is maintained at www.csc.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, Member-North Central Assn. (NCA), 230 S. LaSalle St., Suite 7-500, Chicago, IL 60604-1413, (312) 263-0456 or (800) 621-7440, www.nca.org.

Nondiscrimination Policy (Ref. Policy 3-42, 3-43)

http://www.csc.edu/_resources/media/about/pdf/3-42.pdf

http://www.csc.edu/_resources/media/about/pdf/3-43.pdf

Columbus State Community College is committed to **maintaining a workplace, academic environment, and athletic environment free of discrimination and harassment**. Therefore, the college shall not tolerate discriminatory or harassing behavior by or against employees, faculty members, vendors, customers, students or other persons participating in a college program or activity on the basis of sex, race, color, religion, national origin, ancestry, age, disability, genetic information (GINA), military status, sexual orientation, and gender identity and expression. Further, the college shall take affirmative action to ensure that Columbus State policies and practices

are non-discriminatory and to advance employment and educational opportunities for veterans, individuals with disabilities, women, and minorities.

Reasonable Accommodations (Ref. Policy 3-41)

http://www.csc.edu/_resources/media/about/pdf/3-41.pdf

It is Columbus State Community College policy to make reasonable accommodations, which will provide otherwise qualified applicants, employees, and students with disabilities equal access to participate in opportunities, programs, and services offered by the college.

Students in need of an accommodation due to a physical, mental or learning disability can contact **Disability Services**, Eibling Hall 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 July 1, 2015

Columbus State Community College strives to enhance the general health and wellbeing of its students, faculty, staff and visitors. We desire to support individuals to be tobacco free, achieve their highest state of health and to launch students into their careers at a high level of health and wellbeing. To support this commitment, we intend to provide a tobacco free environment.

As of **July 1, 2015**, smoking and the use of tobacco are prohibited in or on all college-owned, operated or leased property including vehicles. The policy includes indoor and outdoor use of all tobacco products, smoke or smokeless, including e-cigarettes. For cessation resources, please visit csc.edu/tobaccofree.



Message from the President

Dear Students,

Employers are looking for highly skilled, knowledgeable, professional workers to meet the constantly changing demands of the 21st century. Education that prepares you for sustained employment in the coming decades starts here and starts now. You've chosen Columbus State as your pathway into a successful future and your confidence is well-placed. More than 50,000 graduates have entered the workforce or gone on to further studies after experiencing academic success at Columbus State.

While student success is one of the college's overall strategic goals, it is the achievement of individual students, like you, that drives Columbus State's faculty and staff each day. They are primed to be your number one resource here, helping you discover a new career path, solve a scheduling misunderstanding, or master an elusive math concept. Get to know them and put them to work for you.

Countless other resources and student support services are available at Columbus State; most are free for the asking. Accessing assistance can be as simple as a call to the Telephone Information Center, (614)287-5353, a quick stop at the IT Support Center in the Library, or an email to an academic or program advisor. Experienced student services personnel are available in college offices to answer questions and resolve any problems you may encounter. I urge you to take advantage of Columbus State's many college resources in order to maximize your time and efforts here.

Another useful student success tool is this Catalog. It is packed with information that you'll need to complete your degree or certificate studies successfully. The 2015-2016 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 associate 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; access it at www/csc.edu/catalog/.

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!

Yours very truly,

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

Columbus State Directory

Department/Office/Service	Location	Phone
Academic Opportunities for Study Abroad	WD 1079	287-2852
Admissions	MA 101	287-2669
Advising Services	AQ 116	287-2668
Athletics and College Recreation	DE 134	287-5092
Campus Tours	MA 101	287-2669
Career Services	NH 108	287-2782
Cashiers and Student Accounting	RH 2 nd Floor	287-2414
Center for Workforce Development	WD 317	287-5000
Columbus State Bookstore (DX)	DX Bldg.	287-2427
Columbus State Police Department	DE 047	287-2525
Columbus State Foundation	LO	287-2436
Community and Civic Engagement	WD 342	287-2511
Conference Center	WD	287-5500
Counseling Services	NH 010	287-2818
Delaware Campus (Moeller Hall)	Stud. Serv.	740-203-8345
Developmental Education	AQ 215	287-5193
Disability Services	EB 101	287-2570
Dual Enrollment	WD 1009	287-5169
Dublin Center	DB	287-7050
Financial Aid	RH Ground Fl.	287-2648
Fitness Center	DE 082	287-5918
Food Court and Services	DE 1 st Fl.	287-2483
Gahanna Center	GH/CH	287-2000
GED Preparation Program	WD 1090	287-5858
Global Diversity and Inclusion	FR 223	287-5648
Health Records Office	UN 053	287-2450
Human Resources	RH 115	287-2408
IT Support Services	CO-LL	287-5050
Language Institute	WD 1090	287-5858
Library	CO	287-2465
Marysville Center	ML	937-644-1616
Noncredit Registration Office	WD 1090	287-5858
Parking	DE 047	287-2525
Pickaway Center (Teays Valley H.S.)	PC	740-983-5086
Records and Registration	MA 201	287-5353
Regional Learning Centers	WD 1096	287-2696
Reynoldsburg Center	RC	287-7200
Southwest Center (Bolton Field)	SW	287-7102
South-Western Center (Grove City)	GC	801-3385
Student Assistance Center	MA 225	287-5538
Student Engagement and Leadership	NH 116	287-2637
Student IDs	DE 047	287-2525
Student Life	EB 201	287-5299
Telephone Information Center	TIC	287-5353
Testing and Talent Assessment Center	WD 223	287-5750
Testing Center (Delaware Campus)	MO	740-203-8383
Testing Services (Columbus Campus)	AQ 002	287-2478
Tolles Center	TC	287-2696
Transfer Center	AQ 126	287-2847
Transitional Workforce	WD 1090	287-5858
TRiO Programs	FH 223	287-5777
Tutoring Services	AQ 241	287-2232
Military and Veteran Services	DE 156	287-2644
Westerville Center	WV	287-7000

Arts and Science Programs

Biological and Physical Sciences	NH 432	287-2522, 2122
Communication	UN 048	287-3680
Developmental Education	AQ 215	287-5193
English	NH 420	287-2531

Building Codes

AQ	..... Aquinas Hall
AV	..... Aviation Facility (Bolton Field)
CH	..... Clark Hall (Gahanna Ctr.)
CO	..... Columbus Hall
CT	..... Center for Teaching & Learning
	..... Innovation
DA	..... Delaware Admin. Bldg.
DB	..... Dublin Center
DE	..... Delaware Hall
DH	..... Davidson Hall
DX	..... Bookstore/Discv. Exchg. Bldg.
EB	..... Eibling Hall
ET	..... Electrical Trades Center
FR	..... Franklin Hall
GA	..... 375 N. Grant Ave.
GC	..... South-Western Center
GH	..... Gahanna Center
GR	..... 389 N. Grant Ave

Humanities	..... NH 408	287-5043
Mathematics	..... DH 415	287-5313
Modern Languages	..... FR 206A	287-5400
Psychology	..... TL 309	287-2040
Social Sciences	..... TL 309	287-5005

Career and Technical Programs

Business & Engineering Technologies Division

Accounting	..... DE 259	287-5420
Architecture	..... DH 205	287-5030
Automotive Technology	..... DE 259	287-5318
Aviation Maintenance Technology	..... SW	287-7100
Business Management	..... DE 259	287-5351
Business Office Administration	..... DE 259	287-5009/5351
Civil Engineering Technology	..... DH 205	287-5030
Computer Science	..... EB 312	287-5376/5009
Construction Management	..... DH 205	287-5030
Digital Design and Graphics	..... EB 401	287-3697
Digital Photography	..... EB 401	287-5045
Electro-Mech. Engineering Technology	..... DH 205	287-5350
Electronic Engineering Technology	..... DH 205	287-5350
Engineering Technologies Certificates	..... DH 205	287-5350
Environmental Sci., Safety and Health	..... DH 205	287-5030
Finance	..... DE 259	287-5420
Geographic Information Systems	..... DH 205	287-5030
Heating, Ventilating and A/C Technology	..... DE 243	287-2657
Human Resources Management	..... DE 240	287-5351
Interactive Media	..... EB 401	287-5010
Landscape Design and Management	..... DH 205	287-5030
Marketing	..... EB 401	287-2559
Mechanical Engineering Technology	..... DH 205	287-5350
Quality Assurance Technology	..... DH 205	287-5350
Real Estate (includes Appraisal)	..... WD 1099	287-5397
Skilled Trades Technology	..... DE 259	287-5211
Supply Chain Management (Logistics)	..... EB 401	287-5175

Health & Human Services Division

Criminal Justice	..... FR 206B	287-2591
Dental Hygiene	..... UN 308	287-2597
Early Childhood Dev. and Education	..... UN 4th floor	287-2540
Emergency Medical Services Technology	..... GA 001	287-3812
EMS/Fire Science	..... GA 001	287-3812
Fire Science	..... GA 001	287-3812
Health Information Mgmt. Technology	..... UN 308	287-2541
Hospitality Management	..... EB 136	287-5126
Interpreter Education Program	..... UN 4th floor	287-2540
Massage Therapy/Entrepreneurship	..... UN 576	287-5786
Medical Assisting	..... UN 308	287-3638
Medical Laboratory Technology	..... UN 308	287-5099
Mental Hlth./Addiction Std./Dev. Disabilities	..... UN 5th floor	287-2540
Multi-Competency Health	..... UN 308	287-5099
Nursing	..... UN 508	287-2506
Paralegal Studies	..... FR 206B	287-2591
Radiography/Medical Imaging	..... GR 109	287-5215
Respiratory Care	..... UN 308	287-2633
Sport and Exercise Studies	..... DE 007	287-2189
Sterile Processing Technology	..... GR 109	287-5215
Surgical Technology	..... GR 109	287-5215
Veterinary Technology	..... VT 104	287-5135

LO	..... Long St. Bldg.
MA	..... Madison Hall
ML	..... Marysville Center
MO	..... Moeller Hall (Delaware Academic Bldg.)
NH	..... Nestor Hall
PC	..... Pickaway Center (Teays Valley H.S.)
PG	..... Parking Garage
RC	..... Reynoldsburg Center
RH	..... Rhodes Hall
SW	..... Southwest Center (Bolton Field)
SX	..... 366/370 6th St.
TC	..... Tolles Center
TL	..... Center for Technology and Learning
UN	..... Union Hall
VT	..... 384 N. 6th St.
WD	..... Center for Workforce Development
WV	..... Westerville Center

Academic Calendar - Autumn Semester 2015

August 31, 2015 – December 19, 2015

April 20, 2015 (M)	Autumn Semester 2015 On-Time Registration begins
July 2, 2015 (TH)	Readmission Deadline for Academic Dismissal and Academic Review-AU15
August 3, 2015 (M)	Ohio Residency Reclassification Processing Deadline for Autumn Semester 2015
August 10, 2015 (M)	On-Time Admissions Application Deadline for Autumn Semester 2015
August 26, 2015 (W)	Autumn Semester On-Time Registration ends
August 27, 2015 (TH)	Autumn Semester Late Registration begins – late fee will be assessed
August 24, 2015 (M)	Final Admissions Application Deadline for Full Term, First 8-week Term and First 5-week Term for Autumn Semester 2015
August 31, 2015 (M)	*Full Term, First 8-week Term and First 5-week Term classes begin
September 7, 2015 (M)	Labor Day - Campuses closed
September 10, 2015 (TH)	Full Term, First 8-week Term and First 5-week Term Last Day to Register – Late Registration ends
September 15 - 28, 2015	Late Admissions Application Period for Second 8-week Term, Second 5-week Term and Third 5-week Term for Autumn Semester 2015
September 20, 2015 (SU)	Last day to drop from First 5-week Term classes
September 22, 2015 (T)	In-Service Day – Offices closed, no day classes
September 25, 2015 (F)	AU15 Petition to Graduate Deadline due in Records & Registration by 4:30 pm
October 3, 2015 (S)	Last day to drop from First 8-week Term classes
October 4, 2015 (SU)	First 5-week Term classes end – grades due 10/06/15 before 11:00 pm
October 5, 2015 (M)	*Second 5-week Term classes begin
October 7, 2015 (W)	Second 5-week Term Last Day to Register – Late Registration ends
October 9, 2015 (F)	Columbus Day Observed – Campuses closed
October 11, 2015 (SU)	Last day to remove Incompletes (I) incurred Summer Semester 2015
October 24, 2015 (S)	First 8-week Term classes end – grades due 10/26/15 before 11:00 pm
October 25, 2015 (SU)	*Second 8-week Term classes begin
October 25, 2015 (SU)	Last day to drop from Second 5-week Term classes
October 29, 2015 (TH)	Second 8-week Term Last Day to Register – Late Registration ends
November 5, 2015 (TH)	Last day to drop from Full Term classes
November 8, 2015 (SU)	Second 5-week Term classes end – grades due 11/10/15 before 11:00 pm
November 9, 2015 (M)	*Third 5-week Term classes begin
November 11, 2015 (W)	Veterans Day – Campus closed
November 11, 2015 (W)	Third 5-week Term Last Day to Register – Late Registration ends
November 19, 2015 (TH)	Readmission Deadline for Academic Dismissal and Academic Review-SP16
November 26-29, 2015	Thanksgiving Holiday – Campuses closed (TH, F, S, SU)
November 27, 2015 (F)	Last day to drop from Second 8-week Term classes
November 29, 2015 (SU)	Last day to drop from Third 5-week Term classes
December 13, 2015 (SU)	Third 5-week Term classes end – grades due 12/15/15 before 11:00 pm
December 18, 2015 (F)	Graduation Ceremony
December 19, 2015 (S)	Full Term and Second 8-week Term classes end - grades due 12/21/15 before 11:00 pm
December 19, 2015 (S)	Autumn Semester 2015 ends

Please refer to the college website, www.cscs.edu, for additional detailed information. Note the financial aid deadline dates.

*Instructor signature required to add a course after the term begins.

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.

Academic Calendar - Spring Semester 2016

January 18, 2016 - May 14, 2016

October 19, 2015 (M)	Spring Semester 2016 On-Time Registration begins
November 19, 2015 (TH)	Readmission Deadline for Academic Dismissal and Academic Review-SP16
December 14, 2016 (M)	Ohio Residency Reclassification Processing Deadline for Spring Semester 2016
December 25, 2015 (F)	Christmas Day - Campuses closed
December 26-31, 2015 (S-TH)	Winter Break – Campuses closed
December 28, 2015 (M)	On-Time Admissions Application Deadline for Spring Semester 2016
January 1, 2016 (F)	New Year’s Day – Campuses closed
January 11, 2016 (M)	Final Admissions Application Deadline for Full Term, First 8-week Term and First 5-week Term for Spring Semester 2016
January 13, 2016 (W)	Spring Semester On-Time Registration ends
January 14, 2016 (TH)	Spring Semester Late Registration begins – late fee will be assessed
January 18, 2016 (M)	Dr. Martin Luther King, Jr. Day – Campuses closed
January 18, 2016 (M)	*Full Term, First 8-week Term and First 5-week Term begins
January 19, 2016 (T)	**First day of classes for Full Term, First 8-week Term and First 5-week Term
January 28, 2016 (TH)	Full Term, First 8-week Term and First 5-week Term Last Day to Register – Late Registration ends
February 2 – 15, 2016	Late Admissions Application Period for Second 8-week Term, Second 5-week Term and Third 5-week Term for Spring Semester 2016
February 7, 2016 (SU)	Last day to drop from First 5-week Term classes
February 12, 2016 (F)	SP16 Petition to Graduate Deadline due in Records & Registration by 4:30 pm
February 12, 2016 (F)	Presidents’ Day Observed – Campuses closed
February 19, 2016 (F)	Last day to drop from First 8-week Term classes
February 21, 2016 (SU)	First 5-week Term classes end – grades due 02/23/16 before 11:00 pm
February 22, 2016 (M)	*Second 5-week Term classes begin
February 25, 2016 (TH)	Second 5-week Term Last Day to Register – Late Registration ends
February 28, 2016 (SU)	Last day to remove Incompletes (I) incurred Autumn Semester 2015
March 12, 2016 (S)	First 8-week Term classes end – grades due 03/14/16 before 11:00 pm
March 14-19, 2016 (M-S)	Spring Break – No classes
March 17, 2016 (TH)	Last day to drop from Second 5-week Term classes
March 20, 2016 (SU)	*Second 8-week Term classes begin
March 24, 2016 (TH)	Second 8-week Term Last Day to Register – Late Registration ends
March 27, 2016 (SU)	Easter – Campuses closed
March 28, 2016 (M)	Last day to drop from Full Term classes
March 31, 2016 (TH)	Readmission Deadline for Academic Dismissal and Academic Review-SU16
April 3, 2016 (SU)	Second 5-week Term classes end – grades due 04/05/16 before 11:00 pm
April 4, 2016 (M)	*Third 5-week Term classes begin
April 6, 2016 (W)	Third 5-week Term Last Day to Register – Late Registration ends
April 21, 2016 (TH)	In-Service Day – Offices closed, no day classes
April 22, 2016 (F)	Last day to drop from Second 8-week Term classes
April 24, 2016 (SU)	Last day to drop from Third 5-week Term classes
May 8, 2016 (SU)	Third 5-week Term classes end – grades due 05/10/16 before 11:00 pm
May 13, 2016 (F)	Graduation Ceremony
May 14, 2016 (S)	Full Term and Second 8-week Term classes end – grades due 05/16/16 before 11:00 pm
May 14, 2016 (S)	Spring Semester 2016 ends

Academic Calendar - Summer Semester 2016 May 30, 2016 -August 13, 2016

February 15, 2016 (M)	Summer Semester 2016 On-Time Registration begins
March 31, 2016 (TH)	Readmission Deadline for Academic Dismissal and Academic Review-SU16
April 25, 2016 (M)	Ohio Residency Reclassification Processing Deadline for Summer Semester 2016
May 9, 2016 (M)	On-Time Admissions Application Deadline for Summer Semester 2016
May 25, 2016 (W)	Summer Semester On-Time Registration ends
May 26, 2016 (TH)	Summer Semester Late Registration begins – late fee will be assessed
May 23, 2016 (M)	Final Admissions Application Deadline for Full Term and First 5-week Term for Summer Semester 2016
May 30, 2016 (M)	Memorial Day - Campuses closed
May 30, 2016 (M)	*Full Term and First 5-week Term begins
May 31, 2016 (T)	**First day of classes for Full Term and First 5-week Term
June 5, 2016 (SU)	Full Term and First 5-week Term Last Day to Register – Late Registration ends
June 6 - 27, 2016	Late Admissions Application Period for First 8-week Term and Second 5-week Term for Summer Semester 2016
June 10, 2016 (F)	SU16 Petition to Graduate Deadline due in Records & Registration by 4:30 pm
June 13, 2016 (M)	*First 8-week Term begins
June 17, 2016 (F)	First 8-week Term Last Day to Register – Late Registration ends
June 19, 2016 (SU)	Last day to drop from First 5-week Term classes
June 30, 2016 (TH)	Readmission Deadline for Academic Dismissal and Academic Review-AU16
July 3, 2016 (SU)	First 5-week Term classes end – grades due 07/05/16 before 11:00 pm
July 4, 2016 (M)	Independence Day – Campuses closed
July 4, 2016 (M)	*Second 5-week Term begins
July 5, 2016 (T)	**First day of classes for Second 5-week Term
July 6, 2016 (W)	Second 5-week Term Last Day to Register – Late Registration ends
July 10, 2016 (SU)	Last day to remove Incompletes (I) incurred Spring Semester 2016
July 14, 2016 (TH)	Last day to drop from Full Term classes
July 15, 2016 (F)	Last day to drop from First 8-week Term classes
July 24, 2016 (SU)	Last day to drop from Second 5-week Term classes
August 6, 2016 (S)	First 8-week Term classes end – grades due 08/08/16 before 11:00 pm
August 7, 2016 (SU)	Second 5-week Term classes end – grades due 08/09/16 before 11:00 pm
August 13, 2016 (S)	Full Term classes end – grades due 08/15/16 before 11:00 pm
August 13, 2016 (S)	Summer Semester 2016 ends

Please refer to the college website, www.csc.edu, for additional detailed information. Note the financial aid deadline dates.
*Instructor signature required to add a course after the term begins.

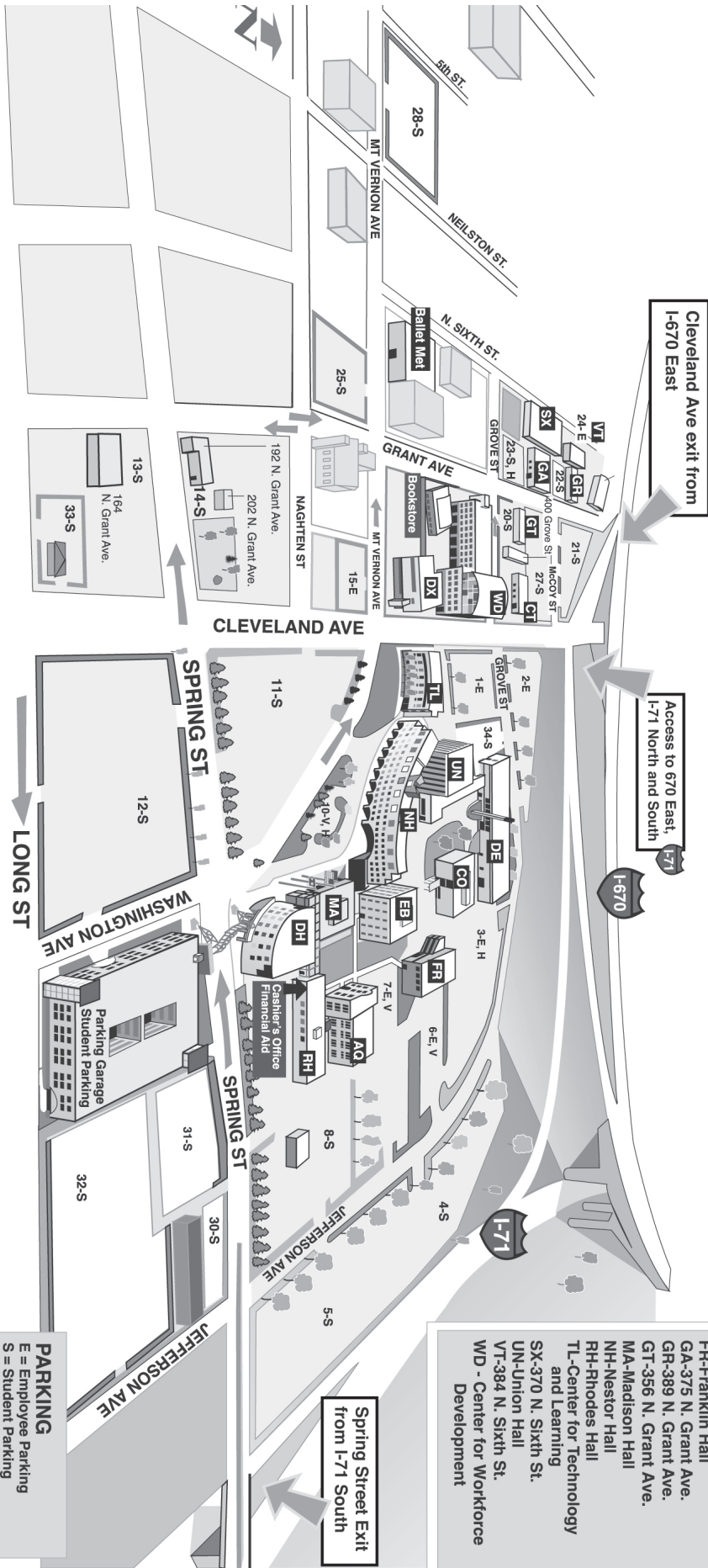
Note: Tuition refunds are based upon the percentage of time elapsed in each course. If the course is dropped before 10% of the time elapsed in the course, a 100% tuition refund will be issued. If the course is dropped before 20% of the time elapsed in the course, a 50% tuition refund will be issued.

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.

Columbus State's Columbus Campus

550 E. Spring Street
 Columbus, OH 43215
 614-287-5353
www.csc.edu



Cleveland Ave exit from I-670 East

Access to 670 East, I-71 North and South

Spring Street Exit from I-71 South

- AQ-Aquinas Hall
- CO-Columbus Hall
- CT - Center for Teaching and Learning Innovation
- DE-Delaware Hall
- DH-Davidson Hall
- DX - Discovery Exchange
- EB-Ebling Hall
- FR-Franklin Hall
- GA-375 N. Grant Ave.
- GR-389 N. Grant Ave.
- GT-356 N. Grant Ave.
- MA-Madison Hall
- NH-Nestor Hall
- RH-Rhodes Hall
- TL-Center for Technology and Learning
- SX-370 N. Sixth St.
- UN-Union Hall
- VT-384 N. Sixth St.
- WD - Center for Workforce Development

PARKING

- E = Employee Parking
 - S = Student Parking
 - H = Handicapped Parking
 - V = Visitor Parking
- The parking garage is open to both employees and students

Columbus State in Brief

Columbus State Community College has been meeting the diverse educational needs of the Central Ohio community for more than 50 years. The college is proud to be an important contributor to the growth and progress of the region and to serve as the front door to higher education in Central Ohio.

In 1963, the Columbus Board of Education created the Columbus Area Technician School, and the board designated an area of Central High School to house this new school for two-year, post-secondary technical programs. Rapid growth in enrollment during the initial two years caused the Board of Education to purchase the Columbus Aquinas Parochial High School property and move the Technician School to a permanent campus. May 25, 1965, the Ohio Board of Regents gave approval to a proposal from the Columbus Board of Education to create the Columbus Technical Institute District, and the Columbus Technical Institute was granted a charter effective July 1, 1967.

As a state-assisted college, Columbus Technical Institute provided technical programs that prepared students for immediate employment. From the first graduating class in 1965 through this year, more than 50,000 students have earned associate degrees in 50+ technical fields and academic transfer programs. The success of the college is reflected in the accomplishments of these graduates and thousands of other students who have completed courses to enhance their knowledge and skills.

On July 1, 1987, Columbus Technical Institute was re-chartered as Columbus State Community College by action of the Ohio Board of Regents. This significant change was a result of careful study of the educational needs of Columbus and central Ohio. The resulting findings supported the establishment of a comprehensive community college to provide additional educational opportunities to area residents.

As a comprehensive community college, Columbus State has a strong commitment to students seeking career and technical education leading to employment and to students who want to pursue an Arts and Sciences curriculum leading to an associate degree and then to an undergraduate degree. Our Career and Technical Division offers certificates and associate degree programs in the areas of business and marketing, computers and interactive media, construction sciences and skilled trades technologies, engineering technologies, health and human services, hospitality, and public services. Columbus State also offers Associate of Arts and Associate of Science degree programs whose coursework fulfills the freshman and sophomore year requirements for bachelor's degree programs offered by four-year colleges and universities throughout the state. Specific transfer agreements with 40+ colleges and universities are in place at Columbus State, and new direct-to-degree partnership programs are being developed all the time. The college's Center for Workforce Development offers skills' enhancement, customized training, professional development, and business consulting for area industries, employers, and individuals.

Columbus State now has two campuses serving Central Ohio educational needs. The Columbus Campus is located on 85 acres

in downtown Columbus. This campus consists of two dozen buildings housing classrooms, laboratories, student services and college offices. Also part of this campus is the recently remodeled library in Columbus Hall which provides materials and resources for students.

The 108-acre, full-service Delaware Campus is located between Columbus and Delaware along U.S. 23, and has an administration building and Moeller Hall, an 80,000 sq. ft., LEEDS Gold-Certified academic building. Currently, students are able to schedule classes in a wide variety of subjects and can pursue several degrees and certificates through the Delaware Campus. Columbus State partners with Franklin University at the Delaware Campus, offering several bachelor degree completion programs through the partnership.

Additionally, Columbus State offers classes at eight convenient regional learning centers throughout Central Ohio. At several of these, a wide range of student services are available and students can even complete an associate degree. Columbus State also operates a facility for Aviation Maintenance Technology at Bolton Field Airport.

Columbus State Community College serves Franklin, Delaware, Madison, and Union counties. A nine-member Board of Trustees is appointed by the governor. Columbus State is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools, and many of the college's degree programs are accredited by professional associations and agencies.

Columbus Campus

550 E. Spring Street
Columbus, OH 43215
(614) 287-5353
www.csc.edu

Delaware Campus

5100 Cornerstone Drive
Delaware, OH 43015
(740) 203-8345
www.csc.edu/delaware

Campus Tours

Campus tours, which are led by Columbus State students, give future students, their families, and new applicants an opportunity to explore and learn more about the campus. Tours are generally offered several times per week. To check the schedule and make a reservation, click "Admissions" and then "Tours & Visit Days" at www.csc.edu. To arrange a campus visit and/or tour for a group of five or more, please contact the Campus Visitation Coordinator, 614-287-2863, in the Admissions Office, Madison Hall (lower level).

Students interested in touring the Delaware Campus should inquire at Student Services in Moeller Hall, or call the event reservation line, 740-203-8348.

Columbus State's Delaware Campus

5100 Cornerstone Drive
Delaware, OH 43015
740-203-8345
www.csc.edu/delaware

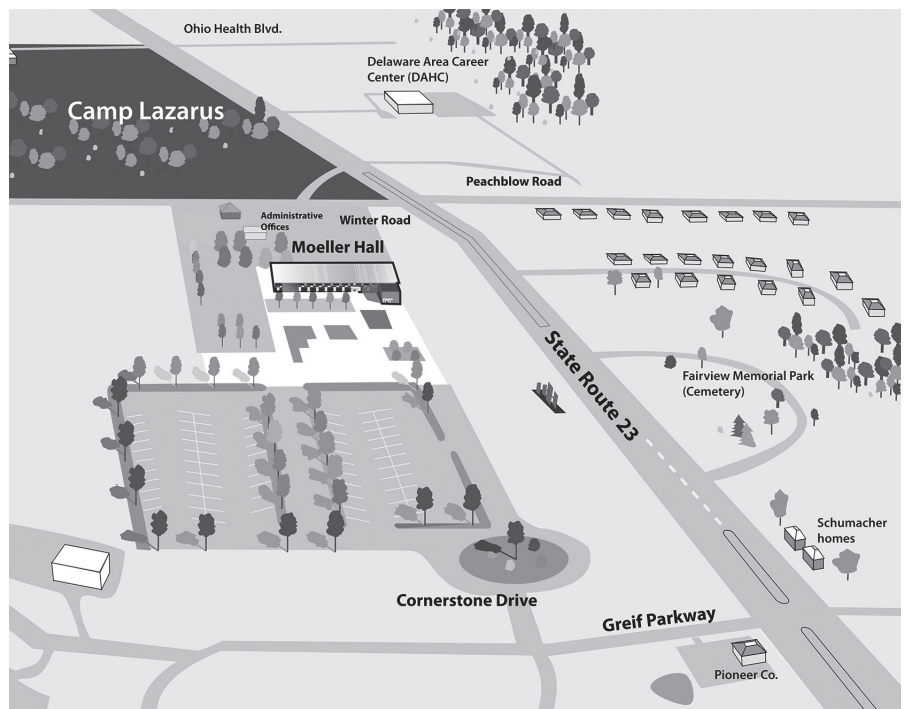
The Delaware Campus opened in July 2010, welcoming students for classes Autumn Quarter 2010. The campus stretches between Greif Parkway and Winter Road, along U.S. 23 in southern Delaware County. The entrance is through Greif Parkway onto Cornerstone Dr. (See map.) Parking abounds, but a permit is required just as it is on the Columbus Campus.

The full-time faculty at the Delaware Campus are experts in their fields and dedicated to teaching. They, along with selected adjunct instructors, lead classes in more than 30 subjects, from accounting to theater. Multiple sections of courses that meet degree or certificate requirements—such as math, English, humanities, and science—have been built into the campus' master schedule. Credits from these required classes transfer easily.

Delaware offers a unique partnership between Franklin University and Columbus State, which provides students with a convenient co-enrollment opportunity. Students at the Delaware Campus work with advisors from both institutions to formulate a schedule that will provide the opportunity to advance to a four-year degree.

Four associate degrees and three certificates are available entirely through the Delaware Campus: Associate of Arts, Associate of Science, Associate of Applied Science in Business Management, Associate of Applied Science in Computer Science, Database Specialist Certificate, Medical Assisting Technology Certificate, and Surveying Certificate. The Delaware Campus is also the gateway to approximately 200 degrees and certificates available at Columbus State, including several online degrees. Delaware Campus students also can take the basic courses that will get them started on most four-year degrees and then transfer earned credits to institutions offering baccalaureate degrees, whether in Ohio or across the country.

On the Delaware Campus, most academic activities and student services take place in Moeller Hall. The 80,000-square-foot structure was designed with student comfort and convenience in



mind, with “smart classrooms,” state-of-the art labs, abundant technology, and multiple gathering and lounging areas. Students will find Moeller Hall, and the campus as a whole, to be a one-stop service center offering assistance with:

- Admissions
- Advising
- Disability Services
- Global Diversity and Inclusion
- Financial Aid
- Orientation
- Registration
- Student Engagement and Leadership
- Study Abroad
- Testing
- Tutoring

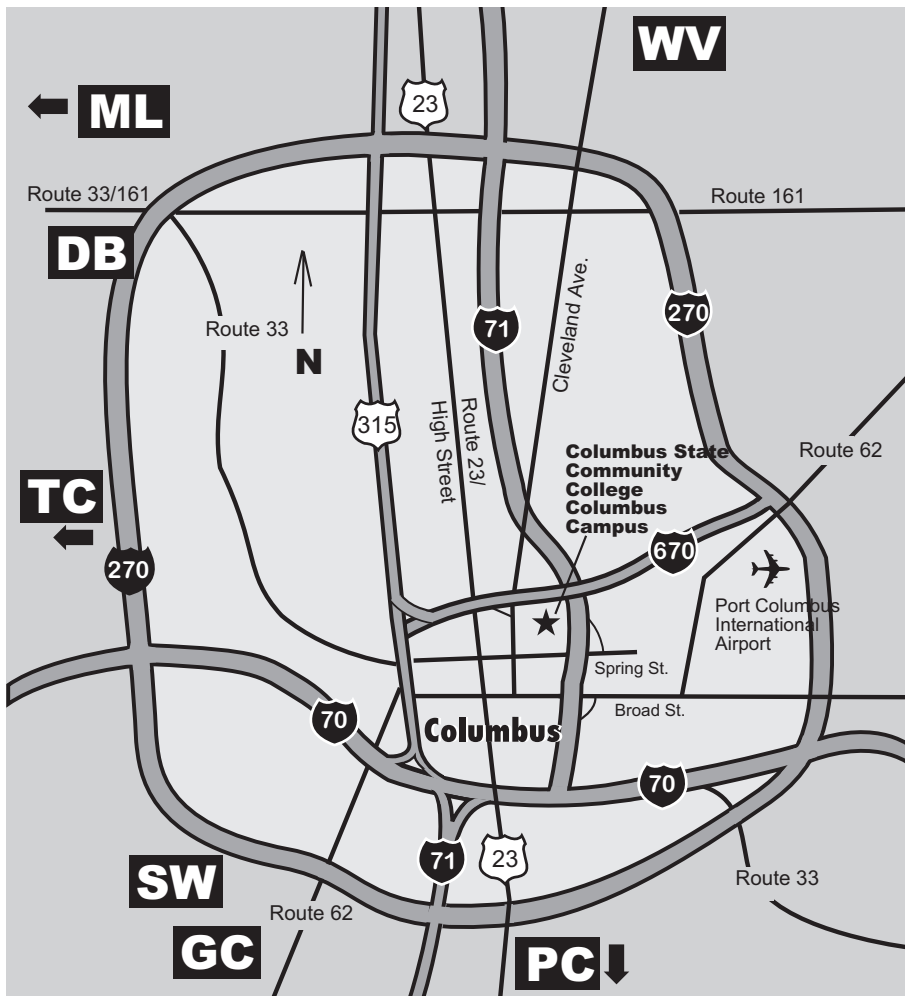
Student Services Center (740) 203-8345
Learning Center
Library (740) 203- 8183
Computer Lab (740) 203-8310
IT Support (740) 203-8300
Testing Center (740) 203-8383

View current hours of operation online at www.csc.edu/delaware. Hours of operation may change during breaks between semesters.

Columbus State Delaware Campus
5100 Cornerstone Dr.
Delaware, OH 43015
(740) 203-8345 or (614) 287-5353
www.csc.edu/delaware

Regional Learning Centers

Jeffrey A. Akers, Director
 RLC Office Location: DA 128 A
 740-203-8212



Columbus State's regional learning centers, located throughout the college's four-county service district and in Pickaway County, provide educational opportunities for thousands of students with day, evening and weekend classes. Regional learning centers offer courses in general education, and certificate programs in technical areas. Developmental courses are also offered at various regional learning centers. In addition, the Associate of Arts and the Associate of Applied Science in Business Management degrees are available at the Dublin and Westerville centers. Academic advising, COMPASS™ placement testing, distance learning testing, and other academic support services are provided at some of the centers.

Please contact the individual centers for times when specific student services are available there.

DB Dublin Center
 6190 Shamrock Court
 Dublin, Ohio 43016
 Hours: M – R, 8 a.m. - 10:30 p.m.;
 F, 8 a.m. - 9 p.m.
 Sat.: 8 a.m. - 1 p.m.
 Phone: 614-287-7050
 Fax: 614-761-1531
 (Academic advising, Bookstore,
 COMPASS testing, Testing Center,
 open Computer Lab, and tutoring
 available)

ML Marysville Center
Marysville High School
 800 Amrine Mill Road
 Marysville, Ohio 43040
 Hours: Offers evening classes only
 Phone: 614-287-7050

PC Pickaway Center
 Teays Valley High School
 3887 State Route 752
 Ashville, Ohio 43103
 Hours: Offers evening classes only
 Phone: 614-287-7200

RB Reynoldsburg Center
 6699 East Livingston Ave.
 Reynoldsburg, Ohio 43068
 Hours: M – R, 8 a.m. - 10:30 p.m.;
 F, 8 a.m. - 4 p.m.
 Phone: 614-287-7200
 Fax: 614-287-7201
 (Academic advising, COMPASS
 testing, Testing Center, open Computer
 Lab, tutoring available)

SW Southwest Center at Bolton Field
 5355 Alkire Road
 Columbus, Ohio 43228
 Hours: M – F, 3 p.m. - 10:30 p.m.
 Sat.: 8 a.m. - 1 p.m.
 Phone: 614-287-7102
 Fax: 614-287-7103
 (Bookstore and open Computer Lab
 available)

GC South-Western Center at Grove City
Southwest Career Center
 4750 Big Run South Road
 Grove City, Ohio 43123
 Hours: M – R, 5 p.m. - 10:30 p.m.
 Phone: 614-801-3485
 Fax: 614-801-3486

TC Tolles Center
Tolles Career and Technical Center
 7877 US Highway 42 South
 Plain City, Ohio 43064
 Hours: Offers evening classes only
 Phone: 614-287-7050

WV Westerville Center
 7233 Northgate Way and
 7207 Northgate Way
 Westerville, Ohio 43082
 Hours: M – R, 8 a.m. - 10:30 p.m.;
 F, 8 a.m. - 9 p.m.
 Sat: 8 a.m. - 1 p.m.
 Phone: 614-287-7000 or 287-7020
 Fax: 614-287-7002
 (Academic advising, Bookstore,
 COMPASS testing, Testing Center,
 open Computer Lab, and tutoring available)

Basic Information about Columbus State



College/Campus Hours

Both the Columbus and Delaware campuses are open from 7 a.m. to 11 p.m., Monday – Friday. There are varying class hours on weekends and some holidays. Columbus Campus buildings generally close at 6 p.m. on weekends except for special events. The Delaware Campus is open from 8 a.m. until 4 p.m. on Saturdays. Please check the website for current departmental hours of operation.

Classes may be delayed or canceled. Check the college website, student email, and local media for any changes due to weather or emergencies. Emergency Text Alerts will be sent to students and employees who have registered their phones.

Student Email

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

The IT Support Center, 614-287-5050, is on the ground floor of the Columbus Hall Library. Lab assistants also are available in the TL 116 computer lab to answer questions regarding your Student Mail account. 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

A student's fees must have been paid before he/she can obtain a student ID card. Please allow two weeks after fee payment for processing before bringing paid receipt and driver's license or state ID card to the Columbus State Police Department, Delaware Hall 047, to obtain a student ID. Hours are Monday – Friday from 10 a.m. to 6 p.m. for IDs. Students enrolled on the Delaware Campus may obtain their student ID card in the Business Services Office, 1st floor of Moeller Hall on the Delaware Campus.

Student Safety and Security

Any college campus offers an open, welcoming environment where many people congregate during the course of a day. To be safe, everyone should be aware of his/her surroundings at all times. Students with safety/security concerns can contact **Columbus State Police Department** personnel at **614-287-2525** or text crime tips

to 67283 from their cell phone. (In the text, type CSCCTIP and enter a space. Everything after the space will be sent as the tip.) Criminal acts, accidents, suspicious behaviors, or emergencies must be reported to the Columbus State Police. The Police Department is located in Delaware Hall 047. Safety personnel can provide a Security Escort if requested. Call 614-287-2525.

Emergency Phones

Emergency phones are strategically located in major parking lots (including the garage), buildings, and elevators. Parking lot phones can be located by looking for a blue light on top of the phone standard (pole). When the phone is activated, the light will flash to alert Columbus State Police Department personnel of the location, and the system also notifies the Police Dept. Communications Center of the phone's location.

Emergency phones inside buildings are affixed to the interior corridor walls. These phone serves as both a speaker and a microphone so the caller can hear the Police Dept. communications technician and reply directly to him/her.

On the Delaware Campus, blue-light phones in Moeller Hall and in the parking lot connect to the Columbus State Police Department Communications Center. Crime tips can also be sent by text to 67283 from your cell phone. (Type CSCCTIP and enter a space. Everything after the space is the tip.)

Emergency Text Messaging

Columbus State Community College has contracted with Rave Mobile Safety for emergency text messaging services adding to the college's existing systems used to notify students and employees. The Rave Emergency Text Messaging system will be used to send both Emergency Notifications and Timely Crime Warnings to quickly inform students and employees. Visit www.csc.edu/

Rave Guardian

The college has contracted for Rave Guardian service as well. Rave Guardian has two elements that enhance existing safety services for students and employees:

- 1) Timer Mode, which acts as a virtual security escort, allowing students and employees to register their phone in advance (four digit PIN) and set a timer with an estimated arrival time at their campus destination. Should the timer expire before it is de-activated, the Guardian terminal in the Police Dept. Communications Center sounds an alarm and uploads the person's profile so the technician can check.
- 2) Immediate Assistance Mode, which allows students and employees to store Guardian's Immediate Assistance number in their phone to be dialed in uncomfortable or potentially dangerous situations. When initiated, this mode causes the Rave Guardian terminal to go into alarm and calls the Communications Center so the caller can speak to a technician to have a police officer dispatched. For emergencies, call 911.

Title IX Equal Opportunity Policies

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, including but not limited to sexual harassment, sexual misconduct, and/or harassment, are addressed by the college's Director of Equity & Compliance in the Human Resources Department. 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 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 <http://www.csc.edu/services/studenthandbook/>. Student Services on the Delaware Campus also has copies.

Non-Discrimination/Anti-Harassment Policy (Ref. 3-43)

http://csc.edu/_resources/media/about/pdf/3-43.pdf

Columbus State Community College is committed to maintaining a workplace, academic environment, and athletic environment free of discrimination and harassment. The college shall not tolerate discriminatory or harassing behavior by or against employees, faculty members, vendors, customers, students or other persons participating in a college program or activity.

While the college does not tolerate any form of discrimination or harassment, the Non-Discrimination/Anti-Harassment Policy and related procedures are intended to cover discrimination and harassment based on protected class. Protected classes for purposes of this policy are sex, race, color, religion, national origin, ancestry, age, disability, genetic information (GINA), military status, sexual orientation, and gender identity and expression.

Sexual Misconduct Policy (Ref. Policy 3-44)

www.csc.edu/_resources/media/about/pdf/3-44.pdf

Columbus State Community College is committed to maintaining a workplace and academic environment where everyone is treated with dignity and respect. The college prohibits sexual misconduct in any form, which includes sexual harassment and sexual violence or other inappropriate behavior that is of a sexual nature, or based on sex, and directed towards, by or against employees, students, vendors, customers or persons participating in a college program or activity. Employees and students are expected to maintain a productive work, academic and athletic environment that is free of sexual misconduct.

Sexual Harassment is conduct of a sexual nature based on a person's sexual orientation, gender or gender identity and expression that prevents or impairs the full realization of occupational, educational or athletic opportunities or benefits. Sexual harassment occurs when this conduct explicitly or implicitly affects or interferes with a person's ability to pursue the terms and conditions of employment, academic or athletic attainment. The conduct must be unwelcome, non-consensual, severe or pervasive and objectionably offensive.

Sexual Misconduct is defined as any unwelcome behavior of a sexual nature that is committed without consent. Sexual misconduct can occur between persons of the same or different sex. Examples of sexual misconduct include, but are not limited to the following: unwanted physical contact of any kind including touching, hugging or kissing; sexual advances or requests or demands for sexual favors; conduct of a sexual nature that is demeaning, bullying or insulting; sexual battery; sexual assault; rape; prostituting another person; using electronic devices or technology to record or transmit nudity or sexual acts without a person's knowledge or permission, threatening to sexually harm someone; initiating sexual activity with a person who is incapacitated and unable to provide consent; sexually based stalking or intimate partner violence.

Administrators, supervisors, faculty members or employees who have been designated to act on behalf of the college are specifically responsible for identifying and, with authority, taking proper action to end such behavior that occurs in the workplace, on Columbus State Community College property, in a classroom or at any event or athletic venue that is hosted or sponsored by the college.

Workplace, Family or Relationship Violence (Ref. Policy 3-45)

www.csc.edu/_resources/media/about/pdf/3-45.pdf

Columbus State Community College is committed to maintaining an environment that is safe, secure and free from threats, intimidat-

ion and violence for all faculty, staff, and students. This includes providing a supportive workplace and academic environment in which to discuss workplace, family and relationship violence and seek assistance with those concerns.

Workplace Violence is defined as any act that results in threats or causes actual harm to a person or property in the workplace, including but not limited to: assault; coercive behavior; psychological intimidation or bullying; isolation; name-calling; or verbal, emotional, or physical abuse.

Family and Relationship Violence is defined as behavior that is used in a household or relationship to cause harm or gain power and control over another such as physical, sexual, or emotional abuse.

For more information about equal opportunity policies, sexual harassment/misconduct or workplace, family or relationship violence and/or to make a report, please see the college website at <http://www.csc.edu/services/title-ix/> and/or contact the Director of Equity & Compliance, SX, 143, 614-287-5519, and/or the Title IX Deputy Coordinator & Compliance Officer for Student Affairs, Eibling Hall 201, 614-287-2856.

Additionally, students may contact the Columbus State Police Department, Delaware Hall 047, 614-287-2525 (ext. 2525 from a campus phone). Columbus State Police are available 24 hours a day, 7 days a week.

Confidential, personal counseling and support for students is available free of charge in Counseling Services, Nestor Hall 010. To make an appointment with a counselor, call 614-287-2818.

Other college policies regarding Equal Opportunity/Affirmative Action, Sexual Harassment and/or Misconduct, and Workplace, Family, and Relationship Violence may be found at the following link: <http://csc.edu/about/policy/>.

Violations of College Discrimination, Harassment, Misconduct and Violence Policies

In cases where the student is the alleged perpetrator of conduct involving discrimination or harassment, sexual harassment, sexual misconduct, and/or workplace and family or relationship violence, the matter may be referred to the Student Code of Conduct office for appropriate investigation/action. Violation of college policies 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 the Dean of Student Life, Eibling Hall 201, 614-287-5299.

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 Leadership (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.

Student Right to Know

Under the terms of the Student Right to Know Act, the college must maintain and report statistics on the number of students receiving aid related to athletics, reported by race and gender; the graduation rate for athletes participating in specific sports, reported by race and gender; the graduation rate for students in general, reported by race and gender; and other relevant statistics. To obtain copies of these reports, contact the Dean of Student Life Office, Eibling Hall 201, 614-287-5299.

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 047, 614-287-2525, or access <http://www.csc.edu/services/publicsafety/>

Student Services



Admissions and Enrollment Services

Hours of Operation: Mondays, Tuesdays, and Thursdays 8a.m.-5 p.m., Wednesdays 8a.m.-6 p.m., Fridays 9:30 a.m.-4:30 p.m., last Saturday of the month 9a.m.-12 p.m.

*Last walk-in will be taken ½ hour before the Admissions Office closes. The Admissions Office is open for extended hours during certain periods of the semester. Check the website for current hours.

Location: Madison Hall, Lower Level (Columbus Campus)

Telephone: 614-287-2669

admissions@csc.edu

General Information

Future/new students are invited to begin the enrollment process in the Admissions Office, located on the lower level of Madison Hall. International Admissions/Enrollment Services is also located in this area. Admissions Representatives assist future/new students with the application and admission process and provide information on programs of study and next steps for enrollment, including required documents, applying for financial aid, placement testing, registration workshops, new student orientation, and fee payment

options. Admissions Representatives also provide information about the many services and resources available to help students succeed at Columbus State and the countless opportunities to get involved in campus activities and organizations. For more information, contact the Admissions Office, 614-287-2669, or view online resources at www.csc.edu (click on “Admissions”).

Advisors are also available in Moeller Hall on the Delaware Campus to help future/new students with admissions and other enrollment-related services. For more information, visit Student Services in Moeller Hall or call 740-203-8345.

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, underage, and transfer students, and applicants with a criminal background. Specific information about each category is maintained in the Admis-

sions Office. Applicants not meeting established procedures 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 non-credit coursework in science, reading, mathematics and/or English 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.

Applicants are required to complete one or more of the following assessments of college readiness in English/Writing and Mathematics prior to registering for courses (individual course prerequisites must still be met):

COMPASS/ESL Placement Test (or ASSET if needed) – Writing and Mathematics sections (reading will also be administered).

Note: Students placing into credit ESL courses are exempt from the math assessment requirement until they reach the designated ESL course proficiency level.

ACT Test – English (not writing) and Mathematics sub tests (reading subtest also recommended). Applicants with an ACT English subscore of 18, an ACT Mathematics subscore of 10, and a Reading subscore of 21 are exempt from placement testing.

AP (Advanced Placement) credit for ENGL 1100 and MATH 1151, 1152, or STAT 1350 (must submit AP transcript verifying completion of English Composition and Literature or English Composition and Language, and Calculus AB, Calculus BC, or Statistics with a score of 3, 4, or 5).

Note: If AP credit is in only one area, a college readiness assessment in the remaining area must be completed and submitted.

CLEP (College Level Examination Program) credit for MATH Special, MATH 1116, or MATH 1151 (must submit CLEP transcript verifying completion of Algebra-Trigonometry, College Algebra, College Algebra-Trigonometry, College Mathematics, Calculus with Elementary Functions, or Trigonometry with a subject exam score of 69 or above).

Note: A college readiness assessment in English/Writing will also be required.

Transfer credit for ENGL 1100 and MATH 1000 or above (“D” grades not acceptable).

Applicants with a previously earned bachelor or master's degree, a declared transient major, or a declared intent to participate in the college's Good as Gold program, are not required to complete a college readiness assessment.

For more information, visit the Admissions Office, Madison Hall, Lower Level, call 614-287-2669, or email admissions@csc.edu.

Application/Enrollment Procedures

Prospective/future students can learn more about the application and enrollment process at Columbus State by visiting the college website at www.csc.edu and clicking on “Admissions.” This webpage links you to a complete Step-by-Step Guide to Enrollment with links to additional information and resources for each step of the process.

Identification Number

An 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 CougarWeb system. Columbus State-assigned user names and student-determined passwords allow access to CougarWeb functions. Columbus State Community College provides each student with a student email which is the college's primary method of communication to students. For assistance with CougarWeb or email, contact IT Support Services, 614-287-5050. (Please refer to the statement on Family Educational Rights and Privacy Act for information on the release of student records.)

High School Transcript/GED Transcript

If required for admission to their chosen program of study, or if needed to verify that a science course prerequisite has been met, or 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 or in the Programs of Study section of this catalog to determine if high school transcript/GED scores are 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.

The final official high school transcript and/or official GED transcript should be mailed to Columbus State Community College, Records and Registration Department - MA 201, 550 East Spring Street, P.O. Box 1609, Columbus, Ohio 43216-1609. All informa-

tion submitted to the college relative to admission and academic status, including the final official high school transcript and 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 should be mailed from the other college(s) to Columbus State Community College, Records and Registration Department, Madison Hall 201, 550 East Spring Street, P.O. Box 1609, Columbus, Ohio 43216-1609, 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, become and remain 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 CougarWeb once their official transcripts have been evaluated by the Records and Registration Department.

Health Record

If you are accepted to, or take courses in, the following technologies or programs, you must submit a health record prior to registering for or attending technical classes: Clinical Laboratory Assisting (CLA), Dental Hygiene, Dietetic Technician, Early Childhood Development and Education, EKG Certificate, Emergency Medical Services Technology/Fire Science, Medical Assisting Technology, Medical Laboratory Technology, Multi-Competency Health, Nuclear Medicine, Nursing, Nursing Certificate Programs (NURC), Phlebotomy, Practical Nursing, Radiography, Respiratory Care, Sterile Processing Technology, Surgical Technology, and Veterinary Technology. Some health record forms can be found by accessing the Health Records Office webpage at: www.csc.edu/healthrecords or the forms will be provided by your department. Specific requirements vary by technology but could include a physician's examination, immunizations, and screenings. Deadline dates for receipt of these health records are available online.

Applicant Information

Applicants who complete the college's placement test and place into the first level developmental education reading AND mathematics courses are classified as Cougar Edge or Cougar Bridge students

and will not be eligible to enroll in credit-bearing courses until their placement levels indicate at or above college-level skills. These applicants will be referred to enroll in a community-based Adult Basic and Literacy Education (ABLE) program and will also be provided a list of resources to review on their own to build their reading and mathematics skills or will be directed to enroll in the college's non-credit Cougar Bridge program. Upon completion of these programs, and/or self-review, applicants will re-test on the college's placement test to determine their eligibility to enroll in credit-bearing courses. All applicants may re-test (once within a two-year period and fees may apply) if they believe their original placement test scores do not accurately reflect their academic skills. Review prior to re-testing is highly encouraged. Applicants whose re-test scores remain at the Cougar Edge or Cougar Bridge level will be ineligible to enroll in credit-bearing courses and will receive referral information for ABLE programs and self-review resources for remediation or Cougar Bridge options.

Applicants who complete the college's placement test and place into the noncredit English as a Second Language (ESL) Basic English course are required to register and successfully complete the noncredit ESL Basic English course(s) prior to enrollment in credit-bearing ESL and other courses with specific prerequisites.

Applicants who are transferring to Columbus State from another college and applicants who are transient students (students attending another college who plan to enroll at Columbus State for one or two semesters and transfer the credits back to the other college) should obtain a copy of their transcript or other documentation of completed courses to use when working with an academic advisor. This documentation assists advisors in recommending appropriate courses and next steps in the enrollment process. Students with transfer credit in college-level composition and algebra may not need to complete the entire placement test. Students dismissed from another institution may be required to submit additional documentation to determine their admission status and conditions of enrollment at Columbus State Community College.

Applicants who are Immigrants (Permanent residents, refugees, asylees) must submit documentation verifying their current immigration status to the Admissions Office. Additional documents may be requested by Columbus State before final admission is granted.

Applicants who are non-immigrants (visa holders other than F-1 status) must submit a photocopy of their passport visa stamp and both sides of their I-94 card. If required for admission to their chosen program of study, applicants must also submit documentation verifying high school graduation/proof of secondary school completion. Applicants must provide documents in the original language and translated into English. Additional documents may be requested by Columbus State before final admission is granted. For complete application procedures and deadlines, please view the Columbus State International Student webpage at csc.edu/international, or contact International Enrollment Services in the Admissions Office on the lower level of Madison Hall, istudent@csc.edu, 614-287-2074.

Applicants who are F-1 status visa holders (international applicants) must submit documentation verifying high school graduation/proof of secondary school completion, college records if applicable, proof of English proficiency, a financial bank statement and affidavit of support. Additional documents may be requested by Columbus State before final admission is granted. For complete application procedures and deadline dates, English proficiency requirements, and financial documentation, please view the Columbus State International Student webpage at csc.edu/international, or contact International Enrollment Services on the lower level of Madison Hall, istudent@csc.edu, 614-287-2074.

F-1 transient student applicants must submit a photocopy of pages one and three of their current Certificate of Eligibility (I-20) for F-1 student status. They must also submit an International Student Advisor Report Form and college transcript(s). Additional documents may be requested by Columbus State before final admission is granted. For complete application procedures, deadline dates, and English proficiency requirements, view the Columbus State International Student webpage at csc.edu/international, or contact International Enrollment Services in the Admissions Office on the lower level of Madison Hall, istudent@csc.edu, 614-287-2074.

Applicants who are high school students interested in dual credit/College Credit Plus programs (concurrent enrollment in college classes while still in high school or home school) must complete the application for admission to Columbus State and complete additional required documentation to determine eligibility for these programs. For more information, contact the Dual Enrollment Office at 614-287-5961 or visit csc.edu/k-12.

Senior Citizens “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.

Senior citizens, who are 60 years old or older and who have applied and been accepted to the College and been certified as eligible for the “Good as Gold” Educational Program, can register between the first and 15th day of the semester for credit courses on a space available basis and for audit “R” only. “Good as Gold” participants are responsible for payment of lab fees, books, instructional supplies, parking permits and any additional educational expenses required of other students by the fee payment deadline for the semester. If the “Good as Gold” student’s course(s) are dropped due to nonpayment of fees, the “Good as Gold” student will be unable to re-register as the registration deadline will have passed. Please refer to the applicable Semester Calendar for correct dates. Due to the audit status of the course(s), registration must be completed between the first and the 15th day of the semester.

Student rates to concerts and activities are available to “Good as Gold” students. However, financial aid is not available for “Good as Gold” registrations as courses are taken for audit “R” only. Students cannot enroll for courses granting academic credit and audit “Good as Gold” courses during the same term. The course(s) the “Good as Gold” student selects will be added to the schedule for audit purposes only.

For more information about the “Good as Gold” program, call the Telephone Information Center at 614-287-5353 or visit the Records and Registration Department, located in Madison Hall 201.

Felony Reporting

All applicants to the college and all current and returning students must report any un-expunged felony convictions to the Office of Student Conduct located in 201 Eibling Hall. Documentation, including a background check and a personal statement, will be required to determine admission and enrollment status. The Enrollment Review Team will review the information submitted and notify students in writing of their next steps. Applicants with an un-expunged felony conviction remain in “pending admission status” until the review process is complete. Visit <http://www.csc.edu/campus-life/student-conduct/criminal-history.shtml> or contact the Office of Student Conduct for more information.

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 Orientation Programs

Columbus State offers a variety of programs to help new students learn their next steps, get oriented to the college, and get off to a

good start. These programs include Financial Aid Workshops, Next Steps Sessions for Accepted Students, Registration Workshops, and New Student Orientation Programs. Some of these programs can be completed online in a self-paced format. Reservations are required for in-person sessions. New students will receive email invitations to these programs. For more information, contact the Admissions Office in the lower level of Madison Hall, 614-287-2669 (click “Admissions” and “Admissions Representative” at csc.edu for specific contact information and hours.) Delaware Campus students can inquire about options at Student Services in Moeller Hall.

Placement Testing

The Testing Center offers the COMPASS/ESL placement test, a computerized assessment for new students, used to identify the appropriate starting level for reading, writing, math, and English as a Second Language (ESL) courses. Developmental Education, English as a Second Language, and/or noncredit Cougar Edge or Cougar Bridge English and Mathematics or ESL Basic English courses may be required to maximize the student’s opportunity for academic and personal success. Students placing into noncredit Cougar Edge or Cougar Bridge English and Mathematics courses or ESL Basic English courses must register and successfully complete these courses prior to enrollment in credit-bearing courses. After completing the COMPASS/ESL test, students testing into credit courses will attend a group advising session for an interpretation of their test results and assistance selecting appropriate courses for their first semester; this session also includes an introduction to the CougarWeb registration system and registration of first semester courses.

Placement testing, or an approved college readiness assessment equivalent(s), is required for most applicants prior to registering for classes. Please see the “Admissions Policy” section or visit <http://csc.edu/admissions/need-compass.shtml> for more information.

Students with transfer credit in college-level composition and algebra from an accredited institution may not need to complete all sections of the placement test. These students should have official transcripts submitted to the Records and Registration Department. They should also obtain a copy of their transcripts or other documentation verifying completed courses and should contact an academic advisor in the Center for Advising Support and Exploration (CASE), Aquinas Hall 116, 614-287-2668, for course selection and registration information.

Students with an ACT English (not writing) test subscore of 18 or higher, an ACT Reading test subscore of 21 or higher, and/or an ACT Mathematics test subscore of 10 or higher may be exempt from taking all or part of the COMPASS/ESL placement test. As part of the Admissions process, students should submit their official ACT scores to Columbus State and bring a copy of the score report when meeting with advisors.

Students with AP (Advanced Placement) or CLEP (College Level Examination Program) credit may be exempt from taking all or part of the COMPASS/ESL placement test. For more information, visit <http://csc.edu/admissions/need-compass.shtml> or contact the Admissions Office in the lower level of Madison Hall, 614-287-2669, admissions@csc.edu.

COMPASS/ESL testing is done on a walk-in basis; appointments are not needed. Please note that students must report for testing no later than two hours prior to the Testing Center closing time; placement tests are not administered after this time. Testing must also be completed by closing time and no extension will be given, so please plan sufficient time for testing. 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 Center. Testing is offered on the Columbus Campus, the Delaware Campus (Moeller Hall), and at some regional learning centers on particular days/times. For more information, contact the Columbus Campus Testing Center in Aquinas Hall 002, 614- 287-2478; Delaware Campus Testing Center in Moeller Hall, 740-203-8383 or visit www.csc.edu. Sample test items and resources for review are available on this website.

For information about placement testing for noncredit Basic English courses, contact the Language Institute in Room 1090 of the Center for Workforce Development, 315 Cleveland Avenue, 614-287-5858.

Cougar Edge

Cougar Edge is a noncredit program designed to provide students with instruction in fundamental mathematics, reading, and writing. The program serves students who place into the first level developmental education mathematics AND reading courses. Once students demonstrate proficiency in both mathematics AND reading, they will be permitted to register for credit classes.

The purpose of this program is to:

- 1) **Provide academic enrichment services to students who are not college-ready, and/or**
- 2) **Find instructional options for students who may need prolonged or individualized remediation; and/or**
- 3) **Conserve funds allocated for education by the students and the state.**

Cougar Edge classes are provided at no cost (tuition and textbook fees) to the student. The program was developed in response to a request from the Ohio Board of Regents as part of the Ohio Developmental Education Initiative funded by the Gates and Lumina Educational Foundation. Cougar Edge/ABLE classes are funded by federal dollars allocated to Central Ohio ABLE programs.

Returning Students

Students who have not taken classes at Columbus State for more than two years, and would like to return to the college, should contact the Records and Registration Department at least one week before the semester begins to update their academic records. The student should also request that official transcripts from any other college they attended during their absence from Columbus State be forwarded to the Records and Registration Department. 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 which 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.

Registering For Classes

Students can register for classes online at www.csc.edu, with a Telephone Information Center representative (614-287-5353), in-person on the Columbus Campus in the Records and Registration Department in Madison Hall, on the Delaware Campus in Moeller Hall, or at one of the college's regional learning centers. Course additions or section changes after the start of the semester will be permitted only with the instructor's approval. Check the Online Schedule 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
- DeVry University
- Franklin University
- Mount Carmel College of Nursing
- Ohio Dominican University
- The Ohio State University
- Otterbein University
- Pontifical College Josephinum

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 he or she is 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 from his or her academic advisor, the Office of the Registrar at Columbus State, and from the host institution's Registrar. It is the student's responsibility to make certain that the host institution's calendar, course schedule, course content, and credit are compatible with his or her goals and Columbus State Community College requirements. Each institution has established cross-registration deadlines which must be met to participate. For more information, contact the Office of the Registrar.

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 the Records and Registration Department. If he does not submit his Selective Service number, the student will be billed a surcharge equivalent to the 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, U.S.C. 1101, as amended, or
- A permanent resident of the Federated States of Micronesia, the Marshall Islands, or the Republic of 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 to retrieve your Selective Service number. Report your Selective Service number to the Telephone Information Center, 614-287-5353, as soon as you have it.

Change of Name, Address, Telephone Number, Program of Study

Any change in a student's name, address, telephone number, or program of study must be reported to the Records and Registration Department so the academic record may be updated.

Name changes require that official documentation, such as a marriage certificate, court decree, etc., must be submitted to the Records and Registration Department.

Address and telephone number changes may be made by calling the Telephone Information Center at 614-287-5353, as well as in person with Records and Registration Department in Madison Hall on the Columbus Campus, on the Delaware Campus in Moeller Hall, or at one of the regional learning centers. Each student is responsible for complying with any official communication sent to the last reported address.

Program of Study changes may be made by calling the Telephone Information Center, 614-287-5353, as well as in-person (Columbus Campus) in the Records and Registration Department in Madison Hall, on the Delaware Campus in Moeller Hall, or at one of the regional learning centers.

Student Services – Delaware Campus

Student Services, on the first floor of Moeller Hall, 740-203-8345, is the place to go for a variety of services on the Delaware Campus. The Student Services team can assist with admissions, orientation, academic advising, financial aid, registration, and online fee payment. They can also link students to placement testing, disability services and answer questions about diversity programs and student activities. Student Services team members can direct students to other Delaware Campus services such as textbook pickup, Learning Center library and computer lab resources, Business Services, and IT Support.

View current hours for all Delaware Campus services online, www.csc.edu/delaware.

Army Reserve Officers Training Corps (ROTC)

Qualified students interested in obtaining an officer's commission in the United States Army, Ohio National Guard, or Army Reserve may enroll in Army ROTC classes through a contracted agreement between Columbus State Community College and the United States Army. Training consists of a combination of classroom and outdoor instruction. 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 Army ROTC scholarships. Applications for scholarships are normally made during the fall term and must be completed by January 30. Additional information may be obtained by contacting the Enrollment and Scholarship Officer at Capital University, 614-236-6808.

Financial Aid and Scholarships

Customer Service Hours (Columbus Campus):

Monday, Tuesday and Thursday: 8:00 a.m. – 5:00 p.m.

Wednesday: 8:00 a.m. – 6:00 p.m.

Friday: 9:30 a.m. – 4:30 p.m.

Saturday: 9 a.m. – 12 noon (only last Saturday of the month)

(Check online to verify current service hours.)

Location: Financial Aid Office, Rhodes Hall, Lower Level

Telephone: 614-287-2648, Toll Free 1-800-621-6407

Delaware Campus, Student Services, Moeller Hall

Telephone: 740-203-8345

Financial aid is available in several forms: grants, scholarships, loans, and part-time employment. In general, the amount of assistance that a student may receive depends upon the established financial need of the student. This need is determined through the U.S. Department of Education and is based on the information submitted in the Free Application for Federal Student Aid (FAFSA). Financial aid is to be used for tuition, fees, room, board, books, and commuting expenses. For more information please see the "High Finance" publication, available at www.csc.edu.

For all federal student aid programs, regular admission status to the college and U.S. citizenship or permanent residence status is required. Only those who have declared their intent to pursue a degree and are taking related courses are eligible. Persons with bachelor's degrees are not eligible for grants but may apply for loans and work study.

Scholarships

A scholarship is financial aid awarded primarily on the basis of scholastic achievement. As with grants, they do not have to be repaid. The college itself offers hundreds of scholarships, of varying types and amounts, designed for recent high school graduates. Contact the Financial Aid Office in Rhodes Hall (287-2648), your academic advisor, or www.csc.edu (click on “Financial Aid” and then “Scholarships”) for additional information related to scholarships.

The Columbus State Community College Foundation also coordinates a large number of scholarships established by private donors, areas businesses and professional organizations. Scholarships vary in availability from year to year, and eligibility for each scholarship program also varies. In general, these scholarships are based on criteria including, but not limited to, field of study, financial need, credit hours earned, academic and individual achievement, and/or recent high school graduation.

Students may apply for these scholarships by completing the Application for Foundation Scholarships, available at www.csc.edu during open application periods. Typically, there are two application periods: one in June/July and one in January/February. Information and scholarship listings will be available in the Financial Aid Office and online at www.csc.edu (click on “Financial Aid” and then “Scholarships”) during application periods.

If you have been awarded a scholarship from an outside agency or organization, you are responsible for notifying the Financial Aid Office of this award. The organizations from which the award was made will need to provide, in writing, verification of what school-related expenses may be covered and/or any requirements for the scholarship. This information is required prior to the release of any scholarship award.

Application Procedures

Students complete the FAFSA online each academic year. New FAFSA applications may be submitted after January 1 each year and throughout the academic year. Campus-based funding is awarded on a first-come, first-awarded basis.

To ensure that your financial aid application materials can be processed in a timely fashion, Columbus State has established priority deadlines for completing the appropriate application materials. These dates are available on the Financial Aid webpage at www.csc.edu.

How Do I Apply?

1. Apply for admission to Columbus State Community College.
2. Complete the FAFSA online at www.fafsa.ed.gov

- a. If you are a first time FAFSA filer, apply for a Personal Identification Number (PIN) from the U.S. Department of Education at www.pin.ed.gov. The PIN will be used as your signature on the FAFSA.
 - b. List Columbus State Community College as the school you plan to attend by denoting school code **006867** in step 6 of the FAFSA.
3. Approximately 5 to 7 days after your FAFSA has been processed by the U.S. Department of Education, you will receive a Student Aid Report (SAR). Review the results. If corrections to your FAFSA are necessary, you may submit them electronically at www.fafsa.ed.gov.
 4. When the Financial Aid Office has received your FAFSA results, we will review your file. Once it is determined that your file is complete, an award letter will be posted to your CougarWeb account indicating the types of financial aid you are eligible to receive.

Basic Eligibility Requirements

Eligibility for most federal student aid programs is based on financial need. In addition, the federal student aid programs require that the student recipient:

- Be a United States citizen, eligible non-citizen, U.S. National, or permanent resident
- Have a valid Social Security Number
- Have a high school diploma or GED.
- Have complied with current Selective Service registration regulations. For information on Selective Service requirements, contact the Financial Aid Office or the college website, www.csc.edu.
- Be a regularly admitted student, enrolled in an eligible program, working toward a degree or certificate at Columbus State Community College.
- Maintain satisfactory academic progress as defined by the Financial Aid Standards of Satisfactory Academic Progress Policy.
- Students may not be in a default or overpayment status on any type of federal financial aid.

Verification

Verification is the process through which the federal government requires confirmation of the accuracy of the information reported on the Free Application for Federal Student Aid (FAFSA). If you are selected for verification, you must provide clear evidence that the information you reported on your FAFSA is true and correct. The Financial Aid Office will contact you regarding specific requirements pertaining to your application if you are selected.

Satisfactory Academic Progress

Federal regulations require that Columbus State Community College monitor the academic progress of students who apply for

and/or receive federal student aid. These regulations apply to each financial aid applicant, regardless of whether a student has ever previously applied for or received financial aid. To receive any form of federal student aid, students must maintain satisfactory academic progress toward a degree or certificate. For additional information, refer to the “High Finance” publication available at www.csc.edu. Failure to maintain satisfactory academic progress will result in loss of eligibility for federal student aid.

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 a student is enrolled on the freeze date is used to calculate the amount of financial aid he/she will receive. This means that if a student adds or drops classes before the freeze date, the amount of financial aid he/she is eligible for will be affected. If classes are added or dropped after the freeze date, the financial aid award will not change.

Refund Policy

Students who withdraw from classes are refunded their instructional and general fees according to the procedure established by the college.

If a financial aid program has paid for a student’s tuition and fees, the refund is made to the program and not to the student. For money refunded from a Federal Direct Loan or Federal PLUS Loan, the refund is made back to the U. S. Department of Education.

Students who receive financial aid over and above the cost of tuition and fees (i.e., a cash disbursement) and withdraw from classes during the refund period may be required to return all or part of the cash disbursement.

Return of Unearned Title IV Funds Policy

Financial aid students who completely withdraw from all classes during a given semester may be subject to repayment of federal and state funds back to the Department of Education. The policy states that a student must attend through the 60 percent point of the semester in order to earn his/her federal student aid. For more information on this policy, please refer to the “High Finance” publication at www.csc.edu.

Other Third-Party Sponsors

If you are a student whose company, or other agency or department, pays your fees, it is very important to register early and initiate the paperwork for your voucher or payment with your sponsoring

company. **Paperwork from your sponsor must be received 7 days before the fee payment deadline to ensure that the college can process your fee payment by the stated deadline.** Vouchers, payments or other paperwork should be dropped off during regular business hours at Cashiers and Student Accounting on the Columbus Campus, or the Business Services Office on the Delaware Campus; mailed to Cashiers and Student Accounting, Columbus State Community College, P.O. Box 1609, Columbus, OH 43216; or faxed to Cashiers and Student Accounting at 614-287-5985. **Paperwork or payments that are mailed must be received, not postmarked, by the stated deadline.** 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 their sponsor. The student will be billed for any costs not paid by the sponsor.

Advising Services

Advising Services: Columbus Campus

Arts and Sciences, Union Hall 048K

Business Programs and Engineering Technologies, see website for advisor locations

Center for Advising, Support and Exploration, (CASE)
Aquinas Hall 116

Health and Human Services, Union Hall 427

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

Advising Services: Delaware Campus

Moeller Hall, Student Services

740-203-8345 or delaware@csc.edu

Please check online at www.csc.edu/delaware for current Delaware Campus Advising Services hours.

Academic advisors also are available at the three regional learning centers listed below. Call ahead for hours.

Dublin Regional Learning Center: 614-287-7050
Reynoldsburg Regional Learning Center 614-287-7200
Westerville Regional Learning Center: 614-287-7000

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 www.csc.edu/advising.

Transfer Center

The Transfer Center represents Columbus State’s commitment to helping students *start right and finish strong*.

Hours of Operation:

Monday -Thursday, 9 a.m. to 5 p.m.

Open one evening until 6:30 p.m., varies by term

Location: Aquinas Hall 126

Students are welcome to stop by the center during open hours or to schedule an appointment by sending an email to transferinfo@csc.edu. Opportunities for transfer can be found by using the transfer database at www.csc.edu/academics/transfer/ and selecting “Search Transfer Agreements.” Once the student identifies a pathway or a transfer institution, students should visit the Transfer Center to talk with an advisor from the transfer institution or to find more information. The Transfer Center is located in Aquinas Hall and can help provide a seamless transition for transferring students. The Center simplifies the transfer process by providing transfer information and easy-to-use reference tools. Advisors and Admissions personnel from four-year institutions hold scheduled office hours in the Center that allow students to work directly with their transfer institution. Students meet individually with the advisor/admissions staff to get the most current and accurate transfer information. Columbus State has transfer agreements with approximately 40 colleges and universities for completing an Associate of Arts or Associate of Science degree. There are also hundreds of additional program-specific transfer agreements students can take advantage of, ranging from Accounting to Veterinary Technology.

The Transfer Center can assist students with:

- Researching options for four-year colleges
- Connecting with four-year schools to discuss bachelor’s degree options
- Scheduling time with representatives from four-year colleges
- Discovering when transfer partner colleges will be visiting Columbus State
- Understanding the documentation and paperwork necessary to transfer successfully
- Completing applications to four-year colleges.

Students also can access Columbus State’s Transfer Database and other resources at the Center to help plan a successful and smooth transfer.

Columbus State Bookstore

Discovery Exchange (DX)

Hours of Operation:

Monday – Thursday, 8:00 a.m. – 6:00 p.m.;

Friday, 8:00 a.m. – 4:30 p.m.

(Hours may vary between semesters and in the summer.)

Location: 283 Cleveland Ave. (corner of Cleveland and Mt. Vernon)

Telephone: 614-287-2427

www.csc.edu/bookstore

The Columbus State Bookstore offers new and used textbooks for all Columbus State courses, as well as a selection of e-books and an online rental option. The store also stocks a variety of retail products including apparel, electronics, computer software, laptops, tablets and accessories, gifts, supplies, trade reference books, candy, and snacks. With two floors of retail space, the Bookstore is a one-stop shop for everything students need to succeed at Columbus State!

The Bookstore offers textbook and used calculator buyback services, and sells first class postage stamps, local and long distance fax services (\$1 per page), international fax services (\$3 per page), COTA 1-day passes, 7-day passes, 31-day passes, Discount 31-day passes, Express 31-day passes and Mainstream passes.

The Bookstore also provides a convenient, online ordering service for textbooks and retail merchandise at www.csc.edu/bookstore. The online site services the Columbus and Delaware Campuses and the Regional Learning Centers. The site accepts Visa, MasterCard, Discover, and the Financial Aid Book Allowances. (For more information on the Financial Aid Book Allowance, visit www.csc.edu/disbursement.) Two delivery options are available to customers:

1) UPS – standard UPS charges and delivery timelines apply. If you are a student using the Financial Aid Book Allowance, the UPS shipping option is available.

2) Free self-pick-up from the following locations within four business days from the order date: Delaware Campus, Dublin Center, Reynoldsburg Center, Southwest Center at Bolton Field, or Westerville Regional Learning Center. A valid Cougar ID, driver’s license, or state ID is required for pick-up.

Career Services

Hours of Operation:

Monday – Thursday, 8 a.m. - 5 p.m.

Friday 9:30 a.m. – 4:30 p.m.

Location: Nestor Hall 108 & 113 Columbus Campus

Telephone: 614-287-2782

www.csc.edu/services/career

Delaware Campus students can make an appointment with personnel at the Columbus Campus office. Visit Student Services in Moeller Hall or call the number above.

Career Services offers a suite of programs and services to currently enrolled students and alumni, including career exploration, student employment, career planning and placement services.

Career Exploration

Career Services offers career counseling for undecided students, including assistance with career decision-making, choosing a major, creating a career exploration plan, redirecting educational plans, and/or planning for a career change. Additionally, Career Services offers:

- Individual Career Counseling
- Career Assessments
- Career Coach
- Major Fairs
- Career Resource Library
- Career Web Resources
- Career Development Workshops
- Un-Workshops
- Classroom Presentations
- Mentorships and Externships

Career Planning and Placement

Columbus State Community College students and alumni have access to a full range of career planning and placement services, including:

- Career Quest (online job/career management system)
- Career Fairs
- Recruitment Information Tables
- Career Planning Workshops
- Internships
- Resume and Cover Letter Assistance
- Career Search Materials
- Interviewing Tips
- Career Connections with Area Employers

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 a) enrollment level at the college, and b) whether the student was awarded Federal Work Study as a portion of their Financial Aid. Student Employment services include:

- Job Search (on campus and off-campus)
- Job Postings
- Advising on Federal Work Study Eligibility
- Resume Review
- Interview Coaching
- Professional Development and Training

To access career resources available through the Department of Career Services, current students and alumni can visit Nestor Hall, Room 108, during posted hours of operation or call 614-287-2782 to make an appointment.

For more information, visit the Career Services webpage, www.csc.edu/services/career.

Cashiers and Student Accounting

Columbus Campus

Hours of Operation:

Monday, Tuesday, Thursday: 8 a.m. - 5 p.m.

Wednesday: 8 a.m. - 6 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

Location: Rhodes Hall, second floor

The Cashiers and Student Accounting operation handles the following:

- All tuition and fee payments including parking permits (\$35),
- Replacement identification cards (\$4),
- Approved tuition and financial aid refunds, and
- Collection of outstanding balances.

Postage stamps also can be purchased. COTA bus passes can be purchased at the Columbus State Bookstore (DX). For information on a Transcript Request, please see csc.edu/services/recordsandregistration/ and select “Transcript Request.”

Delaware Campus

Hours of Operation: Wednesdays, 1 p.m. – 6 p.m.

Telephone: 614-287-5658

Location: Moeller Hall

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 and does not have a dedicated Cashier’s Office. Payments by check and money order may be placed in the drop box (around the corner from the Business Services Office); no payments are accepted at the windows. Credit card payments should be made online using CougarWeb.

Payments may also be made by mail, via the Telephone Information Center at 614-287-5353, or online using CougarWeb, for the

Columbus and Delaware campuses, as well as for all regional learning centers and distance learning classes. The mailing address is **CSCC, P.O. Box 1609, Columbus, Ohio 43216-1609**.

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 CougarWeb. 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 1-888-665-5440.

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 or receive an official transcript 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 30 days for processing.

Third Party Sponsors

Paperwork 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 dropped off during regular business hours at Cashiers and Student Accounting on the Columbus Campus or the Business Services Office on the Delaware Campus; mailed to Cashiers and Student Accounting, Columbus State Community College, P.O. Box 1609, Columbus, OH 43216; or faxed to Cashiers and Student Accounting at 614-287-5985. Payments or paperwork that is mailed must be received, not postmarked, by the stated deadline. 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. The student will be billed for any costs not paid by the sponsor.

College Testing Services Testing Centers

Columbus Campus: www.csccl.edu/testingcenter

Delaware Campus: www.csccl.edu/delaware

Regional Learning Centers: Dublin, Westerville www.csccl.edu/services/testingcenter/off-campus-testing

Columbus State Testing and Talent Assessment Center
(Center for Workforce Development on the Columbus Campus)

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 COMPASS® Placement testing, distance learning testing, departmentalized testing, and classroom make-ups. (After a student completes the COMPASS Placement test, an advisor in Advising Services will interpret the test results and make recommendations for appropriate courses.) 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 Center. However, academic tests will not be administered one hour prior to closing; all exams must be finished by closing time and all tests are collected at closing. COMPASS Placement testing does not start two hours prior to closing. An extension of testing time will NOT be given; therefore, participants should plan sufficient time for taking tests.

Students currently enrolled in classes, or who may need to take the COMPASS Placement test, can report to one of the selected regional learning centers which offers testing. Please call ahead for days and times. A picture ID is required to take a test at any of the locations.

The **Columbus Campus Testing Center** is located in Aquinas Hall, on the Lower Level, Room 002. Phone number is 614-287-2478.

The **Testing Center on the Delaware Campus** is on the main floor of Moeller Hall. The phone number is 740-203-8383. In an effort to provide a distraction-free testing environment, children, food, beverages and cell phones are not permitted in the Testing Centers. Visit www.csccl.edu/services/testingcenter for more information and for hours of operation. Delaware Campus Testing Center hours of operation are also available at www.csccl.edu/delaware.

Community and Professional Testing

University System of Ohio (USO) Talent Development Network at the Center for Workforce Development

Columbus State Community College's Community and Professional Testing center is an authorized Test Center which delivers computer-based and paper-pencil national, state, and professional certification and licensure exams to individuals, students, employers, and professional organizations. Vendors include ACT, Prometric, VUE, Pearson, ETS, LSAC, PAN, Certiport, Comira, ISO-Quality Testing, Kryterion, Castle, PSI/LaserGrade, and

WorkKeys for over 3,000 exams ranging from IT/computer, health care, education, government, graduate/professional school admissions, and many other industry and professional certification exams. The center also provides proctoring for universities and organizations across the United States, as well as Columbus State specific program candidate entrance exams such as the A2, TEAS, and HOBET exams for health care students, the Basic English placement test, and the GED computer-based test. The center is a Certified Testing Center recognized by the National College Testing Association (NCTA). The center is also a member of the University System of Ohio (USO) Talent Development Network. For more information or to schedule a test, contact the Community and Professional Testing center at 614-287-5750 or email act1@csc.edu.

The Community and Professional Testing center also provides a community outreach proctoring service for non-Columbus State academic examinations. There is a service fee of \$40 per non-Columbus State exam. The proctoring service is available to anyone in the community; however, the center reserves the right to deny a proctor request at any given time.

Counseling Services

Hours of Operation (Columbus Campus)

Monday – Thursday: 8 a.m. - 5 p.m.

Friday: 9:30 a.m. - 4:30 p.m.

Location: Nestor Hall 010 (formerly Seminar A, lower level)

Delaware Campus students can stop by Student Services in Moeller Hall or call (740) 203-8345 to arrange an appointment.

www.csc.edu/services/counseling

Personal Counseling

Counseling Services provides a safe and confidential environment for students to explore personal concerns in order 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 help for students working through an array of mental health and substance abuse issues. Issues include, but are not limited to, academic, emotional, psychological, social, and behavioral problems. Our basic purpose is to help students cope with, or resolve, problems that create distress in daily living and are interfering with academic success at Columbus State. Counseling Services also offers presentations, workshops, programs and printed materials about mental health, alcohol, and other drug prevention and abuse issues.

Additionally, Counseling Services provides educational workshops each semester on a variety of important and relevant topics such as anxiety, depression, physical abuse, domestic violence, role responsibilities, ethnic/cultural concerns, adjusting to stressors, grief and loss, anger management, self-esteem, and more.

Confidential counseling is provided on an individual, short-term basis, with referral to community resources for additional services, if needed.

Services for faculty and staff include consultation, in-class workshops on specific mental health topics, and information about community resources.

All counseling services are free and available to Columbus State students by appointment. Call 614-287-2818, for an appointment or stop by Nestor Hall, Room 010 to schedule an appointment.

For more information, visit the Counseling Services webpage, www.csc.edu/services/counseling.

Disability Services

Hours of Operation:

Intake (Columbus) – Monday – Thursday; 8 a.m.-5 p.m.
Friday; 9a.m.-4:30p.m.

Testing (Columbus) – Monday and Thursday; 8a.m.-6p.m.
Tuesday and Wednesday; 8a.m.-5p.m.
Friday; 9a.m.-4:30p.m.

Location: Eibling Hall 101 (Columbus Campus)

Delaware Campus Student Services

Testing (Delaware) - Monday, Wednesday, Friday; 9a.m.-5p.m.
Tuesday and Thursday, 2p.m.-8p.m.

Phone: (614)-287-2570 (Columbus Campus)
(740) 203-8345 (Delaware Campus)

www.csc.edu/disability or email disability@csc.edu

Columbus State Community College offers a wide range of support services to encourage the enrollment of people with disabilities. Through the Disability Services department, 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 Disability Services, by the student, from appropriate medical, educational, and psychological sources. These support services include, but are not limited to, adapted testing procedures, production of print materials in alternate format, note taker notebooks, real-time captioning, and advocacy. In addition, Sign Language Interpreters and assistive listening devices are available for students who are deaf or hard of hearing. Assistive technology and software is also available on campus in a variety of student and classroom computer labs for student training and use in completing course requirements. Students may also meet with a department advocate to develop an individual plan for support services. The department consults with students, consumers and professionals in the field of rehabilitation and education, as well as with state and federal resources in the continued development of program accessibility.

For further information or to arrange for support services, call 614-287-2570. Disability Services is located on the first floor of Eibling Hall on the Columbus Campus. (Enter through Room 101.) More information is available on the Web at www.csc.edu/disability. Disability Services' email address is disability@csc.edu.

On the Delaware Campus, Student Services will assist with referrals to Disability Services by making an intake appointment with a Disability Services advocate. Student Services is located on the first floor of Moeller Hall. The Phone number is 740-203-8345.

Food Services

For hours of operation, call 614-287-3913 or visit www.csc.edu/food.

Locations:

Columbus Campus:

- Food Court in Union Hall;
- DX Café in the Bookstore;
- Vending machines in most buildings;
- Outdoor mobile carts and food trucks (seasonal and weather permitting).

Delaware Campus:

- Cyber Cafe in Moeller Hall

Columbus State Food Services offers a number of options for enjoying a meal, snack, or hot or cold beverage. The Food Court is open Monday through Friday. Check the website www.csc.edu/food for current hours of operation. Joe's Contemporary American Grille features fresh grilled burgers, chicken, vegetarian options and daily combo specials. Piazza Italian Eatery is the place for fresh pizza by the slice with an ever changing variety of toppings. Miso is the authentic Hot Bowl and Sushi location –our most popular stop. No time to wait?, we also offer a huge selection of fresh grab and go sandwiches, wraps, salads and desserts. Nutritional information about all food is provided upon request.

The DX Café features a local coffee, Crimson Cup, that serves espresso, made-to-order lattes, mochas, and other coffee and tea drinks (served hot, frozen, or on ice). The DX Café boasts a selection of fresh local bagels, doughnuts and grab-n-go salads and sandwiches, many of which will satisfy health-conscious and vegan patrons.

Food Services also contracts with several food carts, located on the Columbus campus, which feature a variety of made-to-order grilled sandwiches, pasta and salads. Food carts operate from 10 a.m. until 5 p.m. (weather permitting).

In addition to standard food and beverage choices, Columbus State encourages wellness by offering a variety of healthy eating options (the green swirl indicates a healthy choice) in campus vending

machines. These machines are located in most Columbus Campus buildings and in Moeller Hall on the Delaware Campus.

The Cyber Café on the Delaware Campus, serves deli-style sandwiches, soups, pizzas, pastries, and coffee. It is open Monday – Friday. Hours vary by the day of the week.

Hours may be limited between semesters and during summer semester.

IT Support Services

Students, faculty and staff can get help with college-owned computer problems or Clean Access wireless issues by calling 614-287-5050 between 7 a.m. and midnight, seven days a week. Staff is available in the IT Support Services Office on the lower level of Columbus Hall to assist with problems. Delaware Campus students can get IT help by inquiring at the Learning Center or calling 740-203-8300.

Library

The Library in Columbus Hall houses a full complement of library resources and services including the Learning Commons (on the first floor), group study rooms for students, quiet study spaces (third floor), open computer labs, the Multimedia Support Center, the Writing Center, and the IT Support Center (“Help Desk”). The library’s collection includes print, multimedia, and electronic materials. In addition to the collection in the main stacks, there are collections of reference, course reserve materials, legal reference, periodicals (magazines and journals), microforms, and newspapers. The library catalog can be accessed through its webpage, library.csc.edu, which serves as a gateway to its electronic resources.

Through Columbus State’s membership in the OhioLINK network, library users on both the Columbus and Delaware campuses and at the regional learning centers have access to materials that may be requested online from the libraries of more than 90 Ohio colleges and universities. (An active Cougar ID is needed to access these resources.) In addition to the library’s collection of print periodical titles, users can search at least 150 online research databases. Many of these databases provide links to full-text articles and may be accessed from home computers. The Electronic Journal Center alone provides access to more than 20 million full-text articles from scholarly journals. Reference assistance is available on the second floor of the Library, and students are encouraged to ask for help in starting their research or in using a particular resource.

In the Library, there are multiple computer workstations (including handicap-accessible workstations), as well as copiers. Students with an active Cougar ID can check out a laptop computer on loan from the Circulation Desk on the first floor.

Through a partnership with Columbus Metropolitan Library (CML)

students can sign up for a CML library card at the Columbus State Library Circulation Desk (first floor). Current student can access their Columbus State desktop and online resources using public computers at any CML branch.

For more information about the Library, call the Circulation Desk at 614-287-2465, Reference Services at 614-287-2460, or the Multimedia Support Center at 614-287-2472.

Delaware Campus students can visit the Learning Center in Moeller Hall for library services or technical assistance. Librarians are available to help students conduct research for their class assignments and use electronic materials. The Learning Center has a core reference collection and course reserves. Students can check out a laptop computer, graphing calculator, or headphones with an active Cougar ID.

Through a partnership between the Columbus State Community College 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, call 740-203-8183.

Military and Veteran Services

Monday - Thursday: 8a.m. - 5p.m. Friday: 9:30a.m. - 4:30p.m.
Delaware Hall, Room 156
Phone (614) 287-2644

G.I Bill Office

Monday - Thursday: 8a.m. - 4:30 p.m. Friday: 10:30a.m. - 3:30p.m.
Union Hall, Room 48
Phone (614) 287-2644
Toll Free 1 (800) 621-6407

Columbus State Community College is proud to support the educational and career goals of the local veteran community. The college is dedicated to expanding the minds and changing the lives of veterans, military personnel, and their family members, who have served and supported our country with dignity, honor and courage. Every veteran and service member deserves respect and gratitude for his/her service to the United States, and the college invites them to take advantage of the wealth of services and resources designed specifically with veterans in mind. The Military and Veteran Services team is committed to successfully serving each veteran as an individual.

Columbus State's Military and Veteran Services exists to facilitate the transition "from boots to book bags." The office regularly assists veterans, service members and their families in applying for benefits, navigating admissions, advising, and registration

processes, and in maintaining ongoing progress to achieve successful program completion.

Military and Veteran Services at Columbus State serves more than one thousand student veterans and their families receiving educational benefits through various GI Bill programs and other military tuition assistance programs. The college also participates in a new Department of Veterans Affairs educational initiative called the Veteran Retraining Assistance Program (VRAP). 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.

Telephone Information Center

Phone: **614-287-5353**

Hours of Operation:

Monday – Thursday, 8 a.m. to 5 p.m.

Wednesday, 8 a.m. to 6 p.m.

Friday, 9:30 a.m. to 4:40 p.m.

Last Sat. of Month, 9 a.m. to 12 noon

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

The Telephone Information Center (TIC) houses the college switchboard. TIC representatives assist callers with services and questions related to many campus departments such as Admissions, Records and Registration, Advising, Financial Aid, Cashiers and Student Accounting, the Bookstore, etc. They also can provide callers with general information about the college and specific information for contacting academic program offices and/or faculty/staff at Columbus State. When you need information related to the college, the TIC is the place to call.

TRiO Programs

Location: Franklin Hall 223

Telephone: (614) 287-5648

The Federal TRiO Programs (TRiO) are outreach and student services programs designed to identify and provide services for individuals from disadvantaged backgrounds. TRiO programs serve and assist low-income individuals, and/or potential first-generation college students as they progress through the academic pipeline from middle school through college.

TRiO: Educational Talent Search

Educational Talent Search (ETS) is a federally funded (\$230,000

annually) college access program for low income and/or first generation potential college students in select Columbus Public middle schools and high 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 punctuate the normal school-based curriculum.

TRiO: Student Support Services

Student Support Services (SSS) is a federally funded (\$247,584 annually) grant program serving low-income and potential first-generation college graduates, which provides comprehensive academic support services to enhance students' productivity and academic success. Eligible students regularly receive quality one-on-one academic advising, tutorial assistance, 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 complete transfer process and provides assistance and support with overall adjustment to community college life.

TRiO: Upward Bound

Upward Bound (UB) is a federally funded (\$279736 annually) 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 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.

Tutoring Services

Tutoring at Columbus State is primarily supported through adjunct faculty members who are currently teaching in the content area. Peer tutoring in developmental and select college level courses is available on a limited basis and by appointment (see information below). Supplemental Instruction (SI), which is a peer-lead study group, is also available in many courses. **There is no additional charge to students for tutoring.** Students are urged to attempt all school work prior to attending tutoring and to bring all necessary information with them to tutoring sessions (e.g., syllabus, textbook, assignment, etc.). While departments have individualized content tutoring information, tutoring services are currently supported by a Program Coordinator who works to coordinate the tutoring offerings college wide and can be reached at 614-287-2232.

The most current schedule of tutoring times will be found at www.csc.edu/services/tutoring or use the searchable database which is found on that page.

Automotive and Skilled Trades

Columbus Campus, Delaware Hall 259, 614-287-5318
Tutoring is available for select courses.

Biological and Physical Sciences

Columbus Campus, Nestor Hall 023, 614-287-2522 or 2122
Delaware Campus, Moeller Hall, Learning Center, 740-203-8345

Regional Learning Centers – These vary by term; see www.csc.edu/services/tutoring for current options.

Tutoring is available for select courses in ASTR, BIO, CHEM, GEOL, PHYS, and ENGR 1181.

Business Programs Tutoring

Columbus Campus, Delaware Hall 212

Tutoring is available for select courses in ACCT, BMGT, BOA, and FMGT. Some courses may also be supported online; see www.csc.edu/services/tutoring for current options.

Delaware Campus, Moeller Hall, Learning Center, 740-203-8345

Tutoring is available for select courses in ACCT.

Communication Center (formerly Speech Rehearsal Lab)

Columbus Campus, Nestor Hall 017, 614-287-5391

The Communication Center is open Monday through Saturday, beginning the third full week of the semester through the last Saturday of classes. The center houses a tutorial service for both students and faculty seeking help with speech-making, oral interpretation of literature or business presentations. Communication Department faculty tutors can assist with topic selection, research strategies, outlining, coping with anxiety, and overall delivery. Speech tutors can/will make digital recordings for online and classroom presentations. The center is equipped with all standard

AV equipment. Students can register for an appointment online at <http://tutorfile.com/speechlab>. When making appointments, be prepared with Columbus State username and course instructor's name. Verification of current status as a student or employee, via email, will be required.

Criminal Justice/Law Enforcement

Columbus Campus, Franklin Hall 206, 614-287-2591
Tutoring is available by appointment for select courses.

Developmental Education Learning Skills Centers

Reading/Writing, Columbus Campus, Aquinas Hall 214, 614-287-5193

Basic Math/Pre-Algebra, Columbus Campus, Aquinas Hall 213, 614-287-5193

Economics

Columbus Campus, Center for Technology and Learning, Room 306, 614-287-5005

Delaware Campus, Moeller Hall, Learning Center, 740-203-8345

EMS/Paramedic

Columbus Campus, 375 N. Grant (GA), Room 103, 614-287-2510

English as a Second Language

Columbus Campus, Franklin Hall 245, 614-287-5400
Tutoring is available for ESL courses.

English Department Supported Writing Center

Columbus Campus, Columbus Hall 102, 614-287-5717, writing-center@csc.edu

The Writing Center provides one-on-one tutoring services for Columbus State students, faculty, and staff. Tutors work with writers on a variety of assignments, such as critical essays, research papers, reviews, résumés, formal business letters, lab reports, case studies, poems, and job applications. However, the Writing Center options do not support Developmental Writing or ESL Courses. These are provided by the department. Tutors can help with any stage of the writing process. Open from the second full week of the semester through the last Friday of classes. To schedule an appointment for the Columbus Campus center, go to tutoring.csc.edu and search availability for Writing Center-In Person. Drop-in service may also be available.

Delaware Campus, Moeller Hall, Learning Center, 740-203-8183

Regional Learning Centers – These vary by term; see www.csc.edu/services/tutoring for current options

Columbus State's Online Writing Center (OWC)

An extension of the Writing Center, the Online Writing Center is available to all enrolled students. **To access the service**, log on to Blackboard and go to the OWC under "My Organizations." The OWC is open the second week of the semester through the last Friday; it is closed holidays and In-Service days. The OWC

accepts writing submissions 24/7 and will return submissions within 48 hours.

Humanities

Columbus Campus, Nestor Hall 408, 614-287-5043
Tutoring is available for Classics and History courses.

Integrated Media & Technology

Columbus Campus, Eibling Hall 401, 614-287-5010
Walk-in tutoring is available for many courses in CSCI, IMM, DDG, and the CISCO/CCNA certificate program. FOTO course support is available by scheduling an appointment in Eibling Hall 401.

Mathematics

Columbus Campus, Davidson Hall 313, 614-287-5313
Delaware Campus, Moeller Hall, Learning Center, 740-203-8183

Online tutoring is also available through Blackboard. To schedule your appointment, go to tutoring.csc.edu and search availability for Math Online Tutoring.

Tutoring is available for Algebra, Pre-Calculus, Calculus, and Statistics.

Regional Learning Centers – These vary by term; see www.csc.edu/services/tutoring for current options

Modern Languages (Spanish)

Columbus Campus, Franklin Hall 245, 614-287-5400
Tutoring is available for beginning Spanish courses.

Nursing Success Lab

Columbus Campus, Union Hall 437, 614-287-3885
Walk-in support available for 1st, 2nd, or 3rd semester nursing students currently in the program. Registrations for 30-minute personal sessions also available. Call for current schedule.

Paralegal Studies

Columbus Campus, Nestor Hall 425, 614-287-2591
Tutoring services by appointment are available for select courses.

Peer Tutoring Program

Columbus Campus, Aquinas Hall 241, 614-287-2474
Tutoring services are based on tutor availability for select courses in ACCT, CHEM, DEV, and MATH. Apply to be matched with a tutor by contacting the coordinator at the number above.

Psychology

All locations, in Blackboard Organization for PSY1100 (Intro to Psychology) and for PSY 2340 (Human Growth and Development)

Beginning the third week of the semester, online tutoring through discussion board and email responses is available. Face-to-face tutoring may be available by appointment. Call 614-287-5005 for more information.

Regional Learning Centers

Tutoring for selected English, Math, and Science courses may be available at a nearby regional learning center based on a variety of schedules. Options may be viewed by searching the Tutoring Database found at www.csc.edu/services/tutoring or by calling 614-287-2232 for information.

Speech Lab – See Communication Center.

Supplemental Instruction (SI) Program

Several departments offer SI, which 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 information, contact course instructor, see the Blackboard schedule or call the program coordinator at 614-287-2232.

Writing Center – See English Department

Fees



Fees

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

Application, Records and ID Fee

(One time) \$50

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, even if the class is dropped or cancelled. This fee is assessed to all students, including transient/guest students.

Please Note: If you are a returning student who has not previously paid the Application, Records and ID fee or a matriculation fee, this fee will also be assessed to your account upon registering for any class(es).

Instructional and General Fees

The resident credit hour fee of \$135.93 (*at time of publication for the 2015-16 academic year*) is based upon a \$122.43 instructional fee and a \$13.50 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.

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

Ohio residents are charged a combined instructional and general fee of \$135.93, which includes a \$122.43 instructional fee and a \$13.50 general fee.

Non-Ohio, U.S. Residents

Non-Ohio, U.S. residents are charged a combined instructional and general fee of \$301.03 which includes a \$277.03 instructional fee and a \$24.00 general fee.

International Students

International students are charged a combined instructional and general fee of \$361.24, which includes a \$329.74 instructional fee and a \$31.50 general fee.

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.

Fee Payment

Students can access their class schedule online after logging in at CougarWeb.csc.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 www.csc.edu under Quick Links, (select “Academic Calendar”). All fee payment information is posted at www.csc.edu or emailed to student email accounts (see Email in the Additional Services to Students section of this catalog).

No invoices or statements are mailed, 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

- 1) One-time payment by the posted fee payment deadline
- 2) Making partial payments with balance paid in full by the posted fee payment deadline, with no set-up charge, no minimum/ fixed payment amounts, and no scheduled payment dates
- 3) A tuition extended payment plan option is available. This payment plan option has a plan 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. See details on www.csc.edu.

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.

Late Registration Fee

A **\$100 late registration fee** may be assessed to a student account when registration has occurred starting two weeks before the start day of the semester for Full-Term, First 8-week Term, and First 5-week term classes. For Second 8-week Term, Second 5-week Term, Third 5-week Term, and Flex courses, the fee may be assessed when registration has occurred starting two weeks before the start day of the term or of the course.

Refunds of late registration fees may be requested in extenuating circumstances. Late Registration Fee Refund Request forms are available in the Records and Registration Department. Late fee refund requests are reviewed by a committee. Decisions made by this committee are final.

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. Information 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.***

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 the Transcript Request Form available at www.csc.edu. A photo ID is required for the student or individual picking up the transcript in person. Transcripts will not be released to an individual other than the student without detailed

written permission signed by the student specifying the name of the person picking up the transcript. If a past due balance is owed to the college, Columbus State will not release an official transcript for or to a student until the balance is paid in full.

The Family Educational Rights and Privacy Act of 1974, as amended, governs the maintenance and release of records. A copy of the regulations is available in the Records and Registration Department, or by sending a written request, including the student's signature to that department.

Refunds

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

- a) 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.
- b) 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.
- c) Lab fees may be refundable based upon the same percent of refund issued for instructional and general fees.
- d) No refunds are given if beyond 20% of the time for the course has elapsed.

Check www.csc.edu for refund deadlines.

At the above website, under Quick Links, select "Academic Calendar."

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 15th of the **following** calendar year
- Spring Semester – August 15th of the **same** calendar year
- Summer Semester – November 15th of the **same** calendar year

The Tuition Refund Request form is available at www.csc.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 he or she provides 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, he or she 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.

Dates to submit application and supporting materials for Ohio Residency for Tuition Purposes are:

SEMESTER	REVIEW PROCESS BEGINS	PRIORITY DEADLINE	FINAL DEADLINE
Autumn Semester 2015	May 26, 2015	July 31, 2015	First Day of Classes
Spring Semester 2016	September 14, 2015	December 14, 2015	First Day of Classes
Summer Semester 2016	February 8, 2016	May 10, 2016	First Day of Classes

To inquire about the residency status process, please call 614-287-5533 or stop by the Records and Registration Department, Madison Hall 201.

Parking Permits

All motor vehicles, including motorcycles, parked on all Columbus State locations must have a current Columbus State parking permit. Permits can be purchased online or from Cashiers and Student Accounting, located on the second floor of Rhodes Hall, Columbus Campus. Call 614-287-5353 for more information.

To receive a permit, a student must have paid tuition and fees, including the parking fee, for that term. A new permit must be purchased each semester. Each student is limited to one parking permit per semester. Permit fees are not pro-rated, are nonrefundable, and cost \$35.00 per semester.

For college parking regulations and information, refer to the Columbus State Police section of this catalog or visit the parking webpage at: www.csc.edu/services/publicsafety/parking.shtml.

Grades and Academic Procedures



Grades and Academic Procedures

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
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 mailed to the Records and Registration Department 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. 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 the 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 www.csc.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 his/her instructor.

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

Grade Report

Grades are issued by the instructor via the Web. Once grades are issued by the instructor, the student can view the grades via a secure site at www.csc.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.

Standards of Satisfactory Academic Performance

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
Total Grade Points		40		
GPA = -----		= 3.08		
Total Credit Hours		13		

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 his/her class. If a student decides to stop attending a class, it is important to officially withdraw from the class by completing a Registration Add/Drop Form, or call 614-287-5353, or call 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. Also see Withdrawal Procedure, page 31.

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 2.000, he/she will be placed on academic warning.

Academic Probation

A student who is beyond his/her first semester is placed on academic probation when his/her cumulative grade point average is below that designated by the Standards 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 his/her 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, his/her **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, his/her 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 Board of Regents).

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 via the Web at www.csc.edu.

Course Drop/Withdrawal Procedure

Students may drop a course before 61% of the course has elapsed. Please see the Records and Registration Department for the specific deadlines. To drop a class, it is the responsibility of the student to initiate the process with the college using the college website, www.csc.edu; calling the Telephone Information Center, 614-287-5353; or submitting a completed Registration Add/Drop Form to the Records and Registration Department, 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 withdraw 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.csc.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

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 the Records and Registration Department 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 Degree Audit Report System (DARS) is an important advising tool that helps students determine progress toward completion of their degree or certificate program requirements. DARS 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 DARS report will assist the student in making prudent course selections. Students may view or print copies of their DARS report at www.csc.edu.

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.

Petition to Graduate

Each student who wishes to graduate must obtain a Petition to Graduate form online from www.csc.edu at the beginning of the semester prior to the one in which the student intends to graduate. (***See note below regarding summer semester graduates.**) The student must meet with his or her 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 he or she is registered the current semester to determine eligibility for graduation. The Petition to Graduate form must be turned in to the Records and Registration Department registration windows in Madison Hall 201 by the published deadline date for the intended semester of graduation before 4:30 p.m. The student will be notified of graduation eligibility.

Petition to Graduate Deadline Dates

Autumn Semester 2015: September 18, 2015
before 4:30 p.m.

Spring Semester 2016: February 12, 2016,
before 4:30 p.m.

Summer Semester 2016: June 4, 2016, before
4:30 p.m.

***NOTE: A graduation ceremony will not be held for summer semesters. Students graduating during summer semester can only 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 10 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 petitioned to graduate are invited to attend. *Students who petition to graduate summer semester will be invited to attend only 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. Summa Cum Laude graduates are further distinguished by wearing engraved honor medallions. Class remarks are offered by the graduate attending the ceremony who has maintained a 4.0 cumulative grade point average (GPA) with the largest number of credit hours completed at Columbus State Community College. The 4.0 graduate attending the ceremony with the second largest number of credit hours completed at Columbus State leads the pledge of allegiance.

Replacement Diplomas

To obtain a replacement diploma, submit an Official Request for Replacement Diploma Form, available at www.csc.edu or in the Office of the Registrar. Send the form along with a \$15 replacement fee to: Cashiers and Student Accounting, 550 E. Spring Street, Columbus, Ohio 43215. The replacement diploma will be sent to your current address via certified mail. Please allow 12 weeks for delivery.

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

1. Definition of Education Record

Under the Act, “education records” mean, with certain exemptions 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 personally 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 his or her education records except the following:

- a. Financial records of parents
- b. Confidential letters and statement of recommendations for admission, employment or honorary recognition placed in education records after Jan. 1, 1975, for which a student has signed a waiver of his or her right of access recorded by the Act.

3. Waiver of Rights of Access

A student may waive his or her right of access to confidential letters and statements of recommendation. If the student signs a waiver, he or she shall 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 purposes stated in Paragraph 2b. The college may not require a student to waive his or her right of access accorded by the Act for 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 Records and Registration Department. 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 Records and Registration Department.

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.

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 conducted, 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 Dean of Enrollment Services 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 he or she 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 notify the Records and Registration Department in writing and pay the appropriate fee to release official transcripts to other institutions. A student may request official transcripts for his or her own use, issued to student, by completing the form available from the Records and Registration Department or at www.csc.edu.

9. Directory Information

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
- Weight and height of members of athletic teams
- 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 Dean's List and other honors)

Most recent previous educational agency or institution attended.

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 a form available in the Records and Registration Department.

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 Dean of Enrollment Services and the U.S. Department of Education in writing. The Dean of Enrollment Services shall promptly review all such allegations.

13. Questions

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

Online/Distance Learning



Online/Distance Learning

<http://global.csc.edu>

Columbus State's online/distance learning (DL) 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

At the “Online Learning” website, students can find information on getting started with distance learning, the current courses and programs being offered, free program downloads, free online training and much more. Many students bookmark the website: <http://global.csc.edu>.

Columbus State has an online orientation to Blackboard to help students become familiar with distance learning before enrolling in an online class. To access the orientation, see <http://online.csc.edu/global/help/blackboard/training.php>.

*Important Notice for Distance Learning Students

Certain programs may require some face-to-face learning experiences. Also, be aware that some online/DL courses with lab components may require additional fees. Please consult your academic advisor for details.

On-campus Testing Requirements

Although much of the instruction for distance learning courses (web or blended) is online, many of these courses require completion of exams in a proctored environment. Tests must be taken at one of the college's testing locations or at another secure site under the supervision of an approved test administrator.

If proctored testing is required, carefully read all information on the course Blackboard site for guidance. There are two different procedures, depending on the location of the student:

- 1) **Within Columbus State's four-county service area**, there are five testing locations available. They are located at the Columbus Campus, the Delaware Campus, and at three of our regional learning centers: Gahanna, Dublin and Westerville. The Online/DL website, <http://csc.edu/services/testingcenter>, provides more information on hours of operation, locations and policies.
- 2) **Outside of Columbus State's four-county service area**, students should locate a convenient testing site (a college, library, etc.) and then **complete and submit an Out of City Proctor Request Form** to the following email address to initiate the process: dloctest@csc.edu. Requirements for and information about this process are located at <http://csc.edu/services/testingcenter/distance-learning.shtml>.

For efficient and quality service, please obtain faculty approval and notify the testing center no later than the first two weeks of the semester if you need to arrange an off-campus proctored testing site. Communication with the course instructor is a fundamental requirement for the successful completion of exams. Contact the instructor initially for exams to be released. For questions, please

contact the Testing Specialist responsible for this process through email at dloctest@csc.edu or by phone at 614-287-5219 614-287-5675.

Types of Distance Learning Courses Web (online)

Web course instruction is delivered completely online, although most online courses require testing at one of the Columbus State testing sites. Students located outside of the Central Ohio area may be proctored at authorized institutions, with the approval of their instructor. To participate in an online course, a student must have access to a computer and the Internet, coupled with basic computer knowledge. A student may use a computer at home, at a campus lab, a library, or elsewhere. Some online courses require real-time, online collaboration at specific dates and times using webconferencing. Please consult the course syllabus or academic department for details and technical requirements for your computer.

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.

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.

Videoconferencing (face-to-face)

A videoconference course is held face-to-face at specific dates and times in a classroom. A videoconference is between two or more classrooms or sites communicating through a real-time interactive video and audio connection with one or more instructors. The videoconference instructor(s) may alternate instructing from each face-to-face site, communicating with students at the other sites through a TV monitor and microphone. Students can see and speak with the teacher and students at all sites in real time.

Web conferencing is a distance 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.

The following list indicates degrees and certificates that can be completed via a distance learning mode. This includes delivery via Web and/or blended formats. 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. View the list via the online catalog for updates.

Distance Learning Degree Programs

Associate of Arts
Associate of Applied Science in Accounting
Associate of Applied Science in Business Management
Associate of Applied Science in Criminal Justice
Associate of Applied Science in Criminal Justice - Corrections
Associate of Applied Science in Criminal Justice - Professional Track
Associate of Applied Science in Digital Design and Graphics
Associate of Applied Science in Digital Photography
Associate of Applied Science in Direct Marketing
Associate of Applied Science in Finance
Associate of Applied Science in Geographic Information Systems
Associate of Applied Science in Health Information Management Technology
Associate of Applied Science in Interactive Media
Associate of Applied Science in Marketing
Associate of Applied Science in Nursing
Associate of Applied Science in Retail Management
Associate of Applied Science in Supply Chain Management

Distance Learning Certificates

Certificate in Accounting Concentration
Certificate in Adobe Illustrator
Certificate in Adobe Photoshop Advanced
Certificate in Advanced Digital Photography
Certificate in Intermediate Digital Photography Certificate
Certificate in Basic Digital Photography
Certificate in Bookkeeping
Certificate in Complementary Care
Certificate in Digital Painting
Certificate in Direct Marketing
Certificate in Electronic Marketing
Certificate in Entrepreneurship
Certificate in Entrepreneurship – Hospitality
Certificate in Exercise Specialist
Certificate in Foundations of Insurance
Certificate in Geographic Information Systems
Certificate in Health Care Manager
Certificate in Health Data Analyst
Certificate in Health Information Management Information Technician
Certificate in Homeland Security
Certificate in InDesign Advanced

Certificate in International Business
Certificate in International Commerce
Certificate in Medical Coding
Certificate in Nonprofit Management
Certificate in Office Specialist
Certificate in Photoshop for Photographers
Certificate in Pre-MBA (Marketing)
Certificate in Professional Law Enforcement Officer
Certificate in Registered Nurse First Assistant
Certificate in Rich Media
Certificate in Strategic Procurement
Certificate in Supply Chain Management
Certificate in Sustainable Building
Certificate in Taxation Specialist

For the most current list of Institutional Agreements and for details and information on program-to-program agreements, see the articulation database at www.csc.edu/academics/transfer/.

Online/Distance Learning (DL) Courses

The following programs of study/departments offer DL courses:

Accounting
Anthropology
Architecture
Arts and Sciences
Astronomy
Automotive Technology
Biology
Business Management
Business Office Administration
Chemistry
Civil Engineering Technology
Classics
Communication
Computer Science
Construction Management
Criminal Justice (Law Enforcement)
Dental Hygiene
Developmental Education
Dietetic Manager Certificate
Digital Design and Graphics
Digital Photography
Early Childhood Development and Education
Economics
Electro-Mechanical Engineering Technology
Emergency Medical Services Technology
Engineering Technologies
English
English as a Second Language
Environmental Science, Safety and Health
Financial Management
Fire Science
French

Geographic Information Systems
Geography
Geology
German
Health Information Management Technology
History
Hospitality Management
Human Resources Management
Humanities
Information Technology Support Technician
Interactive Media
Interpreter Education Program
Landscape Design and Management
Massage Therapy/Entrepreneurship
Marketing
Mathematics
Mechanical Engineering Technology
Mental Health/Addiction Studies/Developmental Disabilities
Medical Laboratory Technology
Modern Languages
Multi-Competency Health
Music
Nurse Aide Training Program
Nursing Certificate
Nursing
Paralegal Studies
Philosophy
Physics
Political Science
Practical Nursing
Psychology
Quality Assurance Technology
Medical Imaging
Real Estate
Respiratory Care
Skilled Trade Technologies
Sport and Exercise Studies
Sociology
Social Sciences
Spanish
Supply Chain Management
Surveying
Theatre
Veterinary Technology

For a complete listing of DL courses, see: <http://global.csc.ccc.edu/CoursesDegrees/courses/index.asp>.

Academic, Athletic and Co-curricular Opportunities



Academic, Athletic and Co-curricular Opportunities

Academic Study Abroad Opportunities

Email: studyabroad@csc.edu

Phone: 614-287-2852

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 number of participants and international safety issues. For information on current study abroad course opportunities and travel requirements, contact the Study Abroad office by email at studyabroad@csc.edu, phone at 614-287-2852, or visit the website www.csc.edu/academics/study-abroad/index.shtml.

Athletics and College Recreation

Fitness Center and Locker Rooms

Hours of Operation: Monday – Thursday, 8 a.m. to 8 p.m.,
Friday, 8 a.m. to 6 p.m.

Location: Lower Level of Delaware Hall

Telephone: 614-287-5092

The college's Fitness Center is open to all Columbus State students, faculty and staff (with a valid college ID). The Fitness Center offers cardio and multipurpose strength equipment as well as free weights. Men's and women's locker rooms are adjacent to the center, making it convenient for individuals to work out before and after classes or during lunchtime.

Intercollegiate Athletics

Office Location: Delaware Hall 134

Telephone: 614-287-5092

Columbus State currently fields teams and offers athletic scholarships in the following Division II intercollegiate sports:

Men's Basketball	Women's Basketball
Men's Golf	Women's Golf
	Women's Volleyball

The college also boasts an award-winning, coed cheerleading squad. All students are welcome to try out for athletic teams and the cheerleading squad.

To participate in athletics, a student must be a high school graduate or have earned a General Education Diploma (GED). Student athletes must carry a minimum of 12 credit hours per semester and maintain the required GPA to be eligible for competition and/or athletic scholarships.

The college adheres to the guidelines established by, and is a member of, the National Junior College Athletic Association (NJCAA). Columbus State is also a member of the Ohio Community College Athletic Conference (OCCAC). This conference status allows Cougar student athletes to compete against athletes at other two-year colleges, as well as those at some four-year institutions. For more information about athletic programs, tryouts and/or athletic scholarships, call 614-287-5092, stop by the Athletics and College Recreation office, or visit www.csc.edu/campus-life/athletics

Intramural Sports and Open Gym

Open Gym Hours: Monday – Friday, 9 a.m. to 12 noon.

Location: Delaware Hall Gymnasium

Telephone: 614-287-5092

The Intramural Sports program is an integral part of campus life. Intramural activities offer the opportunity to compete in athletic events without the time commitment of intercollegiate athletics. All students, as well as faculty and staff, with a valid Columbus State ID are eligible to compete. Intramural activities at Columbus State include basketball, volleyball, soccer, floor hockey, wiffle ball, badminton, table tennis and flag football. For more information, call 614-287-5092 or stop by Athletics and College Recreation in Delaware Hall 134.

Dual Enrollment Programs

<http://www.csc.edu/community/dual-enrollment>

Telephone: 614-287-5961

The mission of Dual Enrollment Programs is to enhance the educational opportunities for youth in Columbus State's service area by creating mutually beneficial partnerships among students, college faculty, and high school teachers which foster the development of lifelong learning. Dual Enrollment is directly responsible for the following programs:

Dual Enrollment Courses

Dual Enrollment allows high school students to take college classes without leaving high school. Unlike the PSEO program, through which students take college-level, degree-oriented classes on one of our campuses or at one of our regional learning centers, students typically take Dual Enrollment classes in their high school with the course being taught by high school teachers who are certified to teach the course. In some instances, college faculty may teach a dual enrollment course.

Post-Secondary Enrollment Options Program

This program allows college-ready students without a high school diploma to enroll in college-level coursework. The courses must be degree-oriented (Career and Technology or Arts and Sciences associate degree). Students must be concurrently enrolled in a public or private institution or be in a home school program while taking the college-level coursework. The coursework needs to supplement, not replace, the high school core requirements. The coursework students complete may apply toward high school graduation or homeschool completion requirements, as established by the secondary institution/homeschool they are attending.

Career-Technical Articulation

Columbus State Career and Technical programs have worked with area high school career-technical programs to create the opportunity for students in approved programs to articulate into two-year associate degree programs with credit for the work they completed while in high school. Additionally, agreements exist for students completing Adult Education and Workforce programs with the same secondary school districts.

For information about Dual Enrollment initiatives, visit the webpage, <http://www.csc.edu/community/dual-enrollment> or call 614-287-5961.

Global Diversity and Inclusion

Location: Franklin Hall 223 (Columbus Campus)

Telephone: 614-287-2426

Delaware Campus: Student Services in Moeller Hall

Telephone: 740-203-8345

The Office of Global Diversity and Inclusion leads Columbus State's efforts, events, and initiatives to increase the awareness, equity and inclusion of students from diverse backgrounds. Our goals are to:

- 1) Create programs and initiatives that will promote and contribute to the success and graduation of diverse students; and
- 2) Market Columbus State Community College as an attractive institution of higher education for community members with diverse backgrounds to pursue career and educational goals.

Tools and initiatives facilitated by Global Diversity and Inclusion to promote awareness, equity and inclusion for students include the Pono Learning Community, the MAN Initiative, Interfaith Programming and many other culturally based programming initiatives. The Pono Learning Community is a six-module diversity awareness program. The MAN Initiative is a scholarship program focused on the retention and engagement of at-risk male students.

Global Diversity and Inclusion also supports the Human Resources Employee Resource Group program, which provides affinity communities for Columbus State employees to network with each other and seek peer-to-peer professional development.

Columbus State Community College offers its students and extended campus community the unique opportunity to interact with the world through both local and global formats. Internationally focused programs hosted by the college include Global Bridges, Great Decisions and International Education Week. Global Bridges provides campus and community-based opportunities for students to learn about global issues. Great Decisions is a foreign policy discussion group for employees of the college. International Education Week takes place every year in November and celebrates the benefits of international education and cultural exchange.

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
- SOC 1101
- MATH 1151
- BIO 1111 and 1113
- 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 www.csc.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 as the official community college honor society. 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 the exchange of ideas, and stimulate fellowship among students. Phi Theta Kappa at Columbus State also offers direction, to students who are academically successful, concerning applying for valuable scholarships to continue their education.

Society of the Compass

The Society of the Compass, launched in honor of the college's 50th Anniversary in 2013, is a prestigious student award developed to foster academic success. This award will be announced at the end of each academic year (Spring Semester Commencement). The distinction allows faculty and staff to recognize students who have demonstrated extraordinary achievements during their time at Columbus State. The award is aptly named the Society of the compass because, like the compass, Columbus State is often instrumental in helping students find and follow their direction.

Membership in the Society of the Compass, therefore, 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.

Student Engagement and Leadership (SEaL)

Office Location: Nestor Hall 116

Telephone: 614-287-2637

Student Engagement and Leadership (SEaL) coordinates programs and leadership opportunities for students to grow and become involved during their time at Columbus State. Currently SEaL offers wellness, social, community service, leadership and educational programs for students at the Delaware and Columbus campuses. From Weeks of Welcome and Leadership workshops to Stress-busters to Spring Fling to Wellness prevention and awareness program, there is an activity for every student to get involved in. SEaL also advises 40 student clubs and/or organizations on campus; to start a new club, please visit www.csc.edu/sea and click [Login to ORGSYNC or visit Nestor Hall 116. SEaL encourages students to get involved and SEaL their success! For more information, call 614-287-2637 or visit the Student Engagement and Leadership (SEaL) website, www.csc.edu/sea.

Columbus State C.A.R.E.S.

Columbus State C.A.R.E.S. consists of faculty, staff, administrators, and students working together to support students facing extraordinary situations. If you are facing financial, academic, and/or personal difficulties in college, Columbus State wants to help you navigate resources and opportunities. At Columbus State, there are caring Advocates prepared to respond to you and your extraordinary

situations. It is up to you to take action and make connections to seal your success. To access resources and find more information, visit <http://csc.edu/campus-life/cares>.

Community Service

Student Engagement and Leadership (SEaL) builds community partnerships and connects students with volunteer opportunities. SEaL hosts Community Service Fairs, Alternative Spring Break-Staycation and once-a-month community service projects called Servicing Our Community (S.O.C). Service projects are open to staff, faculty and students. SEaL wants to send a message to the community that we care and desire to make a genuine difference in our surrounding neighborhoods. If you have a particular interest and/or would like to learn more about serving the community, contact seal@csc.edu.

Housing

Columbus State does not provide campus housing, but Student Engagement and Leadership (Nestor Hall 116) does disseminate information it receives on off-campus housing opportunities. This information includes postings for apartments or homes to share and for roommates. Stop by the office or call 614-287-2637 for more information.

Student Ambassador Program

The Student Ambassador Leadership program provides students with the opportunity to develop leadership skills while participating in various public relations, recruiting, and leadership programs at Columbus State. Student Ambassadors also earn money to help pay for tuition and other educational expenses. There are two tiers of participation: Junior ambassadors are new to the program and required to attend weekly training; Student Ambassadors Coordinators additionally serve as mentors to the new ambassadors and chairpersons to wellness, leadership, service, and program logistics. Recruitment for Student Ambassadors begins in March of each year. Membership in the Columbus State Student Ambassador program is limited, but there are other leadership opportunities on campus.

The Columbus State Leadership Society

Participation in Columbus State's Leadership Society is designed to enhance the first year experience for students. Students will learn about the four cornerstones upon which CSLS rests: Integrity, Passion, Vision and Service. With a renewed focus on student success, engagement and retention, CSLS engages students and provides tools for successful learning. Involvement in the society increases the value of the college experience because students who get involved in co-curricular activities have a higher success rate. Invitations and applications are sent beginning in January of each year.

Social Activities

Student Engagement and Leadership (SEaL) offers a number of special events throughout the year such as Week of Welcome (Autumn/Spring semesters), Video game days and Spring Fling. In addition, Women's History Month and other special interest

activities are celebrated at the college.

Student Engagement and Leadership, headquartered in Nestor Hall, is a good starting place for discovering all the possibilities at Columbus State. Students who are looking for a place to study or relax between classes can find a quiet lounge on the west side of Nestor Hall. The east-side lounge is devoted to recreation with a large-screen monitor which students can use for video games. There are also ping pong and foosball tables for a quick game or two. Equipment for use with the tables is available 8:30 a.m. – 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.

Student Organizations

Columbus State Community College is committed to the belief that students have a right to organize and participate in groups whose purpose centers around the interests and goals of the individuals involved. 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 organizations 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 register as a new club and/or renew the registration each semester with the approval of Student Engagement and Leadership. Each year, new clubs and organizations are added to enhance campus diversity.

For information about current clubs and organizations, check out the organization list on OrgSync by visiting www.csc.edu/seal and clicking [login to ORGSYNC]. Please note that the active status of some of these groups varies from year to year. To learn more about clubs and organizations, or to start your own group, stop by Nestor Hall 116, or call 614-287-2637.

Wellness Programs

Student Engagement and Leadership (SEaL) offers educational programs and provides staff and students with the tools and resources to make healthy choices. SEaL teaches the Eight Dimensions of Wellness: social, emotional, spiritual, physical, intellectual, financial, environmental and mental. SEaL empowers Columbus State students to achieve their full potential by living holistically. Since all areas of wellness interact continuously, making a conscious change in one area of wellness will directly affect other areas, too. Wellness offerings include awareness and prevention programs on topics such as alcohol and drug abuse, mental health, eating

disorders and sexual health. For information or an events calendar, visit www.csc.edu/campus-life/SEAL/, email seal@csc.edu, or call 614-287-2637.

Community and Civic Engagement

Nancy M. Case, Executive Director

The Office of Community and Civic Engagement was established to cultivate intentional partnerships that enrich student experience and strengthen our community. The group is charged with 1) securing community resources that support student stability and persistence; 2) expanding and elevating Service-Learning and community service opportunities for students that meet community-identified needs; and 3) pursuing reciprocal partnerships that support student success and address community needs.

Transitional Workforce Department

Douglas House, Director

614-287-5858

Transitional Workforce provides services, courses, and programs for individuals who want to gain the skills needed to enter or advance in the workforce. This includes individuals who want to pursue initial career and educational goals via non-credit courses and those who are not yet eligible or ready for college credit classes. Through the Transitional Workforce Department, individuals can take advantage of language instruction (i.e. immigrants and refugees, conversational Spanish, etc.), academic enrichment, job training, and online non-credit continuing/professional education.

We also offer career counseling services to non-credit students who are enrolled in our courses and to credit students receiving services through the Workforce Innovation and Opportunity Act (WIOA) and/or the Trade Adjustment Assistance for Workers Programs (TAA). For more information, call 614-287-5515, email cwddreg@csc.edu, or come to the Non-Credit Registration, Room 1090, Center for Workforce Development, 315 Cleveland Ave.

Academic Enrichment (AEP)/GED Preparation

614-287-5858 or 315 Cleveland Ave.

The Academic Enrichment (AEP)/GED Preparation courses are designed for individuals who:

- are committed to dedicating the time and effort required to earn a GED certificate
- want to brush-up on math and/or language arts skills in preparation for a college entrance exam
- need to improve their math and/or language arts in order to advance their careers in the workplace

The classes review material from grade school through high school levels for the purpose of improving college placement test scores or as preparation for the GED exam.

The AEP/GED Preparation program is committed to providing differentiated instruction – teaching to the skill level of the student – rather than the “one room schoolhouse” approach that is commonly used. We accomplish this by offering 4 levels of language arts courses and 4 levels of math courses. Results on the TABE® placement exam determine the starting levels for each student.

Language Arts classes provide instruction in reading, writing, grammar, spelling, and vocabulary. An emphasis is placed on improving critical thinking and locating information skills. Math classes are designed to improve skills in fundamental number functions, multi-step word problems, pre-algebra, geometry, and basic algebra.

Our Language Arts 4 and Math 4 courses are intended to help students who have earned a high school diploma or GED prepare for college entrance exams and course work. It is our intention to help students place higher on their college entrance exams and, thereby, reduce the time and money spent on developmental education coursework.

Cost per course is \$99 (fees increase to \$149 one [1] week before first day of term), plus textbooks. Course offerings include:

TWBSC 0101	Language Arts 1 – Basic reading skills
TWBSC 0201	Language Arts 2 – Intermediate reading / introductory writing
TWBSC 0301	Language Arts 3 – Critical reading, grammar, short evidence-based essays
TWBSC 0401	Language Arts 4 – Expository essay writing, non-fiction reading
TWBSC 0102	Math 1 – Fundamental math (whole numbers, fractions, decimals, percents)
TWBSC 0202	Math 2 – Integers, pre-algebra, plane & solid geometry
TWBSC 0302	Math 3 – Linear equations, inequalities & coordinate geometry
TWBSC 0402	Math 4 – Solving systems of equations, quadratic formula, functions

For more information and a schedule of our upcoming placement test and class dates, call (614) 287-5858 or visit our web site at www.csc.edu/ged

Language Institute

Tara Narcross, Ph.D.

614-287-5448

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, as well as other languages, on an open-enrollment basis and by agreement for interested organizations. Courses in language and cultural topics can be customized to meet client needs for a particular industry or cultural focus. For information, contact the Non-Credit Registration Office at 614/287-5858 or cwddreg@csc.edu. You may also visit our web site at www.csc.edu/langinst

Basic English Program

The Basic English Program is a series of nine non-credit courses designed to improve understanding and use of the English language. A placement test determines the starting level. Most courses are eight weeks in length and meet for six hours each week. Morning, evening and weekend classes are available.

All levels are offered each term, along with specialized courses that focus on reading, conversation, and writing skills.

Cost per course for most Basic English courses is \$160, plus materials.

LILNG-0101	Basic English 1
LILNG-0102	Basic English 2
LILNG-0103	Basic English 3
LILNG-0104	Basic English 4
LILNG-0105	Basic English 5
LILNG-0106	Basic English 6
LILNG-0107	Basic English 7
LILNG-0108	Basic English 8
LILNG-0109	Basic English 9
LILNG-0117	Focus on Writing
LILNG-0120	Compass/ESL Readiness
LIBSC-0101	Pronunciation and Conversation
LIBSC-0102	American Conversation

Additional program offerings:

LICPT-0101	Introduction to Computers (\$45)
LICPT-0102	Computer Skills for College Success (\$45)

Non-Credit Language and Culture Courses

These non-credit classes are designed to develop a basic level of conversational skill and cultural understanding. Cost per course is \$100, plus materials.

LILNG-0201	Basic Spanish 1
LILNG-0202	Basic Spanish 2
LILNG-0210	Basic Somali 1

LILNG-0211	Basic Somali 2
LILNG-0220	Basic French 1
LILNG-0221	Basic French 2
LILNG-0300	Spanish for Healthcare (\$150)

No prior knowledge of Spanish is needed to take this course, which provides students with basic practical Spanish to use in their daily work.

For more information, call 614-287-5858, email cwddreg@cscc.edu, come to the Non-Credit Registration Office at 315 Cleveland Ave., or visit www.cougarweb.cscc.edu and click on CougarWeb for Continuing Education. You may also visit our web site at www.cscc.edu/langinst

Non-Credit Registration Office

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 Community and Civic Engagement.

Location: 315 Cleveland Ave. (Building WD), Room 1090
 Phone: 614/287-5858
 E-mail: cwddreg@cscc.edu
 Fax: 614/287-5011

ESL Afterschool Communities

Flo Plagenz, Supervisor
614-287-5868

ESL Afterschool Communities (ESLAsC) is an outreach initiative that introduces the college to the Immigrant/Refugee (I/R) community and helps underserved students discover that college is a possibility and that exciting opportunities lay ahead through education.

Our program has been made possible through a series of grants from various state and county grants. As a result, we have been serving I/R families across the Columbus metropolitan area since 2004.

Our mission is to offer community-based, comprehensive afterschool programming to I/R families within Franklin County. The afterschool programs provide a safe, caring environment where children are able to develop academic, social, and personal skills that will last a lifetime.

For more information, call 614-287-5858, email cwddreg@cscc.edu, or visit our web site at www.cscc.edu/workforce/eslas/

The Center for Workforce Development

Dr. Stacia Edwards, Associate Vice President, Workforce Strategy

Information Center 614-287-5000
www.cscc.edu/workforce

The Center for Workforce Development (CWD) at Columbus State partners with the community to address workforce and economic development needs through innovative approaches to ongoing education, career counseling, talent development, customized training, organizational performance and business engagement. It is a full-service resource for individuals and businesses that provides innovative approaches to training, consulting, and education through customer-driven partnerships. The staff has expertise in 21st century, cutting-edge applications which make the Center for Workforce Development the resource of choice for new and established enterprises. The CWD's varied services can help companies assess, analyze and target cost-effective solutions to meet their specific organizational challenges.

For more information, or to meet with a professional training and performance consultant, call (614) 287-5000 or visit our website at www.cscc.edu/workforce.

Career Services

Hours of Operation:
 Monday – Thursday, 8 a.m. - 5 p.m.
 Friday 9:30 a.m. – 4:30 p.m.
 Location: Nestor Hall 108 & 113 Columbus Campus
 Telephone: 614-287-2782
www.cscc.edu/services/career

Delaware Campus students can make an appointment with personnel at the Columbus Campus office. Visit Student Services in Moeller Hall or call the number above.

Career Services offers a suite of programs and services to currently enrolled students and alumni, including career exploration, student employment, career planning and placement services.

Career Exploration

Career Services offers career counseling for undecided students, including assistance with career decision-making, choosing a major, creating a career exploration plan, redirecting educational plans, and/or planning for a career change. Additionally, Career Services offers:

- Individual Career Counseling
- Career Assessments
- Career Coach
- Major Fairs
- Career Resource Library

Career Web Resources
Career Development Workshops
Un-Workshops
Classroom Presentations
Mentorships and Externships

Career Planning and Placement

Columbus State Community College students and alumni have access to a full range of career planning and placement services, including:

Career Quest (online job/career management system)
Career Fairs
Recruitment Information Tables
Career Planning Workshops
Internships
Resume and Cover Letter Assistance
Career Search Materials
Interviewing Tips
Career Connections with Area Employers

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 a) enrollment level at the college, and b) whether the student was awarded Federal Work Study as a portion of their Financial Aid. Student Employment services include:

Job Search (on campus and off-campus)
Job Postings
Advising on Federal Work Study Eligibility
Resume Review
Interview Coaching
Professional Development and Training

To access career resources available through the Department of Career Services, current students and alumni can visit Nestor Hall, Room 108, during posted hours of operation or call 614-287-2782 to make an appointment.

For more information, visit the Career Services webpage, www.csc.edu/services/career.

The Ohio Small Business Development Center

614-287-5294

The Ohio Small Business Development Center (SBDC) at Columbus State Community College is a business partner and so much more. SBDC provides entrepreneurial development assistance and high-end business consulting to start-up and existing small business owners. The SBDC office is located in the Goodale Center at the Electrical Trades Center, 947 Goodale Blvd., Columbus, Ohio. The SBDC provides consulting and training throughout nine counties in central Ohio. Consulting services are offered at “no cost” to the client and all services are provided on a nondiscriminatory basis.

The Ohio SBDC at Columbus State is unique among Ohio’s 39 centers. It is the only district in Ohio that has centralized services of the SBDC, as well as centers specializing in manufacturing, technology, Latino, and international trade, which provides consulting as well as workshops, seminars and conferences.

New and emerging entrepreneurs can tap the SBDC, an affiliate of the Center for Workforce Development, for its business expertise. The SBDC offers one-on-one consulting, networking programs, business-related classes and a familiarity with funding resources.

Manufacturing and Technology Small Business Development Center

The Manufacturing and Technology Small Business Development Center (MTSBDC) provides specialized assistance and high-end business consulting to manufacturers, technology-based companies like R&D or testing firms, as well as to individual inventors. In addition to core SBDC services, some MTSBDC specialized services include product design, prototype development, intellectual property strategies and research, market research, focus group sessions, licensing, and manufacturer partnering. The program utilizes experts and facilities from Columbus State Community College, Ohio’s colleges and universities, and federal research facilities.

International Trade Assistance Center

The International Trade Assistance Center (ITAC) provides consulting and advising in international trade and international business and logistics. Specific services include developing export strategies; preparing products or services for export; international legal considerations; product shipping, pricing, quotation and terms; methods of payment; financing export transactions; business travel abroad, and selling overseas.

For more information on any SBDC, SBDC Latino, MTSBDC, or ITAC activity, call 614-287-5294 or visit www.SBDC.csc.edu.

Student Safety and Parking Information



Columbus State Police Department

COLUMBUS CAMPUS

Location: Delaware Hall 047

Telephone: 614-287-2525

Available: 24 hours a day, 7 days a week

Emergencies – Dial 911

DELAWARE CAMPUS

Location: Administration Building, Room 133-A

Telephone: 614-287-2525

Emergencies – Dial 911

Police, Environmental Health, Security, Special Services and Parking Enforcement

The Columbus State Community College Police Department, Delaware Hall 047, is responsible for law enforcement, parking enforcement, safety, emergency management, crime prevention and security, and access to facilities. Columbus State Community College Campus Police Officers, along with Security Specialists, provide law enforcement and security staffing. Additional 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.

Staffing

The Columbus and Delaware campuses are staffed by Columbus State Community College Campus Police Officers and Security Specialists.

The Police Department is centrally located on the Columbus Campus in Delaware Hall Room 047. The department is staffed 24 hours a day, seven (7) days a week. Columbus State Campus Police Officers are certified by the Ohio Attorney General's Office, Ohio Peace Officers Training Council and have full arrest authority, granted by the Ohio Revised Code, Section 3345.04. On the Delaware Campus, the Police Department Office is in the Administration Building, Room 133-A. The Administration Building is on the Winter Road side of the campus. The Police Department provides the following services:

- Crime prevention education and patrol of campus
- Investigation of crimes, threats, harassment, disruptive or offensive actions, and disorder
- Investigation of forced entry, and theft or vandalism, and other criminal activity
- Security escort (call 614-287-2525)
- First aid
- Enforcement of state laws and college policies
- Timely warnings and emergency alerts.

The Police Department is responsible for the Clery Crime Statistics and Information (Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act), United States Code

20 U.S.C. 1092 (f), and the Annual Security Report, which is produced by the department's Project Specialist, in collaboration with a cross campus Clery Compliance Committee.

Campus Hours

Columbus Campus: General hours are **7:00 a.m. to 11:00 p.m., Monday – Friday**. There are varying class hours on weekends and some holidays. Buildings generally close at **6:00 p.m. on weekends** except for special events. Classes may be delayed or canceled. Check the college website, email, and local media for any changes due to weather or emergencies. Rave emergency text alerts will also be sent to students and employees who have registered their cell phones.

Delaware Campus Hours and Information

The Delaware Campus is located at 5100 Cornerstone Blvd., Delaware, Ohio (south of the City of Delaware). Normal operating hours are **Monday – Friday 7:00 a.m. to 11:00 p.m. and Saturday 8:00 a.m. to 4:00 p.m.** The Delaware Campus is staffed by Columbus State Police Department personnel during Delaware Campus hours of operation.

Blue-light phones in Moeller Hall and in the parking lot connect directly to the Police Department Communications Center. Criminal acts, accidents, suspicious behaviors, or emergencies must be reported to the Columbus State Police Department at 614-287-2525. Crime tips can be sent by text to 67283 from your cell phone. In the text, type CSCCTIP and enter a space. Everything after the space will be sent as your tip.

Clery Campus Warnings

Emergency Notification

To warn the campus community of a significant critical incident, which represents a sustained and impending life or property threat across the college, the Police Department administration, Communications Center technicians, the Support and Preparedness Coordinator, President, Senior Vice President of Business and Administrative Services, and Vice President of Enrollment Management and Student Services are authorized to issue an immediate warning without an unreasonable delay to allow the campus community to take immediate precautions. Warnings can be issued through public address systems, email, media, and other appropriate emergency message systems. Students and employees are strongly encouraged to register their cell phones for text alerts.

Timely Crime Warning

To promote safety and prevent additional crimes, the Police Department administration will warn the campus community of certain crimes as specified by the Clery Law when those crimes represent a serious and continuing danger to the campus community. Those crimes include: 1) murder, 2) negligent manslaughter, and non-negligent manslaughter 3) forcible rape, 4) forcible sodomy, 5) sexual assault, 6) forcible fondling-with an object 7) incest, 8) non-forcible statutory rape, 9) domestic violence, 10) dating

violence, 11) stalking, 12) robbery, 13) aggravated assault, 14) burglary, 15) motor vehicle theft, 16) arson, and 17) hate crime. Issuing a timely crime warning is decided on a case-by-case basis by the Police Department administration after considering all the facts surrounding the crime. Some of these 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 warning may be issued through email, texts, media, or other appropriate message system. The Columbus State RAVE text alert system is the primary mode for emergency notifications.

Rave Emergency Text Messaging

Columbus State Community College has contracted with Rave Mobile Safety for emergency text messaging services adding to the college's existing systems used to notify students and employees. The Rave Emergency Text Messaging system will be used to send both Emergency Notifications and Timely Crime Warnings to quickly inform our students and employees.

Rave Guardian

Columbus State Community College has contracted with Rave Mobile Safety for their Rave Guardian service. This service has two elements that enhance already existing safety services for students and employees. The first element of Rave Guardian is the Timer Mode. This element acts as a virtual security escort where students and employees can register their phone in advance so they can dial Rave Guardian on their cell phone using a four digit PIN, set a timer with an estimated time that it will take for them to reach their destination while on campus, and leave a message that is recommended to include their starting point, destination, path of travel, and clothing for easier identification by campus police should they need assistance. Once activated, the timer will send reminders to the student when their timer is nearing its end and should the timer expire before the student de-activates it at their destination, the Rave Guardian terminal in the Police Department Communications Center sounds an alarm, showing the communication technician that person's profile so the technician can call the individual for a wellness check.

The other element of Rave Guardian is the Immediate Assistance mode that allows students and employees to store Rave Guardian's Immediate Assistance number in their phone to be dialed in situations when they feel uncomfortable or think they may be in danger. This element, when initiated, causes the Rave Guardian terminal to go into alarm and immediately calls the Police Department Communications Center so the caller can speak directly to a communication technician to have a police officer come to their assistance. For emergencies, call 911.

Reporting a Crime, Accident, Fire, or Emergency

If an emergency exists, immediately call 911, then the Police Department Communications Center at 614-287-2525. Crime tips can be texted to 67283 from your cell phone. In the text, type CSCCTIP and enter a space. Everything after the space will be sent as your tip.

Criminal acts, accidents, medical emergencies, suspicious behaviors, or other emergencies must be reported to the Police Department. You can call the Police Department, visit in-person on the Columbus Campus at Delaware Hall Room 047, activate an emergency phone, or you can call the local police agency by dialing 911. Be prepared to give the Communications Center the following information:

- Nature of emergency, e.g., fire, injury, illness
- Exact location of the emergency
- Description of suspicious activity
- Your name and a call back phone number.

Student Housing

Columbus State is a nonresidential college.

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; however, these cameras are not routinely monitored.

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. Fire suppression systems include: Dry chemical systems used in kitchen areas (class A-B-C-F engineered systems and portable fire extinguishers); Wet system used in science labs (class A-B-C-or D portable fire extinguishers); Wet system, Pre-Action system, Anti-freeze loop system, and Dry system used in academic buildings (Class A-B-C-D); Clean Agent fire suppression system used in computer server rooms (Class ABC, Clean Agent, or Carbon Dioxide portable extinguisher). 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 individual must take responsibility for his/her own safety, assisting others as possible, especially people with disabilities. For more information, visit the Columbus State Police Department website: <http://www.csc.edu/services/publicsafety/> and select the "Emergencies" link.

The Police Department, Support and Preparedness Coordinator maintains the College Emergency Operation Plan and assists other departments with emergency response guidelines and annual drills.

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 exits from

any classroom, building, or facility on the campus. Evacuation maps indicating exits are clearly posted in campus buildings. Faculty should note the presence of students with disabilities and discuss evacuation procedures. **Stairwells are the point of rescue for people with disabilities, who will be assisted in evacuating the building by emergency personnel.**

At the first indication of a building evacuation, people with disabilities should go to the stairways, which will be accessed by emergency personnel who will assist them. **Do not enter the elevators** during an emergency unless assisted by uniformed Police Department or emergency personnel.

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 pull station alarm and proceed with emergency evacuation.

Exit immediately to the nearest emergency fire exit. If inaccessible, use an alternate emergency exit.

Notify Police Department personnel of anyone unable to evacuate.

Evacuate to a distance of **500 feet** from the building, which allows others to exit quickly and provides access for emergency equipment and/or personnel. If you can do so safely, take personal items such as keys, bags, cell phone, and medications with you. **DO NOT** re-enter unless directed to do so by emergency personnel.

Classes may be delayed or canceled. Check the college website, email, emergency text system, and local media.

Crime Prevention Tips

- Students should maintain control over book bags, books, laptop computers, cell phones, portable electronic devices, and all personal property, whether in class, at meals, or socializing.
- Students should evaluate what is actually needed daily and limit what they bring to campus.
- Valuables should be secured out of view in the trunk of your vehicle.
- Only known/trusted individuals should be asked to watch over a student's personal items, even for a short time.
- Students should record/photograph serial numbers on valuable possessions to make identification of stolen and recovered items easier.
- Students should always be aware of their surroundings.
- Students with safety/security concerns can contact Columbus State Police Department personnel at 614-287-2525 or text crime tips to 67283 from their cell phone. In the text, type CSCCTIP and enter a space. Everything after the space will be sent as the tip.
- If each student does his/her part to impact safety, everyone's college experience will be more secure.
- More crime prevention ideas are available at the Columbus State Police Department.

If You Are the Victim of a Crime

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 campus police at 614-287-2525 (or local police agency at 911). If at all possible, do not leave the area until you have spoken with a police officer about the incident; leaving consumes valuable time. Your safety is the primary concern; 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** and license plate number. Report the direction of travel.
- **Preserve evidence.** Do not touch or move anything. In case of sexual assault, do not launder clothing or take a shower if you are the victim. There may be valuable transfer evidence on your clothing or body.
- Victim counseling is available. (See Victim Counseling below.)

Victim Counseling

Columbus Campus: Contact **614-287-2818** or <http://csc.edu/services/counseling/>

Counseling Services can help with mental health issues, such as sexual assault, depression or stress. They also can help students suffering from substance abuse or alcohol problems. Personal counseling services are available by appointment. Stop by the office (Nestor Hall 010) or call 614-287-2818 to schedule an appointment.

Missing Persons

In the event a person should become missing from campus, the Police Department should be notified immediately. A campus police officer will respond and gather information and relay it to other Police Department 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 family will be advised to contact that agency as well. The Columbus State Police Department will assist the investigating agency as requested by that agency.

Clery and College Crime Statistics

Clery crime statistics, annual security report, warnings, crime logs, and emergency information, are available at <http://csc.edu/Publicsafety/cucr>.

The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act, codified at 20 USC 1092 (f), is a federal law that requires colleges and universities to disclose certain timely and annual information about campus crime and security policies. Columbus State Community College Police Department crime statistics and crime log can be found online at: <http://www.csc.edu/services/publicsafety/crime-statistics.shtml>.

Notification about Sex Offenders

Ohio's Electronic Sex Offender Registration and Notification

system is known as eSORN. The Columbus State Police Department provides a link to the Ohio Attorney General's website for sex offenders: [eSORN-Electronic Sex Offender Registration and Notification Ohio Database](#)

MOU Disclosure for Criminal Investigation

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

Classroom Safety Committee

The Columbus State Community College Classroom Safety Committee, which is composed of faculty and staff, was formed as a result of the Faculty Labor Agreement. The purpose of the committee is to identify and propose solutions to enhance classroom safety.

Campus Safety Committee

Whereas the Classroom Safety Committee specifically focuses on classroom safety measures, the Campus Safety Committee provides "a forum for the college community to monitor, report, and educate employees and students about health and safety awareness." It consists of staff, faculty, Human Resource, Facilities Management, and Police Department personnel. The committee annually reviews the employee safety manual, conducts safety walk-throughs to identify and resolve potential hazards, and promotes proactive health and safety techniques.

Children on Campus

Children 14 years of age and under must be accompanied and attended by an adult while on campus. Children are not to be taken into classrooms unless authorized by the instructor in advance.

Children will not be left unattended in automobiles.

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 at the Veterinary Technology Department. Persons wishing to bring a non-service animal on campus must complete a Miscellaneous Animals on Campus form at the Police Department. Completed form and documentation must be returned to Veterinary Technology at least three weeks prior to the date the animal will be on campus. If approved to bring a non-service animal on campus, the owner/handler must have the form with them at all times when on campus.

Lost and Found Items

In accordance with Columbus State Community College Procedure No. 13-11 (E) (I), the collection and disposal of lost and found items of value is the responsibility of the Police Department. Items will be retained and periodically disposed of in accordance with the Ohio Revised Code and departmental procedures.

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, and other electronics, checkbooks, credit cards or cash. These items will be placed in the property room for safe keeping. Other accepted items include backpacks containing valuables, prescription medications, textbooks, and other items deemed appropriate by a supervisor. For sanitary reasons, **clothing items are not accepted** into Lost and Found.

Delaware Campus Lost and Found Property

All property will remain at the Delaware Campus for approximately seven (7) 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.

Claiming Lost Property

All property must be claimed in the Police Department Office on the Columbus or the Delaware Campus unless otherwise approved by a supervisor. Property will only be released to the owner. To claim property, a valid Cougar ID, driver's license, or state ID must be presented to verify the identity of the owner. Lost property can be claimed at the Police Department on the Columbus Campus (Delaware Hall 047) between 9 a.m. and 5 p.m., Monday – Friday.

ID Cards

Student ID cards are made by the Police Department at the Columbus Campus, Monday – Friday from 10:00 a.m. to 6:00 p.m. To obtain a student ID card, student fees must have already been paid. **Allow two weeks after payment for processing before trying to obtain the ID.** The student should bring a paid receipt to the Police Department Communications Center for verification of payment and have his/her driver's license or state-issued ID card with them. Fees may be paid in the Cashiers and Student Accounting Office in Rhodes Hall or online through the college website. The Police Department does not process any cash or credit transactions.

Student Fingerprinting

Fingerprinting is restricted to Columbus State Community College business purposes only. The service is provided to meet the legal requirements of academic programs, service programs, and licensure. Fingerprinting is done by the Police Department in Delaware Hall 047, Monday – Friday, from 10:00 a.m. to 6:00 p.m.

To be fingerprinted at Columbus State, the individual must bring the following items:

- 1) Applicant's valid driver's license or state-issued ID;
- 2) Social Security Card or letter from the Social Security Administration containing individual's Social Security Number;
- 3) Appropriate form from program of study (obtained from the program department); and
- 4) Receipt showing proof of payment.

If applicant has no driver's license, he/she can obtain an Ohio ID card by contacting the State of Ohio, Bureau of Motor Vehicles or local Deputy Registrar's Office. Applicant will need two

documents, such as a birth certificate and Social Security Card. If under 18 years of age, applicant MUST have parent/legal guardian accompany him/her to sign for the card.

Emergency Phone Locations

Emergency phones are strategically located in major parking lots (including the garage), buildings, and elevators. Parking lot phones can be located by looking for a blue light on top of the phone standard (pole). When the phone is activated, the light will flash to alert Police Department personnel of the phone location. The system also notifies our Police Department Communications Center of the location of the activated phone.

Building phones are affixed to interior corridor walls. Emergency phones are speaker/microphones. The phone serves as a speaker and microphone so caller can hear the Police Department Communications Technician and also reply directly to the Technician.

Campus Crisis Response Crisis Intervention (CIT)

The Police Department established its Crisis Intervention Training in 2004. Designated officers receive 40 hours of initial training in areas of mental health issues from the Columbus Police Department's CIT (Crisis Intervention Team) Unit and Net Care Services. Officers assist in situations involving an individual in crisis who needs rapid, on-scene, assistance from someone trained in dealing with such issues.

Student Behavioral Intervention Team (BIT)

The Columbus State Behavioral Intervention Team (BIT) is a multi-disciplinary assessment team that responds to severely disruptive, threatening, or distressed students on campus. The primary goal of the team is to monitor and assess student behavior to determine whether a student poses a serious risk of harm to him/herself or the campus community. The team is comprised of representatives from the Dean of Student Life Office, Student Conduct, Counseling Services, Disability Services, and the Police Department. If you experience any concerning student behavior, please contact the BIT for consultation at 614-287-2117. If you are in an emergency and need help immediately, call 911 and then the Columbus State Police, 24/7 at 614-287-2525.

Communications Center

The Communications Section is staffed by non-sworn members of the Police Department. Some of the duties performed by the Communications Technicians include: central monitoring of campus alarm systems, customer service, issuance of ID cards for students and staff, answering telephone calls for service, and dispatching appropriate resource(s) to the scene, conducting vehicle registration, operator license checks, and conducting wanted-persons checks via the Law Enforcement Automated Data System (LEADS) computer.

Safety and Security

Safety and Security handles a myriad of functions. Members provide non-police supplemental patrol of the campus. They have no arrest authority. Safety and Security consists of five specialty areas: 1) Parking Enforcement and Special Services, 2) Access Control, 3) Life and Property Alarm Systems, 4) Environmental Health and Safety, and 5) Emergency Management.

Programs of Study and Course Descriptions



General Education Goals

Central to the mission of Columbus State Community College is the provision of General Education studies for all degree programs. General Education comprises the measurable knowledge and skills that serve as the foundation for success in society and in one's discipline, vocation, and life. Columbus State Community College's General Education Goals are an integral part of the curriculum and central to the mission of the college. The faculty at Columbus State Community College has determined that these goals include the following competencies:

Critical Thinking

Critical thinking involves recognizing, analyzing, and defining problems, drawing logical, well-supported conclusions and testing them against relevant criteria and standards. Critical thinking also includes examining issues by identifying and challenging assumptions (including one's own), developing alternative solutions or strategies, and evaluating practical and ethical implications.

Effective Communication

Effective communication involves writing, speaking, or communicating using language appropriate to the audience, technology, and purpose. Effective communication also includes receiving information/listening actively with understanding, demonstrating college-level reading comprehension, and writing in Standard English.

Community and Civic Responsibility

Community and civic responsibility involves collaborating and interacting effectively with others and identifying individual and group roles. Community and civic responsibility also includes recognizing social responsibilities, ethics, and individual rights in a democratic society. Other elements include recognizing social diversity, including contributions, traditions, cultures, lifestyles, and/or values of others.

Quantitative Literacy

Quantitative literacy involves performing mathematical computations using appropriate methods to arrive at accurate results. Quantitative literacy also includes analyzing, interpreting, and explaining the results of computations, including graphs, charts, tables, or statistical data.

Scientific and Technological Effectiveness

Scientific and technological effectiveness involves differentiating between scientific and nonscientific methods of inquiry and using scientific knowledge in the analysis of civic and environmental issues. Scientific and technological effectiveness also includes integrating technology appropriate to one's vocation or discipline. Other elements include recognizing the impact of science and technology on society and how scientific and technological principles are built and used in the modern world.

Information Literacy

Information literacy involves defining the information needed to accomplish a specific purpose and accessing, analyzing, synthesizing, and incorporating selected information effectively. Information literacy also includes evaluating information critically and drawing from a variety of perspectives and sources. Other elements include the ethical and legal use of information.

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 in the Transfer Database at <http://www.csc.edu/academics/transfer/>. Click on "Search Transfer Programs." Within many of the technologies, short-term certificate programs are offered which qualified students can complete in less than two years.

Arts and Sciences/Transfer Programs

Associate of Arts

Associate of Science

The Ohio Transfer Module

The Associate of Arts and Associate of Science degrees are specifically designed to allow for the transfer and application of all 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 advanced physics, chemistry, mathematics, and engineering.

Agreements have been developed with public and private four-year partners which guarantee admission and the application of all 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 in the Transfer Database at <http://www.csc.edu/academics/transfer/>. Click on "Search Transfer Agreements".

Completion of the Associate of Arts and Associate of Science degrees at Columbus State ensures completion of the Ohio Transfer Module. This guarantees the application of a minimum of 37 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. Certified TAGs or pre-major guides are available in Advising Services or from the Dean of Arts and Sciences.

Graduation Requirements Catalog Rights

In order for a student to be considered a candidate for an associate degree, he/she 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 the Ohio Transfer Module and Ohio Transfer Assurance Guides

Graduation Requirements Associate of Arts Degree Associate of Science Degree

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, nontraditional credit, and transfer credit do not apply toward meeting residency credit hour requirements.
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. . 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 in the following lists.
4. All students must file a completed "Petition to Graduate" form

with Records and Registration by the published deadline date for the intended semester of graduation. Refer to page 42 of this catalog for complete details.

Associate of Arts Degree

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.

First Year Experience	1 hr required
COLS 1100 First Year Experience Seminar <i>or</i>	1
COLS 1101 College Success Skills	1

English	3 hrs required
ENGL 1100 Composition I <i>or</i>	3
ENGL 1101 Composition IW	3

Intermediate Composition	3 hrs required
ENGL 2367 Composition II <i>or</i>	3
ENGL 2567 Composition II: Gender & Identity <i>or</i>	3
ENGL 2667 Comp II: American Working Class Identity <i>or</i>	3
ENGL 2767 Comp II: Writing About Science/Technology	3

Mathematics	3 hrs required
Choose one:	
MATH 1116 Math for Liberal Arts <i>or</i>	3
MATH 1130 Business Algebra <i>or</i>	5
MATH 1148 College Algebra	4
OR	

Math for Primary & Middle School Teachers *:	
MATH 1125 Concepts of Math for Teachers I &	5
MATH 1126 Concepts of Math for Teachers II	5
* Both MATH 1125 & 1126 must be completed to fulfill the math requirement	

Historical Study	6 hrs required
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 to 1500	3
HIST 1182 World Civ II since 1500	3
HIST 2223 African-Am Hist I to 1877	3
HIST 2224 African-Am Hist II since 1877	3

Social & Behavioral Sciences	9 hrs required
Part I	
Choose two courses from two different categories:	
Individuals & Groups	
ANTH 2201 World Prehistory	3
ANTH 2202 Peoples & Culture	3
PSY 1100 Introduction to Psychology	3
PSY 2261 Child Development	3
SOC 2210 Sociology of Deviance	3
SOC 2380 American Race & Ethnic Relations	3
Organizations & Politics	
ECON 2201 Principles of Macroeconomics	3
POLS 1100 Intro to American Government	3
POLS 1200 Comparative Politics	3
SOC 1101 Introduction to Sociology <i>or</i>	3
SOC 1500 Intro to Rural Sociology	3

Human, Natural & Economic Resources

ECON 2200 Principles of Microeconomics3
GEOG 2750 World Regional Geography3
GEOG 2400 Economics & Social Geography3
POLS 1300 International Relations3

Part II

Choose one of the following courses or an additional course from Part I.

ECON 1110 Intro to Economics3
PSY 2200 Educational Psychology3
PSY 2325 Social Psychology3
PSY 2331 Abnormal Psychology3
PSY 2340 Human Growth & Development3
PSY 2551 Adolescent Psychology3
SOC 2202 Social Problems3
SOC 2209 Soc. Of Criminal Justice System3
SOC 2309 Law & Society3
SOC 2330 Marriage & Family Relations3
SOC 2410 Soc. Aspects of Criminology3

Literature, Cultures & Ideas, Visual/Performing Arts

6 hrs required

Part I

Choose one course from the following:

Literature

CLAS 1222 Classical Mythology3
ENGL 2201 British Literature I3
ENGL 2202 British Literature II3
ENGL 2220 Intro to Shakespeare3
ENGL 2260 Intro to Poetry3
ENGL 2274 Intro to Non-Western Literature3
ENGL 2276 Women in Literature3
ENGL 2280 The English Bible as Literature3
ENGL 2281 African American Literature3
ENGL 2290 U. S. Literature I3
ENGL 2291 U. S. Literature II3

Cultures & Ideas

CLAS 1224 Classical Civilization: Greece3
CLAS 1225 Classical Civilization: Rome3
CLAS 1226 Classical Civilization: Byzantium3
ENGL 2270 Intro to Folklore3
HUM 1270 Comparative Religions3
PHIL 1101 Intro to Philosophy3
PHIL 1130 Ethics3
PHIL 2270 Philosophy of Religion3

Visual/Performing Arts

HART 1201 History of Art I3
HART 1202 History of Art II3
HART 1260 World Cinema3
HUM 1160 Music & Art Since 19453
MUS 1251 Survey of Music History3
THEA 1100 Intro to Theatre3

Part II

Choose one of the following courses or an additional course from Part I.

ART 1205 Beginning Drawing3
ART 1206 Two Dimensional Design3
ART 1207 Three Dimensional Design3
ART 2275 Beginning Painting3
ENGL 2240 Intro to Science Fiction3
ENGL 2261 Intro to Fiction3
HUM 1100 Intro to Humanities3
THEA 2215 Fundamentals of Script Analysis2
THEA 2230 Intro to Dramatic Literature3

Natural Sciences (Choose two

7 hrs required

One course must have a lab (N = no lab)

Biological Sciences

ANTH 2200 Intro to Bio Anth.N3
BIO 1111 Intro to Biology4
BIO 1112 Human Biology4
BIO 1113 Biological Sciences I4
BIO 1114 Biological Sciences II4
BIO 1125 Plant Biology4
BIO 1127 Environmental Sci. I4
BIO 2215 Intro to Microbiology4
BIO 2232 Human Physiology4

Physical Sciences

ASTR 1141 Life in the Universe N3
ASTR 1161 The Solar System N3
ASTR 1162 Stars & Galaxies N3
ASTR 1400 Astronomy Laboratory1
CHEM 1100 Chemistry & SocietyN5
CHEM 1111 Elementary Chem I4
CHEM 1112 Elementary Chem II4
CHEM 1171 General Chemistry I5
CHEM 1172 General Chemistry II5
CHEM 1200 Intro General/Organic Chemistry5
GEOG 1900 Weather & Climate4
GEOL 1101 Intro to Earth Science4
GEOL 1105 Geology/National Parks N3
GEOL 1121 Physical Geology4
GEOL 1122 Historical Geology4
GEOL 1151 Natural Disasters N3
PHYS 1103 World of Energy N3
PHYS 1200 Alg-Based Physics I5
PHYS 1201 Alg-Based Physics II5
PHYS 1250 Calc-Based Physics I5
PHYS 1251 Calc-Based Physics II5

Additional Requirements to Complete Degree

To complete the Associate of Arts degree, take additional credits to meet the 61 semester hour requirement.

Recommended Elective:

ASC 1190 Critical Thinking for Arts & Sciences (1 hr)

To view the full list of courses that apply to the Associate of Arts degree, go to:

http://www.csc.edu/academics/transfer/aa-requirements.shtml

Associate of Science Degree

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.

First Year Experience

1 hr required

COLS 1100 First Year Experience Seminar or1
COLS 1101 College Success Skills1

English

3 hrs required

ENGL 1100 Composition I or3
ENGL 1101 Composition IW3

Intermediate Composition 3 hrs required

ENGL 2367 Composition II <i>or</i>	3
ENGL 2567 Composition II: Gender & Identity <i>or</i>	3
ENGL 2667 Comp II: American Working Class Identity <i>or</i>	3
ENGL 2767 Comp II: Writing About Science/Technology	3

Historical Study 3 hrs required

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 Civilization I to 1500	3
HIST 1182 World Civilization II since 1500	3
HIST 2223 African-Am History I to 1877	3
HIST 2224 African-Am History II since 1877	3

Social & Behavioral Sciences 6 hrs required
Choose two courses from two different categories:

Individuals & Groups

ANTH 2201 World Prehistory	3
ANTH 2202 Peoples & Culture	3
PSY 1100 Introduction to Psychology	3
PSY 2261 Child Development	3
SOC 2210 Sociology of Deviance	3
SOC 2380 American Race & Ethnic Relations	3

Organizations & Politics

ECON 2201 Principles of Macroeconomics	3
POLS 1100 Intro to American Government	3
POLS 1200 Comparative Politics	3
SOC 1101 Introduction to Sociology <i>or</i>	3
SOC 1500 Intro to Rural Sociology	3

Human, Natural & Economic Resources

ECON 2200 Principles of Microeconomics	3
GEOG 2750 World Regional Geography	3
GEOG 2400 Economics & Social Geography	3
POLS 1300 International Relations	3

Literature, Cultures & Ideas, Visual/Performing Arts 3 hrs required

Choose one course from the following:

Literature

CLAS 1222 Classical Mythology	3
ENGL 2201 British Literature I	3
ENGL 2202 British Literature II	3
ENGL 2220 Intro to Shakespeare	3
ENGL 2260 Intro to Poetry	3
ENGL 2274 Intro to Non-Western Literature	3
ENGL 2276 Women in Literature	3
ENGL 2280 The English Bible as Literature	3
ENGL 2281 African American Literature	3
ENGL 2290 U. S. Literature I	3
ENGL 2291 U. S. Literature II	3

Cultures & Ideas

CLAS 1224 Classical Civilization: Greece	3
CLAS 1225 Classical Civilization: Rome	3
CLAS 1226 Classical Civilization: Byzantium	3
ENGL 2270 Intro 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

HART 1201 History of Art I	3
HART 1202 History of Art II	3
HART 1260 World Cinema	3
HUM 1160 Music & Art Since 1945	3

MUS 1251 Survey of Music History	3
THEA 1100 Intro to Theatre	3

Other options

ENGL 2240 Intro to Science Fiction	3
HUM 1100 Intro to Humanities	3
THEA 2230 Intro to Dramatic Literature	3

Mathematics/Statistics 6 hrs required
Two courses required

Mathematics

MATH 1130 Business Algebra OR	5
MATH 1148 College Algebra	4
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
MATH 2153 Calculus III	5
MATH 2173 Engineering Math B	5
MATH 2174 Linear Algebra & Differential Eq.	5
MATH 2255 Elementary Differential Equations	4
MATH 2366 Discrete Math Structures	5
MATH 2415 Ordinary & Partial Differential Eq.	4
MATH 2568 Linear Algebra	4

Statistics

STAT 1450 The Practice of Statistics	4
STAT 2430 Business Statistics	5
STAT 2450 Intro to Statistical Analysis	4
STAT 2470 Probability & Statistics for Eng./Sci.	4

Natural Sciences 10 hrs required
Two courses must have a lab (^N = no lab)

Biological Sciences

ANTH 2200 Intro to Bio Anth. ^N	3
BIO 1113 Biological Sciences I	4
BIO 1114 Biological Sciences II	4
BIO 1127 Environmental Science I	4
BIO 2215 Intro to Microbiology	4
BIO 2232 Human Physiology	4

Physical Sciences

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 General/Organic Chemistry	5
GEOG 1900 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 Physics II	5

Additional Math or Science
Take one additional course
SELECT FROM:

Mathematics/Statistics

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 2153 Calculus III	5

MATH 2255 Elementary Differential Equations	4
MATH 2568 Linear Algebra	4
STAT 1450 The Practice of Statistics	4
STAT 2430 Business Statistics	5

Biological Sciences

ANTH 2200 Intro to Bio Anth. ^N	3
BIO 1111 Intro to Biology	4
BIO 1112 Human Biology	4
BIO 1113 Biological Sciences I	4
BIO 1114 Biological Sciences II	4
BIO 1125 Plant Biology	4
BIO 2215 Intro to Microbiology	4
BIO 2232 Human Physiology	4
BIO 2263 Human Pathophysiology	3
BIO 2300 Human Anatomy	4

Physical Sciences

ASTR 1161 The Solar System ^N	3
ASTR 1162 Stars & Galaxies ^N	3
CHEM 1111 Elementary Chem I	4
CHEM 1112 Elementary Chem II	4
CHEM1113 Elements of Org/Biochem	4
CHEM 1171 General Chemistry I	5
CHEM 1172 General Chemistry II	5
CHEM1200 Intro Gen/Organic Chemistry	5
GEOG 1900 Weather & Climate	4
GEOL 1101 Intro to Earth Science	4
GEOL 1121 Physical Geology	4
GEOL 1122 Historical Geology	4
PHYS 1200 Alg-Based Physics I	5
PHYS 1201 Alg-Based Physics II	5
PHYS 1250 Calc-Based Physics I	5
PHYS 1251 Calc-Based Physics II	5

Additional Requirements to Complete Degree

To complete the Associate of Science degree, take additional credits to meet the 61 semester hour requirement.

Recommended Elective:

ASC 1190 Critical Thinking for Arts & Sciences (1hr)

To view the full list of courses that apply to the Associate of Science degree, go to: <http://www.csc.edu/academics/transfer/as-requirements.shtml>

Ohio Transfer Policy

Institutional Transfer

The Ohio Board of Regents 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 Board of Regents 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.

Transfer Module

The Ohio Board of Regents’ Transfer and Articulation Policy established the Transfer Module, 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 applied associate degree programs may complete some individual transfer module courses within their degree program or continue beyond the degree program to complete the entire transfer module. The Transfer Module 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 Transfer Module.

Courses for the Transfer Module 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 Transfer Module.

Transfer Module course(s) or the full module completed at one college or university will automatically meet the requirements of individual Transfer Module course(s) or the full Transfer Module 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 Transfer Module at Institution S (sending institution) and then transfers to Institution R (receiving institution) is said to have completed the Transfer Module portion of Institution R’s General Education program. Institution R, however, may have General Education courses that go beyond its Transfer Module. State policy initially required that all courses in the Transfer Module be completed to receive its benefit in transfer. However, subsequent policy revisions have extended this benefit to the completion of individual Transfer Module courses on a course-by-course basis.

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, 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.

Transfer Module

(36-40 hours minimum)

English Composition

College Composition (3 hours required)

ENGL 1100 Composition I (3 hours) or

ENGL 1101 Composition IW (3 hours)

Intermediate Composition (3 hours required)

ENGL 2367 Composition II (3 hours)

ENGL 2567 Comp II Gender & Identity (3 hours)

ENGL 2667 Comp II American Working-Class Identity (3 hours)

ENGL 2767 Comp II Writing About Science/Technology (3 hours)

Mathematics and Logical Analysis

Select a minimum of one course.

Mathematics (3 hours required)

MATH 1116 Math for Liberal Arts (3 hours)

MATH 1130 Business Algebra (5 hours)

MATH 1131 Calculus for Business (6 hours)

MATH 1148 College Algebra (4 hours)

MATH 1149 Trigonometry (4 hours)

MATH 1150 Pre-Calculus (6 hours)

MATH 1151 Calculus I (5 hours)

MATH 1152 Calculus II (5 hours)

MATH 2153 Calculus III (5 hours)

MATH 2255 Elementary Differential Equations (4 hours)

MATH 2568 Linear Algebra (4 hours)

STAT 1450 The Practice of Statistics (4 hours)

STAT 2430 Business Statistics (5 hours)

Biological and Physical Sciences (6 hours required)

Select two courses. At least one must contain a lab (^N = no lab).

Biological Sciences

ANTH 2200^N Introduction to Biological Anthropology (3 hours)

BIO 1101^N Fundamental of Human Anatomy & Physiology (3 hours)

BIO 1111 Introduction to Biology (4 hours)

BIO 1112 Human Biology (4 hours)

BIO 1113 Biological Sciences I (4 hours)

BIO 1114 Biological Sciences II (4 hours)

BIO 1125 Plant Biology (4 hours)

BIO 1127 Environmental Science I (4 hours)

BIO 2215 Introduction to Microbiology (4 hours)

BIO 2232 Human Physiology (4 hours)

BIO 2263^N Human Pathophysiology (3 hours)

BIO 2300 Human Anatomy (4 hours)

HORT 1130 Plant Sciences (3 hours)

Physical Sciences

ASTR 1141^N Life in the Universe (3 hours)

ASTR 1161^N The Solar System (3 hours)

ASTR 1162^N Stars and Galaxies (3 hours)

ASTR 1400 Astronomy Lab (1 hour)

CHEM 1111 Elementary Chemistry I (4 hours)

CHEM 1112 Elementary Chemistry II (4 hours)

CHEM 1113 Elements Organic/Biochemistry (4 hours)

CHEM 1171 General Chemistry I (5 hours)

CHEM 1172 General Chemistry II (5 hours)

CHEM 1200 Introduction to General and Organic Chemistry (5 hours)

ESSH 1101^N Introduction to Environmental Science, Safety, and Health (3 hours)

GEOG 1900 Introduction to Weather and Climate (4 hours)

GEOG 2300^N Introduction to Physical Geography (3 hours)

GEOL 1101 Introduction to Earth Science (4 hours)

GEOL 1105^N Geology and National Parks (3 hours)

GEOL 1121 Physical Geology (4 hours)

GEOL 1122 Historical Geology (4 hours)

GEOL 1151^N Natural Disasters (3 hours)

PHYS 1103^N World of Energy (3 hours)

PHYS 1200 Algebra-Based Physics I (5 hours)

PHYS 1201 Algebra-Based Physics II (5 hours)

PHYS 1250 Calculus- Based Physics I (5 hours)

PHYS 1251 Calculus- Based Physics II (5 hours)

Arts/Humanities (6 hours required)

Choose two courses. One must be historical study.

Historical Study

HIST 1111 European History to 1648 (3 hours)

HIST 1112 European History since 1648 (3 hours)

HIST 1151 American History to 1877 (3 hours)

HIST 1152 American History since 1877 (3 hours)

HIST 1181 World Civilization I to 1500 (3 hours)

HIST 1182 World Civilization II since 1500 (3 hours)

HIST 2223 African-American History I before 1877 (3 hours)

HIST 2224 African-American History II since 1877 (3 hours)

Literature, Culture and Ideas, Visual/Performing Arts:

ARCH 2100 History of Architecture (3 hours)

CLAS 1222 Classical Mythology (3 hours)

CLAS 1224 Classical Civilization: Greece (3 hours)

CLAS 1225 Classical Civilization: Rome (3 hours)

CLAS 1226 Classical Civilization: Byzantium (3 hours)

ENGL 2201 British Literature I (3 hours)

ENGL 2202 British Literature II (3 hours)

ENGL 2220 Introduction to Shakespeare (3 hours)

ENGL 2240 Introduction to Science Fiction (3 hours)

ENGL 2260 Introduction to Poetry (3 hours)

ENGL 2270 Introduction to Folklore (3 hours)

ENGL 2274 Introduction to Non-Western Literature (3 hours)

ENGL 2276	Women in Literature (3 hours)
ENGL 2280	The English Bible as Literature (3 hours)
ENGL 2281	African-American Literature (3 hours)
ENGL 2290	U.S. Literature I (3 hours)
ENGL 2291	U.S. Literature II (3 hours)
HART 1201	History of Art I (3 hours)
HART 1202	History of Art II (3 hours)
HART 1260	World Cinema (3 hours)
HUM 1100	Introduction to Humanities (3 hours)
HUM 1160	Music and Art since 1945 (3 hours)
HUM 1270	Comparative Religions (3 hours)
MUS 1251	Survey of Music History (3 hours)
PHIL 1101	Introduction to Philosophy (3 hours)
PHIL 1130	Ethics (3 hours)
PHIL 2270	Philosophy of Religion (3 hours)
THEA 1100	Introduction to Theatre (3 hours)
THEA 2230	Introduction to Dramatic Literature (3 hours)

Social and Behavioral Sciences

(6 hours required) Choose two courses.

Economics

ECON 1110	Introduction to Economics (3 hours)
ECON 2200	Principles of Microeconomics (3 hours)
ECON 2201	Principles of Macroeconomics (3 hours)

Geography

GEOG 2300	Introduction to Physical Geography (3 hours)
GEOG 2400	Economic and Social Geography (3 hours)
GEOG 2750	World Regional Geography (3 hours)

Political Science

POLS 1100	Introduction to American Government (3 hours)
POLS 1200	Comparative Politics (3 hours)
POLS 1300	International Relations (3 hours)

Psychology

PSY 1100	Introduction to Psychology (3 hours)
PSY 2200	Educational Psychology (3 hours)
PSY 2261	Introduction to Child Development (3 hours)
PSY 2325	Social Psychology (3 hours)
PSY 2331	Abnormal Psychology (3 hours)
PSY 2340	Human Growth and Development (3 hours)
PSY 2551	Adolescent Psychology (3 hours)

Sociology/Anthropology

ANTH 2201	World Prehistory (3 hours)
ANTH 2202	Peoples and Culture (3 hours)
SOC 1101	Introduction to Sociology (3 hours)
SOC 1500	Introduction to Rural Sociology (3 hours)
SOC 2202	Social Problems (3 hours)
SOC 2210	Sociology of Deviance (3 hours)
SOC 2309	Law and Society (3 hours)
SOC 2330	Marriage and Family Relations (3 hours)
SOC 2380	American Race and Ethnic Relations (3 hours)
SOC 2410	Sociological Aspects of Criminology (3 hours)

Conditions for Transfer Admission

1. Ohio residents with associate degrees from state-assisted institutions and a completed, approved Transfer Module 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 a Transfer Module, they will be eligible for preferential consideration for admission as transfer students if they have grade point averages 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 course 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 Transfer Module, 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 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 Transfer Module requirements.

Columbus State Community College Transfer Agreements

Columbus State Community College has transfer relationships with many institutions. Student 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:

The Ohio State University

Franklin University

Ohio University

Otterbein University

Ohio Dominican University

Ohio Wesleyan University

Miami University

Bowling Green State University

Capital 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 the articulation database at <http://www.csc.edu/academics/transfer/>. Click on "Search Transfer Agreements."

Graduation Requirements Associate of Applied Science Degree

Requirements of All Graduates

1. The satisfactory completion of 60 – 73 semester credit hours as required by the particular program.
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. 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 must file a completed "Petition to Graduate" with Records and Registration by the published deadline date of their intended semester of graduation. Refer to page 32 of this catalog for complete details.

General Education Requirements

Each program has a required plan of study (listing begins on page 75). Please refer to the plan of study for each program for the exact courses required to fulfill the 15 semester hours in the following general education categories.

1. Three semester credit hours in English Composition
2. Three semester credit hours in Arts and Humanities
3. Three semester credit hours in Social and Behavioral Sciences
4. Three semester credit hours in Natural and Physical Sciences.
5. Three semester credit hours in Mathematics and Data Analysis.

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. They are listed in the following section, with the listings of technical program requirements.

Technical Studies Requirements

Each technical program requires completion of 30 – 43 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.

Graduation 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 rationale for the A.T.S. program.

The application will then be reviewed and the degree content will be developed by the Office of the Dean of Career and Technical Programs. Upon final approval, the Dean’s Office will identify the faculty advisor(s) or others with whom the student will work for his/her 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 or 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 – 73 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 file a completed “Petition to Graduate” with Records and Registration by the published deadline date of their intended semester of graduation. Refer to page 32 of this catalog for complete details.

Specific Program Requirements

In the next section of the catalog, the requirements for Columbus State’s Programs of Study are listed alphabetically. Students can locate a program of interest and read through the listing of required courses. The first three- or four- alpha identifiers of each course number indicate which department offers the course. A chart in the Course Description Section shows all the departments and their corresponding identifiers.

Academic Programs

ARTS AND SCIENCES DIVISION

Associate of Arts Degree

Associate of Science Degree

CAREER AND TECHNICAL PROGRAMS DIVISION

Associate of Applied Science Degree

Associate of Technical Studies Degree

Certificate Programs

(A.A.S. Degrees unless the A.T.S. degree is indicated or the program title contains the word “certificate”)

BUSINESS AND ENGINEERING TECHNOLOGIES

Accounting

Certificate of Accounting Concentration

(CPA Exam Preparation)

Certificate of Accounting Foundations

Certificate of Internal Auditing

Certificate of Taxation Specialist

Architecture

3D Visualization Certificate

Architectural CAD Drafting Certificate

Architectural Design Certificate

Automotive Technology

Automotive Service Management Major

Ford ASSET Program

TECHLink Program

Automotive Management Certificate

Automotive Service Technician Certificate

Ford Maintenance and Light Repair Certificate

Maintenance and Light Repair Certificate

Master Automotive Service Technician Certificate

Aviation Maintenance Technology

Aviation Maintenance Airframe Certificate

Aviation Maintenance Powerplant Certificate

Business Management

Business Management Major

Entrepreneurship Major

Business Culture & Diversity Certificate

Business Operations Analysis Certificate

Entrepreneurship Certificate

Entrepreneurship Certificate – Automotive

Technology Management

Entrepreneurship Certificate – Hospitality

Entrepreneurship Certificate – Real Estate

Management

Entrepreneurship Certificate – Sport

Management

Foundations of Insurance Certificate

Managing Interpersonal Skills Certificate

Nonprofit Management Certificate

Pre-MBA Certificate

Project Management Certificate

Business Office Administration

Administrative Assistant Major

Medical Administrative Assistant

Bookkeeping Certificate

Office Specialist Certificate

Civil Engineering Technology

Civil Track

Survey Track

Land Surveying Certificate

Surveying Certificate

Computer Science

Game Developer Track

MIS/Project Management Track

Network Administrator Track

Network Security Track

Software Developer Track

Web Developer Track

Business Intelligence Certificate

Cisco Certified Network Administrator

(CCNA) Routing & Switching Certificate

Computer Literacy Certificate

Database Specialist Certificate

Management Information Systems Certificate

Mobile Game Apps Certificate

Network Administrator Certificate

Network Security Certificate

Software Developer Certificate

Construction Management

Building Information Modeling (BIM) Certificate

Estimating/Bidding Certificate

Facility Conservation and Energy Management Certificate

Field Supervision Certificate

Residential Construction Management Certificate

Digital Design and Graphics

Digital Design Certificate

Adobe Illustrator Certificate

Adobe InDesign Advanced Certificate

Adobe Photoshop Advanced Certificate

Digital Painting Certificate

Digital Photography

Basic Digital Photography Certificate

Intermediate Digital Photography Certificate

Advanced Digital Photography Certificate

Black and White Film Certificate

Business of Photography Certificate

Off-Camera Flash Certificate

Basic Photoshop for Photographers Certificate

Intermediate Photoshop for Photographers Certificate

Advanced Photoshop for Photographers Certificate

Electro-Mechanical Engineering Technology

Information Technology Support Technician Major

Electronic Engineering Technology

Engineering Technologies Certificates

Computer Aided Drafting Technician

CNC (Computer Numerical Control) Engineering

Technician

Engineering Assembly Technician

Manufacturing Maintenance Technician

Academic Programs (continued)

Environmental Science, Safety and Health

Health and Safety for Hazardous Waste Operations Certificate
Occupational Health and Safety Certificate
Sustainable Building Certificate
Water/Wastewater Technology Certificate

Finance

Geographic Information Systems

Geographic Information Systems Certificate

Heating, Ventilating and Air Conditioning Technology

Controls Certificate
High Pressure Boiler License Training Program Certificate
Large Commercial Certificate
Residential/Light Commercial Certificate
Test and Balance Certificate

Human Resources Management

Interactive Media

Video Game Art and Animation Track
Digital Video and Sound Certificate

Landscape Design and Management

Landscape Certificate

Marketing

Digital Marketing Major
Retail Management Major
Customer Service Certificate
Digital Marketing Certificate
Electronic Marketing Certificate
Pre-MBA Certificate
Retail Management Certificate
Social Media Certificate

Mechanical Engineering Technology

Quality Assurance Technology

Bioscience Technology Certificate

Real Estate

Appraisal Certificate
Real Estate Broker Certificate
Real Estate Pre-Licensure Certificate
Real Estate Property Management Certificate

Skilled Trades Technology

Apprenticeship Partnership Degree Programs
Associate of Technical Studies Degree in
Construction Trades
Facilities Maintenance Associate Degree
Welding Associate Degree
Facilities Maintenance Certificate
Facilities Module Certificates
Carpentry Module Certificate
Electrician Module Certificate
Plumbing Module Certificate
Welding Module Certificate
Intermediate Pipe & Plate Tig Welder Certificate
Intermediate Pipe I Welder Certificate
Intermediate Pipe II Welder Certificate
Intermediate Welder Certificate

Apprentice Readiness Certificates

Carpenter
Electrician
Plumbing
Sheet Metal

Electrician Apprenticeship

Supply Chain Management

International Commerce Major
Strategic Procurement Major
International Commerce Certificate
LINCS Supply Chain Management Certificates
Strategic Procurement Certificate
Supply Chain Management Certificate

HEALTH AND HUMAN SERVICES

Criminal Justice

Criminal Justice Major
Law Enforcement Major-Academy Track
Law Enforcement Major-Professional Track
Probation & Supervision Major
Basic Peace Offer Certificate
Crime Scene Investigations Certificate
Homeland Security Certificate
Professional Law Enforcement Officer Certificate

Dental Hygiene

Early Childhood Development and Education

Basic Early Childhood Administrators Certificate
Early Childhood Aide Certificate

Emergency Medical Services Technology

Paramedic Major
Emergency Medical Technician (EMT) Certificate
Paramedic Certificate

EMS/Fire Science (A.T.S.)

Fire Science

Professional Major
Firefighter I Certificate
Firefighter II Certificate
Fire & Emergency Services Higher Education Certificate
Fire Inspector Certification
Red Cross Lifeguard & Waterfront Certificate
Rescue Certificate

Health Information Management Technology

Health Data Analyst Post-HIMT Associate's Degree Certificate
Health Information Management Technician Certificate
Medical Coding Certificate

Academic Programs (continued)

Hospitality Management

- Culinary Apprenticeship Major
- Nutrition and Dietetics Major
- Hotel, Tourism and Event Management Major
- Restaurant and Foodservice Management Major
- Restaurant and Foodservice Management Major- Baking and Pastry Arts Track
- Baking Certificate
- Casino Management Certificate
- Meeting and Event Management Certificate

Interpreter Education Program

- American Sign Language/Deaf Studies Certificate

Massage Therapy/Entrepreneurship (A.T.S.)

- Massage Therapy Certificate
- Massage Therapy Advanced Techniques Certificate

Medical Assisting (A.T.S.)

- Medical Assisting Certificate

Medical Imaging

- GXMO Medical Imaging Certificate

Medical Laboratory Technology

- Clinical Laboratory Assisting Certificate

Multi-Skilled Health (A.A.S. and A.T.S.)

- Basic Electrocardiography Certificate
- Health Care Manager Certificate
- Pharmacy Technician Certificate
- Phlebotomy Certificate

Nursing (A.A.S.)

- Practical Nursing Certificate
- Complementary Care Certificate
- Nurse Aide Training Certificate
- Patient Care Skills Certificate
- Registered Nurse First Assistant Certificate
- Train the Trainer Certificate

Paralegal Studies

- Paralegal Studies Certificate (Post Baccalaureate)

Respiratory Care

Social and Human Services

- Advanced Addiction Studies Certificate
- Advanced Developmental Disabilities Certificate
- Advanced Mental Health Certificate
- Chemical Dependency Counselor Assistant Certificate
- Community/Habilitation Assistant Certificate
- Prevention Certificate

Sport and Exercise Studies

- Exercise Science Major
- Exercise Science, Athletic Performance Track
- Physical Education Major
- Physical Education, Coaching Track
- Recreation and Leisure Studies Major
- Sport Management Major
- Wellness and Health Promotion Major
- Exercise Specialist Certificate
- Youth Coaching Certificate

Sterile Processing Technology (A.T.S.)

- Sterile Processing Technology Certificate

Surgical Technology

- Surgical Technology Certificate

Veterinary Technology

Accounting

- Accounting Associate Degree**
- Certificate of Accounting Concentration (CPA Exam Preparation)**
- Certificate of Accounting Foundations**
- Certificate of Internal Auditing**
- Certificate of Taxation Specialist**
- (Bookkeeping: See Business Office Administration)**

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.

Certificate of Accounting Concentration (CPA Exam Preparation)

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.

Certificate of Accounting Foundations

The Certificate of Accounting Foundations provides the student with the fundamental accounting skills necessary to pursue entry-level and clerk positions. In addition, the courses in the certificate can be the gateway to the accounting associate degree program at Columbus State, which could lead to a transfer to a bachelor degree program at a four year institution. This certificate is also beneficial for entrepreneurs who need the knowledge of basic accounting processes and statements in their own small business.

Accounting Associate Degree

COURSE	CR
Semester 1	
ACCT 1211 Financial Accounting	3
BOA 1102 Excel I	2
COLS 1100 First Year Experience Seminar	1
ECON 2200 Principles of Microeconomics	3
ENGL 1100 Composition I	3
HUM XXXX Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS	15
Semester 2	
ACCT 1212 Managerial Accounting	3
ACCT 2232 Federal Taxation I	3
FMGT 2201 Corporate Finance	3
LEGL 2064 Legal Environment of Business	3
STAT 1350 Elementary Statistics	3
TOTAL CREDIT HOURS	15
Semester 3	
ACCT 2211 Cost Accounting	3
ACCT 2250 Intermediate Accounting I	4
ACCT XXXX Technical Elective	3
BMGT 1102 Interpersonal Skills	2
SBS XXXX Refer to approved GE - SBS list	3
TOTAL CREDIT HOURS	15

Semester 4	
ACCT 2241 Auditing	4
ACCT 2252 Intermediate Accounting II	4
ACCT 2299 Accounting Capstone or Accounting Practicum	3
BOA 1117 Payroll	1
NAT XXXX Refer to approved GE - NAT list	3
TOTAL CREDIT HOURS	15
TOTAL DEGREE CREDIT HOURS	60

Technical Electives

The following courses are approved for technical elective requirements:

ACCT 1400 Accounting Systems	3
ACCT 1500 Accounting Documentation	1
ACCT 2231 State & Local Taxation	3
ACCT 2236 Federal Taxation II	3
ACCT 2239 Advanced Taxation	3
ACCT 2240 Tax Practice	3
ACCT 2258 Advanced Accounting	3
ACCT 2266 Public Administration/Fund Accounting	3
ACCT 2275 Fraud Examination	3
ACCT 2281 Sarbanes Oxley	3
ACCT 2291 Internal Auditing	3
ACCT 2293 Operational Auditing and Special Topics	3
BOA 1122 QuickBooks	2

Approved General Education (GE) List

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT

(SELECT ONE)		CR
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	Introduction to Biology.....	4
BIO 1112	Human Biology.....	4
BIO 1113	Biological Sciences I.....	4
BIO 1114	Biological Sciences II.....	4
BIO 1125	Plant Biology.....	4
BIO 1127	Environmental Science I.....	4
BIO 2215	Introduction to Microbiology.....	4
BIO 2232	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 Physics II.....	5

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)

		CR
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/Non-Amer to 1500.....	3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500.....	3
HIST 2223	African-American History I: 1451-1876.....	3
HIST 2224	African-American History II: 1877-Present.....	3
HUM 1100	Introduction to Humanities.....	3
HUM 1270	Comparative Religions.....	3
MUS 1251	Survey of Music History.....	3
PHIL 1101	Introduction to Philosophy.....	3
PHIL 1130	Ethics.....	3

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT

(SELECT ONE)		CR
ANTH 2202	Introduction to Cultural Anthropology.....	3
GEOG 2400	Economic and Social Geography.....	3
POLS 1100	American Government.....	3
SOC 1101	Introduction to Sociology.....	3
PSY 1100	Introduction to Psychology.....	3

Certificate of Internal Auditing

The Certificate of Internal Audit program develops the competencies required for today's internal auditor or the business professional involved with, or responsible for, related issues. The topics covered in this certificate program include Sarbanes-Oxley compliance, internal auditing, operational auditing, fraud control, and fraud prevention.

Certificate of Taxation Specialist

The Certificate of Taxation Specialist was developed to provide students with an understanding of the fundamental concepts of practicing in all areas of taxation. Students will obtain the needed tools and skills necessary to be employable within a tax firm or pursue their own tax preparation practice. This certificate will also allow students to pursue this specialized area of employment opportunity without the extensive coursework that is required in the associate degree.

Traditional Classes and Online/Distance Learning Choices

The Accounting program offers both traditional and online/distance learning (DL) options for students. The traditional learning experience provides students with high quality instruction in small classes on Columbus State's campuses or at one of our regional learning centers. Accounting also offers online/distance learning courses, which provide the same high quality learning as traditional instruction and provide the flexibility of completing coursework online.

Upon completion of the Associate of Applied Science Degree in Accounting, the graduate will be able to:

- Apply generally accepted accounting principles to measure, process, and communicate financial information about a business entity
- Use accounting computer software to maintain accounting records and prepare financial statements
- Prepare flowcharts and evaluate the internal controls of accounting processes
- Apply theory and practical applications to budgeting, break-even analysis, product costing, profit planning, and cost analysis for decision making purposes
- Use financial statements for decision making purposes; make comparisons and interpret the results of financial statement analysis
- Explain the purpose and standards for Audit and Assurance Services as well as the procedures used in applying auditing standards while conducting an independent audit
- Research the rules contained in the AICPA Code of Professional Conduct and apply the rules to professional accounting scenarios
- Apply FASB accounting standards to solve accounting problems. 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.



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.

Certificate of Accounting Concentration (CPA Exam Preparation)

COURSE	CR
Semester 1	
ACCT 1211 Financial Accounting	3
ACCT 1212 Managerial Accounting	3
LEGL 2064 Legal Environment of Business	3
TOTAL CREDIT HOURS	9
Semester 2	
ACCT 1400 Accounting Systems	3
ACCT 2250 Intermediate Accounting I	4
ACCT 2211 Cost Accounting	3
TOTAL CREDIT HOURS	10

Summer Semester	
ACCT 2252 Intermediate Accounting II	4
ACCT 2232 Federal Taxation I	3
TOTAL CREDIT HOURS	7
Semester 3	
ACCT 2236 Federal Taxation II	3
ACCT 2241 Auditing	4
TOTAL CREDIT HOURS	7
Semester 4	
ACCT 2258 Advanced Accounting	3
ACCT 2266 Public Administration/Fund Accounting	3
TOTAL CREDIT HOURS	6
TOTAL CERTIFICATE CREDIT HOURS	39

Certificate of Accounting Foundations

Semester 1	
ACCT 1211 Financial Accounting	3
TOTAL CREDIT HOURS	3
Semester 2	
ACCT 1212 Managerial Accounting	3
ACCT 1400 Accounting Systems	3
TOTAL CREDIT HOURS	6
Semester 3	
ACCT 1500 Accounting Documentation	1
ACCT 2250 Intermediate Accounting I	4
TOTAL CREDIT HOURS	5
TOTAL CERTIFICATE CREDIT HOURS	14

Certificate of Internal Auditing

COURSE	CR
Semester 1	
ACCT 2275 Fraud Examination	3
ACCT 2281 Sarbanes Oxley	3
TOTAL CREDIT HOURS	6
Semester 2	
ACCT 2291 Internal Auditing	3
ACCT 2293 Operational Auditing	3
TOTAL CREDIT HOURS	6
TOTAL CERTIFICATE CREDIT HOURS	12

Certificate of Taxation Specialist

COURSE	CR
Semester 1	
ACCT 2231 State & Local Taxation	3
ACCT 2232 Federal Taxation I	3
TOTAL CREDIT HOURS	6
Semester 2	
ACCT 2236 Federal Taxation II	3
LEGL 2064 Legal Environment of Business	3
TOTAL CREDIT HOURS	6
Semester 3	
ACCT 2239 Advanced Taxation	3
BOA 1122 QuickBooks	2
TOTAL CREDIT HOURS	35
Semester 4	
ACCT 2240 Tax Practice	3
TOTAL CREDIT HOURS	3
TOTAL CERTIFICATE CREDIT HOURS	20

Architecture

Architecture Associate Degree 3D Visualization Certificate Architectural CAD Drafting Certificate Architectural Design Certificate

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 Technologies 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/humanities, natural/physical sciences, and social/behavioral sciences.

Upon completion of the Associate Degree in Architecture, the graduate will be able to:

- 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.
- Use current CAD (Computer Aided Drafting) and 3D modeling software to prepare architectural drawings and other applicable graphics.
- Understand, interpret, organize, and generate architectural drawings.
- Understand and be familiar with the relationship and coordination implications between architectural and engineering drawings (site, structural, electrical, lighting, mechanical and plumbing).
- Research materials, consult with industry experts, and use CSI (Construction Specification Institute) standards relevant to the preparation of architectural drawings and specifications.
- Use applicable building and zoning codes relevant to the preparation of architectural drawings and specifications.
- Understand the basic principals of detailing building structures utilizing wood, steel, and concrete manuals and handbooks.

- Understand and be familiar with project coordination, total project development, and professional practice.
- 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.
- 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.

3D Visualization Certificate

This post-associate certificate program will provide students with advanced coursework in 3D modeling, rendering and animation. Current modeling software such as Autodesk 3ds Max and form Z will be used in the courses.

This certificate 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: associate degree or higher in a related field of study, completion of 50 or more credit hours within a related field of study, or permission from a faculty member.

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.

NOTE: The ARCH 1110 manual drafting prerequisite may be waived for those individuals with prior manual drafting or other related work experience. Please see an Architecture advisor for permission to waive the manual drafting prerequisite.

Architectural Design Certificate

This certificate program will first provide the student with an introduction to 3D modeling and rendering using the software program called SketchUP. This software is used heavily within Architectural firms around the country. The student will then proceed to take an introductory course in architectural design and then finish the certificate by completing an advanced course in architectural design. Please see an Architecture advisor

for permission to waive necessary courses in order to register for the design courses. Depending upon the student's current knowledge of Architecture, additional coursework may be recommended prior to beginning the certificate.

*Sustainable Building Certificate

*See Environmental Science, Safety and Health for information and plan of study.

Architecture Associate Degree

COURSE	CR
Semester 1	
MATH 1113 Technical Mathematics or	
MATH 1148 College Algebra	4
CIVL 1120 Construction Material Science	3
CMGT 1121 Construction Drawings	3
ARCH 1111 Manual Drafting	4
COLS 1100 First Year Experience Seminar	1
TOTAL CREDIT HOURS	15
Semester 2	
CIVL 1320 Statics and Strengths of Materials	3
ARCH 1114 AutoCAD 2D	4
ARCH 1214 Electricity & Lighting	2
ARCH 1232 Building Codes	2
ARCH 1250 Enclosure Materials	2
TOTAL CREDIT HOURS	13
Summer Semester	
NAT XXXX Refer to approved GE - NAT list	3
ENGL 1100 Composition I	3
SBS XXXX Refer to approved GE - SBS list	3
ARCH 1274 Revit Architecture I	2
ARCH 1276 SketchUp	2
TOTAL CREDIT HOURS	13
Semester 3	
ESSH 2282 Sustainable Building Strategies	2
ARCH 2100 History of Architecture	3
ARCH 2221 Design Studio I	4
ARCH 2266 Working Drawings	4
TOTAL CREDIT HOURS	13

Semester 4	
HUM XXXX Refer to approved GE - HUM list	3
XXXX XXXX Basic Elective	2
ARCH 2237 Structures	3
ARCH 2270 Professional Practice	3
ARCH XXXX Technical Elective	1
TOTAL CREDIT HOURS	12
TOTAL DEGREE CREDIT HOURS	66

Technical Electives

The following courses are approved for technical elective requirements:

ARCH 1115 MicroStation 2D	2
ARCH 2223 Design Studio II	4
ARCH 2240 AutoCAD 3D	2
ARCH 2242 3D Visualization I	3
ARCH 2243 3D Visualization II	3
ARCH 2275 Revit Architecture II	2
ARCH 2282 Sustainable Design	2
ARCH 2283 Sustainable Energy	2
ARCH 2291 Field Experience	1-3
ARCH 2294 Special Topics in ARCH	1-4

Basic Electives

The following courses are approved for basic elective requirements:

CMGT 1105 Construction Documents	3
CMGT 1115 Construction Methods	3
CMGT 2215 Intro to Building Information Modeling (BIM)	3
CMGT 2282 Sustainable Construction	2
ESSH 1101 Introduction to Environmental Science, Safety, Health	3
GIS 1100 Introduction to GIS	3
LAND 1160 Landscape Principles	2
LAND 1565 Landscape Graphics	2
SURV 1410 Basic Surveying	3

3D Visualization Certificate

COURSE	CR
Semester 1	
ARCH 2240 AutoCAD 3D	2
TOTAL CREDIT HOURS	2
Semester 2	
ARCH 2242 3D Visualization I	3
TOTAL CREDIT HOURS	3
Semester 3	
ARCH 2243 3D Visualization II	3
TOTAL CREDIT HOURS	3
TOTAL CERTIFICATE CREDIT HOURS	8

Architectural CAD Drafting Certificate

COURSE	CR
Semester 1	
ARCH 1112 Basic CAD Drafting	1
TOTAL CREDIT HOURS	1
Semester 2	
ARCH 1114 AutoCAD 2D	4
TOTAL CREDIT HOURS	4
Semester 3	
ARCH 1115 MicroStation 2D	2
TOTAL CREDIT HOURS	2
TOTAL CERTIFICATE CREDIT HOURS	7

Architectural Design Certificate

COURSE	CR
Semester 1	
ARCH 1276 SketchUp	2
TOTAL CREDIT HOURS	2
Semester 2	
ARCH 2221 Design Studio I	4
TOTAL CREDIT HOURS	4
Semester 3	
ARCH 2223 Design Studio II	4
TOTAL CREDIT HOURS	4
TOTAL CERTIFICATE CREDIT HOURS	10

Approved General Education (GE) List

HUM	
GE-ARTS/HUMANITIES REQUIREMENT (SELECT ONE)	
	CR
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/Non-Amer to 1500	3
HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223 African-American History I: 1451-1876	3
HIST 2224 African-American History II: 1877-Present	3
HUM 1100 Introduction to Humanities	3
HUM 1270 Comparative Religions	3
MUS 1251 Survey of Music History	3
PHIL 1101 Introduction to Philosophy	3
PHIL 1130 Ethics	3

NAT	
GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT (SELECT ONE) ESSH 1101 Preferred	
	CR
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 Introduction to Biology	4
BIO 1112 Human Biology	4
BIO 1113 Biological Sciences I	4
BIO 1114 Biological Sciences II	4
BIO 1125 Plant Biology	4
BIO 1127 Environmental Science I	4
BIO 2215 Introduction to Microbiology	4
BIO 2232 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 1101 Introduction to Environmental 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 Physics II	5

SBS	
GE-SOCIAL/BEHAVIORAL SCIENCES REQUIREMENT (SELECT ONE)	
	CR
ANTH 2202 Introduction to Cultural Anthropology	3
ECON 2200 Principles of Microeconomics	3
GEOG 2400 Economic and Social Geography	3
POLS 1100 American Government	3
SOC 1101 Introduction to Sociology	3
PSY 1100 Introduction to Psychology	3

Automotive Technology

Automotive Technology Associate Degree
Automotive Service Management Major
Ford ASSET Program
TechLINK Program
Automotive Management Certificate
Automotive Service Technician Certificate
Ford Maintenance and Light Repair Certificate
Maintenance and Light Repair Certificate
Master Automotive Service Technician Certificate

Automotive Technology Associate 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's 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.

Upon completion of the Associate of Applied Science Degree in Automotive Technology, the graduate will be able to:

- Identify the major systems of the automobile and correctly assess a system for proper operation
- Synthesize a customer's symptom into a set of possible system malfunctions and then into a subset of possible system component malfunctions
- Select the correct type and source of automotive information and then employ that information to devise a repair strategy
- Evaluate components and identify the failed component and the root cause of failure
- 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

- Determine the correct procedure for the repair and then correctly perform the procedure
- Apply proper ethical consideration when recommending needed repairs and managing the employer's resources when conducting such repairs
- Employ self-teaching techniques mastered during the program in order to remain abreast of advancements in technology
- Apply good customer relations skills in all interactions with service customers.

TechLINK: Cooperative Work Experience

The Automotive Technology Department firmly believes that the best way to learn to become a highly skilled automotive technician is through a combination of on-campus learning and real-life work. Columbus State works closely with students to help those interested in finding paid cooperative work experience placements in local shops. Those students who are actively working in cooperative work placements in area dealerships and independent repair shops follow the same curriculum as the general Automotive Technology program. However, since those students are working in the automotive repair industry as well as taking coursework on campus, the student's class schedule and work schedule must be coordinated between the student and the employer. TechLINK is a selective program and students must qualify to participate. For more information, students can refer to the website (www.csc.edu/autotech) and/or contact the department cooperative work experience advisor for further information on cooperative placement opportunities.

In addition to meeting all of the objectives of the general Automotive Technology program, participation in cooperative education is designed to:

- Fill the local shortage of qualified, entry-level technicians needed by area automotive repair shops
- Provide participating students with paid industry work experience to enhance the learning experience and to enable them to successfully transition from the classroom to the workplace
- Provide a course of study that will enable successful graduates to have the knowledge and skills necessary to develop an upward career path in automotive repair.

NOTE: Students must have placement into DEV 0114 or MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher before beginning with AUTO 1101 and AUTO 1106.

Automotive Service Management Major

The Service Management Major prepares students for entry into management positions available in automotive repair facilities. Potential job titles for graduates include service advisor, dispatcher, customer relations specialist, service manager, or independent shop owner. The Service Management major shares the general education courses and first level of basic technical courses within the Automotive Technology program. During the second year of the program, it supplements the foundational technical knowledge with the fundamental management principles and practices students need to know to be successful in a management career.

Upon completion of the program, students earn an Associate of Applied Science Degree in Automotive Technology – Service Management Major. The program is designed to:

- Provide students with fundamental knowledge of the theory and operation of all automotive systems
- Provide students with a broad-based background in general business management principles and practices
- Provide students with knowledge of a wide range of current automotive-specific management practices and principles
- Prepare students for entry-level, management-track positions in the automotive repair industry.

Ford ASSET

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.

For more information, students can refer to the Auto Technology website (www.csc.edu/autotech).

Automotive Technology Associate Degree

COURSE	CR
Semester 1	
AUTO 1101 Basic Auto Systems.....	2
AUTO 1106 Auto Shop Orientation & Service.....	2
AUTO 1160 Electrical Systems: Theory & Operation.....	2
AUTO 1140 Suspension & Steering: Theory & Operation.....	2
AUTO 1150 Brake & Systems: Theory & Operation.....	2
AUTO 1170 Heating & Air Conditioning: Theory & Operation.....	2
CSCI 1101 Computer Concepts & Applications.....	3
ENGL 1100 Composition I.....	3
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS	19

Semester 2	
*AUTO 1240 or FORD 1240 Suspension & Steering: Diagnosis & Repair...	2
*AUTO 1250 or FORD 1250 Brake Systems: Diagnosis & Repair.....	2
*AUTO 1260 or FORD 1260 Electrical Systems: Diagnosis & Repair.....	2
AUTO 1110 Engines: Theory & Operation.....	2
AUTO 1180 Engine Performance: Theory & Operation.....	2
AUTO 1210 Powertrain Systems Service.....	2
MATH 1010 Mathematics for Business Applications.....	4
XXXX xxxx Business Elective: BMGT 1101 or FMGT 1101.....	3
TOTAL CREDIT HOURS	19

Semester 3	
AUTO 2220 Automatic Transmission: Diagnosis & Car Repair.....	2
AUTO 2270 Heating & Air Conditioning: Diagnosis & Repair.....	2
AUTO 2280 Engine Performance: Theory & Operation II.....	2
AUTO 2120 Automatic Transmissions: Theory & Operations.....	2
COMM xxxx 1105, 1110, 2200, or 2204.....	3
HUM xxxx Refer to approved GE - HUM list.....	3
TOTAL CREDIT HOURS	16

Semester 4	
AUTO 2130 Manual Transmissions: Theory & Operation.....	2
AUTO 2230 Manual Transmission: Diagnosis & Car Repair.....	2
AUTO XXXX Advanced Auto: AUTO 2360 or 2380.....	3
XXXX xxxx Technical Elective Refer to approved list.....	3
NAT xxxx Refer to approved GE - NAT list.....	3
SBS xxxx Refer to approved GE - SBS list.....	3
TOTAL CREDIT HOURS	14
TOTAL DEGREE CREDIT HOURS	68
*Students must choose either AUTO 1240, 1250 and 1260 or FORD 1240, 1250 and 1260 as a group.	

Technical Electives	
The following courses are approved for technical elective requirements:	
AUTO 2360 Advanced Electrical System: Diagnosis & Repair.....	3
AUTO 2380 Advanced Engine Performance: Diagnosis & Repair.....	3
AUTO 2310 Engines: Diagnosis & In-Car Repair.....	2
AUTO 2460 Electronic Systems: Systems Service.....	2
AUTO 2190 Hybrid Vehicles: Theory & Operation.....	2
AUTO 2480 Engine Performance: Systems Service.....	2
AUTO 2101 Auto Business Management.....	2
AUTO 2399 Maintenance & Light Repair Shop Experience.....	2
SKTR 1180 Welding: Introduction to Stick.....	2

Independent Studies:	
AUTO 2193 Ind Studies in Automotive Technology.....	1
AUTO 2293 Ind Studies in Automotive Technology.....	2
AUTO 2393 Ind Studies in Automotive Technology.....	3

Special Topics:	
AUTO 2194 SPT in Automotive Technology.....	1
AUTO 2294 SPT in Automotive Technology.....	2
AUTO 2394 SPT in Automotive Technology.....	3

Automotive Service Management Major

COURSE	CR
Semester 1	
AUTO 1101 Basic Auto Systems.....	2
AUTO 1106 Auto Shop Orientation & Service.....	2
AUTO 1160 Electrical Systems: Theory & Operation.....	2
AUTO 1140 Suspension & Steering: Theory & Operation.....	2
AUTO 1150 Brake Systems: Theory & Operation.....	2
AUTO 1170 Heating & Air Conditioning: Theory & Operation.....	2
COLS 1100 First Year Experience Seminar.....	1
CSCI 1101 Computer Concepts & Applications.....	3
ENGL 1100 Composition I.....	3
TOTAL CREDIT HOURS	19

Semester 2	
*AUTO 1240 or FORD 1240 Suspension & Steering: Diagnosis & Repair.....	2
*AUTO 1250 or FORD 1250 Brake Systems: Diagnosis & Repair.....	2
*AUTO 1260 or FORD 1260 Electrical Systems: Diagnosis & Repair.....	2
AUTO 1110 Engines: Theory & Operation.....	2
AUTO 2270 Heating & Air Conditioning: Diagnosis & Repair.....	2
AUTO 1180 Engine Performance: Theory & Operation.....	2
MATH 1010 Mathematics for Business Applications.....	4
XXXX xxxx Business Elective: BMGT 1101 or FMGT 1101.....	3
TOTAL CREDIT HOURS	19

Semester 3	
AUTO 2101 Auto Business Management.....	2
AUTO 2201 Service Advising.....	2
COMM xxxx 1105, 1110, or 2200.....	3
COMM 2204 Technical Writing.....	3
HUM xxxx Refer to approved GE - HUM list.....	3
MKTG 1105 Retailing.....	3
TOTAL CREDIT HOURS	16

Semester 4	
AUTO 2301 Auto Service Management.....	2
AUTO 2401 Auto Parts Management.....	2
XXXX xxxx Technical Elective.....	2
XXXX xxxx Technical Elective.....	2
NAT xxxx Refer to approved GE - NAT list.....	3
SBS xxxx Refer to approved GE - SBS list.....	3

TOTAL CREDIT HOURS14
TOTAL DEGREE CREDIT HOURS68

*Students must choose either AUTO 1240, 1250 and 1260 or FORD 1240, 1250 and 1260 as a group.

Technical Electives

The following courses are approved for technical elective requirements:

AUTO 1001 Auto Care.....	2
BMGT 2231 Fundamentals of Entrepreneurship.....	3
MKTG 1120 Branding.....	3
MKTG 1230 Customer Service & Sales.....	3

Independent Studies:

AUTO 2193 Ind. Studies in Automotive Technology.....	1
AUTO 2293 Ind. Studies in Automotive Technology.....	2
AUTO 2393 Ind. Studies in Automotive Technology.....	3

Special Topics:

AUTO 2194 SPT in Automotive Technology.....	1
AUTO 2294 SPT in Automotive Technology.....	2
AUTO 2394 SPT in Automotive Technology.....	3

Ford ASSET Program

COURSE	CR
Semester 1	
AUTO 1101 Basic Auto Systems.....	2
AUTO 1106 Auto Shop Orientation & Service.....	2
AUTO 1160 Electrical Systems: Theory & Operation.....	2
AUTO 1140 Suspension & Steering: Theory & Operation.....	2
AUTO 1150 Brake Systems: Theory & Operation.....	2
AUTO 1170 Heating & Air Conditioning: Theory & Operation.....	2
COLS 1100 First Year Experience Seminar.....	1
CSCI 1101 Computer Concepts & Applications.....	3
ENGL 1100 Composition I.....	3
TOTAL CREDIT HOURS	19

Semester 2	
FORD 1240 Suspension & Steering: Diagnosis & Repair.....	2
FORD 1250 Brake Systems: Diagnosis & Repair.....	2
FORD 1260 Electrical Systems: Diagnosis & Repair.....	2
FORD 1270 Heating & Air Conditioning: Diagnosis & Repair.....	2
FORD 1360 Electronic Systems: Theory & Operation.....	3
MATH 1010 Mathematics for Business Applications.....	4
XXXX xxxx Business Elective: BMGT 1101 or FMGT 1101.....	3
TOTAL CREDIT HOURS	18

Summer Semester	
FORD 1110 Engines: Diagnosis & Repair.....	3
FORD 2951 Cooperative Work Experience/Seminar I.....	2
TOTAL CREDIT HOURS	5

Semester 3	
FORD 2180 Engine Performance: Operation & Diagnosis.....	3
FORD 2130 Manual Transmissions/Driveline: Diagnosis & Repair.....	3
FORD 2952 Cooperative Work Experience/Seminar II.....	2
HUM xxxx Refer to approved GE - HUM list.....	3
COMM xxxx 1105, 1110, 2220, or 2204.....	3
TOTAL CREDIT HOURS	14

Semester 4	
FORD 2120 Automatic Transmissions: Diagnosis & Repair.....	3
FORD 2280 Advanced Engine Performance: Diagnosis & Testing.....	2
FORD 2953 Cooperative Work Experience/Seminar I.....	2
NAT xxxx Refer to approved GE - NAT list.....	3
SBS xxxx Refer to approved GE - SBS list.....	3
TOTAL CREDIT HOURS	13

Summer Semester

FORD 2380 Diesel Engine Performance: Diagnosis & Repair.....	2
FORD 2954 Cooperative Work Experience/Seminar IV.....	2
TOTAL CREDIT HOURS	4
TOTAL DEGREE CREDIT HOURS	73

Approved General Education (GE) List

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT

(SELECT ONE)		CR
ASTR 1141	Life in the Universe	3
ASTR 1161	The Solar System	3
ASTR 1162	Stars and Galaxies.....	3
BIO 1111	Introduction to Biology.....	4
BIO 1112	Human Biology.....	4
BIO 1113	Biological Sciences I.....	4
BIO 1114	Biological Sciences II.....	4
BIO 1125	Plant Biology	4
BIO 1127	Environmental Science I.....	4
BIO 2215	Introduction to Microbiology.....	4
BIO 2232	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 Physics II.....	5

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT

(SELECT ONE)		CR
ANTH 2202	Introduction to Cultural Anthropology	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic and Social Geography.....	3
POLS 1100	American Government.....	3
SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology.....	3

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE)		CR
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/Non-Amer to 1500	3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223	African-American History I: 1451-1876	3
HIST 2224	African-American History II: 1877-Present	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions.....	3
MUS 1251	Survey of Music History.....	3
PHIL 1101	Introduction to Philosophy.....	3
PHIL 1130	Ethics.....	3

Automotive Technology Certificates

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 certificate 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.

Automotive Management Certificate

The Automotive Management Certificate can be completed in six to nine months giving students the knowledge and skills necessary to enter the automotive repair industry quickly. Upon completion of this certificate, graduates are employable at local auto repair companies as a service advisor. This certificate helps students also prepare for the A.S.E. certification exams – Parts Specialist and Service Consultant. Since this certificate is part of the Automotive Technology program, certificate completers can continue their education in the college degree program at any time to expand their knowledge and skills and work toward the Automotive Service Management Degree.

Automotive Management Certificate

COURSE		CR
Semester 1		
ENGL 1100	Composition I.....	3
AUTO 1101	Basic Auto Systems.....	2
AUTO 1106	Auto Shop Orientation & Service.....	2
AUTO 1140	Suspension & Steering: Theory & Operation.....	2
AUTO 1150	Brake & Systems: Theory & Operation.....	2
AUTO 2101	Auto Business Management.....	2
TOTAL CREDIT HOURS		13

Semester 2		
AUTO xxxx	Auto Service Management Elective (select from list).....	2
AUTO xxxx	Auto Service Management Elective (select from list).....	2
XXXX xxxx	Management Elective (select from list).....	3
XXXX xxxx	Management Elective (select from list).....	3
BMGT 1102	Interpersonal Skills.....	2
MKTG 1230	Customer Service and Sales.....	3
TOTAL CREDIT HOURS		15
TOTAL CERTIFICATE CREDIT HOURS		28

Auto Service Management Electives

The following courses are approved elective requirements:

AUTO 2201	Service Advising.....	2
AUTO 2301	Auto Service Management.....	2
AUTO 2401	Auto Parts Management.....	2

Management Electives

The following courses are approved elective requirements:

BMGT 2231	Entrepreneurship I.....	3
BMGT 2232	Entrepreneurship II.....	3
MKTG 1105	Retailing.....	3
MKTG 1120	Branding.....	3

Automotive Service Technician Certificate (AST)

(This certificate is intended for students who have already completed the Maintenance and Light Repair Certificate or the Ford Maintenance and Light Repair Certificate. It is the second certificate in a series of three certificates)

COURSE		CR
Semester 1		
AUTO 1110	Engines: Theory & Operations.....	2
AUTO 1210	Powertrain System Service.....	2
AUTO 2120	Automatic Transmission: Theory & Operation.....	2
AUTO 2130	Manual Transmission: Theory & Operation.....	2
AUTO 2270	Heating & Air Conditioning: Diagnosis & Repair.....	2
AUTO 2280	Engine Performance: Theory & Operation II.....	2
TOTAL CREDIT HOURS		12
TOTAL CERTIFICATE CREDIT HOURS		12

FORD Maintenance and Light Repair Certificate (FORD-MLR)

(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)

COURSE		CR
Semester 1		
AUTO 1101	Basic Auto Systems.....	2
AUTO 1106	Auto Shop Orientation & Service.....	2
AUTO 1160	Electrical Systems: Theory & Operation.....	2
AUTO 1140	Suspension & Steering: Theory & Operation.....	2
AUTO 1150	Brake Systems: Theory & Operation.....	2
AUTO 1170	Heating & Air Conditioning Theory & Operation.....	2
TOTAL CREDIT HOURS		12

Semester 2		
FORD 1240	Suspension & Steering: Diagnosis & Repair.....	2
FORD 1250	Brake Systems: Diagnosis & Repair.....	2
FORD 1260	Electrical Systems: Diagnosis & Repair.....	2
AUTO 2399	Maintenance & Light Repair Shop Experience.....	2
TOTAL CREDIT HOURS		8
TOTAL CERTIFICATE CREDIT HOURS		20

Maintenance and Light Repair Certificate (MLR)

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.

COURSE		CR
Semester 1		
AUTO 1101	Basic Auto Systems.....	2
AUTO 1106	Auto Shop Orientation & Service.....	2
AUTO 1160	Electrical Systems: Theory & Operation.....	2
AUTO 1140	Suspension & Steering: Theory & Operation.....	2
AUTO 1150	Brake & Systems: Theory & Operation.....	2
AUTO 1170	Heating & Air Conditioning: Theory & Operation.....	2
TOTAL CREDIT HOURS		12

Semester 2		
AUTO 1180	Engine Performance: Theory & Operation 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	Maintenance & Light Repair Shop Experience.....	2
TOTAL CREDIT HOURS		10
TOTAL CERTIFICATE CREDIT HOURS		22

Master Automotive Service Technician Certificate (MAST)

(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)

COURSE		CR
Semester 1		
AUTO 2190	Hybrid Vehicles: Theory & Operation.....	2
AUTO 2220	Auto Transmission: Diagnosis & Repair.....	2
AUTO 2230	Manual Transmission: Diagnosis & In-Car Repair.....	2
AUTO 2360	Advanced Electrical Systems: Diagnosis & Repair.....	3
AUTO 2380	Advanced Engine Performance: Diagnosis & Repair.....	3
	Technical Elective (select from list).....	1-3
TOTAL CREDIT HOURS		13-14
TOTAL CERTIFICATE CREDIT HOURS		13-14

Technical Electives

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

Independent Studies:

AUTO 2193	Ind Studies in Automotive Technology.....	1
AUTO 2293	Ind Studies in Automotive Technology.....	2
AUTO 2393	Ind Studies in Automotive Technology.....	3

Special Topics:

AUTO 2194	SPT in Automotive Technology.....	1
AUTO 2294	SPT in Automotive Technology.....	2
AUTO 2394	SPT in Automotive Technology.....	3

Aviation Maintenance Technology

Aviation Maintenance Technology Associate Degree Aviation Maintenance Airframe Certificate Aviation Maintenance 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.

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.

Upon completion of the Aviation Maintenance Technology curriculum, the graduate will be able to:

- Service, inspect, and complete repairs and alterations on airframes, engines, propellers, and associated systems (including environmental, electrical, fuel, hydraulic, and pneumatic systems)
- 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

- Properly use precision measuring equipment for the accuracy demanded by the aviation industry
- Understand blueprints used for the repair and alteration of aircraft and utilize them to affect the repair or alteration
- Identify aircraft materials and hardware and their structural properties. Correctly identify corrosion and the proper treatment and prevention methods and techniques
- Identify and use nondestructive testing methods used in the aviation industry
- Meet FAA certification requirements for the Airframe and Powerplant Certificates.

Aviation Maintenance Technology Specific Program Admissions Information

Prospective students are required to meet with an Aviation Maintenance Technology faculty member where they will receive the separate admissions application for the Aviation Maintenance Technology. Detailed admission criteria, plans of study, hand tool requirements, facility tour and career opportunities are addressed. General information packets and admission applications can be obtained by calling the Aviation Maintenance Technology at 614-287-7100.

Twenty five full-time students are admitted each Autumn and Spring semesters. Part-time night students are admitted each semester as space permits.

Applicants to the Aviation Maintenance Technology program should understand that employment in the aviation industry requires stringent drug and alcohol screening as well as background/criminal and credit checks

Additional Requirements for Admission to the Program

- High School Graduate or Equivalency (PSEO students will be evaluated individually)
- Placement into ENGL 1100 Composition I
- Placement into "No Reading Required" or transfer credit for ENGL 1100
- Completion of MATH 1020 Beginning Algebra with grade of "C" or better, or placement into MATH 1030
- Completion of separate Aviation Maintenance Technology application and meeting with AMT Faculty.

Aviation Maintenance Technology Associate Degree

COURSE	CR
Semester 1	
AMT 1101 Introduction to Aviation	2
AMT 1102 Aircraft Weight & Balance	2
AMT 1103 Aircraft Materials	4
AMT 1104 AMT Regulation & Inspection	3
AMT 1105 Ground Operation & Servicing	2
ENGL 1100 Composition I	3
COLS 1100 First Year Experience Seminar	1
TOTAL CREDIT HOURS.....	17

Semester 2	
AMT 1106 Basic Electricity for the AMT	6
AMT 2101 Aircraft Metallic Structures	6
AMT 2102 Aircraft Electrical Systems	6
MATH 1113 Technical Mathematics	5
TOTAL CREDIT HOURS.....	23

Summer Semester	
AMT 2103 Aircraft Instrument & Fire Protection	3
AMT 2104 Aircraft Fuel Systems	2
AMT 2105 Aircraft Non-Metallic Structures	5
ENGT 1115 Engineering Graphics	3
SBS XXXX Refer to approved GE - SBS list	3
TOTAL CREDIT HOURS.....	16

Semester 3	
AMT 2106 Communications & Navigation Systems	2
AMT 2107 Aircraft Environmental Controls	2
AMT 2108 Aircraft Landing Gear & Fluid Power	4
AMT 2109 Aircraft Inspection	6
XXXX XXXX Basic Elective	3
HUM XXXX Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS.....	20

Semester 4	
AMT 2201 Turbine Engine Maintenance I	5
AMT 2202 Turbine Engine Maintenance II	5
AMT 2203 Reciprocating Engine Maintenance I	5
NAT XXXX Refer to approved GE - NAT list	4
XXXX XXXX Basic Elective	3
TOTAL CREDIT HOURS.....	22

Summer Semester	
AMT 2204 Reciprocating Engine Maintenance II	5
AMT 2205 Propellers	2
AMT 2206 Powerplant Inspection	4
XXXX XXXX Basic Elective	3
XXXX XXXX Basic Elective	2
TOTAL CREDIT HOURS.....	16
TOTAL DEGREE CREDIT HOURS.....	114

Basic Electives

The following courses are approved for basic elective requirements:

BMGT 1111 Management	3
EET 1115 Basic Digital Systems	3
ESSH 1101 Introduction to Environmental Science, Safety & Health	3
ESSH 2111 Hazardous Materials Management	3
MECH 1150 Manufacturing Materials & Processes	3
MECH 1240 Machine Tools	3
ITST 1101 Computer Applications in Construction/Engineering Tech I	2
ITST 1102 Computer Applications in Construction/Engineering Tech II	2
ITST 1123 PC Tech Essentials I	3

Approved General Education (GE) List

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT (SELECT ONE)

COURSE	CR
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 Introduction to Biology	4
BIO 1112 Human Biology	4
BIO 1113 Biological Sciences I	4
BIO 1114 Biological Sciences II	4
BIO 1125 Plant Biology	4
BIO 1127 Environmental Science I	4
BIO 2215 Introduction to Microbiology	4
BIO 2232 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 Physics II	5

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT (SELECT ONE)

COURSE	CR
ANTH 2202 Introduction to Cultural Anthropology	3
ECON 2200 Principles of Microeconomics	3
GEOG 2400 Economic and Social Geography	3
POLS 1100 American Government	3
SOC 1101 Introduction to Sociology	3
PSY 1100 Introduction to Psychology	3

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)

COURSE	CR
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/Non-Amer to 1500	3
HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223 African-American History I: 1451-1876	3
HIST 2224 African-American History II: 1877-Present	3
HUM 1100 Introduction to Humanities	3
HUM 1270 Comparative Religions	3
MUS 1251 Survey of Music History	3
PHIL 1101 Introduction to Philosophy	3
PHIL 1130 Ethics	3

Students should be aware that employers prefer completion of both Airframe and Powerplant ratings for employment consideration. The split certificates were designed for those applicants who have prior experience acceptable to the Federal Aviation Administration for testing authorization for one of the ratings. Please contact the Aviation Maintenance Technology for advising.

Aviation Maintenance Airframe Certificate

COURSE	CR
Semester 1	
AMT 1101 Introduction to Aviation	2
AMT 1102 Aircraft Weight & Balance	2
AMT 1103 Aircraft Materials	4
AMT 1104 AMT Regulation & Inspection	3
AMT 1105 Ground Operation & Servicing.....	2
TOTAL CREDIT HOURS.....	13
Semester 2	
AMT 1106 Basic Electricity for the AMT.....	6
AMT 2101 Aircraft Metallic Structures	6
AMT 2102 Aircraft Electrical Systems	6
TOTAL CREDIT HOURS.....	18
Summer Semester	
AMT 2103 Aircraft Instruments & Fire Protections	3
AMT 2104 Aircraft Fuel Systems	2
AMT 2105 Aircraft Non-Metallic Structures	5
TOTAL CREDIT HOURS.....	10
Semester 3	
AMT 2106 Communication & Navigation Systems	2
AMT 2107 Aircraft Environmental Controls	2
AMT 2108 Aircraft Landing Gear & Fluid Power.....	4
AMT 2109 Airframe Inspection	6
TOTAL CREDIT HOURS.....	14
TOTAL CERTIFICATE CREDIT HOURS	55

Aviation Maintenance Powerplant Certificate

COURSE	CR
Semester 1	
AMT 1101 Introduction to Aviation	2
AMT 1102 Aircraft Weight & Balance	2
AMT 1103 Aircraft Materials	4
AMT 1104 AMT Regulation & Inspection	3
AMT 1105 Ground Operation & Servicing.....	2
TOTAL CREDIT HOURS.....	13
Semester 2	
AMT 1106 Basic Electricity for the AMT.....	6
AMT 2102 Aircraft Electrical Systems	6
TOTAL CREDIT HOURS.....	12
Summer Semester	
AMT 2103 Aircraft Instruments & Fire Protections	3
TOTAL CREDIT HOURS.....	3
Semester 3	
AMT 2201 Turbine Engine Maintenance I.....	5
AMT 2202 Turbine Engine Maintenance II	5
AMT 2203 Reciprocating Engine Maintenance I.....	5
TOTAL CREDIT HOURS.....	15
Semester 4	
AMT 2204 Reciprocating Engine Maintenance II	5
AMT 2205 Propellers.....	2
AMT 2206 Powerplant Inspection.....	4
TOTAL CREDIT HOURS.....	11
TOTAL CERTIFICATE CREDIT HOURS	54

Business Management

**Associate of Applied Science Degree
Business Management Major
Entrepreneurship Major
Business Culture & Diversity Certificate
Business Operations Analysis Certificate
Entrepreneurship Certificate
Entrepreneurship Certificate- Automotive Technology Management
Entrepreneurship Certificate - Hospitality
Entrepreneurship Certificate - Real Estate Management
Entrepreneurship Certificate - Sport Management
Foundations of Insurance
Managing Interpersonal Skills Certificate
Nonprofit Management Certificate
Pre-MBA Certificate
Project Management Certificate**

In order to compete effectively in the 21st century, successful managers and entrepreneurs need strong interpersonal, communication, analytical, and decision-making skills. Columbus State's Business Management curriculum focuses on meeting these requirements for students who wish to attain an Associate Degree in Business Management or who wish to upgrade current job performance skills. The emphasis in the program is on skill applications through the latest teaching techniques and technologies.

The Project Management Certificate is comprised of six (6) courses totaling 17 credit hours. This certificate can become the platform to accelerate PMI credentialing or other recognized professional certifications or will provide substantial value in itself. Students will develop a personal project management methodology which will enhance their resume. Potential employers, will easily be able to see the value of this document. This six (6) course certificate program is available to degree, as well as non-degree-seeking students.

The Business Culture and Diversity Certificate is a unique five course sequence which may be embedded with the BMGT Associate Degree or completed as a standalone program. This certificate will provide value added skills to any manager in a supervisory role or human resources practitioner. In today's changing and diverse business environment, certificate candidates will develop their ability to understand and manage the complexities of dealing with a multi-cultural environment. Certificate recipients will have a better understanding of verbal and nonverbal communication for different cultures, ethical behavior, and how race and ethnicity or religion play a role in work related values and behaviors. This certificate will provide a strong basis for improving overall management skills and allow candidate to tailor the final elective course to their unique work situation or needs.

The Business Operations Analysis Certificate is comprised of a five 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 basic 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.

The Entrepreneurship Certificate consists of seven (7) courses covering twenty (20) credit hours and can be taken in as short as two (2) 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.

The Entrepreneurship Certificate focusing on Automotive Technology Management consists of eight (8) courses covering nineteen (19) 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.

The Entrepreneurship Certificate focusing on Hospitality consists of eight (8) courses covering twenty two (22) 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.

The Entrepreneurship Certificate focusing on Real Estate Management consists of eight (8) 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 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.

The Entrepreneurship Certificate focusing on Sport Management consists of seven (7) courses covering twenty one (21) 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.

The Foundations of Insurance Certificate is a six (6) class sequence that prepares students for entry-level positions in central Ohio's thriving insurance industry. The Foundations of Insurance certificate is a natural fit for students who are already in the Business Management or Finance programs.

The certificate includes a new course, Principles of Insurance (FMGT 2232). This course introduces the principles of insurance and risk management, including terminology and definitions as used in the industry.

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 four (4) course certificate program is available to degree and non-degree-seeking students.

The Nonprofit Management Certificate is a four (4) course sequence which prepares individuals for leadership roles in a variety of nonprofit organizations, including those in the fields of adult human service, health care, cultural arts, the environment, youth service, faith-based, and professional/trade. The program is dynamic, interactive, and practical yielding insights and skills immediately applicable to the workplace. The curriculum was validated by professionals in the field and is taught by faculty with significant practical and academic nonprofit experience. This four (4) course certificate program is available to both degree and non-degree seeking students.

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.

Traditional Classes and Online/Distance Learning Choices

The Business Management program offers traditional and online/distance learning (DL) options for our students. The traditional

classroom experience continues to provide students with quality instruction in a small classroom setting on Columbus State's campuses or at one of our regional learning centers. The Business Management program also offers online/distance learning courses that provide the same high quality learning as traditional instruction, yet with the added flexibility of being able to complete course work online.

Business Management Major

Upon completion of the program for an Associate of Applied Science with a Business Management Major, the graduate will be able to:

- Demonstrate knowledge of the management functions and skills within an organizational system as they interact in a dynamic and diverse global environment

- Demonstrate a working knowledge of current legal, ethical, social, financial, and economic environmental factors as they apply to business
- Prepare and present effective written and oral business related reports
- Work effectively as a member of a team
- Use appropriate technology and other resources to research, analyze and integrate both quantitative and qualitative data to solve business problems
- Appropriately apply the management functions both departmentally and to the organization as a whole
- Assess and develop individual communication, leadership and team building styles
- Recognize and adapt to the communication, leadership and team building styles of others.

Business Management Major

COURSE	CR
Semester 1	
BMGT 1101 Principles of Business	3
BMGT 1102 Interpersonal Skills	2
COLS 1100 First Year Experience Seminar	1
CSCI 1101 Computer Concepts & Applications	3
ENGL 1100 Composition I.....	3
MATH 1030 Beginning Algebra II or	
MATH 1050 Elementary Algebra or	
STAT 1350 Elementary Statistics.....	3-5
TOTAL CREDIT HOURS	15-17

Semester 2	
BMGT 1111 Management.....	3
ACCT 1211 Financial Accounting	3
COMM 2200 Business Communications	3
HUM XXXX Refer to approved GE - HUM list	3
LEGL 2064 Legal Environment of Business	3
TOTAL CREDIT HOURS	15

Summer Semester	
BMGT XXXX Technical Elective	3
ECON 2200 Principles of Microeconomics	3
HRM 1121 Human Resources Management	3
TOTAL CREDIT HOURS	9

Semester 3	
BOA 1300 Business Applications	2
BMGT XXXX Technical Elective	3
ACCT 1212 Managerial Accounting.....	3
MKTG 1110 Marketing Principles.....	3
NAT XXXX Refer to approved GE - NAT list	4
TOTAL CREDIT HOURS	15

Semester 4	
BMGT 2258 Enterprise Planning & Analysis	3
BMGT 2299 Case Studies in Strategic Management.....	3
BMGT 2280 Professional Development	1
BMGT XXXX Technical Elective.....	3
FMGT 2201 Corporate Finance.....	3
TOTAL CREDIT HOURS	13
TOTAL DEGREE CREDIT HOURS	67-69

Technical Electives

The following courses are approved for technical elective requirements:

BMGT 1008 21st Century Workplace Skills.....	2
BMGT 1798 Study Abroad Global Business Management	3
BMGT 2211 Organizational Behavior	3
BMGT 2216 Business Ethics	3
BMGT 2231 Fundamentals of Entrepreneurship	3
BMGT 2232 Entrepreneurship: Business Plan Development	3
BMGT 2245 Introduction to Non-Profit Management.....	3
BMGT 2246 Operational Management of Nonprofit Organizations.....	3
BMGT 2247 Legal/Financial Issues in Nonprofit Management	3
BMGT 2250 Project Management Principles	3
BMGT 2251 Project Management Techniques	3
BMGT 2253 Conflict Management.....	3
BMGT 2254 Negotiation.....	3
BMGT 2599 Project Management Capstone	3
BMGT 2901 Business Practicum/Seminar.....	3
FMGT 1101 Personal Finance	3
FMGT 2232 Principles of Insurance.....	3

NOTE: Those students who intend to complete an associate degree at Columbus State Community College and then transfer to another college to complete a baccalaureate degree should confirm the math requirements at the target transfer college; math requirements vary greatly.

Entrepreneurship Major

In addition to the Business Management core outcomes, a graduate pursuing the Entrepreneurship Major will be able to:

- Demonstrate knowledge of the skills needed to start a new business
- Demonstrate knowledge of the research methods and skills needed to start, expand, or purchase a business
- List and explain the major factors influencing the success or failure of a small business
- Develop a business plan
- Demonstrate knowledge of the functional and interpersonal management skills needed to operate a small business.



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.

Entrepreneurship Major

COURSE	CR
Semester 1	
BMGT 1101 Principles of Business	3
BMGT 1102 Interpersonal Skills	2
COLS 1100 First Year Experience Seminar	1
CSCI 1101 Computer Concepts & Applications	3
ENGL 1100 Composition I	3
MATH 1030 Beginning Algebra II or	
MATH 1050 Elementary Algebra or	
STAT 1350 Elementary Statistics	3-5
TOTAL CREDIT HOURS	15-17
Semester 2	
BMGT 1111 Management	3
ACCT 1211 Financial Accounting	3
ECON 1110 Introduction to Economics or	
ECON 2200 Principles of Microeconomics	3
LEGL 2064 Legal Environment of Business	3
NAT XXXX Refer to approved GE - NAT list	4
TOTAL CREDIT HOURS	16
Summer Semester	
ACCT 1212 Managerial Accounting	3
BMGT 2258 Enterprise Planning & Analysis	3
BMGT XXXX Business Management Technical Elective	3
TOTAL CREDIT HOURS	9
Semester 3	
BMGT XXXX Technical Elective	3
BMGT 2231 Fundamentals of Entrepreneurship	3
FMGT 2201 Corporate Finance	3
MKTG 1110 Marketing Principles	3
TOTAL CREDIT HOURS	12

Semester 4	
BMGT 2232 Entrepreneurship: Business Plan Development	3
BMGT 2902 Entrepreneurship Practicum/Seminar	3
BMGT XXXX Business Management Technical Elective	3
HUM XXXX Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS	12
TOTAL DEGREE CREDIT HOURS	64

Technical Electives

The following courses are approved for technical elective requirements:

BMGT 1008 21st Century Workplace Skills	2
BMGT 2211 Organizational Behavior	3
BMGT 2216 Business Ethics	3
BMGT 2245 Introduction to Non-Profit Management	3
BMGT 2246 Operational Management of Nonprofit Organization	3
BMGT 2247 Legal & Financial Nonprofit Management	3
BMGT 2250 Project Management Principles	3
BMGT 2251 Project Management Techniques	3
BMGT 2253 Conflict Management	3
BMGT 2254 Negotiation	3
BMGT 2280 Business Professional Development	1
BMGT 2299 Case Studies in Strategic Management	3
BMGT 2599 Project Management Capstone	3
FMGT 2232 Principles of Insurance I	3
HRM 1121 Human Resources Management	3
MKTG 1125 Social Media	3
MKTG 2200 Digital Marketing	3

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE)

	CR
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/Non-Amer to 1500	3
HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223 African-American History I: 1451-1876	3
HIST 2224 African-American History II: 1877-Present	3
HUM 1100 Introduction to Humanities	3
HUM 1270 Comparative Religions	3
MUS 1251 Survey of Music History	3
PHIL 1101 Introduction to Philosophy	3
PHIL 1130 Ethics	3

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT

(SELECT ONE)

	CR
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 Introduction to Biology	4
BIO 1112 Human Biology	4
BIO 1113 Biological Sciences I	4
BIO 1114 Biological Sciences II	4
BIO 1125 Plant Biology	4
BIO 1127 Environmental Science I	4
BIO 2215 Introduction to Microbiology	4
BIO 2232 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 Physics II	5

Business Culture & Diversity Certificate

COURSE	CR
Semester 1	
BMGT 1102 Interpersonal Skills	2
COMM 2268 Intercultural Communication	3
SCM 1190 International Business	3
TOTAL CREDIT HOURS	8
Semester 2	
BMGT 2216 Business Ethics	3
XXX XXXX General Education Elective (choose from list)	3
TOTAL CREDIT HOURS	6
TOTAL CERTIFICATE CREDIT HOURS	14

General Education Electives

HUM 1270 Comparative Religions	3
HUM 1275 Introduction to Visual representations	3
SOC 2380 American Race & Ethnic Relations	3
Any foreign language course	

Business Operations Analysis Certificate

COURSE	CR
Semester 1	
ACCT 1212 Managerial Accounting	3
BOA 1300 Business Applications	2
STAT 1350 Elementary Statistics	3
TOTAL CREDIT HOURS	8
Semester 2	
BMGT 2258 Enterprise Planning & Analysis	3
SCM 1100 Supply Chain Management Principles	3
TOTAL CREDIT HOURS	6
TOTAL CERTIFICATE CREDIT HOURS	14

Entrepreneurship Certificate

COURSE	CR
Semester 1	
BMGT 2231 Fundamentals of Entrepreneurship	3
BOA 1111 Bookkeeping	3
LEGL 2064 Legal Environment of Business	3
MKTG 1110 Marketing Principles	3
TOTAL CREDIT HOURS	12
Semester 2	
BMGT 2232 Entrepreneurship: Business Plan Development	3
BOA 1122 QuickBooks	2
FMGT 1101 Personal Finance	3
TOTAL CREDIT HOURS	8
TOTAL CERTIFICATE CREDIT HOURS	20

Entrepreneurship Certificate – Automotive Technology Management

COURSE	CR
Semester 1	
AUTO 1101 Basic Auto Systems	2
AUTO 1106 Auto Shop Orientation & Service	2
BOA 1111 Bookkeeping	3
TOTAL CREDIT HOURS	7
Semester 2	
AUTO 2101 Auto Business Management	2
BMGT 2231 Fundamentals of Entrepreneurship	3
TOTAL CREDIT HOURS	5
Summer Semester	
AUTO 2201 Service Advising	2
AUTO 2301 Auto Service Management or	
AUTO 2401 Auto Parts Management	2
BMGT 2232 Entrepreneurship: Business Plan Development	3
TOTAL CREDIT HOURS	7
TOTAL CERTIFICATE CREDIT HOURS	19

Entrepreneurship Certificate – Hospitality

COURSE	CR
Semester 1	
BMGT 1102 Interpersonal Skills	2
BMGT 1111 Management	3
BMGT 2231 Fundamentals of Entrepreneurship	3
HOSP 1122 Hospitality Facilities & Sanitation	2
TOTAL CREDIT HOURS	10
Semester 2	
BMGT 2232 Entrepreneurship: Business Plan Development	3
BOA 1111 Bookkeeping	3
HOSP 2207 Hospitality Financial Analysis	3
HOSP 2246 Hospitality Sales & Marketing	3
TOTAL CREDIT HOURS	12
TOTAL CERTIFICATE CREDIT HOURS	22

Entrepreneurship Certificate – Real Estate Management

COURSE	CR
Semester 1	
REAL 1101 Real Estate Principles & Practices	3
BMGT 1111 Management	3
BOA 1111 Bookkeeping	3
TOTAL CREDIT HOURS	9
Semester 2	
BMGT 2231 Fundamentals of Entrepreneurship	3
REAL 2221 Profession Property Management	2
REAL 2270 Real Estate Investing	2
TOTAL CREDIT HOURS	7
Summer Semester	
BMGT 2232 Entrepreneurship: Business Plan Development	3
REAL 2275 Repair, Restore, Remodel	2
TOTAL CREDIT HOURS	5
TOTAL CERTIFICATE CREDIT HOURS	21

Entrepreneurship Certificate – Sport Management

COURSE	CR
Semester 1	
BMGT 1111 Management.....	3
BMGT 2231 Fundamentals of Entrepreneurship.....	3
BOA 1111 Bookkeeping	3
SES 2529 Sport & Event Management.....	3
TOTAL CREDIT HOURS	12
Semester 2	
BMGT 2232 Entrepreneurship: Business Plan Development.....	3
SES 2534 Sport Marketing.....	3
SES 2535 Sport Law.....	3
TOTAL CREDIT HOURS	9
TOTAL CERTIFICATE CREDIT HOURS	21

Foundations of Insurance Certificate

COURSE	CR
Semester 1	
BMGT 1101 Principles of Business.....	3
BMGT 1102 Interpersonal Skills	2
CSCI 1101 Computer Concepts and Applications.....	3
TOTAL CREDIT HOURS	8
Semester 2	
BMGT 2253 Conflict Management.....	3
FMGT 2232 Principles of Insurance.....	3
MKTG 1230 Customer Service and Sales.....	3
TOTAL CREDIT HOURS	9
TOTAL CERTIFICATE CREDIT HOURS	17

Managing Interpersonal Skills Certificate

COURSE	CR
Semester 1	
BMGT 1102 Interpersonal Skills	2
TOTAL CREDIT HOURS	2
Semester 2	
BMGT 2211 Organizational Behavior	3
TOTAL CREDIT HOURS	3
Semester 3	
BMGT 2253 Conflict Management.....	3
TOTAL CREDIT HOURS	3
Semester 4	
BMGT 2280 Professional Development	1
TOTAL CREDIT HOURS	1
TOTAL CERTIFICATE CREDIT HOURS	9

Nonprofit Management Certificate

Semester 1	
BMGT 2245 Introduction to Nonprofit Management.....	3
TOTAL CREDIT HOURS	3
Semester 2	
BMGT 2246 Operational Management of Nonprofit.....	3
TOTAL CREDIT HOURS	3
Semester 3	
BMGT 2247 Legal & Financial Issues in Non Profit Management.....	3
TOTAL CREDIT HOURS	3
Semester 4	
BMGT 2250 Project Management Principles	3
TOTAL CREDIT HOURS	3
TOTAL CERTIFICATE CREDIT HOURS	12

Pre-MBA Certificate

NOTE: We strongly recommend that you first meet with the advisor(s) of your target MBA college(s) PRIOR to beginning this certificate program, since MBA programs vary greatly.

Semester 1	
MKTG 1110 Marketing Principles.....	3
BMGT 1111 Management.....	3
ECON 2200 Principles of Microeconomics	3
STAT 1350 Elementary Statistics.....	3
ACCT 1211 Financial Accounting	3
FMGT 2201 Corporate Finance.....	3
TOTAL CREDIT HOURS	18
TOTAL CERTIFICATE CREDIT HOURS	18

Project Management Certificate

COURSE	CR
Semester 1	
BMGT 2250 Project Management Principles	3
BMGT 1102 Interpersonal Skills	2
TOTAL CREDIT HOURS	5
Semester 2	
BMGT 2251 Project Management Techniques	3
BMGT 2216 Business Ethics	3
TOTAL CREDIT HOURS	6
Semester 3	
ACCT 1212 Managerial Accounting.....	3
BMGT 2599 Project Management Capstone	3
TOTAL CREDIT HOURS	6
TOTAL CERTIFICATE CREDIT HOURS	17

Business Office Administration

Associate of Applied Science Degree
Administrative Assistant Major
Medical Administrative Assistant Major
Bookkeeping Certificate
Office Specialist Certificate

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.

The Medical Administrative Assistant Major also prepares students to work in medical settings such as hospitals, medical offices, clinics, dental offices, and insurance companies.

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 Office 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, Excel, and/or PowerPoint course will have the opportunity to take the Microsoft Office Specialist Exam.

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.

Upon completion of the Associate Degree in Business Office Administration, the graduate will be able to:

- Utilize industry tools, resources, technology, and software to facilitate, create, access, report, and analyze business information. Plan, implement, and manage business data and information by applying and adhering to standard office policies, procedures and practices
- 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
- Research information using a variety of resources, to accomplish tasks in the workplace environment
- Work effectively and efficiently both independently and as part of a team.

In addition to the general competencies, a graduate choosing the Medical Administrative Assistant Major will be able to:

- Identify the structure and organization of current health care systems and environments.
- Demonstrate a working knowledge of medical terminology.



The Business Office Administration 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.

Administrative Assistant Major

COURSE	CR
Semester 1	
BOA 1101 Word I	2
BOA 1102 Excel I	2
BOA 1131 Keyboarding & Document Formatting	2
BOA 1150 Office Procedures I	2
COLS 1100 First Year Experience Seminar	1
ENGL 1100 Composition I	3
TOTAL CREDIT HOURS	12
Semester 2	
BOA 1103 PowerPoint	2
BOA 1132 Advanced Document Formatting	2
BOA 1151 Office Procedures II	3
BOA 1172 Excel II	2
BOA 1191 Word II	2
BOA 1200 Business Language	2
TOTAL CREDIT HOURS	13
Summer Semester	
BOA 1111 Bookkeeping	3
BMGT 1101 Principles of Business	3
MATH 1010 Mathematics for Business Applications	4
SBS XXXX Refer to approved GE - SBS list	3
TOTAL CREDIT HOURS	13

Semester 3	
BOA 1104 Access	2
BMGT 1111 Management	3
FMGT 1101 Personal Finance	3
XXX XXXX Refer to approved GE - NAT list	4
TOTAL CREDIT HOURS	12

Semester 4	
BOA 2950 Practicum & Seminar	3
BOA 2999 BOA Capstone	3
BOA XXX Technical elective	2
BMGT 2216 Business Ethics	3
HUM XXXX Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS	14
TOTAL DEGREE CREDIT HOURS	64

Technical Electives

The following courses are approved for technical elective requirements:

BOA 1117 Payroll	1
BOA 1122 QuickBooks	2
BOA 2167 Desktop Publishing	2
BMGT 2250 Project Management Principles	3
CSCI 1100 Essential Computer Topics	1
CSCI 2325 Expert Access	3
COMM 2200 Business Communications	3
IMM 1120 Fundamentals of Interactive Media	4

Medical Administrative Assistant Major

COURSE	CR
Semester 1	
BOA 1101 Word I	2
BOA 1103 PowerPoint	2
BOA 1131 Keyboarding & Document Formatting	2
BOA 1150 Office Procedures I	2
BOA 1200 Business Language	2
COLS 1100 First Year Experience Seminar	1
ENGL 1100 Composition I	3
TOTAL CREDIT HOURS	14
Semester 2	
BOA 1102 Excel I	2
BOA 1132 Advanced Document Formatting	2
BOA 1151 Office Procedures II	3
BOA 1191 Word II	2
MLT 1100 Basic Concepts in Health Care	2
MULT 1110 Medical Terminology	2
TOTAL CREDIT HOURS	13
Summer Semester	
BOA 1104 Access	2
BOA 1111 Bookkeeping	3
BOA 1172 Excel II	2
HIMT 1121 Advanced Medical Terminology	2
MATH 1010 Mathematics for Business Applications	4
TOTAL CREDIT HOURS	13

Semester 3	
BOA XXXX Technical Elective	2
XXX XXXX Refer to approved GE - NAT list	3
HIMT 1135 Health Data Management	3
HIMT 1274 Introduction to Medical Coding and Reimbursement	2
SBS XXXX Refer to approved GE - SBS list	3
TOTAL CREDIT HOURS	13

Semester 4	
BOA 2950 Practicum & Seminar	3
BOA 2999 BOA Capstone	3
HIMT 1265 Medical Reimbursement	3
HUM XXXX Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS	12
TOTAL DEGREE CREDIT HOURS	65

Technical Electives

The following courses are approved for technical elective requirements:

BOA 1117 Payroll	1
BOA 1122 QuickBooks	2
BOA 1300 Business Applications	2
BOA 2167 Desktop Publishing	2
COMM 2200 Business Communications	3
CSCI 1100 Essential Computer Topics	1
IMM 1120 Fundamentals of Interactive Media	4

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT		CR
(SELECT ONE)		
ANTH 2202	Introduction to Cultural Anthropology	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic and Social Geography.....	3
POLS 1100	American Government.....	3
SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology	3

HUM

GE-ART/HUMANITIES REQUIREMENT		CR
(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/Non-Amer to 1500.....	3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223	African-American History I: 1451-1876	3
HIST 2224	African-American History II: 1877-Present	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions.....	3
MUS 1251	Survey of Music History.....	3
PHIL 1101	Introduction to Philosophy.....	3
PHIL 1130	Ethics.....	3

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT		CR
(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	Introduction to Biology.....	4
BIO 1112	Human Biology	4
BIO 1113	Biological Sciences I.....	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Environmental Science I.....	4
BIO 2215	Introduction to Microbiology.....	4
BIO 2232	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 Physics II.....	5

Bookkeeping Certificate

COURSE	CR
Semester 1	
BOA 1102	Excel I
BOA 1111	Bookkeeping
TOTAL CREDIT HOURS	
5	
Semester 2	
BOA 1117	Payroll.....
BOA 1122	QuickBooks.....
BOA 1172	Excel II.....
TOTAL CREDIT HOURS	
5	
TOTAL CERTIFICATE CREDIT HOURS	
10	

Office Specialist Certificate

Semester 1	
BOA 1101	Word I
BOA 1102	Excel I
BOA 1103	PowerPoint
BOA 1104	Access
TOTAL CREDIT HOURS	
8	
Semester 2	
BOA 1172	Excel II.....
BOA 1191	Word II
CSCI 2325	Expert Access.....
TOTAL CREDIT HOURS	
7	
TOTAL CERTIFICATE CREDIT HOURS	
15	

Civil Engineering Technology

Associate Degree in Civil Engineering Technology

Civil Track

Survey Track

Land Surveying Certificate

Surveying Certificate

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.

Upon completion of the Associate Degree in Civil Engineering Technology, the graduate will be able to:

- Prepare engineering drawings for public and private work projects utilizing computer aided drafting (CAD).
- 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.
- Correctly apply regulatory and industry standards to design public utility systems, including sanitary wastewater collection systems, storm-water management systems and water distribution systems.
- 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.

Civil Engineering Technology – Civil Track

COURSE	CR
Semester 1	
ARCH 1112 Basic CAD Drafting.....	1
CIVL 1120 Construction Material Science.....	3
CMGT 1121 Construction Drawings.....	3
MATH 1148 College Algebra.....	4
SURV 1410 Introduction to Surveying or.....	3
SURV 1410A (2) and SURV 1410B (1)	
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS	15
Semester 2	
CIVL 1230 Heavy Construction Estimating.....	3
CIVL 1320 Statics & Strength of Materials.....	3
CIVL 2430 Roadway Location & Design.....	3
CMGT 1105 Construction Documents.....	3
ENGL 1100 Composition I.....	3
SURV 1460 Computer Applications in Construction Science.....	2
CIVL 2430 Roadway Location & Design.....	3
TOTAL CREDIT HOURS	17
Summer Semester	
GIS 1102 GIS in Industry.....	2
NAT XXXX Refer to approved GE - NAT list	3
TOTAL CREDIT HOURS	5

Semester 3	
CIVL 2210 Principles of Hydraulics.....	2
SURV 1420 Historical Surveying.....	2
SURV 2410 Engineering Surveying or.....	4
SURV 2410A (2) and SURV 2410B (2)	
HUM XXXX Refer to approved GE - HUM list.....	3
MATH 1149 Trigonometry.....	4
TOTAL CREDIT HOURS	12

Semester 4	
CIVL 2230 Public Utility Systems.....	2
ESSH 1650 OSHA 30-Hr General Industry Safety & Health	2
PSY 1100 Introduction to Psychology or.....	3
SOC 1101 Introduction to Sociology.....	3
SURV 2490 Land Development Systems.....	3
XXXX XXXX Technical Elective.....	2
TOTAL CREDIT HOURS	12
TOTAL DEGREE CREDIT HOURS	66

Technical Electives

The following courses are approved for technical elective requirements:

ARCH 2237 Structures.....	4
CIVL 2910 Field Experience.....	3
CIVL 2994 Special Topics: Civil Engineering Technology.....	1-3
CMGT 1131 Quantity Survey.....	3
SURV 2450 Legal Principles in Surveying.....	3
SURV 2480 Geodetic Surveying or.....	4
SURV 2480A (2) and SURV-2480B (2)	

- Determine forces and stresses in elementary structural systems.
- Apply ODOT, Federal Highway Administration (FHWA), and industry design standards to plan, design, and detail a simulated highway including drainage structures.
- Apply subdivision regulations and surveying laws in the preparation of preliminary sketch, preliminary plat, and final plat for a major private platted land subdivision.
- Perform preliminary site investigations, research infrastructure records, secure appropriate codes and regulations, and prepare a set of preliminary drawings of an urban redevelopment site.
- Perform quantity takeoffs and estimates for heavy construction projects.

The Civil Engineering Technology, Surveying Certificate is a one-year, three-semester program, which provides a basis for entry-level careers in survey field and office operations. The one-year 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, and drafter/designer.

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.

Civil Engineering Technology – Survey Track

COURSE	CR
Semester 1	
ARCH 1112 Basic CAD Drafting.....	1
CIVL 1120 Construction Material Science.....	3
CMGT 1121 Construction Drawing.....	3
MATH 1148 College Algebra.....	4
SURV 1410 Introduction to Surveying or.....	3
SURV 1410A (2) and SURV 1410B (1)	
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS	15

Semester 2	
CIVL 1230 Heavy Construction Estimating.....	3
CMGT 1105 Construction Documents.....	3
ENGL 1100 Composition I.....	3
ESSH 1650 OSHA 30-Hr General Industry Safety & Health.....	2
NAT XXXX Refer to approved GE - NAT list.....	3
SURV 1460 Computer Applications in Construction Science.....	2
TOTAL CREDIT HOURS	16

Summer Semester	
GIS 1102 GIS in Industry.....	2
TOTAL CREDIT HOURS	2

Semester 3	
SURV 1420 Historical Surveying.....	2
SURV 2410 Engineering Surveying or.....	4
SURV 2410A (2) and SURV 2410B (2)	
SURV 2480 Geodetic Surveying or.....	4
SURV 2480A (2) and SURV 2480B (2)	
HUM XXXX Refer to approved GE - HUM list.....	3
MATH 1149 Trigonometry.....	4
TOTAL CREDIT HOURS	17

Semester 4	
SURV 2450 Legal Principles in Survey.....	3
CIVL 2430 Roadway Location & Design.....	3
SURV 2490 Land Development Systems.....	3
PSY 1100 Introduction to Psychology or	
SOC 1101 Introduction to Sociology.....	3
XXXX XXXX Technical Elective.....	3
TOTAL CREDIT HOURS	15
TOTAL DEGREE CREDIT HOURS	65

Technical Electives

The following courses are approved for technical elective requirements:

CMGT 1131 Quantity Survey.....	3
CIVL 1320 Statics & Strength of Materials.....	3
CIVL 2210 Principles of Hydraulics.....	2
CIVL 2910 Field Experience.....	3
GIS 2200 Imaging Management & Analysis.....	4
LAND 2175 Sustainable Sites.....	3
SURV 2994 Special Topics: Surveying.....	1-3

Approved General Education (GE) List

HUM			
GE-ART/HUMANITIES REQUIREMENT			
(SELECT ONE) ARCH 2100 – PREFERRED			
			CR
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/Non-Amer to 1500.....		3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500.....		3

NAT			
GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT			
(SELECT ONE) HORT 1130 PREFERRED			
			CR
ASTR 1161	The Solar System.....		3
BIO 1112	Introduction to Biology.....		4
CHEM 1111	Elementary Chemistry I.....		4
ESSH 1101	Intro Environmental 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

Land Surveying Certificate

COURSE	CR
Semester 1	
SURV 1420 Historical Surveying	2
SURV 2410 Engineering Surveying.....	4
SURV 2480 Geodetic Surveying.....	4
TOTAL CREDIT HOURS	10
Semester 2	
SURV 2450 Legal Principles in Surveying.....	3
SURV 2490 Land Development Systems	3
TOTAL CREDIT HOURS	6
TOTAL CERTIFICATE CREDIT HOURS	16

This course is a prerequisite to SURV 2410 if not completed in B.S. program.
SURV 1410 Introduction to Surveying

Surveying Certificate

COURSE	CR
Semester 1	
ARCH 1112 Basic CAD Drafting.....	1
ESSH 1650 OSHA 30-Hr General Industry Safety & Health	2
SURV 1410 Introduction to Surveying	3
SURV 1420 Historical Surveying	2
TOTAL CREDIT HOURS	8
Semester 2	
SURV 1460 Comp Applications in Construction Science	2
CIVL 2430 Roadway Location & Design.....	3
SURV 2450 Legal Principles in Surveying.....	3
SURV 2490 Land Development Systems	3
TOTAL CREDIT HOURS	11
Semester 3	
GIS 1102 GIS in Industry.....	2
SURV 2410 Engineering Surveying.....	4
SURV 2480 Geodetic Surveying.....	4
TOTAL CREDIT HOURS	10
TOTAL CERTIFICATE CREDIT HOURS	29

Computer Science

Computer Science Associate of Applied Science Degree

Game Developer Track

MIS/Project Management Track

Network Administrator Track

Network Security Track

Software Developer Track

Web Developer Track

Business Intelligence Certificate

CCNA Routing and Switching Certificate

Computer Literacy Certificate

Database Specialist Certificate

Management Information Systems (MIS) Certificate

Mobile Games Apps Certificate

Network Administrator Certificate

Network Security Certificate

Software Developer Certificate

The Computer Science curriculum provides graduates with a foundation in logic, programming, operating systems, applications, systems analysis, and networking through a core set of courses. Learners may choose to specialize in Game Developer, Network Administrator, Network Security, Software Developer, or Web Developer. CSCI offers a number of industry subject-specific certificates in database, networking, hardware/software, and applications.

Upon completion of the Associate Degree in Computer Science, the graduate will be able to:

- Participate in collaborative projects utilizing the Systems Development Life Cycle (SDLC)
- Determine project requirements
- Create project documentation using computer based applications software
- Develop applications using programming languages
- Create a multiple-page, multiple presentation website
- Perform operating systems fundamentals for effective file

management

- Identify and apply networking concepts. Identify and apply programming logic concepts
- Identify and apply relevant social networking applications
- Demonstrate team project skills using effective technical communication.

The Cisco Certified Network Administrator, CCNA Routing and Switching Certificate is a curriculum that provides foundational networking knowledge, practical experience, and soft-skills development to prepare students for entry-level careers in IT and networking. The curriculum focuses on networking for simple home or small office networks to complex enterprise networks. Students are introduced to advanced technologies such as voice, video, wireless and security and gain hands-on experience with switches, routers, cables and other networking technologies. The CCNA Routing and Switching Certificate curriculum prepares students for two different Cisco certification exams, Cisco Certified Entry Network Technician (CCENT), and Cisco Certified Network Associate (CCNA).

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.

Upon completion of the Computer Literacy Certificate, the student will be able to:

- Use the Windows operating system to manage files and folders, including creating, renaming, copying, deleting, and moving
- Demonstrate proficiency within the Blackboard environment
- Navigate and explore the Internet and the World Wide Web utilizing Microsoft Internet Explorer
- Utilize the Internet as an effective research tool
- Describe the basic elements and terminology of the Windows operating system
- Create and edit Word documents including a research paper, a resume, and a business letter
- Create and format an Excel worksheet with embedded charts, formulas, and functions
- Perform a What-if Analysis in Excel
- Create and use an Access database including tables, queries, and reports
- Create a slide show in PowerPoint
- Integrate Microsoft Office applications.

In addition to many of the Computer Science competencies, a graduate with a Database Specialist Certificate will be able to:

- Prepare a systems design utilizing a database management system
- Design and implement an Access, Oracle and Microsoft SQL server database
- Perform basic administration functions of a database management system
- Understand data warehousing systems
- Use the Visual Basic.NET language to interface with a database management system.

In addition to many of the Computer Science competencies, a graduate with a Management Information Systems (MIS) Certificate will be able to:

- Define project goals clearly
- Design and produce a UML requirement model
- Implement a UML design in IT Project
- Determine task dependencies and schedules
- Assign and optimize resources
- Produce the implementation plan
- Manage and respond to change
- Measure and present results effectively
- Apply practical aspects learned in the classroom by managing or assisting in managing IT projects.

In addition to many of the Computer Science competencies, 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.

In addition to many of the Computer Science competencies, a graduate with a Network Security Certificate will be able to:

- Describe and analyze security threats
- Protect an organization's system and data
- Design disaster recovery strategies for the enterprise
- Design and implement computer forensics strategies
- Assess network vulnerabilities
- Recognize and respond to security threats
- Design and develop security audits for an organization
- Understand the ethical issues related to network security
- Design and implement wireless networks
- Work with VPNs and firewalls
- Protect Internet connections and intranets as well as critical data from attacks
- Learn how to carry out and implement secure communications across unsecured networks.

In addition to many of the Computer Science competencies, a graduate with a Software Developer Certificate will be able to:

- Demonstrate techniques of object analysis and object design
- Design and code programs in C# and Visual Basic.NET
- Debug a C# or Visual Basic.NET program
- Develop Web front-end applications
- Utilize a database for a Web application.

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.

Computer Science Associate Degree, Game Developer Track

COURSE	CR
Semester 1	
CSCI 1101 Computer Concepts & Applications.....	3
CSCI 1103 Introduction to Programming Logic.....	3
MATH 1148 College Algebra.....	4
CSCI 1511 Python Programming.....	3
IMM 1115 Survey of Gaming Industry.....	3
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS.....	17
Semester 2	
CSCI 1145 HTML.....	3
CSCI 1551 Concepts of 3D Games Engines.....	3
ENGL 1100 Composition I.....	3
CSCI 1151 Operating Systems.....	2
CSCI 2521 C++ Programming.....	3
TOTAL CREDIT HOURS.....	14
Summer Semester	
PHYS 1200 Algebra-Based Physics I.....	5
COMM 2204 Technical Writing.....	3
ECON 2200 Principles of Microeconomics.....	3
CSCI 2447 JavaScript Fundamentals.....	3
TOTAL CREDIT HOURS.....	14
Semester 3	
CSCI 1152 Networking Concepts.....	3
CSCI 2551 Graphics in 3D Games Engines.....	4
CSCI 2541 Foundations of 2D Game Programming.....	3
IMM 1201 3D Modeling I.....	4
TOTAL CREDIT HOURS.....	14
Semester 4	
CSCI 2556 3D Game Project.....	3
CSCI 2546 2D Game Project.....	3
MKTG 1110 Marketing Principles or.....	3
MKTG 1120 Branding.....	3
HIST XXXX 1111, 1112, 1151, or 1152.....	3
TOTAL CREDIT HOURS.....	12
TOTAL DEGREE CREDIT HOURS.....	71

Computer Science Associate Degree, MIS/Project Management Track

COURSE	CR
Semester 1	
CSCI 1101 Computer Concepts & Applications.....	3
CSCI 1103 Introduction to Programming Logic.....	3
MATH 1148 College Algebra.....	4
ENGL 1100 Composition I.....	3
HUM XXXX Refer to approved GE - HUM list.....	3
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS.....	17
Semester 2	
CSCI 1145 HTML.....	3
CSCI 1151 Operating Systems.....	2
CSCI 1152 Networking Concepts.....	3
CSCI 1610 Object Oriented Analysis & UML.....	3
CSCI 1620 Visual Basic I.....	3
COMM 2200 Business Communication.....	3
TOTAL CREDIT HOURS.....	17
Summer Semester	
CSCI 1275 Systems Analysis.....	3
TOTAL CREDIT HOURS.....	3
Semester 3	
CSCI 2330 Project Management Fundamentals & Case Studies.....	4
CSCI XXXX Technical Elective I.....	3
ACCT 1211 Financial Accounting.....	3
ECON 2200 Principles of Microeconomics.....	3
NAT XXXX Refer to approved GE - NAT list.....	4
TOTAL CREDIT HOURS.....	17
Semester 4	
CSCI XXXX Technical Elective II.....	3
CSCI 2370 Database Systems Programming.....	3
CSCI 2802 CSCI Seminar.....	1
CSCI 2902 CSCI Practicum.....	3
MKTG 1110 Marketing Principles.....	3
SCM 1501 Information Technology in Logistics.....	3
TOTAL CREDIT HOURS.....	16
TOTAL DEGREE CREDIT HOURS.....	70
Technical Electives	
The following courses are approved for technical elective requirements:	
CSCI 1001 Computer Fundamentals.....	2
CSCI 1630 C# Programming I.....	4
CSCI 1772 Networking I.....	3
CSCI 2371 Database Administration & Data Mining.....	4
CSCI 2412 Web Database Development.....	4
CSCI 2620 Visual Basic II.....	4

Approved General Education (GE) List

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT

(SELECT ONE)

	CR
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	Introduction to Biology .....4
BIO 1112	Human Biology .....4
BIO 1113	Biological Sciences I .....4
BIO 1114	Biological Sciences II .....4
BIO 1125	Plant Biology .....4
BIO 1127	Environmental Science I .....4
BIO 2215	Introduction to Microbiology .....4
BIO 2232	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

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE)

	CR
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/Non-Amer to 1500 .....3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500 .....3
HIST 2223	African-American History I: 1451-1876 .....3
HIST 2224	African-American History II: 1877-Present .....3
HUM 1100	Introduction to Humanities .....3
HUM 1270	Comparative Religions .....3
MUS 1251	Survey of Music History .....3
PHIL 1101	Introduction to Philosophy .....3
PHIL 1130	Ethics .....3

Computer Science Associate Degree, Network Administrator Track

COURSE

CR

Semester 1

CSCI 1101	Computer Concepts & Applications .....3
CSCI 1103	Introduction to Programming Logic .....3
CSCI 1151	Operating Systems .....2
CSCI 1152	Networking Concepts .....3
COLS 1100	First Year Experience Seminar .....1
MATH 1151	Calculus I .....5
TOTAL CREDIT HOURS	17

Semester 2

CSCI 1145	HTML .....3
CSCI 1772	Networking I .....3
ECON 2200	Principles of Microeconomics .....3
ENGL 1100	Composition I .....3
PHYS 1200	Algebra-Based Physics I .....5
TOTAL CREDIT HOURS	17

Summer Semester

CSCI 1275	Systems Analysis .....3
ACCT 1211	Financial Accounting .....3
MKTG 1110	Marketing Principles .....3
TOTAL CREDIT HOURS	9

Semester 3

CSCI 1620	Visual Basic I .....3
CSCI 2770	Network Communication & TCP/IP .....3
CSCI 2774	Networking II .....4
CSCI 2790	Linux Administration .....3
HIST XXXX	1111, 1112, 1151, or 1152 .....3
TOTAL CREDIT HOURS	16

Semester 4

CSCI 2778	Wireless, Voice & Mobile Communications .....3
CSCI 2792	Virtualization .....3
CSCI 2802	CSCI Seminar (1) and CSCI 2902 CSCI Practicum (3) or
CSCI 2999	CSCI Capstone (3) 3-4
IMM 1120	Fundamentals of Interactive Media .....4
TOTAL CREDIT HOURS	13-14
TOTAL DEGREE CREDIT HOURS	72-73

Computer Science Associate Degree, Network Security Track

COURSE	CR
Semester 1	
CSCI 1101 Computer Concepts & Applications.....	3
CSCI 1103 Introduction to Programming Logic	3
MATH 1148 College Algebra.....	4
ENGL 1100 Composition I	3
COLS 1100 First Year Experience Seminar	1
TOTAL CREDIT HOURS	14

Semester 2	
CSCI 1145 HTML.....	3
CSCI 1151 Operating Systems	2
CSCI 1152 Networking Concepts	3
BMGT 2250 Project Management Principles.....	3
ECON 2200 Principles of Microeconomics.....	3
PHIL 1150 Introduction to Logic or.....	1
PHIL 1130 Ethics	3
TOTAL CREDIT HOURS	17

Summer Semester	
CSCI 1275 Systems Analysis	3
HIST XXXX 1111, 1112, 1151, or 1152.....	3
MKTG 1110 Marketing Principles.....	3
CHEM 1111 Elementary Chemistry I.....	4
TOTAL CREDIT HOURS	13

Semester 3	
CSCI 2750 Introduction to CISCO Networks.....	3
CSCI 2776 Network & Cybersecurity.....	3
CSCI XXXX Technical Elective	3
IMM 1120 Fundamentals of Interactive Media	4
TOTAL CREDIT HOURS	13

Semester 4	
CSCI 2752 CISCO Routing and Switching Essentials.....	3
CSCI 2780 Computer Forensics	3
CSCI 2786 Security Practice & Management.....	3
CSCI 2790 Linux Administration	3
CSCI 2802 CSCI Seminar	1
CSCI 2902 CSCI Practicum	3
TOTAL CREDIT HOURS	16
TOTAL DEGREE CREDIT HOURS.....	73

Technical Electives

The following courses are approved for technical elective requirements:

CSCI 2754 Scaling CISCO Networks.....	3
CSCI 2756 Connecting CISCO Networks	3
CSCI 1445 Content Management & Integration.....	3
CSCI 2760 CCNA Voice.....	3
CSCI 2762 CCNA Security	3
CSCI 2782 Information Security Audit.....	3
CSCI 2784 Business Continuity and Disaster	3

Computer Science Associate Degree, Software Developer Track

COURSE	CR
Semester 1	
CSCI 1101 Computer Concepts & Applications.....	3
CSCI 1103 Introduction to Programming Logic.....	3
MATH 1148 College Algebra.....	4
ENGL 1100 Composition I.....	3
PHIL 1150 Introduction to Logic	3
COLS 1100 First Year Experience Seminar	1
TOTAL CREDIT HOURS.....	17

Semester 2	
CSCI 1145 HTML	3
CSCI 1151 Operating Systems	2
CSCI 1152 Networking Concepts	3
CSCI 1610 Object Oriented Analysis & UML.....	3
CSCI 1620 Visual Basic I	3
CSCI 1630 C# Programming I	4
TOTAL CREDIT HOURS.....	18

Summer Semester	
CSCI 1275 Systems Analysis	3
ECON 2200 Principles of Microeconomics.....	3
PHYS 1200 Algebra-Based Physics I.....	5
TOTAL CREDIT HOURS.....	11

Semester 3	
CSCI 2370 Database Systems Programming.....	3
CSCI 2447 JavaScript Fundamentals	3
CSCI 2467 Java Programming I	3
SCM 1190 International Business.....	3
MKTG 1110 Marketing Principles.....	3
TOTAL CREDIT HOURS.....	15

Semester 4	
CSCI XXXX Technical Elective.....	1-2
CSCI 2802 CSCI Seminar	1
CSCI 2902 CSCI Practicum	3
BMGT 1111 Management.....	3
HIST XXXX 1111, 1112, 1151, or 1152	3
TOTAL CREDIT HOURS.....	11-12
TOTAL DEGREE CREDIT HOURS.....	72-73

Technical Electives

The following courses are approved for technical elective requirements:

CSCI 2412 Web Database Development.....	4
CSCI 2469 Java Programming II.....	3
CSCI 2620 Visual Basic II.....	4
CSCI 2630 C# Programming II	3
CSCI 2994 CSCI Current Topics.....	1 - 3

Computer Science Associate Degree, Web Developer Track

COURSE	CR
Semester 1	
CSCI 1101 Computer Concepts & Applications.....	3
CSCI 1103 Introduction to Programming Logic.....	3
MATH 1148 College Algebra.....	4
ENGL 1100 Composition I.....	3
HIST XXXX 1111, 1112, 1151, or 1152.....	3
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS	17
Semester 2	
CSCI 1102 Intermediate Excel & Access.....	3
CSCI 1145 HTML.....	3
CSCI 1151 Operating Systems.....	2
CSCI 1152 Networking Concepts.....	3
ACCT 1211 Financial Accounting.....	3
ECON 2200 Principles of Microeconomics.....	3
TOTAL CREDIT HOURS	17
Summer Semester	
CSCI 1275 Systems Analysis.....	3
TOTAL CREDIT HOURS	3
Semester 3	
CSCI 2412 Web Database Development.....	4
CSCI 2447 JavaScript Fundamentals.....	3
CSCI 2467 Java Programming I.....	3
COMM 2204 Technical Writing.....	3
IMM 2620 Website Design Creation.....	3
TOTAL CREDIT HOURS	16
Semester 4	
CSCI 2489 Mobile Software Development.....	3
CSCI XXXX Technical Elective.....	3
CSCI 2802 CSCI Seminar.....	1
CSCI 2902 CSCI Practicum.....	3
CHEM 1111 Elementary Chemistry I.....	4
MKTG 1110 Marketing Principles.....	3
TOTAL CREDIT HOURS	17
TOTAL DEGREE CREDIT HOURS	70

Technical Electives

The following courses are approved for technical elective requirements:

CSCI 1143 Introduction to HTML.....	1
CSCI 1150 Networking Terminology.....	1
CSCI 1100 Essential Computer Topics.....	1
CSCI 1320 Database Fundamentals.....	2
CSCI 1620 Visual Basic I.....	3
CSCI 1630 C# Programming I.....	4
CSCI 2370 Database Systems Programming.....	3
CSCI 2371 Database Administration & Data Mining.....	4
CSCI 2380 Business Intelligence Fundamentals.....	3
CSCI 2385 Business Intelligence Reporting.....	3
CSCI 2479 Advanced Web Programming.....	3

Business Intelligence (BI) Certificate

COURSE	CR
Semester 1	
CSCI 1320* Database Fundamentals.....	2
CSCI 2380 Business Intelligence Fundamentals.....	3
STAT 2430 Business Statistics.....	5
TOTAL CREDIT HOURS	10
Semester 2	
CSCI 2371 Database Administration & Data Mining.....	4
CSCI 2385 Business Intelligence Reporting.....	3
TOTAL CREDIT HOURS	7
TOTAL CERTIFICATE CREDIT HOURS	17

*CSCI 1320 may be waived for those with SQL database work experience or database degrees or certifications. Please see program coordinator for details.

CCNA Routing and Switching Certificate

COURSE	CR
Semester 1	
CSCI 2750 Introduction to CISCO Networks.....	3
TOTAL CREDIT HOURS	3
Semester 2	
CSCI 2752 CISCO Routing and Switching Essentials.....	3
TOTAL CREDIT HOURS	3
Semester 3	
CSCI 2754 Scaling CISCO Networks.....	3
CSCI 2756 Connecting CISCO Networks.....	3
TOTAL CREDIT HOURS	6
TOTAL CERTIFICATE CREDIT HOURS	12

Computer Literacy Certificate

COURSE	CR
Semester 1	
CSCI 1001 Computer Fundamentals.....	2
TOTAL CREDIT HOURS	2
Semester 2	
CSCI 1101 Computer Concepts & Applications.....	3
TOTAL CREDIT HOURS	3
Summer Semester	
CSCI 1102 Intermediate Excel & Access.....	3
TOTAL CREDIT HOURS	3
TOTAL CERTIFICATE CREDIT HOURS	8

Database Specialist Certificate

COURSE	CR
Semester 1	
CSCI 1275 Systems Analysis.....	3
CSCI 2325 Expert Access.....	3
TOTAL CREDIT HOURS	6
Semester 2	
CSCI 2370 Database Systems Programming.....	3
CSCI 2412 Web Database Development.....	4
TOTAL CREDIT HOURS	7
Semester 3	
CSCI 1620 Visual Basic I.....	3
CSCI 2371 Database Administration & Data Mining.....	4
TOTAL CREDIT HOURS	7
TOTAL CERTIFICATE CREDIT HOURS	20

Management Information Systems (MIS) Certificate

COURSE	CR
Semester 1	
CSCI 1103 Introduction to Programming Logic.....	3
CSCI 2330 Project Management Fundamentals & Case Studies.....	4
TOTAL CREDIT HOURS.....	7
Semester 2	
CSCI 1275 Systems Analysis.....	3
CSCI 1610 Object Oriented Analysis & UML.....	3
TOTAL CREDIT HOURS.....	6
TOTAL CERTIFICATE CREDIT HOURS.....	13

Mobile Game Apps Certificate

COURSE	CR
Semester 1	
CSCI 1103 Introduction to Programming Logic.....	3
CSCI 1511 Python Programming.....	3
TOTAL CREDIT HOURS.....	6
Semester 2	
CSCI 1145 HTML.....	3
TOTAL CREDIT HOURS.....	3
Summer Semester	
CSCI 2447 JavaScript Fundamentals.....	3
TOTAL CREDIT HOURS.....	3
Semester 3	
CSCI 2541 Foundations of 2D Game Programming.....	3
TOTAL CREDIT HOURS.....	3
Semester 4	
CSCI 2546 2D Game Project.....	3
TOTAL CREDIT HOURS.....	3
TOTAL CERTIFICATE CREDIT HOURS.....	18

Network Administrator Certificate

COURSE	CR
Semester 1	
CSCI 1772 Networking I.....	3
CSCI 2770 Network Communication & TCP/IP.....	3
TOTAL CREDIT HOURS.....	6
Semester 2	
CSCI 2774 Networking II.....	4
CSCI 2790 Linux Administration.....	3
TOTAL CREDIT HOURS.....	7
Summer Semester	
CSCI 2792 Virtualization.....	3
CSCI 2778 Wireless, Voice & Mobile Communications.....	3
TOTAL CREDIT HOURS.....	6
TOTAL CERTIFICATE CREDIT HOURS.....	19

Network Security Certificate

COURSE	CR
Semester 1	
CSCI 2750 Introduction to CISCO Networking.....	3
TOTAL CREDIT HOURS.....	3
Semester 2	
CSCI 2752 CISCO Routing and Switching Essentials.....	3
TOTAL CREDIT HOURS.....	3
Summer Semester	
CSCI 2790 Linux Administration.....	3
TOTAL CREDIT HOURS.....	3
Semester 3	
CSCI 2754 Scaling CISCO Networks.....	3
CSCI 2756 Connecting CISCO Networks.....	3
CSCI 2776 Network & Cybersecurity.....	3
TOTAL CREDIT HOURS.....	9
Semester 4	
CSCI 2786 Security Practice & Management.....	3
CSCI XXXX Technical Elective.....	3
TOTAL CREDIT HOURS.....	6
TOTAL CERTIFICATE CREDIT HOURS.....	24

Technical Electives

The following courses are approved for technical elective requirements:

CSCI 2762 CCNA Security.....	3
CSCI 2780 Computer Forensics.....	3
CSCI 2782 Information Security Audit.....	3
CSCI 2784 Business Continuity & Disaster Recovery.....	3

Software Developer Certificate

COURSE	CR
Semester 1	
CSCI 1145 HTML.....	3
CSCI 1630 C# Programming I.....	4
CSCI 2467 Java Programming I.....	3
TOTAL CREDIT HOURS.....	10
Semester 2	
CSCI 1620 Visual Basic I.....	3
CSCI 2370 Database Systems Programming.....	3
CSCI 2447 JavaScript Fundamentals.....	3
TOTAL CREDIT HOURS.....	9
TOTAL CERTIFICATE CREDIT HOURS.....	19

Construction Management

- Associate of Applied Science Degree**
- Building Information Modeling (BIM) Certificate**
- Estimating/Bidding Certificate**
- Facility Conservation and Energy Management Certificate**
- Field Supervision Certificate**
- Residential Construction Management Certificate**

There are 2+2 and formal articulation agreements in place for many Ohio and U.S. colleges and universities. Contact the program advisor for details. The Construction Management program has been continuously accredited by the American Council for Construction Education (ACCE) since 2000.

The Construction Management program prepares graduates for entry-level employment with all types of construction companies. Inside positions include work assignments in marketing, sales, estimating, and purchasing; field assignments include those in scheduling, cost control, quality assurance, assisting field superintendents, and monitoring safety programs. The local job market for graduates is expected to continue to grow as the Columbus construction industry steadily expands.

In addition to technical and management courses taught at the college, associate degree students have the opportunity to work directly with employers through a summer semester cooperative

job program that fulfills part of the degree program requirements. Students in the program share a course core curriculum with other programs in the Construction Sciences 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 computer literacy.

Upon completion of the Associate Degree in Construction Management, the graduate will be able to:

- Analyze and interpret all types of construction drawings and documents
- Develop conceptual programs and detail in order to calculate quantities of material, labor, and equipment needed for a project
- Analyze financial data relative to cost budget data of construction work in the field and office
- Apply data analysis to identify construction problems, specify

Construction Management Associate Degree

COURSE		CR
COURSE		CR
Semester 1		
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 Material Science.....	3
TOTAL CREDIT HOURS		16
Semester 2		
CMGT 1131	Quantity Survey	3
CMGT 1135	Safety & Loss Prevention	2
ESSH 1650	OSHA 30-Hour Construction Safety & Health.....	2
NAT XXXX	Refer to approved GE - NAT list	3
ARCH 1110	Basic Manual Drafting.....	1
ARCH 1112	Basic CAD Drafting.....	1
COMM 2200	Business Communication.....	3
TOTAL CREDIT HOURS		15

Summer Semester		
CMGT 1141	Estimating	3
CMGT 2241	Planning & Scheduling	3
XXXX XXXX	Technical Elective.....	3
TOTAL CREDIT HOURS		9

Semester 3		
CMGT 2251	Cost Control.....	3
CMGT 2231	Commercial Computer Estimating or	3
CMGT 2281	Residential Computer Estimating	3
SURV 1410	Introduction to Surveying	3
MATH 1075	Intermediate Algebra.....	4
TOTAL CREDIT HOURS		13

Semester 4		
CMGT 2221	Construction Company ManagementManagement & Professional Development	3
CMGT 2699	Project Management	3
STAT 1350	Elementary Statistics	3
PSY 1100	Introduction to Psychology or	3
SOC 1101	Introduction to Sociology	3
HUM XXXX	Refer to approved GE - HUM list.....	3
TOTAL CREDIT HOURS		15
TOTAL DEGREE CREDIT HOURS		68

- goals, and execute projects including understanding risk management and safety loss prevention
- Utilize the critical path and Gantt bar chart methods to organize, track and update construction projects as necessary
- Identify, understand and apply the elements in construction employee relations and contract law

- Utilize industry standard software for estimating, planning, scheduling and cost control
- Understand the processes of construction disputes, claims and project documentation
- Obtain working knowledge of safety, health and environmental issues.

Construction Management Associate Degree (continued)

Technical Electives

The following courses are approved for technical elective requirements:

ACCT 1211	Financial Accounting	3
ARCH 1274	Revit Architecture I	2
ARCH 1276	SketchUp	2
ARCH 2282	Sustainable Design	2
ARCH 2283	Sustainable Energy	2
BMGT 1102	Interpersonal Skills	2
CIVL 1320	Statics & Strength of Materials	3
CIVL 1230	Heavy Construction Estimating	3
CMGT 1153	Residential Construction	3
CMGT 1171	Sustainability Management	3
CMGT 1173	Sustainability Applications	3
CMGT 2215	Introduction to Building Information Modeling (BIM)	3
CMGT 2216	BIM Applications	3

CMGT 2231	Commercial Computer Estimating	3
CMGT 2281	Residential Computer Estimating	3
CMGT 2282	Sustainable Construction	2
CMGT 2910	Field Experience	3
CMGT 2994	Special Topics: Construction Management	1-4
ESSH 1160	OSHA 10-Hour Construction Safety & Health	1
ESSH 2282	Sustainable Building Strategies	2
ESSH 2520	40-HR HAZWOPER	2
GIS 1100	Introduction to GIS	3
SURV 1460	Computer Applications in Construction Science	2
SURV 2410	Engineering Surveying	4

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE) ARCH 2100-PREFERRED		CR
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/Non-Amer to 1500	3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Introduction to Philosophy	3
PHIL 1130	Ethics	3

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT

(SELECT ONE) ESSH 1101-PREFERRED		CR
BIO 1127	Environmental Science I	4
CHEM 1171	General Chemistry I	5
GEOL 1121	Physical Geology	4
HORT 1130	Plant Sciences	3
ESSH 1101	Intro to Environmental Science, Safety, Health	3

Note: Students planning to transfer to a related baccalaureate program at a four-year institution must take MATH 1148.

Building Information Modeling (BIM) Certificate

COURSE	CR	
Semester 1		
CMGT 2215	Introduction to Building Information Modeling (BIM).....	3
ARCH 1274	Revit Architecture I	2
TOTAL CREDIT HOURS	.....	5
Semester 2		
ARCH 2275	Revit Architecture II	2
CMGT 2216	BIM Applications	3
TOTAL CREDIT HOURS	.....	5
TOTAL CERTIFICATE CREDIT HOURS	.....	10

Estimating/Bidding Certificate

COURSE	CR	
Semester 1		
CMGT 1105	Construction Documents	3
CMGT 1121	Construction Drawings	3
CMGT 1115	Construction Methods	3
TOTAL CREDIT HOURS	.....	9
Semester 2		
CMGT 1131	Quantity Survey	3
CMGT 2281	Residential Computer Estimating	3
CMGT 1135	Safety & Loss Prevention	2
ESSH 1650	OSHA 30-Hr Construction Safety & Health	2
TOTAL CREDIT HOURS	.....	10
Semester 3		
CMGT 1141	Estimating	3
CMGT 2231	Commercial Computer Estimating	3
CMGT 2241	Planning & Scheduling	3
TOTAL CREDIT HOURS	.....	9
TOTAL CERTIFICATE CREDIT HOURS	.....	28

Facility Conservation and Energy Management Certificate

COURSE	CR
Semester 1	
CMGT 1171 Sustainability Management.....	3
TOTAL CREDIT HOURS	3
Semester 2	
CMGT 1173 Sustainability Applications	3
TOTAL CREDIT HOURS	3
TOTAL CERTIFICATE CREDIT HOURS	6

Field Supervision Certificate

COURSE	CR
Semester 1	
CMGT 1105 Construction Documents.....	3
CMGT 1115 Construction Methods.....	3
CMGT 1121 Construction Drawings	3
CMGT 1135 Safety & Loss Prevention	2
TOTAL CREDIT HOURS	11
Semester 2	
CMGT 1131 Quantity Survey	3
CMGT 2221 Managing Construction Management & Professional Development 3	
CMGT 2241 Planning & Scheduling	3
ESSH 1650 OSHA 30-Hr Construction Safety & Health.....	2
TOTAL CREDIT HOURS	11
TOTAL CERTIFICATE CREDIT HOURS	22

Residential Construction Management Certificate

COURSE	CR
Semester 1	
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.....	3
TOTAL CREDIT HOURS	14
Semester 2	
CMGT 1131 Quantity Survey	3
CMGT 1141 Estimating	3
CMGT 2221 Managing Construction Management & Professional Development 3	
CMGT 2281 Residential Computer Estimating	3
ESSH 1650 OSHA 30-Hr Construction Safety & Health.....	2
TOTAL CREDIT HOURS	14
TOTAL CERTIFICATE CREDIT HOURS	28

Transfer Options

The Construction Management program at Columbus State has articulation agreements with many four-year institutions, including the Technical Education and Training Program of The Ohio State University College of Education. This agreement allows Construction Management students to complete their associate degree at Columbus State, transfer their credits to Ohio State, and complete a baccalaureate degree in Technical Education and Training. Students completing the Ohio State program may be eligible for certification by the Ohio Department of Education to teach in related high school career and technical education programs throughout the state of Ohio.

2 + 2 Program: A.A.S. in Construction Management to a B.S. in Agriculture in Construction Systems Management from The Ohio State University.

3 + 1 Program: A.A.S. in Construction Management to a B.S. in Applied Management from Franklin University.

2 + 2 program: A.A.S. in Construction Management to a B.S. in Construction Management from Northern Kentucky University.

2 + 2 program: A.A.S. in Construction Management to a B.S. in Construction Management from Eastern Michigan University.

Additional Formal Transfer Agreement Options:

Baccalaureate Degree in Business Administration from Capital University, Otterbein University, Mount Union College, Mount Vernon Nazarene University, Franklin University, and Ohio Wesleyan University.

Baccalaureate Degree in Construction Management from Bowling Green State University and more than 96 other colleges and universities around North America.

Baccalaureate Degree in Construction Engineering and Construction Management from the University of Cincinnati and 96 other colleges and universities around North America.

Interested students should contact the Construction Management program coordinators for curriculum requirements and additional details. Please note that course requirements for this option may differ from the standard plan of study published in the catalog.

Criminal Justice

Criminal Justice Associate Degree
Criminal Justice Probation and Supervision Degree
Law Enforcement Academy Track Major
Law Enforcement Professional Track Major
Basic Peace Officer Certificate
Crime Scene Investigation Certificate
Homeland Security Certificate
Professional Law Enforcement Officer Certificate

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: Homeland Security, Crime Scene Investigations, Victim Advocacy, and Crime Prevention.

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.

The Law Enforcement Academy Track degree program 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 Criminal Justice 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 35 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
- 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.

Ohio Peace Officer Certification will only be granted by the state of Ohio upon completion of all in-class requirements, and the successful passage of both the state mandated physical fitness test and the state written test.

The Law Enforcement Professional Track degree program is designed for currently employed, sworn law enforcement professionals with a recommended three years of full-time experience or equivalent. Individuals seeking a degree in this program must be Ohio Peace Officer Training Commission certified or an approved equivalent such as completion of the Ohio State Highway Patrol Trooper Academy. Those individuals who meet these requirements and take, or have taken, at least one college class from Columbus State, will be granted equivalency credit totaling 24 semester hours of the 70-72 required semester degree hours for the Academy I, II, III, and IV courses. The remaining technical courses in the degree focus on developing student skills for future police management and leadership positions at their respective agencies.

Crime Scene Investigation Certificate

The Crime Scene Investigation Certificate is designed for working professionals within the law enforcement or criminal justice field who are seeking to supplement prior training and education in an effort to advance their current or future career paths. This certificate will not automatically qualify or certify a person to become a crime scene investigator however it will provide the participant with a detailed overview and focus on crime scene investigatory practices.

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.

Professional Law Enforcement Officer Certificate

This certificate is designed for individuals currently employed within the field of law enforcement who are looking to amend or add to their credentials or individuals who have already attained a degree in another field or major yet are seeking an added credential for professional development purposes.

Criminal Justice Major

In addition to the general Criminal Justice competencies, a graduate majoring in Criminal Justice will be able to:

- Communicate effectively within all aspects of the Criminal Justice System, especially in the areas of enforcement, education, and community relations
- Gather, analyze, and interpret information for effective problem solving
- Demonstrate a working knowledge of legal, procedural, and theoretical fundamentals of the Criminal Justice System
- 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.

Probation and Supervision

In addition to the general Criminal Justice competencies, a graduate majoring in Probation and Supervision will be able to:

- Communicate effectively within all aspects of the Criminal Justice System, especially in the areas of enforcement, education, and community relations
- Gather, analyze, and interpret information for effective problem solving
- Demonstrate a working knowledge of legal, procedural, and theoretical fundamentals of the Criminal Justice System
- 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
- Describe historical, legal, and policy practices of the corrections component of the criminal justice system

Law Enforcement Major – Academy Track

In addition to the general Criminal Justice major competencies, a graduate majoring in Law Enforcement – Academy Track will be able to:

- Communicate effectively within all aspects of the Criminal Justice System, especially in the areas of enforcement, education, and community relations
- Gather, analyze, and interpret information for effective problem solving
- Demonstrate a working knowledge of legal, procedural, and theoretical fundamentals of the Criminal Justice System
- 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
- Successfully complete the Peace Officer Basic Training Academy (POBT) as governed by the Ohio Peace Officer Training Commission.

Law Enforcement Major-Professional Track

A graduate majoring in the Law Enforcement-Professional track will be able to:

- Communicate effectively within all aspects of the Criminal Justice System, especially in the areas of enforcement, education, and community relations
- Gather, analyze, and interpret information for effective problem solving
- Demonstrate a working knowledge of legal, procedural, and theoretical fundamentals of the Criminal Justice System
- 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
- Demonstrate effective instructional skills related to criminal justice education
- Describe the character traits and abilities related to leadership and promotion in criminal justice.

Basic Peace Officer Certificate

A person completing this certificate offering should be able to:

- Communicate effectively within all aspects of the Criminal Justice System, especially in the areas of enforcement, education, and community relations

Crime Scene Investigation Certificate

A person completing this certificate offering should be able to:

- Communicate effectively within all aspects of the Criminal Justice System, especially the areas of enforcement, education, and community relations
- Demonstrate the ability to process various types of crime scenes while adhering to accepted legal and scientific parameters for collecting, testing, and storing evidence
- Demonstrate an ability to utilize evidence from a crime scene to help investigators, juries, and judges draw conclusions about how events transpired
- Demonstrate an understanding and proper methods for adhering to the chain of custody with respect to pieces of evidence
- Demonstrate an understanding and the proper methods to preserve evidence from its original state for testing, comparison, and courtroom presentation
- Learn the basic elements of latent print development and comparison
- Demonstrate the ability to photographically record a crime scene
- Demonstrate the ability to analyze a crime scene as it pertains to the overall investigation of a criminal case and how to work with criminal investigators as a team to identify and prosecute criminal defendants.

Homeland Security Certificate

A person completing this certificate offering should be able to:

- Communicate effectively within all aspects of the Criminal Justice System, especially the areas of enforcement, education, and community relations
- Demonstrate an understanding of the characteristics of national and international acts of terrorism

- Identify characteristics, ideologies, motives and behaviors of various extremist and terrorist groups that foster and support terrorist, criminal activities
- Demonstrate operational knowledge of intelligence gathering and analysis pertinent to homeland security and other threats facing government and private sectors
- Demonstrate an understanding of how agencies, using various forms of intelligence, apply sound reasoning, formulate predictions and forecast terrorist activities
- Identify general vulnerabilities and risks in transportation systems and border security systems
- Demonstrate the roles, functions, and interdependency between local, federal, and international law enforcement and military agencies to foster border security.

Professional Law Enforcement Officer Certificate

A person completing this certificate offering should be able to:

- Communicate effectively within all aspects of the Criminal Justice System, especially the areas of enforcement, education, and community relations
- Gather, analyze, and interpret information for effective problem solving.
- Demonstrate a working knowledge of legal, procedural, and theoretical fundamentals of the Criminal Justice System.
- 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 socio-economic stratum.
- Demonstrate effective instructional skills related to criminal justice education.
- Describe the character traits and abilities related to leadership and promotion in criminal justice.

Criminal Justice Major AAS

COURSE	CR
Semester 1	
CRJ 1101 Introduction Criminal Justice.....	3
CRJ 1116 Government and the Law.....	3
COLS 1100 First Year Experience Seminar.....	1
ENGL 1100 Composition I.....	3
CSCI 1101 Computer Concepts and Applications.....	3
TOTAL CREDIT HOURS	13
Semester 2	
CRJ 1110 Policing.....	3
CRJ 1115 Criminal Procedure.....	3
MATH 1010 Math for Business Applications (4) or.....	3
STAT 1350 Elementary Statistics (3).....	3-4
SPAN 1120 Spanish for Law Enforcement	2
TOTAL CREDIT HOURS	11-12
Summer Semester	
CRJ 1140 Corrections.....	3
CRJ XXXX Technical Elective.....	3
COMM 1105 Oral Communications.....	3
MHAD 1114 Introduction to Addiction Studies.....	3
TOTAL CREDIT HOURS	12
Semester 3	
CRJ 2020 Constitutional Law.....	3
CRJ XXXX Technical Elective.....	3
HUM XXXX Refer to approved GE - HUM list.....	3
PSY 1100 Introduction to Psychology.....	3
TOTAL CREDIT HOURS	12
Semester 4	
CRJ 2030 Criminal Investigation I.....	3
CRJ 2901 CRJ Practicum/Seminar.....	3-5
ENGL 2XX7 2367 or 2567 or 2667 or 2767 Composition II.....	3
NAT XXXX Refer to approved GE - NAT list.....	3-5
TOTAL CREDIT HOURS	12-14
TOTAL DEGREE CREDIT HOURS	60-62

Technical Electives:

Crime Scene Investigation:

CRJ 2001 Crime Scene Investigation I.....	3
CRJ 2002 Crime Scene Investigation II	3
CRJ 2003 Crime Scene Investigation III.....	3

Homeland Security:

CRJ 1135 Terrorism.....	3
CRJ 1150 Introduction to Homeland Security.....	3
CRJ 1151 Intelligence Analysis & Security Management.....	3
CRJ 1152 Transportation & Border Security.....	3

Law Enforcement:

CRJ 1145 Juveniles & the CRJ System.....	3
CRJ 2006 Ethics in Law Enforcement.....	3
CRJ 2007 Law Enforcement Promotion.....	3
CRJ 2008 Applied Leadership CRJ Professions.....	3
CRJ 2011 Crisis Intervention.....	3
CRJ 2024 Community Relations	3
CRJ 2031 Interviewing Techniques.....	3

Probation and Supervision

CRJ 2041 Special Category Offender.....	3
CRJ 2042 Community Based Corrections.....	3
CRJ 2043 Institutional Corrections.....	3
CRJ 2044 Counseling: Probation & Parole	3

Approved General Education/Natural Sciences (NAT) List - Criminal Justice Major ONLY

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT

(SELECT ONE)

COURSE	CR		
ASTR 1141	3	Life in the Universe	
ASTR 1161	3	The Solar System	
ASTR 1162	3	Stars and Galaxies.....	
ASTR 1400	1	Astronomy Laboratory.....	
BIO 1111	4	Introduction to Biology.....	
BIO 1112	4	Human Biology.....	
BIO 1113	4	Biological Sciences I.....	
BIO 1114	4	Biological Sciences II	
BIO 1125	4	Plant Biology	
BIO 1127	4	Environmental Science I.....	
BIO 2215	4	Introduction to Microbiology.....	
BIO 2232	4	Human Physiology.....	
CHEM 1100	5	Chemistry and Society.....	
		CHEM 1111	4
		CHEM 1112	4
		CHEM 1171	5
		CHEM 1172	5
		GEOL 1101	4
		GEOL 1105	3
		GEOL 1121	4
		GEOL 1122	4
		GEOL 1151	3
		PHYS 1103	3
		PHYS 1200	5
		PHYS 1201	5
		PHYS 1250	5
		PHYS 1251	5

Criminal Justice - Probation and Supervision AAS

COURSE	CR		
Semester 1			
CRJ 1101	3	Introduction to Criminal Justice.....	
CRJ 1116	3	Government & the Law	
COLS 1100	1	First Year Experience Seminar.....	
CSCI 1101	3	Computer Concepts and Applications.....	
ENGL 1100	3	Composition I.....	
TOTAL CREDIT HOURS	13		
Semester 2			
CRJ 1140	3	Corrections.....	
HUM XXXX	3	Refer to approved GE - HUM list.....	
MATH 1010		Math for Business Applications (4) or	
STAT 1350	3-4	Elementary Statistics (3).....	
SPAN 1120	2	Spanish for Law Enforcement	
TOTAL CREDIT HOURS	11-12		
Summer Semester			
CRJ XXXX	3	Technical Elective	
COMM 1105	3	Oral Communications	
MHAD 1114	3	Introduction to Addiction Studies	
PSY 1100	3	Introduction to Psychology.....	
TOTAL CREDIT HOURS	12		
Semester 3			
CRJ 2030	3	Criminal Investigation I	
TOTAL CREDIT HOURS	12		
Semester 4			
CRJ 2043	3	Institutional Corrections.....	
CRJ 2044	3	Counseling: Probation & Parole	
		CRJ 2901	3-5
		XXX XXXX	3-5
		TOTAL CREDIT HOURS	12-14
		TOTAL DEGREE CREDIT HOURS	60-64
Technical Electives:			
Crime Scene Investigation:			
CRJ 2001	3	Crime Scene Investigation I.....	
CRJ 2002	3	Crime Scene Investigation II	
CRJ 2003	3	Crime Scene Investigation III	
Homeland Security:			
CRJ 1135	3	Terrorism.....	
CRJ 1150	3	Introduction to Homeland Security.....	
CRJ 1151	3	Intelligence Analysis & Security Management.....	
CRJ 1152	3	Transportation & Border Security.....	
CRJ 2021	3	Introduction to Cyberlaw	
Law Enforcement:			
CRJ 1110	3	Policing	
CRJ 1115	3	Criminal Procedure	
CRJ 1145	3	Juveniles & the CRJ System	
CRJ 2006	3	Ethics in Law Enforcement.....	
CRJ 2007	3	Law Enforcement Promotion.....	
CRJ 2008	3	Applied Leadership in CRJ	
CRJ 2011	3	Crisis Intervention.....	
CRJ 2024	3	Community Relations	
CRJ 2031	3	Interviewing Techniques	

Criminal Justice – Law Enforcement Major Academy Track

COURSE	CR		
Semester 1			
CRJ 1101	3	Introduction to Criminal Justice.....	
CRJ 1116	3	Government and the Law.....	
COLS 1100	1	First Year Experience Seminar.....	
CSCI 1101	3	Computer Concepts and Applications.....	
ENGL 1100	3	Composition I.....	
TOTAL CREDIT HOURS	13		
Semester 2			
MATH 1010		Business Math (4) or	
STAT 1350	3-4	Elementary Statistics (3).....	
XXXX XXXX	3-5	Natural Science Elective	
SPAN 1120	2	Spanish for Law Enforcement	
SES 1100	3	Personal Fitness Concepts.....	
TOTAL CREDIT HOURS	11-14		
Summer Semester			
COMM 1105	3	Oral Communications	
ENGL 2XX7	3	2367 or 2567 or 2667 or 2767 Composition II	
HUM XXXX	3	Refer to approved list.....	
PSY 1100	3	Introduction to Psychology	
TOTAL CREDIT HOURS	12		
Semester 3			
CRJ 2075	6	Peace Officer Academy I	
CRJ 2076	6	Peace Officer Academy II	
TOTAL CREDIT HOURS	12		
Semester 4			
CRJ 2077	6	Peace Officer Academy III.....	
CRJ 2078	6	Peace Officer Academy IV.....	
TOTAL CREDIT HOURS	12		
TOTAL DEGREE CREDIT HOURS	61-63		

Law Enforcement Major - Professional Track*

COURSE	CR
Semester 1	
CRJ 2075 Peace Officer Academy I*	6
CRJ 2076 Peace Officer Academy II*	6
TOTAL CREDIT HOURS	12
Semester 2	
CRJ 2077 Peace Officer Academy III*	6
CRJ 2078 Peace Officer Academy IV*	6
TOTAL CREDIT HOURS	12
Summer Semester	
COLS 1100 First Year Experience Seminar	1
CSCI 1101 Computer Concepts and Applications	3
ENGL 1100 Composition I	3
FIRE 1101 Legal Issues for Emergency Serv.	3
SPAN 1120 Spanish for Law Enforcement	2
TOTAL CREDIT HOURS	12

Semester 3	
CRJ 2007 Law Enforcement Promotion	3
COMM 1105 Oral Communications	3
ENGL 2XX7 2367 or 2567 or 2667 or 2767 Composition II	3
MATH 1010 Business Math (4) or	3-4
STAT 1350 Elementary Statistics (3)	3-4
TOTAL CREDIT HOURS	12-13

Semester 4	
CRJ 2008 Applied Leadership CRJ Professions	3
HUM XXXX Refer to approved GE - HUM list	3
XXX XXXX Natural Science Elective	3-5
PSY 1100 Introduction to Psychology	3
TOTAL CREDIT HOURS	12-14
TOTAL DEGREE CREDIT HOURS	64-66

*A law enforcement certification from the state of Ohio and at least three years full time law enforcement experience required for this degree program. See program information for further details.

Approved List of General Education/Humanities (HUM) Electives

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)

COURSE	CR
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/Non-Amer to 1500	3
HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223 African-American History I: 1451-1876	3
HIST 2224 African-American History II: 1877-Present	3
HUM 1100 Introduction to Humanities	3
HUM 1270 Comparative Religions	3
MUS 1251 Survey of Music History	3
PHIL 1101 Introduction to Philosophy	3
PHIL 1130 Ethics	3

Basic Peace Officer Certificate

Semester 1	
CRJ 2075 Peace Officer Academy I*	6
CRJ 2076 Peace Officer Academy II*	6
TOTAL CREDIT HOURS	12
Semester 2	
CRJ 2077 Peace Officer Academy III*	6
CRJ 2078 Peace Officer Academy IV*	6
TOTAL CREDIT HOURS	12
TOTAL DEGREE CREDIT HOURS	24

Homeland Security Certificate

Semester 1	
CRJ 1101 Introduction to Criminal Justice	3
CRJ 1110 Policing	3
CRJ 1150 Introduction to Homeland Security	3
TOTAL CREDIT HOURS	9
Semester 2	
CRJ 1116 Government & the Law	3
CRJ 1135 Terrorism	3
CRJ 1151 Intelligence Analysis & Security Management	3
TOTAL CREDIT HOURS	9

Crime Scene Investigation Certificate

Semester 1	
CRJ 1101 Introduction to Criminal Justice	3
CRJ 2001 Crime Scene Investigation I	3
TOTAL CREDIT HOURS	6
Semester 2	
CRJ 2002 Crime Scene Investigation II	3
CRJ 2030 Criminal Investigation I	3
TOTAL CREDIT HOURS	6
Summer Semester	
CRJ 2003 Crime Scene Investigation III	3
TOTAL CREDIT HOURS	3
TOTAL DEGREE CREDIT HOURS	15

Summer Semester	
CRJ 1152 Transportation and Border Security	3
CRJ 2021 Introduction to Cyberlaw	3
CRJ 2030 Criminal Investigations	3
TOTAL CREDIT HOURS	9
TOTAL DEGREE CREDIT HOURS	27

Professional Law Enforcement Officer Certificate

Semester 1	
CRJ 2006 Ethics in Law Enforcement	3
CRJ 2007 Law Enforcement Promotion	3
CRJ 2008 Applied Leadership in Law Enforcement	3
TOTAL CREDIT HOURS	9
Semester 2	
CRJ 2031 Interviewing Techniques	3
FIRE 1101 Legal Issues for Emergency Services	3
TOTAL CREDIT HOURS	6
TOTAL DEGREE CREDIT HOURS	15

Dental Hygiene

Dental Hygiene Associate 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 for 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.

Upon completion of the Associate of Applied Science Degree in Dental Hygiene, the graduate will:

- Possess the skills and knowledge to manage the ethical and professional issues of dental hygiene practice
- Be able to acquire and analyze information in a scientific and effective manner using critical thinking skills
- Be able to demonstrate written comprehension, critical thinking, and skills for the application of assessment, planning, implementation, and evaluation related to the provision of optimal preventive, therapeutic, and educational dental hygiene services to individuals of diverse populations
- 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
- 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.
- Be able to apply self-assessment skills in preparation for life-long learning

Degree Completion Requirement: All basic and technical courses must be completed with a grade of "C" or higher.

Specific Program Admission Information

The following list details additional requirements for admission to the Dental Hygiene program.

- 1) The annual application deadline is January 31, with the last mandatory information session being held by the end of November each year. Students are advised to attend an information session before the end of November.
- 2) Applications to the Dental Hygiene program are provided only at the information session.
- 3) Acceptance is conditional on submission and clearance of student background check and drug screening.

Students can obtain additional information by visiting www.csc.edu/dentalhygiene or by contacting Vincent Coccozza, 614-287-2521, or vcoccozza@csc.edu.

Admission Requirements

- A. Attend one mandatory Dental Hygiene Information Session within 12 months before applying to the program to obtain current admission information and application
- B. Achievement of a minimum overall GPA of 2.95 or higher through the most recently completed coursework.
- C. Placement into MATH 1148
- D. Completion of the HESI A² Exam
- E. Placement into ENGL 1100
- F. Placement into "No Reading Required" or completion of DEV 0145
- G. BIO 2300 Human Anatomy with grade of "C" or better
- H. BIO 2232 Human Physiology with grade of "C" or better
- I. CHEM 1113 Elements of Organic and Biochemistry with a grade of "C" or better
- J. Mandatory observation (20 hours) of a dental hygienist working in a dental office; detailed specific information is given during the information sessions
- K. Students applying to the Dental Hygiene program must submit official high school and college transcripts to Columbus State Community College, Records and Registration Office, by January 10 so that transcripts may be evaluated and posted.
- L. International students or students who have international transcripts must submit official transcripts to an official transcript evaluation agency by November 30. Records and Registration may have other requirements for international students, thus international students should contact them in advance of November 30.
- M. All admission criteria MUST be turned in by January 31 of the application year.

Statement Regarding Infectious Diseases

Students in any of the Allied Health Professions' programs, including Dental Hygiene, 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 we 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, herpes, tuberculosis, measles, mumps, rubella, etc.

NOTE: All students are required to have appropriate immunizations including influenza vaccine after being admitted to the program. 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 Dental Hygiene program must be aware of this slight, but real, potential. It is recommended that students maintain personal health insurance for the duration of enrollment in the program.

Dental Hygiene Associate Degree

Approved General Education (GE) List

COURSE	CR
Semester 1	
BIO 2263 Human Pathophysiology.....	3
COLS 1100 First Year Experience Seminar.....	1
DHY 1100 Introduction to Dental Hygiene.....	3
DHY 1200 Dental Hygiene Pre-Clinic.....	3
DHY 1130 Dental Radiography.....	3
DHY 1140 Dental Anatomy & Histology.....	3
DHY 1260 Periodontology I.....	1
DHY 1210 Preventive Concepts.....	1
TOTAL CREDIT HOURS	18
Semester 2	
BIO 2215 Introduction to Microbiology.....	4
ENGL 1100 Composition I.....	3
DHY 1161 Techniques I.....	1
DHY 1861 Clinic I.....	3
DHY 1250 Oral Pathology.....	1
DHY 1261 Periodontology II.....	1
DHY 1300 Community Health Concepts.....	1
TOTAL CREDIT HOURS	14
Summer Semester	
SOC 1101 Introduction to Sociology.....	3
HNTR 1153 Nutrition for a Healthy Lifestyle.....	3
DHY 2262 Techniques II.....	1
DHY 2862 Clinic II.....	3
DHY 2240 Dental Materials.....	1
DHY 2200 Pain Management.....	1.5
TOTAL CREDIT HOURS	12.5
Semester 3	
MATH 1148 College Algebra.....	4
PSY 1100 Introduction to Psychology.....	3
DHY 2263 Techniques III.....	1
DHY 2863 Clinic III.....	4
DHY 2300 Community Health.....	2
DHY 2400 Pharmacology.....	1.5
TOTAL CREDIT HOURS	15.5
Semester 4	
COMM 1105 Oral Communication or	3
COMM 1110 Small Group Communication.....	3
HUM XXXX Refer to approved GE - HUM list.....	3
DHY 2264 Techniques IV.....	1
DHY 2275 Dental Hygiene Case & Concept Review.....	1
DHY 2864 Clinic IV.....	4
TOTAL CREDIT HOURS	12
TOTAL DEGREE CREDIT HOURS	72

HUM	
GE-ART/HUMANITIES REQUIREMENT	
(SELECT ONE)	
	CR
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/Non-Amer to 1500.....	3
HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500.....	3
HIST 2223 African-American History I: 1451-1876.....	3
HIST 2224 African-American History II: 1877-Present.....	3
HUM 1100 Introduction to Humanities.....	3
HUM 1270 Comparative Religions.....	3
MUS 1251 Survey of Music History.....	3
PHIL 1101 Introduction to Philosophy.....	3
PHIL 1130 Ethics.....	3

Digital Design and Graphics

- Digital Design and Graphics Associate Degree**
- Digital Design Certificate**
- Adobe Illustrator Certificate**
- Adobe InDesign Advanced Certificate**
- Adobe Photoshop Advanced Certificate**
- Digital Painting Certificate**

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.

Upon completion of the Associate Degree in Digital Design and Graphics, the graduate will be able to:

- Explain the Digital Design and Graphics business and be able to interact with clients, marketing, copy writers, Web designers, photographers and printing companies
- Utilize the most widely used industry software programs: Adobe Photoshop, Adobe Illustrator, Adobe InDesign, Corel Painter X and be introduced to Fireworks, Dreamweaver and Flash
- Identify the management of color for print media, photography,

and interactive media

- Recognize and interpret digital photography and how to implement in all creative areas
- Examine how an advertising agency organization works on projects for clients
- Explain and discuss how to work in a creative environment as an individual and as a team member
- Effectively prepare and present a creative portfolio
- Recognize the importance of good verbal and written communications.

The Digital Design & Graphics Certificates combine design and typography basics with focused instruction on industry-standards: page layout, image manipulation, and computer illustration software. These certificates are designed for working professionals with significant experience in digital design and graphics.

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.

Digital Design and Graphics Associate Degree

COURSE	CR
Semester 1	
ENGL 1100 Composition I.....	3
STAT 1350 Elementary Statistics.....	3
DDG 1101 Survey of Digital Design	3
DDG 1200 Color Management/Business of Design.....	3
DDG 1100 Introduction to Computer Design	3
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS	16
Semester 2	
DDG 1525 Storyboarding.....	3
DDG 1535 Advertising Design I.....	3
DDG 1545 Effective Visual Communications.....	2
MKTG 1020 Branding.....	3
DDG 1555 Adobe Photoshop I/A.....	3
DDG 1565 Interactive Adobe InDesign	3
TOTAL CREDIT HOURS	17
Summer Semester	
SBS XXXX Refer to approved GE - SBS list.....	3
HUM XXXX Refer to approved GE- HUM list.....	3

DDG 2650 Digital Painting	3
NAT XXXX Refer to approved GE - NAT list	4
TOTAL CREDIT HOURS	13

Semester 3	
DDG 2550 Typography for Advertising & Design.....	3
DDG 2750 Adobe Illustrator I/A.....	3
DDG 2994 Current Topics in Advertising & Design.....	1
IMM 1120 Fundamentals of Interactive Media	4
FOTO 1140 Introduction to Digital Photography	3
TOTAL CREDIT HOURS	14

Semester 4	
IMM 2620 Website Design/Creation.....	3
DDG 2975 Ad Agency/Portfolio Development.....	3
DDG 2802 Digital Design & Graphics Seminar	1
DDG 2902 Digital Design & Graphics Practicum	2
IMM 2370 Flash I & II.....	3
TOTAL CREDIT HOURS	12
TOTAL DEGREE CREDIT HOURS	72

Students should request a program plan of study from their faculty advisor.

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT (SELECT ONE)		CR
ANTH 2202	Introduction to Cultural Anthropology	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic and Social Geography	3
POLS 1100	American Government	3
SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology	3

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)		CR
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/Non-Amer to 1500	3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223	African-American History I: 1451-1876	3
HIST 2224	African-American History II: 1877-Present	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Introduction to Philosophy	3
PHIL 1130	Ethics	3

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT (SELECT ONE)		CR
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	Introduction to Biology	4
BIO 1112	Introduction to Biology	4
BIO 1113	Biological Sciences I	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Environmental Science I	4
BIO 2215	Introduction to Microbiology	4
BIO 2232	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 Physics II	5

Digital Design Certificate

Semester 1	
DDG 1100	Introduction to Computer Design
DDG 1545	Effective Visual Communications
DDG 2650	Digital Painting
TOTAL CREDIT HOURS	8
Semester 2	
DDG 1535	Advertising Design I
DDG 1555	Adobe Photoshop I/A
DDG 1565	Interactive Adobe InDesign
TOTAL CREDIT HOURS	9
Summer Semester	
DDG 2550	Typography for Advertising & Design
DDG 2750	Adobe Illustrator I/A
DDG 2975	Ad Agency/Portfolio Development
TOTAL CREDIT HOURS	9
TOTAL CERTIFICATE CREDIT HOURS	26

Adobe InDesign® Advanced Certificate

Semester 1	
DDG 1100	Introduction to Computer Design**
DDG 1565	Interactive Adobe InDesign
TOTAL CREDIT HOURS	6
TOTAL CERTIFICATE CREDIT HOURS	6

** May be waived after review of Professional Portfolio

Adobe Photoshop® Advanced Certificate

Semester 1	
DDG 1100	Introduction to Computer Design**
DDG 1555	Adobe Photoshop I/A
IMM 1160	Media Graphics and Optimization
FOTO 2120	Advanced Photoshop for Photographers
TOTAL CREDIT HOURS	12
TOTAL CERTIFICATE CREDIT HOURS	12

** May be waived after review of Professional Portfolio

Adobe Illustrator® Certificate

Semester 1	
DDG 1100	Introduction to Computer Design**
DDG 1555	Adobe Photoshop I/A
DDG 2750	Adobe Illustrator I/A
TOTAL CREDIT HOURS	9
TOTAL CERTIFICATE CREDIT HOURS	9

** May be waived after review of Professional Portfolio

Digital Painting Certificate

Semester 1	
DDG 2650	Digital Painting
TOTAL CREDIT HOURS	3
TOTAL CERTIFICATE CREDIT HOURS	3

Digital Photography (FOTO)

Digital Photography Associate Degree
Advanced Digital Photography Certificate
Advanced Photoshop for Photographers Certificate
Basic Digital Photography Certificate
Basic Photoshop for Photographers Certificate
Black and White Film Certificate
Business of Photography Certificate
Intermediate Digital Photography Certificate
Intermediate Photoshop for Photographers Certificate
Off-Camera Flash Certificate

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.

Upon completion of the Associate Degree in Digital Photography the graduate will be able to:

- Demonstrate an understanding of the principles associated with the craft, scholarly theory, and profession of digital photography.
- 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.
- Describe how digital photography is utilized in local and regional career applications and processes.
- Demonstrate appropriate digital image-editing software and computer skills that directly support digital photography editing/enhancement and post-production workflow techniques.
- Demonstrate aesthetic and technical problem-solving skills to determine the best visual solutions for different assignments and situations.
- Demonstrate self-management, life-management and interpersonal skills.

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.

The Photography Certificates are designed to prepare and enrich student skill sets in specific areas of study from film to digital capture to Photoshop post-production techniques. These certificates range in outcomes from enriching industry specific knowledge in a core area to preparing students for employment as photography assistants in the photography industry. These certificate programs focus on the development of skills and competencies in the use of traditional and/or digital cameras software for the photography industry.

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.

Digital Photography Associate Degree

COURSE	CR
Semester 1	
FOTO 1100 Black and White Photography	3
FOTO 1140 Introduction to Digital Photography	3
DDG 1100 Introduction to Computer Design	3
ENGL 1100 Composition I	3
STAT 1350 Elementary Statistics	3
COLS 1100 First Year Experience Seminar	1
TOTAL CREDIT HOURS	16

Semester 2	
FOTO 1120 Photoshop for Photographers	3
FOTO 1150 Digital Photography and Design	3
IMM 1120 Fundamentals of Interactive Media	4
SBS XXXX Refer to approved GE - SBS list	3
TOTAL CREDIT HOURS	13

Summer Semester	
NAT XXXX Refer to approved GE - NAT list	4
FOTO 2100 Advanced Digital Photography	3
FOTO 2994 Current Topics in Digital Photography	1 to 3
HUM XXXX Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS	11-13

Semester 3	
FOTO 2120 Advanced Photoshop for Photographers	3
FOTO 2600 Studio & Environmental Portraiture	4
IMM 2620 Website Design/Creation	3
MKTG 1020 Branding	3
TOTAL CREDIT HOURS	13

Semester 4	
FOTO 2200 Studio Lighting	3
FOTO 2960 Business of Photography	2
FOTO 2975 Digital Portfolio Development	3
FOTO XXXX Technical Elective	2
TOTAL CREDIT HOURS	10
TOTAL DEGREE CREDIT HOURS	63-65

Technical Electives

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	3
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 2802 Digital Photography Seminar	1
FOTO 2902 Digital Photography Practicum	3
FOTO 2970 FOTO Field Studies	1-4

*Will only count once toward the degree

Students should request a program plan of study from their faculty advisor.

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT (SELECT ONE)

	CR
ANTH 2202 Introduction to Cultural Anthropology	3
ECON 2200 Principles of Microeconomics	3
GEOG 2400 Economic and Social Geography	3
POLS 1100 American Government	3
SOC 1101 Introduction to Sociology	3
PSY 1100 Introduction to Psychology	3

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)

	CR
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/Non-Amer to 1500	3
HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223 African-American History I: 1451-1876	3
HIST 2224 African-American History II: 1877-Present	3
HUM 1100 Introduction to Humanities	3
HUM 1270 Comparative Religions	3
MUS 1251 Survey of Music History	3
PHIL 1101 Introduction to Philosophy	3
PHIL 1130 Ethics	3

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT (SELECT ONE)

	CR
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 Introduction to Biology	4
BIO 1112 Human Biology	4
BIO 1113 Biological Sciences I	4
BIO 1114 Biological Sciences II	4
BIO 1125 Plant Biology	4
BIO 1127 Environmental Science I	4
BIO 2215 Introduction to Microbiology	4
BIO 2232 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 Physics II	5

Basic Photoshop for Photographers Certificate

COURSE	CR
Semester 1	
FOTO 1120 Photoshop for Photographers.....	3
TOTAL CREDIT HOURS	3
Semester 2	
FOTO 2120 Advanced 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 Digital Photography	1-3
TOTAL CREDIT HOURS	1-3
TOTAL CERTIFICATE CREDIT HOURS	4-6

(Current topic subject must pertain to Photoshop)

Intermediate Photoshop for Photographers Certificate

COURSE	CR
Semester 1	
FOTO 1120 Photoshop for Photographers.....	3
TOTAL CREDIT HOURS	3
Semester 2	
FOTO 2120 Advanced Photoshop for Photographers.....	3
FOTO 2130 Photoshop for Retouching.....	3
FOTO 2140 Photoshop for Compositing (3) OR	
FOTO 2150 Photoshop for Video (2).....	2-3
FOTO 2994 Current Topics in Digital Photography	1-3
TOTAL CREDIT HOURS	9-12
TOTAL CERTIFICATE CREDIT HOURS	12-15

Advanced Photoshop for Photographers Certificate

COURSE	CR
Semester 1	
FOTO 1120 Photoshop for Photographers.....	3
TOTAL CREDIT HOURS	3
Semester 2	
FOTO 2120 Advanced Photoshop for Photographers.....	3
FOTO 2130 Photoshop for Retouching.....	3
TOTAL CREDIT HOURS	6
Semester 3	
FOTO XXXX Technical Elective	1-3
FOTO XXXX Technical Elective	1-3
TOTAL CREDIT HOURS	2-6
TOTAL CERTIFICATE CREDIT HOURS	11-15

Technical Electives

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 Digital Photography	1-3

(Current topic subject must pertain to Photoshop)

Basic Digital Photography Certificate

COURSE	CR
Semester 1	
FOTO 1140 Introduction to Digital Photography	3
FOTO 1120 Photoshop for Photographers.....	3
TOTAL CREDIT HOURS	6
TOTAL CERTIFICATE CREDIT HOURS	6

Intermediate Digital Photography Certificate

COURSE	CR
Semester 1	
FOTO 1120 Photoshop for Photographers.....	3
FOTO 1140 Introduction to Digital Photography	3
TOTAL CREDIT HOURS	6
Semester 2	
FOTO 1150 Digital Photography and Design.....	3
FOTO XXXX Technical Elective	3
TOTAL CREDIT HOURS	6
TOTAL CERTIFICATE CREDIT HOURS	612

Technical Electives

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	3
FOTO 1500 Off-Camera Flash.....	2
FOTO 1600 Advanced Off-Camera Flash	2
FOTO 1780 Photo Lab	1
FOTO 2140 Photoshop for Compositing (3) OR.....	3
FOTO 2150 Photoshop for Video (2).....	2-3
FOTO 2200 Studio Lighting	3
FOTO 2650 Photojournalism	3
FOTO 2960 Business of Photography.....	2
FOTO 2970 FOTO Field Studies	1-4
FOTO 2994 Current Topics in Digital Photography	1-3

Advanced Digital Photography Certificate

COURSE	CR
Semester 1	
FOTO 1120 Photoshop for Photographers.....	3
FOTO 1140 Introduction to Digital Photography	3
TOTAL CREDIT HOURS	6
Semester 2	
FOTO 1150 Digital Photography and Design.....	3
FOTO 2130 Photoshop for Retouching.....	3
FOTO XXXX Technical Elective	2
TOTAL CREDIT HOURS	8
Semester 3	
FOTO 2100 Advanced Digital Photography.....	3
FOTO 2994 Current Topics in Digital Photography	1 - 3
TOTAL CREDIT HOURS	4-6

Semester 4

FOTO 2200 Studio Lighting (3) OR	
FOTO 2600 Studio & Environmental Portraiture (4)	3-4
FOTO 2975 Digital Portfolio Development.....	3
TOTAL CREDIT HOURS	6-7
TOTAL CERTIFICATE CREDIT HOURS	24-27

Technical Electives

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	3
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) OR.....	3
FOTO 2150	Photoshop for Video (2).....	2-3
FOTO 2500	View Camera.....	3
FOTO 2650	Photojournalism.....	3
FOTO 2970	FOTO Field Studies.....	1-4

Business of Photography Certificate

COURSE	CR
Semester 1	
FOTO 2960 Business of Photography.....	2
TOTAL CREDIT HOURS	2
TOTAL CERTIFICATE CREDIT HOURS	2

Black & White Film Certificate

COURSE	CR
Semester 1	
FOTO 1100 Black and White Photography.....	3
TOTAL CREDIT HOURS	3
Semester 2	
FOTO 2500 View Camera.....	3
TOTAL CREDIT HOURS	3
TOTAL CERTIFICATE CREDIT HOURS	6

Off-Camera Flash Certificate

COURSE	CR
Semester 1	
FOTO 1500 Off-Camera Flash.....	2
TOTAL CREDIT HOURS	2
Semester 2	
FOTO 1600 Advanced Off-Camera Flash.....	2
TOTAL CREDIT HOURS	2
TOTAL CERTIFICATE CREDIT HOURS	4

Early Childhood Development and Education

Early Childhood Development and Education Associate Degree

Basic Early Childhood Administrators Certificate

Early Childhood Aide Certificate

Family needs and increased focus on appropriate early education for all young children continue to drive the demand for qualified professionals in 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/childcare administrator, nanny, infant/toddler caregiver, or family childcare provider.

The Early Childhood Development and Education (ECDE) program is approved by the Ohio Department of Education to offer the 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, inclusive settings for children with special needs, as well as part-day and full-day childcare programs. The ECDE course of study exceeds the requirements for staff as outlined in the revised Ohio Child Day Care Licensing Rules. The ECDE program is also NAEYC accredited.

Upon completion of the Associate Degree in Early Childhood Development and Education, the graduate will be able to:

- Demonstrate knowledge of theories of human growth, development, and learning related to children, birth to age eight
- Plan appropriate learning experiences for individuals, as well as groups of young children, in inclusive settings

- Demonstrate a competent, respectful, nurturing teaching style to meet children's needs
- Develop appropriate educational practices for young children that foster the growth of skills in problem solving, decision-making, critical thinking, communication, and emerging literacy
- Use appropriate teaching strategies to address individual differences in developmental levels, culture, and learning styles
- Recognize and respect unique characteristics of families and demonstrate appropriate strategies to support and address family needs
- Demonstrate a variety of strategies to evaluate children's growth and development in cooperation with parents and related professionals
- Design a physically safe environment to facilitate children's independence and competence through constructive experiences
- Demonstrate knowledge of content areas and familiarity with Ohio Department of Education pre-kindergarten standards
- Reflect and evaluate one's professional, interdisciplinary role as teacher, team member, lifelong learner, and advocate for children and families.

Specific Program Admissions Information

Listed below are additional requirements for formal admission to Early Childhood Development and Education (Pre-ECDE student requirements):

High school graduate or GED equivalency
 Placement into ENGL 1100 Composition I or completion of
 ENGL 0190 Introduction to Composition
 Completion of the following 6 courses with grade of “C” or
 above:
 ECDE 1101 Early Childhood Guidance & Curriculum

ECDE 1102 Observing, Recording, and Assessment
 ECDE 1105 Social Emotional Development & Curriculum
 ECDE 1108 Creative Curriculum
 ECDE 1109 Language & Literacy
 PSY 2261 Child Development
 2.0 or higher Non-Tech GPA and 2.0 or higher Tech GPA

Early Childhood Development and Education Associate Degree

COURSE	CR
Semester 1	
ECDE 1101 Early Childhood Guidance & Curriculum	3
ECDE 1102 Observing, Recording & Assessment	2
COLS 1100 First Year Experience Seminar.....	1
ENGL 1100 Composition I.....	3
PSY 1100 Introduction to Psychology.....	3
EDUC 2210 Introduction to Education	3
TOTAL CREDIT HOURS	15
Semester 2	
ECDE 1105 Social Emotional Development & Curriculum.....	3
ECDE 1108 Creative Curriculum.....	3
ECDE 1109 Language & Literacy Experiences.....	3
ENGL 2xx7 2367 or 2567 or 2667 or 2767 Composition II	3
PSY 2261 Child Development.....	3
TOTAL CREDIT HOURS	15
Summer Semester	
ECDE 2910 Practicum I Infants & Toddlers.....	1
ECDE 2810 Seminar I: Infants & Toddlers.....	1
ECDE 2010 Infant Toddler Curriculum	3
ECDE 2014 Cognitive Curriculum	3
NAT XXXX Refer to GE-Natural Science list I	4
ECDE XXXX Technical Elective	1
TOTAL CREDIT HOURS	13

Semester 3	
ECDE 2920 Practicum II: Preschool.....	1
ECDE 2820 Seminar II: Preschool.....	1
ECDE 2012 Families, Communities & Schools	3
PSY 2245 Children with Exceptionalities.....	3
PSY 2200 Educational Psychology.....	3
MATH 1010 Mathematics for Business Applications.....	4
TOTAL CREDIT HOURS	15
Semester 4	
ECDE 2930* Practicum III: Preschool or ECDE 2932 or ECDE 2933	1
ECDE 2830* Seminar III: Preschool or ECDE 2832 or ECDE 2833	1
ECDE 2018 Health, Safety & Nutrition	3
ECDE 2021 Administration & Staff Dynamics	3
ECDE 2099 ECDE Capstone	1
EDUC 2220 Educational Technology.....	3
HUM XXXX Refer to GE-HUM list.....	3
TOTAL CREDIT HOURS	15
TOTAL DEGREE CREDIT HOURS	73

Technical Electives

The following courses are approved for technical elective requirements:

ECDE 2105 Best Practice Inclusive Early Childhood	1
ECDE 2107 Media Resources	1
ECDE 2109 Phonics & the Structure of Language	4
ECDE 2294 ECDE Contemporary Issues	1 – 5

Approved General Education (GE) List

HUM	
GE-ART/HUMANITIES REQUIREMENT	
(SELECT ONE)	
	CR
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 2223 African-American History I Before 1877	3
HIST 1181 World Civ I Non Western to 1500.....	3
HIST 1182 World Civ II Non Western since 1500	3
HIST 2224 African-American 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 Introduction to Philosophy.....	3
PHIL 1130 Ethics.....	3

NAT	
GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT	
(SELECT ONE)	
	CR
BIO 1111 Introduction to Biology.....	3
GEOL 1101 Introduction to Earth Science.....	3
GEOL 1105 Geology and the National Parks	3
GEOL 1151 Natural Disasters.....	3
ANTH 2200 Introduction to Biological Anthropology.....	3
GEOG 1900 Weather and Climate.....	4
GEOG 2300 Physical Geography	3

Basic Early Childhood Administrators Certificate*

COURSE	CR
Semester 1	
ECDE 1101 Early Childhood & Guidance & Curriculum.....	3
ECDE 1102 Observing, Recording & Assessment	2
TOTAL CREDIT HOURS	5
Semester 2	
ECDE 1105 Social Emotional Development Curriculum.....	3
ECDE 1108 Creative Curriculum.....	3
ECDE 2021 Administration & Staff Dynamics	3
TOTAL CREDIT HOURS	9
TOTAL CERTIFICATE CREDIT HOURS.....	14

*NOTE: 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.

Early Childhood Aide Certificate

COURSE	CR
Summer Semester	
SAHS 1120 Service Delivery	2
ECDE 2294 ECDE Contemporary Issues	2
TOTAL CREDIT HOURS	4
Semester 1	
ECDE 1103 Guidance & Curriculum for Early Childhood Aide	2
ECDE 1106 Language & Literacy for Early Childhood Aide	1
ECDE 2840 Early Childhood Practicum & Seminar I	4
TOTAL CREDIT HOURS	7

Semester 2	
ECDE 1104 Social Emotional Dev for Early Childhood Aide	2
ECDE 2107 Media Resources	1
ECDE 2841 Early Childhood Practicum & Seminar II	4
TOTAL CREDIT HOURS	7
TOTAL CERTIFICATE CREDIT HOURS	18

Electro-Mechanical Engineering Technology

Electro-Mechanical Engineering Technology Associate Degree Information Technology Support Technician Major

The Electro-Mechanical program is a marriage of Columbus State's Mechanical Engineering Technology and Electronics Engineering Technology programs. The skills electro-mechanical technicians possess are used in virtually every industry—from manufacturing, to environmental control, to food and pharmaceutical production, to power plants. Electro-mechanical technicians are able to contribute immediately to the companies that hire them.

Electro-mechanical technicians are in great demand. Any industry that uses electrical components and/or has any level of automation and process control needs and will always need EMEC technicians. Electro-mechanical engineering technicians perform both preventive and corrective maintenance on electro-mechanical systems as well as assist in the design of such systems. The most rewarding part of this field is the variety and creativity it affords. EMEC technicians use their knowledge and skills to solve problems and to come up with creative solutions daily.

Electro-Mechanical Engineering Technology also shares related courses with the Electronic Engineering Technology, Mechanical Engineering Technology, and Quality Assurance Technology. For additional information refer to those sections of the College Catalog.

Upon completion of the Associate Degree in Electro-Mechanical Engineering Technology, the graduate will be able to:

- Read and interpret engineering drawings
- Select an appropriate electric motor and control based on known functional requirements
- Identify and troubleshoot components in hydraulic and pneumatic systems
- Troubleshoot electric motors

- Identify and select electro-mechanical components for typical industrial requirements
- Select and use appropriate power control devices, timers, and sensors
- Identify closed-loop and open-loop systems and select the type of control required to achieve a given system response
- Demonstrate skill in applying programmable logic controllers to control simple processes
- Perform preventive and corrective maintenance on electro-mechanical systems.

Information Technology Support Technician Major

Students interested in a computer technology systems career path should consider the Information Technology Support Technician Major. This program prepares the student to enter career fields related to computer technology systems and support.

Career fields associated with this program major are:

- Information Technology Technician
- Field PC Technician
- Enterprise Technician
- IT Support
- PC Support Specialist
- Computer Technician
- Information Technology Administrator
- Help Desk Technician
- Network Technician
- Network Administrator
- Remote Support Technician
- Service Desk Technician
- Call Center Technician
- Depot Technician
- Bench Technician

The program focus of the ITST Major includes:

- Preparing the student for the CompTIA A+ Certification Exam, as well as CompTIA Network + and Linux Professional Institute Certifications
- Preparing the student for the CISCO CCNA Certification Exam
- Demonstrating and applying effective tools and strategies for

- supporting and troubleshooting hardware and software
- Analyzing strategies for troubleshooting and debugging networks and network devices
- Developing expertise in supporting both proprietary and Open Source software and operating systems
- Applying effective interpersonal skills and communication.

Electro-Mechanical Engineering Technology Associate Degree

COURSE	CR
Semester 1	
MATH 1113 Technical Mathematics	5
ENGL 1100 Composition I.....	3
ITST 1101 Computer Apps in Construction/Engineering Tech I.....	2
ENGT 1100 Introduction to Engineering Technology	2
EMEC 1250 Motors & Control Logic	4
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS	17

Semester 2	
PHYS 1200 Algebra-Based Physics I.....	5
EMEC 1251 Control Logic & PLCs.....	4
EET 1105 Basic DC Electronic Systems	3
EET 1115 Basic Digital Systems.....	3
ENGT 1115 Engineering Graphics.....	3
TOTAL CREDIT HOURS	18

Semester 3	
EET 1125 Basic AC Electronic Systems.....	3
MECH 1145 CAD I.....	3
MECH 1150 Manufacturing Materials & Processes.....	3
MECH 1240 Machine Tools.....	3
MECH 2243 Robotics	2
ITST 1102 Computer Apps in Construction/Engineering Tech II.....	2
TOTAL CREDIT HOURS	16

Semester 4	
COMM 2204 Technical Writing.....	3
EET 2235 Data Acquisition Systems	3
ENGT 2260 Basic Mechanisms & Drives.....	4
HUM XXXX Refer to approved GE - HUM list.....	3
SBS XXXX Refer to approved GE - SBS list.....	3
TOTAL CREDIT HOURS	16
TOTAL DEGREE CREDIT HOURS.....	67

Information Technology Support Technician Major

COURSE	CR
Semester 1	
MATH 1030 Beginning Algebra II or	3
STAT 1350 Elementary Statistics.....	3
ITST 1101 Computer Applications in Construction/Engineering Tech I.....	2
XXXX XXXX Basic Elective.....	3
GIS 1100 Introduction to GIS	3
COLS 1100 First Year Experience Seminar.....	1
ITST 1102 Computer Applications in Construction/Engineering Tech II	2
XXXX XXXX Basic Elective.....	3
TOTAL CREDIT HOURS	17

Semester 2	
ITST 1123 PC Tech Essentials I.....	3
ITST 1136 Introduction to Open Source	3
EET 1105 Basic DC Electronic Systems	3
PHYS 1103 World of Energy.....	3
XXXX XXXX Basic Elective.....	3
TOTAL CREDIT HOURS	15

Semester 3	
ITST 2143 PC Tech Essentials II	3
ITST 2246 Intermediate Open Source	3
CSCI 2750 Introduction to CISCO Networks	3
SBS XXXX Refer to approved GE - SBS list.....	3
ITST 2137 E-Mail for Tech Support	3
ITST 2252 Computer Programming for Technicians.....	2
TOTAL CREDIT HOURS	17

Semester 4	
ENGL 1100 Composition I.....	3
HUM XXXX Refer to approved GE - HUM list.....	3
ITST 2256 Tech Support Fundamentals.....	3
ITST 2699 Capstone Experience in ITST	3
XXXX XXXX Basic Elective.....	3
TOTAL CREDIT HOURS	15
TOTAL DEGREE CREDIT HOURS	64

Basic Electives

The following courses are approved for basic elective requirements:

ACCT 1211 Financial Accounting	3
BMGT 1008 21st Century Workplace Skills.....	2
BMGT 1101 Principles of Business.....	3
BMGT 1102 Interpersonal Skills	2
BMGT 1111 Management or	3
BMGT 2231 Fundamentals of Entrepreneurship	3
BMGT 2250 Project Management Principles	3
BMGT 2280 Professional Development	1
CSCI 2752 CISCO Routing and Switching Essentials.....	3
CSCI 2754 Scaling CISCO Networks	3
CSCI 2756 Connecting CISCO Networks.....	3
CSCI 2776 Network & CyberSecurity	3
ESSH 1101 Introduction to Environmental Science, Safety, Health.....	3
ESSH 2111 Hazardous Materials Management	3
GIS 2120 Introduction to GIS Programming	3
GIS 2530 Introduction to ArcGIS Server	2
HIMT 1121 Advanced Medical Terminology.....	2
MECH 1240 Machine Tools.....	3

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT

(SELECT ONE)

		CR
ANTH 2202	Introduction to Cultural Anthropology	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic and Social Geography.....	3
POLS 1100	American Government.....	3
SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology	3

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE)

		CR
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/Non-Amer to 1500	3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500.....	3
HIST 2223	African-American History I: 1451-1876.....	3
HIST 2224	African-American History II: 1877-Present.....	3
HUM 1100	Introduction to Humanities.....	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Introduction to Philosophy	3
PHIL 1130	Ethics	3

Electronic Engineering Technology

Electronic Engineering Technology Associate 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 Technology Accreditation Commission of ABET, 415 N. Charles St., Baltimore, MD 21201, (410) 347-7700. For additional information, visit 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.

NOTE: The degree formerly known as **Computer Electronics Major – Technology Systems Technician Track** has been renamed **Information Technology Support Technician Major** and is now listed under the Electro-Mechanical Engineering Technology degree.

Consistent with the accreditation standards of ABET, Columbus State Electronic Engineering Technology graduates will have developed:

- An appropriate mastery of the knowledge, techniques, skills, and modern tools of their disciplines
- An ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering, and technology
- An ability to conduct, analyze and interpret experiments, and to apply experimental results to improve processes

- An ability to apply creativity in the design of systems, components, or processes appropriate to program educational objectives
- An ability to function effectively on teams
- An ability to identify, analyze and solve technical problems
- An ability to communicate effectively
- A recognition of the need for, and an ability to engage in, lifelong learning
- An ability to understand professional, ethical and social responsibilities
- A respect for diversity and a knowledge of contemporary professional, societal and global issues
- A commitment to quality, timeliness, and continuous improvement.

Additionally graduates will demonstrate knowledge, skills and hands-on competence in:

- The application of circuit analysis and design, computer programming, associated software, analog and digital electronics, and microcontrollers to the building, testing, operation, and maintenance of electrical/electronic(s) systems.
- The applications of physics or chemistry to electrical/electronic(s) circuits in a rigorous mathematical environment at or above the level of algebra and trigonometry.

Electronic Engineering Technology Associate Degree

COURSE	CR
Semester 1	
EET 1105 Basic DC Electronic Systems	3
EET 1115 Basic Digital Systems	3
ITST 1101 Computer Applications in Construction/Eng. Tech I	2
ENGL 1100 Composition I	3
COLS 1100 First Year Experience Seminar	1
TOTAL CREDIT HOURS	12
Semester 2	
EET 1125 Basic AC Electronic Systems	3
EET 1135 Electronic Switching & Amplifier Systems	3
ITST 1123 PC Tech Essentials I	3
MATH 1113 Technical Mathematics or	3
MATH 1148 College Algebra*	4
TOTAL CREDIT HOURS	13
Summer Semester	
EET 1145 Data Communications Systems	3
EET 2215 Advanced Digital (FPGA) Systems	3

PHIL 1130 Ethics	3
TOTAL CREDIT HOURS	9
Semester 3	
EET 2225 Embedded Microcontroller Systems	3
EET 2235 Data Acquisition Systems	3
PHYS 1200 Algebra-Based Physics I	5
ECON 2200 Principles of Microeconomics	3
TOTAL CREDIT HOURS	14
Semester 4	
EET 2599 EET Capstone	3
PHYS 1201 Algebra-Based Physics II	5
COMM 2204 Technical Writing	3
COMM 1110 Small Group Communications	3
TOTAL CREDIT HOURS	14
TOTAL DEGREE CREDIT HOURS	62
*Students interested in pursuing the Miami University Bachelor of Science Degree Completion Program should opt for MATH 1148.	

Emergency Medical Services Technology

Emergency Medical Services Associate Degree

Emergency Medical Services/Fire Science Associate of Technical Studies Degree

EMT Certificate

Paramedic Certificate

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).

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.

Good mental and physical health is critical in emergency medical services. Students must have a physical examination and must meet program health requirements before they may participate in clinical experiences. Because students and workers in the health care field may be exposed to infectious materials and communicable diseases, the program emphasizes safety and prevention. In addition, all students must be covered by EMT-student liability insurance while enrolled in the certificate courses. To meet clinical affiliation agreement requirements, students in the EMT & Paramedic courses must successfully complete a background check which includes fingerprinting and drug screening.

Upon completion of the Associate Degree requirements in Emergency Medical Services Technology, the graduate will be able to:

- Demonstrate technical proficiency in all skills necessary to fulfill the role of entry level paramedic
- Exhibit behaviors consistent with professional standards and employer expectations
- Analyze legal, ethical and administrative concepts that influence EMS systems.
- Develop community disaster preparedness, mitigation and response plans for natural and manmade events.

EMT Certificate

Students completing the EMT Certificate will be able to:

- Meet requirements to successfully complete the certification process and achieve credentials to practice as an EMT
- Demonstrate personal behaviors consistent with professional and employer expectations of an entry level EMT
- Demonstrate technical proficiency in all skills necessary to fulfill the role of an entry level EMT
- Comprehend, evaluate and apply information relative to the role of an entry level EMT.

Paramedic Certificate

Students completing the Paramedic Certificate will be able to:

- Meet the requirements to successfully complete the certification process and achieve credentials to practice as a paramedic
- Demonstrate personal behaviors consistent with professional and employer expectations of an entry level paramedic
- Demonstrate technical proficiency in all skills necessary to fulfill the role of an entry level paramedic
- Comprehend, evaluate and apply information relative to the role of an entry level paramedic.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Emergency Medical Services Technology:

- High school graduate or GED equivalency
- 18 years of age or older
- Completed health record required PRIOR TO registration
- COMPASS placement into ENGL 0190 or completion of equivalent course as verified on CSCC transcript.

E-mail ems@csc.edu for Information Session dates or to make an appointment with department advisors.

Emergency Medical Services Technology Associate Degree

Semester 1

COLS 1100	First Year Experience Seminar.....	1
EMS 1861	Paramedic I.....	11
TOTAL CREDIT HOURS		12

Semester 2

EMS 1862	Paramedic II.....	11
MATH 1010	Math for Business Applications.....	4
TOTAL CREDIT HOURS		15

Summer Semester

EMS 1863	Paramedic III.....	8
CSCI 1101	Computer Concepts & Applications.....	3
ENGL 1100	Composition I.....	3
TOTAL CREDIT HOURS		14

Semester 3

HUM XXXX	Refer to approved GE - HUM list.....	3
COMM 1105	Oral Communication.....	3
FIRE 1102	HazMat Awareness & Operation.....	3
SES 1100	Personal Fitness Concepts.....	3
TOTAL CREDIT HOURS		12

Semester 4

EMS XXXX	Technical Elective.....	2
FIRE 2006	Legal Aspects of EMS.....	3

PSY 1100	Introduction to Psychology.....	3
BIO 1111	Introduction to Biology.....	4
TOTAL CREDIT HOURS		12
TOTAL DEGREE CREDIT HOURS		65

Technical Electives

The following courses are approved for technical elective requirements:

EMS 1107	Search and Rescue Wilderness EMT.....	5
EMS 1108	WMD for Emergency Services.....	2
EMS 1109	Emergency Psychiatric Intervention.....	2
EMS 2000	EMS Management.....	3
EMS 2001	Disaster Planning & ICS.....	2
EMS 2002	12 Lead EKG Interpret. & Advanced Cardiac Treatment.....	2
EMS 2004	EMT 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

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE) CR

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/Non-Amer to 1500.....	3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500.....	3
HIST 2223	African-American History I: 1451-1876.....	3
HIST 2224	African-American History II: 1877-Present.....	3
HUM 1100	Introduction to Humanities.....	3
HUM 1270	Comparative Religions.....	3
MUS 1251	Survey of Music History.....	3
PHIL 1101	Introduction to Philosophy.....	3
PHIL 1130	Ethics.....	3

Paramedic Certificate

COURSE CR

Semester 1

EMS 1861	Paramedic I.....	11
TOTAL CREDIT HOURS		11

Semester 2

EMS 1862	Paramedic II.....	11
TOTAL CREDIT HOURS		11

Summer Semester

EMS 1863	Paramedic III.....	8
TOTAL CREDIT HOURS		8
TOTAL CERTIFICATE CREDIT HOURS		30

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.

EMT Certificate

COURSE CR

Semester 1

EMS 1860	EMT.....	7
TOTAL CERTIFICATE CREDIT HOURS		7

Emergency Medical Services/Fire Science

Associate of Technical Studies Degree

In many areas, emergency medical services are provided through Fire Service agencies. This unique Associate of Technical Studies degree provides the student with the opportunity to combine these two programs into a degree with specific preparation for entering or advancing in such agencies.

The Associate of Technical Studies degree 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 is accredited by the Committee on Accreditation of Allied Health Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP # 600009).

Students must first complete the EMT course and then pass the State/National EMT Certificate 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 EMT certification as above, students must also complete EMS 1002 (Paramedic Preparation Course) as a prerequisite, and a pretesting process, which includes the Health Education Services, Inc. (HESI) Admission Assessment exam.

Good mental and physical health is critical in emergency services; therefore, students must have a physical examination, meet the program health requirements and be covered by the EMT-student liability insurance. To meet clinical affiliation agreement

requirements, students in the EMT and Paramedic courses must successfully complete a background check, which includes fingerprinting and drug screening.

Upon completion of the Associate of Technical Studies in Emergency Medical/Fire Science, the graduate will be able to:

- Demonstrate technical proficiency in all skills necessary to fulfill the role of entry level paramedic
- Demonstrate technical proficiency in all skills necessary to fulfill the role of entry level firefighter
- Exhibit behaviors consistent with professional standards and employer expectations
- Analyze legal, ethical and administrative concepts that influence EMS and Fire systems
- Demonstrate the duties and responsibilities of Incident Command
- Determine unique rescue tactics necessary to employ on emergency responses.

For student outcomes for EMT Certificate and Paramedic Certificate, see Emergency Medical Services.

NOTE: If you currently have EMT, Paramedic, Firefighter I and II and/or Apprenticeship certification, you may qualify for Nontraditional Credit (“N”) which may apply toward the degree. Contact EMS or Fire Science Technology faculty (email: ems@csc.edu or fire@csc.edu) to determine your individual status.

Emergency Medical Services/Fire Science Associate of Technical Studies Degree

COURSE	CR
Semester 1	
COLS 1100 First Year Experience Seminar.....	1
EMS 1861 Paramedic I.....	11
TOTAL CREDIT HOURS	12
Semester 2	
EMS 1862 Paramedic II.....	11
ENGL 1100 Composition I.....	3
TOTAL CREDIT HOURS	14
Summer Semester	
CHEM 1111 Elementary Chemistry I or	
BIO 1111 Introduction to Biology.....	4
EMS 1863 Paramedic III.....	8
TOTAL CREDIT HOURS	12
Semester 3	
FIRE 1106 Fire Behavior & Combustion.....	3
FIRE 1100 Principles Emergency Services.....	3
HUM XXXX Refer to approved list.....	3
MATH 1010 Math for Business Applications.....	4
TOTAL CREDIT HOURS	13

Semester 4	
PSY 1100 Introduction to Psychology	3
FIRE 1105 Strategies and Tactics.....	3
XXXX XXXX Basic Elective.....	8
TOTAL CREDIT HOURS	14
TOTAL DEGREE CREDIT HOURS	65

Basic Electives

The following courses are approved for Basic elective requirements:

CRJ 1116 Government and the Law.....	3
EMS 1107 Search & Rescue Wilderness	5
EMS 1108 WMD for Emergency Services.....	2
EMS 1109 Emergency Psychiatric Intervention	2
EMS 2000 EMS Management	3
EMS 2001 Disaster Planning & ICS	2
EMS 2002 12 Lead EKG Interpretation & Adv. Cardiac Treatment	2
EMS 2005 Paramedic Refresher	2
EMS 2101 Critical Care Transport.....	6
EMS 2102 Public Safety Service Instructor.....	5
SES 1100 Personal Fitness Concepts.....	3
FIRE 2006 Legal Aspects of Emergency Services.....	3

Approved General Education (GE) List

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE)

	CR		
ARCH 2100	3	HUM 1270	Comparative Religions.....3
HART 1201	3	MUS 1251	Survey of Music History.....3
HART 1202	3	PHIL 1101	Introduction to Philosophy.....3
HIST 1111	3	PHIL 1130	Ethics.....3
HIST 1112	3		
HIST 1151	3		
HIST 1152	3		
HIST 1181	3		
HIST 1182	3		
HIST 2223	3		
HIST 2224	3		
HUM 1100	3		

NOTE:

Prerequisite for FIRE courses in this degree: Firefighter II certificate (FIRE 1122OR equivalent State of Ohio Firefighter II certification).
 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.

Engineering Technologies

(See specific program sections for Applied Science degrees in AMT, EET, EMEC, MECH and QUAL)

- Computer Aided Drafting Technician Certificate**
- Engineering Assembly Technician Certificate**
- CNC Engineering Technician Certificate**
- Manufacturing Maintenance Technician Certificate**

Engineering Technologies offers four focused certificates (see above) that lead to employment opportunities in technology areas. The certificate coursework and preparation means that the student can be gainfully employed earlier, and, in many instances, with companies that offer tuition reimbursement. These certificates can be combined and count toward an associate degree.

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.

Engineering Assembly Technician Certificate

Assemblers and fabricators play an important role in the manufacturing process. They are responsible for putting together finished and semi-finished goods, assembling the pieces of components of a product and then joining the components into a whole product.

Assemblers 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 assembly process, so assemblers 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. 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 more advanced assemblers must be able to work with these new technologies and be comfortable using them to produce goods.

CNC Engineering Technician Certificate

Engineering technicians use application-oriented principles of science, engineering, and mathematics to solve technical problems in research, development, and manufacturing. Their work is more limited in scope than that of scientists and engineers. Many engineering technicians assist engineers and scientists, especially in research and development. Others work in quality control, inspecting products and processes, conducting tests, or collecting data. In manufacturing, they may assist in product design, development, or production. Although many workers who repair or maintain various types of electrical, electronic, or mechanical equipment are called technicians, those interested in repair and maintenance should pursue the Manufacturing Maintenance Technician Certificate.

Manufacturing Maintenance 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.

Computer Aided Drafting Technician Certificate

COURSE	CR
Semester 1	
ENGT 1115 Engineering Graphics.....	3
ITST 1101 Computer Applications for CSET I.....	2
ENGT 1100 Introduction to Engineering Technology	2
TOTAL CREDIT HOURS	7
Semester 2	
MECH 1145 CAD I.....	3
TOTAL CREDIT HOURS	3
Semester 3	
MECH 2215 CAD II	3
TOTAL CREDIT HOURS	3
TOTAL DEGREE CREDIT HOURS	13

CNC Engineering Technician Certificate

COURSE	CR
Semester 1	
ENGT 1100 Introduction to Engineering Technology	2
ENGT 1115 Engineering Graphics.....	3
MECH 1240 Machine Tools.....	3
MATH 1020 Beginning Algebra I.....	2
TOTAL CREDIT HOURS	10
Semester 2	
MECH 1150 Manufacturing Materials & Processes.....	3
MECH 2253 Computer Numerical Controls.....	2
MATH 1110 Math for Skilled Trades	3
TOTAL CREDIT HOURS	8
TOTAL CERTIFICATE CREDIT HOURS	18

Engineering Assembly Technician Certificate

COURSE	CR
Semester 1	
ENGT 1115 Engineering Graphics.....	3
ITST 1101 Computer Applications for CSET I.....	2
ENGT 1100 Introduction to Engineering Technology	2
EET 1105 Basic DC Electronic Systems	3
TOTAL CREDIT HOURS	10
Semester 2	
MECH 1240 Machine Tools.....	3
QUAL 1112 Total Quality Management.....	4
TOTAL CREDIT HOURS	7
TOTAL CERTIFICATE CREDIT HOURS	17

Manufacturing Maintenance Technician Certificate

COURSE	CR
Semester 1	
EMEC 1250 Motors & Control Logic	4
EET 1105 Basic DC Electronic Systems	3
EET 1115 Basic Digital Systems	3
MECH 2243 Robotics	2
TOTAL CREDIT HOURS	12
Semester 2	
EMEC 1251 Control Logic and PLCs	4
MATH 1113 Technical Mathematics	5
EET 1125 Basic AC Electronic Systems.....	3
TOTAL CREDIT HOURS	12
TOTAL CERTIFICATE CREDIT HOURS	24

Environmental Science, Safety and Health

Environmental Science, Safety and Health Associate Degree Health and Safety for Hazardous Waste Operations Certificate (40-Hour HAZWOPER) Occupational Health and Safety Certificate Sustainable Building Certificate Water/Wastewater Technology Certificate

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.

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.

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.

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.

For additional information on the Health and Safety Training for Hazardous Waste Operations Certificate, or other OSHA training opportunities, contact the Environmental Science, Safety and Health program coordinator.

Upon completion of the Associate Degree in Environmental Science, Safety and Health, the graduate will be able to:

- Collect air, water, waste, and soil samples for routine monitoring as required by regulatory agencies and for operational control of remediation or treatment systems.
- Conduct field investigations using environmental instrumentation.
- Assist in the operation and maintenance of systems used to control pollution, remediate contaminated materials, or treat water as required by environmental laws.
- 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.
- Collect and compile data necessary for an environmental site assessment.
- Utilize basic concepts of geology, hydrology, chemistry, and biology in the investigation of the occurrence, transport and remediation of environmental contaminants.
- 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.
- Describe components of risk assessment and toxic substances exposure analysis.
- Identify duties requiring knowledge of safety regulations in the workplace and at construction sites.
- Demonstrate a working knowledge of the regulatory aspects of industrial hygiene.

Environmental Science, Safety and Health Associate Degree

COURSE	CR
Semester 1	
ENGL 1100 Composition I	3
STAT 1350 Elementary Statistics or	3
MATH 1148 College Algebra	4
BIO 1111 Introduction to Biology or	
BIO 1113 Biological Sciences I	4
ESSH 1101 Introduction to Environmental Science, Safety & Health	3
ESSH 1130 Environmental Laws & Regulations	3
COLS 1100 First Year Experience Seminar	1
TOTAL CREDIT HOURS	18

COURSE	CR
Semester 2	
CHEM 1111 Elementary Chemistry I	4
GEOL 1101 Introduction to Earth Science or	4
GEOL 1121 Physical Geology	4
ESSH 2120 Environmental Aspects of Soils	3
ESSH 1580 Environmental Site Assessment	2
ESSH 1140 Industrial/Municipal Pollution Control	3
TOTAL CREDIT HOURS	16

Summer Semester	
ESSH 2520 Health & Safety Training for Hazardous Waste Operation	2
ESSH 2220 Drinking Water Treatment or	2
ESSH 2230 Wastewater Treatment (Autumn Semester only)	2
ITST 1101 Computer Applications in CSET I or	2
CSCI 1101 Computer Concepts & Applications	3
COMM 2204 Technical Writing	3
TOTAL CREDIT HOURS	9-10

Semester 3	
HUM XXXX Refer to 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 or	2
ESSH 1700 OSHA 30-Hr General Industry Safety & Health	2
TOTAL CREDIT HOURS	16

Semester 4	
SBS XXXX Refer to approved GE - SBS list	3
ESSH 2400 Environmental Analytical Methods	2
ESSH 2530 Applied Environmental Engineering	2
ESSH 2550 Air Pollution & Monitoring	3
XXX XXXX Technical Elective	2
TOTAL CREDIT HOURS	12
TOTAL DEGREE CREDIT HOURS	72-73

Technical Electives

The following courses are approved for technical elective requirements:

ARCH 1110 Basic Manual Drafting	1
ARCH 1112 Basic CAD Drafting	1
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 2282 Sustainable Building Strategies	2
ESSH 2900 ESSH Field Experience	2
ESSH 2994 Special Topics: ESSH	1-4
ESSH 2750 Industrial Hygiene	3
SURV 1410 Basic Surveying	3
CIVL 2210 Principles of Hydraulics	2
CIVL 2230 Public Utility Systems	2
GIS 1100 Introduction to Geographic Information Systems	3

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT

(SELECT ONE) GEOG 2400 or ECON 2200 PREFERRED CR

ANTH 2202 Introduction to Cultural Anthropology	3
ECON 2200 Principles of Microeconomics	3
GEOG 2400 Economic and Social Geography	3
POLS 1100 American Government	3
SOC 1101 Introduction to Sociology	3
PSY 1100 Introduction to Psychology	3

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE) ARCH 2100 or HIST 1152 PREFERRED CR

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/Non-Amer to 1500	3
HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223 African-American History I: 1451-1876	3
HIST 2224 African-American History II: 1877-Present	3
HUM 1100 Introduction to Humanities	3
HUM 1270 Comparative Religions	3
MUS 1251 Survey of Music History	3
PHIL 1101 Introduction to Philosophy	3
PHIL 1130 Ethics	3

Health and Safety for Hazardous Waste Operations Certificate (40-Hour HAZWOPER)

COURSE	CR
Semester 1	
ESSH 2520 Health & Safety Training for Hazardous Operations	2
TOTAL CREDIT HOURS	2
TOTAL CERTIFICATE CREDIT HOURS	2

Occupational Health and Safety Certificate

COURSE	CR
Semester 1	
ESSH 1101 Introduction to ESSH.....	3
ESSH 1700 OSHA 30-Hr General Industry Safety & Health.....	2
ESSH 2111 Hazardous Materials Management.....	3
TOTAL CREDIT HOURS	8
Semester 2	
CMGT 1135 Safety & Loss Prevention	2
ESSH 1650 OSHA 30-Hr Construction Safety & Health	2
ESSH 2750 Industrial Hygiene	3
ESSH 2520 Health & Safety Training for Haz. Waste Operations.....	2
TOTAL CREDIT HOURS	9
TOTAL CERTIFICATE CREDIT HOURS	17

Sustainable Building Certificate

COURSE	CR
Semester 1	
ESSH 2282 Sustainable Building Strategies	2
CMGT 2282 Sustainable Construction.....	2
TOTAL CREDIT HOURS	4
Semester 2	
ARCH 2282 Sustainable Design	2
ARCH 2283 Sustainable Energy	2
TOTAL CREDIT HOURS	4
TOTAL CERTIFICATE CREDIT HOURS	8

Water/Wastewater Technology Certificate

COURSE	CR
Semester 1	
ESSH 1101 Introduction to ESSH.....	3
ESSH 2240 Environmental Hydrology	3
CHEM 0100 Introduction to Chemistry.....	4
ENGL 1100 Composition I	3
MATH 1020 Beginning Algebra I	3
TOTAL CREDIT HOURS	16
Semester 2	
CIVL 2210 Principles of Hydraulics	3
ESSH 1140 Industrial/Municipal Pollution.....	3
ESSH 1650 OSHA 30-Hr Construction Safety & Health or	
ESSH 1700 OSHA 30-Hr General Industry Safety & Health or.....	
ESSH 2230 Wastewater Treatment.....	2
ESSH 2520 Health & Safety Training for Hazardous Waste Operations.....	2
ESSH 2530 Applied Environmental Engineering.....	2
TOTAL CREDIT HOURS	12
Semester 3	
ESSH 2220 Drinking Water Treatment.....	2
CIVL 2230 Public Utility Systems.....	3
ITST 1101 Computer Applications in Construction/Eng Tech I or	2
CSCI 1101 Computer Concepts and Applications.....	3
TOTAL CREDIT HOURS	7-8
TOTAL CERTIFICATE CREDIT HOURS	35-36

Finance

Associate of Applied Science Degree Foundations of Insurance Certificate (BMGT certificate)

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.

The Foundations of Insurance Certificate is a six (6) class sequence that prepares students for entry-level positions in central Ohio's thriving insurance industry. The Foundations of Insurance Certificate is a natural fit for students who are already in the Business Management or Finance programs.

Upon completion of the Associate Degree in Finance, the graduate will be able to:

- Explain the evolving role of finance in enterprise operations. Explain operational methods, policies and regulations of various financial institutions including basics of different functional areas/departments.
- Demonstrate an understanding of both commercial and consumer credit.
- Understand and analyze various financial instruments including their interrelationships and risks/returns as well as how they fit into asset allocation.
- Understand the essential elements of personal finance including credit, taxes, major purchases, banking, insurance and financial planning.
- Demonstrate the ability to use current tools and technology (including spreadsheets and the internet) to research, analyze and report on financial topics.

- Apply Time Value of Money techniques for valuing financial instruments and capital expenditures projects. Understand the role of ethics and personal integrity in business and finance.
- Demonstrate a basic understanding of the opportunities and risks of International Finance.
- Demonstrate an understanding of corporate finance including financial analysis and capital structure.
- Demonstrate the ability to communicate financial and business concepts in written and oral form.

campuses or at one of our regional learning centers. Finance also offers online/distance learning (DL) courses that provide the same high quality learning as traditional instruction, yet with the flexibility of being able to complete course work online.



The Finance 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.

Traditional Classes and Online/Distance Learning Choices

The Finance program is proud to offer traditional and online/distance learning (DL) options for our students. The traditional classroom experience continues to provide students with high quality instruction in a small class setting, on Columbus State's

Finance Associate Degree

COURSE	CR
Semester 1	
FMGT 1101 Personal Finance	3
ACCT 1211 Financial Accounting	3
COLS 1100 First Year Experience Seminar	1
CSCI 1101 Computer Concepts & Applications	3
ENGL 1100 Composition I	3
HUM XXXX Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS	16
Semester 2	
FMGT 1211 Investments	3
ACCT 1212 Managerial Accounting	3
COMM 2200 Business Communications	3
ECON 2200 Principles of Microeconomics	3
STAT 1350 Elementary Statistics	3
TOTAL CREDIT HOURS	15
Semester 3	
FMGT 2201 Corporate Finance	3
FMGT 2202 Money and Banking	3
BMGT 1111 Management	3
BOA 1300 Business Applications	2
ECON 2201 Principles of Macroeconomics	3
XXXX XXXX Technical Elective	3
TOTAL CREDIT HOURS	17

Semester 4	
FMGT 2242 International Finance	3
FMGT 2299 Finance Capstone	3
FMGT 2901 Finance Practicum/Seminar OR	
BMGT 2299 Case Studies in Strategic Management	3
XXXX XXXX Technical Elective	3
NAT XXXX Refer to approved GE - NAT list	4
TOTAL CREDIT HOURS	16
TOTAL DEGREE CREDIT HOURS	64

Technical Electives

The following courses are approved for technical elective requirements:

ACCT 1400 Accounting Systems	3
ACCT 2231 State & Local Taxation	3
ACCT 2232 Federal Taxation I	3
ACCT 2250 Intermediate Accounting I	4
BMGT 1102 Interpersonal Skills	2
BMGT 2216 Business Ethics	3
BMGT 2245 Introduction to Non-Profit Management	3
BMGT 2280 Professional Development	1
FMGT 2232 Principles of Insurance	3
HRM 1121 Human Resources Management	3
LEGL 2064 Legal Environment of Business	3
MATH 1075 Intermediate Algebra	5
MATH 1148 College Algebra	4
MATH 1150 Pre-Calculus	6
MATH 1151 Calculus I	5
MATH 1152 Calculus II	5
MKTG 1110 Marketing Principles	3
SCM 1190 International Business	3

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)	CR
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/Non-Amer to 1500	3

HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223 African-American History I: 1451-1876	3
HIST 2224 African-American History II: 1877-Present	3
HUM 1100 Introduction to Humanities	3
HUM 1270 Comparative Religions	3
MUS 1251 Survey of Music History	3
PHIL 1101 Introduction to Philosophy	3
PHIL 1130 Ethics	3

Approved General Education (GE) List (continued)

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT

(SELECT ONE)

	CR
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 Introduction to Biology.....	4
BIO 1112 Human Biology.....	4
BIO 1113 Biological Sciences I.....	4
BIO 1114 Biological Sciences II.....	4
BIO 1125 Plant Biology	4
BIO 1127 Environmental Science I.....	4
BIO 2215 Introduction to Microbiology.....	4
BIO 2232 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 Physics II.....	5

Foundations of Insurance Certificate

COURSE		CR
Semester 1		
BMGT 1101	Principles of Business	3
BMGT 1102	Interpersonal Skills	2
CSCI 1101	Computer Concepts and Applications.....	3
TOTAL CREDIT HOURS		8
Semester 2		
BMGT 2253	Conflict Management.....	3
FMGT 2232	Principles of Insurance.....	3
MKTG 1230	Customer Service and Sales.....	3
TOTAL CREDIT HOURS		9
TOTAL CERTIFICATE CREDIT HOURS		17

Fire Science

Fire Science Associate Degree - Professional Track (EMS/FIRE, ATS-see Emergency Medical Services)

Firefighter I Certificate

Firefighter II Certificate

Fire and Emergency Services Higher Education (FESHE) Certificate

Fire Inspector Certificate

Red Cross Lifeguarding and Waterfront Skills Certificate

Rescue Technician Certificate

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 Fire Science Program is accredited by the Ohio Department of Public Safety, Division of EMS commonly referred to as the Fire Charter (Certificate # 311).

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.

Upon completion of the Associate Degree in Fire Science, the graduate will be able to:

- Demonstrate effective communication and interpersonal skills with supervisors, peers, and the public
- Explain the history and basic principles of the fire service
- Recognize and respond to changing fire conditions and the potential for collapse in structures
- Demonstrate knowledge of the legal aspects of the fire service
- Demonstrate the duties and responsibilities of Incident Command
- Demonstrate necessary proficiencies with extinguishment hydraulics and fire protection systems
- Demonstrate a working knowledge of fire investigation principles.

Fire Science Associate Degree - Professional

COURSE	CR
Semester 1	
COLS 1100 First Year Experience Seminar.....	1
ENGL 1100 Composition I.....	3
FIRE 1121 Firefighter I.....	7
FIRE1122 Firefighter II.....	5
TOTAL CREDIT HOURS	16
Semester 2	
EMS 1860 Emergency Medical Technician.....	7
PSY 1100 Introduction to Psychology.....	3
FIRE 1105 Strategies and Tactics.....	3
SES 1100 Personal Fitness Concepts.....	3
TOTAL CREDIT HOURS	16
Summer Semester	
COMM 1105 Oral Communication	3
FIRE 1112 Customer Service for Emergency Services.....	3
HUM XXXX Refer to approved GE - HUM list.....	3
MATH 1030 Beginning Algebra II OR	
MATH 1109 Math for Emergency Services.....	3
TOTAL CREDIT HOURS	12
Semester 3	
NAT XXXX Refer to approved GE – NAT list.....	4
FIRE 2001 Fire Service Company Officer	3
FIRE 2003 Fire Cause & Origin Investigation.....	3
TOTAL CREDIT HOURS	10
SEMESTER 4	
FIRE 2006 LEGAL ASPECTS OF EMERGENCY SERVICES	3
FIRE XXXX TECHNICAL ELECTIVE.....	3
TOTAL CREDIT HOURS	6
TOTAL DEGREE CREDIT HOURS	60

Technical Electives:

FIRE 1102 Hazardous Materials Awareness & Operations.....	3
FIRE 1103 Hazardous Materials Tech Level.....	3
FIRE 1104 Fire and Emergency Services Safety & Survival.....	2
FIRE 1106 Fire Behavior and Combustion.....	2
FIRE 1107 Fire Protection Hydraulics & Water Supply	3
FIRE 1108 Fire Prevention.....	3
FIRE 1109 Building Construction for Fire Protection	3
FIRE 1110 Fire Protection Systems	2
FIRE 1201 Introduction to Technical Rescue.....	3
FIRE 2002 Fire Safety Inspector	3
FIRE 2003 Fire Cause and Origin Investigation	3
FIRE 2005 Principals of Fire Science Command.....	3
FIRE 2094 Special Topics of Emergency Services	5
FIRE 2105 Advanced Building Construction.....	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@csc.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@csc.edu for an advising appointment.

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE)

COURSE	CR
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/Non-Amer to 1500.....	3
HIST 1182 World Civ. II: Non-West/Non-Amer since 1500.....	3
HIST 2223 African-American History I: 1451-1876	3
HIST 2224 African-American History II: 1877-Present	3
HUM 1100 Introduction to Humanities	3
HUM 1270 Comparative Religions.....	3
MUS 1251 Survey of Music History.....	3
PHIL 1101 Introduction to Philosophy.....	3
PHIL 1130 Ethics.....	3

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT

(SELECT ONE)

COURSE	CR
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 Introduction to Biology.....	4
BIO 1112 Human Biology	4
BIO 1113 Biological Sciences I.....	4
BIO 1114 Biological Sciences II.....	4
BIO 1125 Plant Biology	4
BIO 1127 Environmental Science I	4
BIO 2215 Introduction to Microbiology.....	4
BIO 2232 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 Physics II.....	5

Firefighter I Certificate

COURSE	CR
Semester 1	
FIRE 1121 Firefighter I	7
TOTAL CREDIT HOURS	7

Firefighter II Certificate

COURSE	CR
Semester 1	
FIRE 1122 Firefighter II	5
TOTAL CREDIT HOURS	5

Red Cross Lifeguarding & Waterfront Skills Certificate

COURSE	CR
Semester 1	
FIRE 1203 Surface and Ice Rescue Technician	2
TOTAL CREDIT HOURS	2

Fire and Emergency Services Higher Education (FESHE) Certificate

COURSE	CR
Semester 1	
FIRE 1100 Principles of Emergency Services	3
TOTAL CREDIT HOURS	3

Semester 2	
FIRE 1108 Fire Prevention	3
FIRE 1109 Building Construction for Fire	3
FIRE 1110 Fire Protection Systems	2
TOTAL CREDIT HOURS	8

Semester 3	
FIRE 1104 Fire and Emergency Services Safety & Survival	2
TOTAL CREDIT HOURS	2

Semester 4	
FIRE 1106 Fire Behavior and Combustion	3
TOTAL CREDIT HOURS	3
TOTAL DEGREE CREDIT HOURS	16

Fire Inspector Certificate

COURSE	CR
Semester 1	
FIRE 1121 Firefighter I	7
FIRE 1122 Firefighter II	5
TOTAL CREDIT HOURS	12

Semester 2	
FIRE 1108 Fire Prevention	3
FIRE 1110 Fire Protection Systems	2
TOTAL CREDIT HOURS	5

Semester 3	
FIRE 2002 Fire Safety Inspector	3
TOTAL CREDIT HOURS	3
TOTAL DEGREE CREDIT HOURS	20

Rescue Technician Certificate

COURSE	CR
Semester 1	
FIRE 1202 Rope Rescue Technician	3
TOTAL CREDIT HOURS	3

Semester 2	
FIRE 1203 Surface and Ice Rescue Technician	2
FIRE 1208 Vehicle & Machinery Rescue Technician	2
TOTAL CREDIT HOURS	4

Semester 3	
FIRE 1204 Swiftwater Rescue Technician	2
FIRE 1205 Confined Space Rescue Technician	2
FIRE 1206 Trench Rescue Technician	2
FIRE 1207 Structural Collapse Rescue Technician	2
TOTAL CREDIT HOURS	8
TOTAL DEGREE CREDIT HOURS	15

Geographic Information Systems

Geographic Information Systems Associate Degree GIS Certificate

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.

Upon completion of the Associate Degree in GIS, the graduate will be able to:

- Identify and define the components of a GIS
- Evaluate quality and integrity of data and be able to determine that the data meets both professional and industry standards
- Recognize and describe the components of project coordination, project development and professional practice
- Distinguish how GIS is being implemented in different industries
- Analyze spatial data using techniques from a variety of applications
- Demonstrate a working knowledge of current GIS technologies
- Create, organize, edit, georeference, and effectively use spatial data
- Create effective visual, tabular and analytical products such as maps, graphs, charts, statistics, databases, models and programs.

GIS Associate Degree

COURSE	CR
Semester 1	
ENGL 1100 Composition I.....	3
COLS 1100 First Year Experience Seminar.....	1
ITST 1101 Computer Applications in CSET I.....	2
XXX XXXX Basic Elective.....	2
GIS 1100 Introduction to GIS.....	3
GIS 1101 Acquiring GIS Data.....	2
GIS 1102 Mapping for Everyone.....	2
TOTAL CREDIT HOURS	15
Semester 2	
NAT XXXX Refer to approved GE - NAT list	3
STAT 1350 Elementary Statistics or	3
MATH 1148 College Algebra	4
GEOG 2900 Elements of Cartography	3
ARCH 1112 Basic CAD Drafting.....	1
GIS 1200 GIS Software I	2
GIS 1201 GIS Software II.....	2
GIS 1202 Planning and Implementing GIS.....	2
TOTAL CREDIT HOURS	17
Summer Semester	
GIS 2950 GIS Practicum & Seminar	3
TOTAL CREDIT HOURS	3

Semester 3	
HUM XXXX Refer to approved GE- HUM list.....	3
XXX 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 2130 Georeferencing and Editing	2
TOTAL CREDIT HOURS	16

Semester 4	
SBS XXXX Refer to approved GE - SBS list.....	3
COMM 2200 Business Communication.....	3
GIS 2200 Image Management & Analysis.....	3
GIS 2299 Advanced GIS Applications.....	4
GIS XXXX Technical Elective.....	1
TOTAL CREDIT HOURS	14
TOTAL DEGREE CREDIT HOURS	65

Basic Electives

The following courses are approved for basic elective requirements:

ARCH 1114 AutoCAD 2D	4
ARCH 1274 Revit Architecture I.....	2
BMGT 2250 Project Management Principles	3
CMGT 1105 Construction Documents.....	3
CMGT 2215 Introduction to Building Information Modeling (BIM).....	3
ITST 2252 Computer Programming for Technicians.....	2
SURV 1410 Introduction to Surveying	3
SURV 1460 Computer Applications Construction Science	2

GIS Associate Degree (continued)

Technical Electives

The following courses are approved for technical elective requirements:

GIS 2510	Advanced Spatial Analysis	2	GIS 2530	Introduction to ArcGIS Server	2
GIS 2520	Advanced GIS Programming	2	GIS 2540	GIS in Business	2
			GIS 2550	GIS in 3D	2
			GIS 2594	Current Topics: GIS	1-4

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT

(SELECT ONE) GEOG 2400 PREFERRED	CR
ANTH 2202 Introduction to Cultural Anthropology	3
ECON 2200 Principles of Microeconomics	3
GEOG 2400 Economic and Social Geography	3
POLS 1100 American Government	3
SOC 1101 Introduction to Sociology	3
PSY 1100 Introduction to Psychology	3

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE) PHIL 1130- PREFERRED	CR
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/Non-Amer to 1500	3
HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223 African-American History I: 1451-1876	3
HIST 2224 African-American History II: 1877-Present	3
HUM 1100 Introduction to Humanities	3
HUM 1270 Comparative Religions	3
MUS 1251 Survey of Music History	3
PHIL 1101 Introduction to Philosophy	3
PHIL 1130 Ethics	3

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT (SELECT ONE)

	CR
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 Introduction to Biology	4
BIO 1112 Human Biology	4
BIO 1113 Biological Sciences I	4
BIO 1114 Biological Sciences II	4
BIO 1125 Plant Biology	4
BIO 1127 Environmental Science I	4
BIO 2215 Introduction to Microbiology	4
BIO 2232 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

GIS Certificate

COURSE	CR
Semester 1	
GIS 1100 Introduction to GIS	3
GIS 1101 Acquiring GIS Data	2
GIS 1102 Mapping for Everyone	2
TOTAL CREDIT HOURS	7
Semester 2	
GIS 1200 GIS Software I	2
GIS 1201 GIS Software II	2
GIS XXXX Technical Elective	2
TOTAL CREDIT HOURS	6
Semester 3	
GIS XXXX Technical Elective	2
GIS 2299 Advanced GIS Applications or	4
GIS 2950 GIS Practicum & Seminar	3
TOTAL CREDIT HOURS	5-6
TOTAL CERTIFICATE CREDIT HOURS	18-19

Technical Electives

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 & Analysis	3
GIS 2510	Advanced Spatial Analysis	2
GIS 2520	Advanced GIS Programming	2
GIS 2530	Introduction to ArcGIS Server	2
GIS 2540	GIS in Business	2
GIS 2550	GIS in 3D	2
GIS 2594	Current Topics: GIS	1-4

Health Information Management Technology

Health Information Management Technology Associate Degree Health Data Analyst Certificate-Post HIMT Associate's Degree Health Information Management Technician Certificate Medical Coding Certificate

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 also may 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.

The Health Data Analyst Certificate program helps prepare students for the Certified Health Data Analyst (CHDA) certification examination offered by the American Health Information Management Association (AHIMA). The Clinical Data Analyst will work independently to document external data acquisition policies and procedures, as well as interface with other business units to define and document data needs and ad-hoc analysis requirements. With emphasis on use of electronic health records (EHRs), the health care industry continues to become more data driven, making health data analysts more valuable than ever. The CHDA designation provides practitioners with the knowledge to acquire, manage, analyze, interpret, and transform data into

accurate, consistent, and timely information.

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.

The Medical Coding Certificate program prepares students with entry-level skills needed to code, classify, and index diagnoses and procedures for the purpose of reimbursement, standardization, retrieval and statistical analysis. Principles in ICD-9-CM coding, CPT coding, and third-party reimbursement will be emphasized.

The Health Information Management Technology degree program, Health Data Analyst Certificate program, Health Information Management Technician Certificate program, Medical Coding Certificate program, and the Health IT Certificates are web-based programs. All technical coursework is offered online. Students are required to come to campus for proctored tests and occasional class meetings. Students are also required to attend professional practice experiences (PPEs) throughout the program at assigned healthcare facilities. Proctored testing is required for most HIMT courses.

Health Information Management Technology

Upon completion of the Associate Degree in the Health Information Management Technology, the graduate will be able to:

- 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.
- Review health records for completeness and accuracy to determine appropriateness and adequacy of health care documentation.
- Maintain and compile health information using electronic applications and work processes.
- Apply legal principles, policies, regulations and standards for the control, use, and dissemination of health information.
- Collect, compute, analyze, interpret and present statistical data related to health care services.

- Apply official coding principles in the assignment of diagnostic and procedural codes for the purpose of health care administrative, reimbursement, and research purposes.
- Abstract data from patient records for administrative, reimbursement, and research purposes.
- Apply principles of supervision and leadership and the tools used to effectively manage human resources.
- Demonstrate ethical practices as outlined in the American Health Information Management Association (AHIMA) Code of Ethics.

Health Data Analyst Certificate-Post HIMT Associate's Degree

Upon completion of this certificate, the student will be able to:

- Assist with the development, maintenance, and support of the data architecture and models for health care databases.
- Establish uniform data capture methods and strategies for validating the accuracy and reliability of data.
- Analyze and interpret health data using acceptable methods, criteria, and metrics.
- Generate meaningful reports using internal and external data sources and provides recommendation based on the data.
- Perform basic statistical analyses for projects and reports.
- Utilize data mining techniques and procedures to provide data for analysis and/or reporting.
- Demonstrate ethical practices as outlined in the American Health Information Management Association (AHIMA) Code of Ethics.

Health Information Management Technician Certificate

Upon completion of the Health Information Management Technician Certificate, the student will be able to:

- Demonstrate knowledge of medical terminology and clinical data as it relates to the collection and use of health information.
- Perform assembly and analysis of health records for completeness and accuracy.
- Perform concurrent and retrospective ongoing reviews of health records to ensure compliance with standards for health record documentation.
- Compile statistical data, such as admissions, discharges, deaths, births, and types of treatment given.
- 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.
- Assist clinical and administrative team in chart completion by running reports.
- Perform release of information (ROI) function.
- Demonstrate ethical practices as outlines in the American Health Information Management Association (AHIMA) Code of Ethics.

Medical Coding Certificate

Upon completion of the Medical Coding Certificate, the student will be able to:

- 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.

- Review health records for completeness and accuracy to determine appropriateness and adequacy of health-care documentation.
- Identify components of appropriate and adequate documentation of health care.
- Code, classify, and index diagnoses and procedures for the purpose of reimbursement, standardization, retrieval, and statistical analysis.
- Abstract data from patient records for administrative, reimbursement, and research purposes.
- Demonstrate ethical practices as outlined in the American Health Information Management Association (AHIMA) Code of Ethics.

Specific Program Admissions Information

(HIMT Degree, Health Data Analyst Certificate, and Medical Coding Certificate)

Listed below are requirements for admission to the Health Information Management Technology and the Medical Coding Certificate. *These requirements must be completed prior to acceptance into the HIMT Degree program and the Medical Coding Certificate program.*

- High school graduate or GED equivalency*
- Placement into ENGL 1100 Beginning Composition*
- Placement into STAT 1350 Elementary Statistics, or completion of MATH 1025 Quantitative Literacy Completion of the HIM Technician Certificate*
- Students must pass a drug screen and background check before they can be accepted into the HIMT Degree program, the Medical Coding Certificate program, or the Health Data Analyst Post Associate's Degree Certificate.*

After earning a "C" or higher in all the Health Information Management Technician Certificate courses, the student is eligible to apply to the HIMT Degree program or the Medical Coding Certificate program.

Students completing the HIMT degree program with a GPA of 2.5 or higher (or those with a current certification of RHIT or RHIA) are eligible to apply to the Health Data Analyst Post Associate's Degree Certificate program

The Health Information Management Technician Certificate program, the HIMT Degree, and the Health Data Analyst Post HIMT Associate's Degree Certificate will begin Autumn Semester as published. and The Medical Coding Certificate plan of study will begin Summer Semester as published. Students are expected to follow the established plans of study. An alternate plan of study may extend program completion time.

Students must earn a grade of "C" or higher in all HIMT technical and basic related courses to earn an Associate of Applied Science Degree in HIMT, to complete the Health Information Management Technician Certificate, the Medical Coding Certificate, or the Health Data Analyst Post Associate's Degree Certificate.

Health Information Management Technology Associate Degree

COURSE	CR
Semester 1	
HIMT 1111 Introduction to Health Information Management	2
HIMT 1133 Legal Aspects of Health Information	2
HIMT 1135 Health Data Management	3
CSCI 1001 Computer Fundamentals	2
COLS 1100 First Year Experience Seminar	1
ENGL 1100 Composition I	3
TOTAL CREDIT HOURS	13

Semester 2	
HIMT 1121 Advanced Medical Terminology	2
HIMT 1256 Clinical Documentation and Disease	2
HIMT 1274 Introduction to Medical Coding & Reimbursement	2
BIO 1101 Fundamentals of Human Anatomy & Physiology	3
CSCI 1101 Computer Concepts and Applications	3
SBS XXXX Refer to approved GE-SBX list	3
TOTAL CREDIT HOURS	15

Summer Semester	
HIMT 1141 Pharmacology	2
CSCI 1102 Intermediate Excel & Access	3
HUM XXXX Refer to approved GE - HUM list	3
STAT 1350 Elementary Statistics	3
TOTAL CREDIT HOURS	11

Semester 3	
HIMT 1245 ICD-10-CM/PCS Coding	3
HIMT 1255 CPT-4 Coding	3
HIMT 1265 Medical Reimbursement	2
HIMT 2870 PPE HIM Applications	2
BIO 2300 Human Anatomy	4
CSCI 1320 Database Fundamentals OR	2
CSCI 2325 Expert Access	3
TOTAL CREDIT HOURS	16/17

Semester 4	
HIMT 2257 Introduction to Health Statistics	2
HIMT 2259 Quality and Resource Management	2
HIMT 2267 Principles of Management	2
HIMT 2930 PPE HIM Field Experience	1
HIMT 2294 Special Topics OR	2
HIMT 2275 Intermediate Coding	2
TOTAL CREDIT HOURS	9
TOTAL DEGREE CREDIT HOURS	64/65

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)

COURSE	CR
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/Non-Amer to 1500	3
HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223 African-American History I: 1451-1876	3
HIST 2224 African-American History II: 1877-Present	3
HUM 1100 Introduction to Humanities	3

HUM 1270 Comparative Religions	3
MUS 1251 Survey of Music History	3
PHIL 1101 Introduction to Philosophy	3
PHIL 1130 Ethics	3

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT (SELECT ONE)

COURSE	CR
SOC 1101 Introduction to Sociology	3
SOC 2309 Law and Society	3
GEOG 2400 Economic and Social Geography	3

Health Data Analyst Certificate-Post HIMT Associate's Degree

COURSE	CR
Semester 1	
HIMT 2276 Analyzing Healthcare Data	2
CSCI 2380 Business Intelligence Fundamentals	3
TOTAL CREDIT HOURS	3
Semester 2	
HIMT 2277 Health Data Analyst Exam Preparation	2
CSCI 2385 Business Intelligence Reporting	3
TOTAL CREDIT HOURS	5
TOTAL CERTIFICATE CREDIT HOURS	10

Health Information Management Technician Certificate

COURSE	CR
Semester 1	
CSCI 1001 Computer Fundamentals	2
HIMT 1111 Introduction to Health Information Management	2
HIMT 1133 Legal Aspects of HIM	2
HIMT 1135 Health Data Management	3
TOTAL CREDIT HOURS	9
Semester 2	
CSCI 1101 Computer Concepts & Applications	3
HIMT 1121 Advanced Medical Terminology	2
HIMT 1274 Introduction to Medical Coding & Reimbursement	2
TOTAL CREDIT HOURS	7
TOTAL CERTIFICATE CREDIT HOURS	16

Medical Coding Certificate

COURSE	CR
Summer	
BIO 1101 Fundamentals of Human Anatomy & Physiology	3
HIMT 1141 Pharmacology	2
HIMT 1256 Clinical Documentation & Disease	2
TOTAL CREDIT HOURS	7
Semester 1	
HIMT 1245 ICD-10-CM/PCS Coding	3
HIMT 1255 CPT-4 Coding	3
HIMT 1265 Medical Reimbursement	2
BIO 2300 Human Anatomy	4
TOTAL CREDIT HOURS	12
Semester 2	
HIMT 2275 Intermediate Coding	2
HIMT 2930 PPE Field Experience	1
TOTAL CREDIT HOURS	3
TOTAL CERTIFICATE CREDIT HOURS	22

Heating, Ventilating and Air Conditioning Technology

Heating, Ventilating and Air Conditioning Technology Associate Degree Controls Certificate High Pressure Boiler License Training Program Certificate Large Commercial Certificate Residential/Light Commercial Certificate Test and Balance Certificate

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.

The four-course High Pressure Boiler License Training Program Certificate prepares students to take the State of Ohio High Pressure Boiler Operators License examination. To be licensed, individuals

are also required to document directly-related work experience with high pressure boilers in accordance with State of Ohio requirements. This boiler license program gives technicians the opportunity to progress from licensed boiler operator through many more responsible jobs in industry and commercial applications.

Upon completion of the Associate Degree in Heating, Ventilating and Air Conditioning Technology, the graduate will be able to:

- Create manual and computer graphic representations of HVAC projects
- Select piping materials and design piping systems
- Perform designs for commercial and industrial piping systems, including water, steam and refrigeration piping
- Calculate heat loss and heat gain loads for residential and commercial structures, using National ACCA manuals and computer software
- 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
- Assist in the selection and application of a variety of residential and commercial HVAC equipment to solve environmental problems
- Assist in the design of automatic control circuits using electro-mechanical and electronic control devices

Continued on next page

Heating, Ventilating and Air Conditioning Technology Associate Degree

COURSE	CR
Semester 1	
ARCH 1110 Basic Manual Drafting.....	1
HVAC 1140 Principles of Refrigeration.....	3
HVAC 1160 Hand Tools/Safety.....	3
HVAC 1180 Wiring Circuits I.....	2
ENGL 1100 Composition I.....	3
COLS 1100 First Year Experience Seminar.....	1
CSCI 1101 Computer Concepts and Applications.....	3
TOTAL CREDIT HOURS	16
Semester 2	
HVAC 1150 Instrumentation/Combustion Process.....	3
HVAC 1280 Wiring Circuits II.....	3
HVAC 1120 Load Calculations I.....	3
SBS XXXX Refer to approved GE - SBS list.....	3
MATH 1110 Mathematics for the Skilled Trade.....	3
ESSH 1160 OSHA 10	3
TOTAL CREDIT HOURS	16
Semester 3	
HVAC 2220 Load Calculations II.....	2
HVAC 2160 Automatic Controls.....	3

HVAC 2150 Heating Systems.....	3
COMM 2200 Business Communications.....	3
BMGT 2231 Fundamentals of Entrepreneurship	3
TOTAL CREDIT HOURS	14

Semester 4	
HVAC XXXX Technical Elective.....	3
HVAC 2193 Advanced Problems in HVAC	3
HVAC 2140 A/C & Heat Pump.....	4
PHYS 1103 World of Energy.....	3
BMGT 2232 Entrepreneurship: Business Plan Development	3
TOTAL CREDIT HOURS	16
TOTAL DEGREE CREDIT HOURS	65

Technical Electives

The following courses are approved for technical elective requirements:

HVAC 2094 Special Topics in HVAC	1-5
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	3

- Assist in designing preventative maintenance programs for various HVAC systems
- Research and apply local, state, and national codes to various environmental systems
- Assist in conducting energy audits of residential and commercial structures
- Test and calculate airflow through system equipment
- Read control schematics and test control circuits for malfunctions
- Troubleshoot and repair gas/electric furnaces, fuel oil furnaces,

split system air conditioners and heat pumps, humidifiers, and electronic air cleaners.

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.csc.edu/HVAC and/or contact HVAC Program Coordinator Bill Highley at 614-287-2657.

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT (SELECT ONE)

COURSE	DESCRIPTION	CR
ANTH 2202	Introduction to Cultural Anthropology	3
GEOG 2400	Economic and Social Geography	3
SOC 1101	Introduction to Sociology	3

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)

COURSE	DESCRIPTION	CR
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/Non-Amer to 1500	3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223	African-American History I: 1451-1876	3
HIST 2224	African-American History II: 1877-Present	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Introduction to Philosophy	3
PHIL 1130	Ethics	3

Controls Certificate

COURSE	DESCRIPTION	CR
Semester 1		
HVAC 1180	Wiring Circuits I	2
HVAC 1280	Wiring Circuits II	3
HVAC 2160	Automatic Controls	3
HVAC 2180	Advanced Controls	5
TOTAL CREDIT HOURS		13
TOTAL CERTIFICATE CREDIT HOURS		13

High Pressure Boiler License Training Program Certificate

COURSE	DESCRIPTION	CR
Semester 1		
HVAC 2110	Piping Systems	2
HVAC 1150	Instrumentation/Combustion	3
HVAC 1160	Hand Tools/Safety	3
HVAC 2190	Boiler Systems	4
TOTAL CREDIT HOURS		12
TOTAL CERTIFICATE CREDIT HOURS		12

Large Commercial Certificate

COURSE	DESCRIPTION	CR
Semester 1		
HVAC 1140	Principles of Refrigeration	3
HVAC 1180	Wiring Circuits I	2
TOTAL CREDIT HOURS		5
Semester 2		
HVAC 1150	Instrumentation/Combustion	3
HVAC 2190	Boiler Systems	4
TOTAL CREDIT HOURS		7
Semester 3		
HVAC 2170	Commercial A/C Systems	3
HVAC 2180	Advanced Controls	5
TOTAL CREDIT HOURS		8
TOTAL CERTIFICATE CREDIT HOURS		20

Residential/Light Commercial Certificate

COURSE	DESCRIPTION	CR
Semester 1		
HVAC 1140	Principles of Refrigeration	3
HVAC 1180	Wiring Circuits I	2
HVAC 1160	Hand Tools/Safety	3
TOTAL CREDIT HOURS		8

Semester 2		
HVAC 1150	Instrumentation/Combustion Process	3
HVAC 1280	HVAC Wiring Circuits II	3
TOTAL CREDIT HOURS		6

Semester 3		
HVAC 2140	A/C & Heat Pump	4
HVAC 2150	Heating Systems	3
TOTAL CREDIT HOURS		7
TOTAL CERTIFICATE CREDIT HOURS		21

Test and Balance Certificate

COURSE	DESCRIPTION	CR
Semester 1		
HVAC 1120	Load Calculations I	3
HVAC 1140	Principles of Refrigeration	3
HVAC 1150	Instrumentation/Combustion Process	3
ARCH 1110	Basic Manual Drafting	1
ARCH 1112	Basic CAD Drafting	1
TOTAL CREDIT HOURS		11

Semester 2		
HVAC 2110	Piping Systems	2
HVAC 2220	Load Calculations II	2
TOTAL CREDIT HOURS		4
TOTAL CERTIFICATE CREDIT HOURS		15

Hospitality Management Technology

Culinary Apprenticeship Major

Nutrition & Dietetics Major

Hotel, Tourism, and Event Management Major

Restaurant and Foodservice Management Major

Restaurant and Foodservice Management Major–Baking and Pastry Arts Track

Baking Certificate

Casino Management Certificate

Meeting and Event Management Certificate

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 Culinary Apprenticeship, Nutrition and Dietetics, Restaurant and Foodservice Management (also Baking and Pastry Arts Track), and Hotel, Tourism, and Event Management. The programs are accredited by the Accreditation Commission on Programs in Hospitality Administration (ACPHA) and the American Culinary Federation Educational Foundation 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, 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 through the ACF and as Journeyman Chefs through the U.S. Department of Labor, Bureau of Apprenticeship and Training.

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. 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 Dietetic Technician Registered (DTR).

The Hotel, Tourism, and Event Management Major prepares students for a wide variety of positions in travel agencies, hotels, attractions, and related tourism organizations. Required cooperative work experiences and hands-on instruction in computer reservations systems are included in a course of study appropriate for individual growth and advancement in hospitality and tourism.

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 Culinarians by the American Culinary Federation upon successful completion of national written and practical examinations.

The Restaurant and Foodservice Management Major–Baking and Pastry Arts Track is designed to prepare graduates to prepare and produce pies, cookies, cakes, breads, rolls, desserts and other baked goods in a variety of baking environments such as independent and in-store bakeries as well as large commercial bakeries, restaurants and hotels. The program includes classroom instruction, laboratory experience, and industry work experience. This major is accredited by the American Culinary Federation Foundation Accrediting Commission, and graduates can qualify as Certified Pastry Culinarians (CPC).

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.

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.

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.

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.

Culinary Apprenticeship Major

In addition to the general Hospitality Management competencies, a graduate majoring in the Culinary Apprenticeship program will be able to:

- Plan, organize, and supervise the production and service of appropriate high quality food and beverage to a variety of customers.

Nutrition and Dietetics Major

In addition to the general Hospitality Management competencies, a graduate majoring in the Nutrition and Dietetics major will be able to:

- Apply nutrition principles to menu planning and food production for a variety of customers
- 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.

Hotel, Tourism and Event Management Major

In addition to the general Hospitality Management competencies, a graduate majoring in Hotel, Tourism and Event Management will be able to:

- Apply destination geography knowledge as required for lodging and tourism industry
- Plan, organize and supervise the delivery of services in both lodging and tourism operations.

Restaurant and Foodservice Management Major

In addition to the general Hospitality Management competencies, a graduate majoring in Restaurant and Foodservice Management will be able to:

- Plan, organize, and supervise the production and service of appropriate high quality food and beverage to a variety of customers.

Restaurant and Foodservice Management Major – Baking and Pastry Arts Track

In addition to the general Hospitality Management competencies, a graduate majoring in the Restaurant and Foodservice Management – Baking and Pastry Arts Track will be able to:

- Plan, organize and supervise the production and service of appropriate high quality food and beverage to a variety of customers
- 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.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Culinary Apprenticeship major and the Nutrition and Dietetics major.

Culinary Apprenticeship Major

High school graduate or GED equivalency

Supplemental application required by the department (March 1 deadline for Summer Semester start)

Completion of program prerequisites: HOSP 1101, HOSP 1122, HOSP 1107, MATH 1010, COLS 1100, HNTR 1153, HOSP 1109, ENGL 1100, GEOL 1101

Nutrition and Dietetics Major

High school graduate or GED equivalency

Recommended high school or equivalent courses in Algebra, Chemistry and Biology

Completed health statement (see program coordinator)

Background check / Drug Test

Placement above MATH 1030 or MATH 1050

Placement into ENGL 1100

Supplemental application required by the department (May 1 deadline for Autumn Semester start)

Culinary Apprenticeship Major

COURSE	CR
Semester 1	
HOSP 1101 Researching the Hospitality & Tourism Industry	2
HOSP 1122 Hospitality Facilities & Sanitation.....	2
HOSP 1107 Food Principles & Purchasing	4
MATH 1010 Mathematics for Business Applications.....	4
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS	13
Semester 2	
HNTR 1153 Nutrition for a Healthy Lifestyle.....	3
HOSP 1109 Basic Food Production.....	4
ENGL 1100 Composition I.....	3
GEOL 1101 Introduction to Earth Science.....	4
TOTAL CREDIT HOURS	14
Summer Semester	
HOSP 2902 Hospitality Cooperative Work Experience II	3
HOSP 2218 Baking Fundamentals.....	2
SBS XXXX Refer to approved GE - SBS list.....	3
TOTAL CREDIT HOURS	8
Semester 3	
HOSP 2216 Food Laboratory & Menu Management	4
BMGT 1102 Interpersonal Skills	2
SES XXXX Basic Elective.....	1
TOTAL CREDIT HOURS	7
Semester 4	
HOSP 2217 Garde Manger	3
HUM XXXX Refer to approved GE - HUM list.....	3
TOTAL CREDIT HOURS	6

Summer Semester	
BMGT 2216 Business Ethics	3
HOSP 2903 Hospitality Cooperative Work Experience III.....	3
HOSP 2214 International Cuisine.....	2
TOTAL CREDIT HOURS	8

Semester 5	
HOSP 2271 Catering & Event Services.....	3
PSY 1100 Introduction to Psychology.....	3
HOSP 2207 Hospitality Financial Analysis	3
TOTAL CREDIT HOURS	9

Semester 6	
HOSP 2224 Hospitality Supervision & Quality Management.....	3
COMM 2200 Business Communication.....	3
HOSP 2286 Apprentice Final Project	2
TOTAL CREDIT HOURS	8
TOTAL DEGREE CREDIT HOURS	73

Basic Electives

The following courses are approved for basic elective requirements:

SES 1112 Total Body Conditioning.....	1
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

Nutrition and Dietetics Major

COURSE	CR
Semester 1	
ENGL 1100 Composition I.....	3
STAT 1350 Elementary Statistics.....	3
HNTR 1901 Dietetic Practicum I	1.5
MULT 1110 Medical Terminology	2
HOSP 1122 Hospitality Facilities & Sanitation.....	2
HNTR 1153 Nutrition for a Healthy Lifestyle.....	3
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS	15.5
Semester 2	
BIO 2300 Human Anatomy.....	4
HOSP 1109 Basic Food Production.....	4
COMM 2200 Business Communication.....	3
HNTR 1902 Dietetic Practicum II	2
HOSP 1107 Food Principles & Purchasing	4
TOTAL CREDIT HOURS	17
Summer Semester	
BIO 2232 Human Physiology.....	4
COMM 1105 Oral Communication.....	3
BMGT 2216 Business Ethics	3
SBS XXXX Refer to approved GE - SBS list.....	3
TOTAL CREDIT HOURS	13

Semester 3	
HUM XXXX Refer to approved GE - HUM list.....	3
HNTR 2275 Medical Nutrition Therapy I	3
HNTR 2903 Dietetic Practicum III A	1
HNTR 2904 Dietetic Practicum III B	1
HOSP 2224 Hospitality Supervision & Quality Management.....	3
HOSP 2207 Hospitality Financial Analysis	3
TOTAL CREDIT HOURS	14

Semester 4	
HOSP 2219 Food Production & Menu Management	5
HNTR 2276 Medical Nutrition Therapy II.....	3
HNTR 2277 DTR Exam Review	1
HNTR 2902 Dietetic Practicum IV.....	2.5
HNTR 2265 Dietetic Current Issues.....	1
TOTAL CREDIT HOURS	12.5
TOTAL DEGREE CREDIT HOURS	72

Hotel, Tourism and Event Management Major

COURSE	CR
Semester 1	
HOSP 1101 Researching the Hospitality & Tourism Industry	2
HOSP 1145 Lodging Operations	3
HOSP 1154 Tourism Geography.....	3
COLS 1100 First Year Experience Seminar.....	1
ENGL 1100 Composition I.....	3
MATH 1010 Mathematics for Business Applications.....	4
TOTAL CREDIT HOURS	16

Semester 2	
HOSP 1122 Hospitality Facilities & Sanitation.....	2
HOSP 1143 Hospitality Tourism Law	2
HOSP 1155 Tourism Operations.....	4
ENGL 2XX7 2367 or 2567 or 2667 or 2767 Composition II	3
MKTG 1230 Customer Service & Sales	3
TOTAL CREDIT HOURS	14

Summer Semester	
HOSP 2207 Hospitality Financial Analysis	3
HOSP 2246 Hospitality Sales & Marketing.....	3
COMM 2200 Business Communications	3
PSY 1100 Introduction to Psychology	3
TOTAL CREDIT HOURS	12

Semester 3	
HOSP 2226 Event Menu Planning.....	2
HOSP 2273 Casino & Gaming Operations.....	2
BMGT 2216 Business Ethics	3
GEOL 1101 Introduction to Earth Science.....	4
SES 2529 Sport & Event Management.....	3
SES XXXX Select from Technical Electives list.....	3
TOTAL CREDIT HOURS	17

Semester 4	
HOSP 2224 Hospitality Supervision & Quality Management **.....	3
HOSP 2271 Catering & Event Services.....	3
HOSP 2901 Hospitality Cooperative Work Experience I	3
HUM XXXX Refer to approved GE - HUM list.....	3
SBS XXXX Refer to approved GE - SBS list.....	3
TOTAL CREDIT HOURS	15
TOTAL DEGREE CREDIT HOURS	74

**A grade of "C" or higher is required.

Technical Electives

The following courses are approved for basic elective requirements:

SES 2528 Casino Culture	3
SES 2711 Financial Controls & Regulations.....	3

Restaurant and Foodservice Management Major

COURSE	CR
Semester 1	
HOSP 1101 Researching the Hospitality & Tourism Industry	2
HOSP 1122 Hospitality Facilities & Sanitation	2
HOSP 1107 Food Principles & Purchasing	4
HOSP 1109 Basic Food Production.....	4
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS	13

Semester 2	
MATH 1010 Mathematics for Business Applications.....	4
HNTR 1153 Nutrition for a Healthy Lifestyle.....	3
ENGL 1100 Composition I.....	3
PSY 1100 Introduction to Psychology	3
HOSP 1143 Hospitality & Tourism Law	2
TOTAL CREDIT HOURS	15

Summer Semester	
BMGT 1102 Interpersonal Skills	2
GEOL 1101 Introduction to Earth Science.....	4
SBS XXXX Refer to approved GE - SBS list.....	3
ENGL 2XX7 2367 or 2567 or 2667 or 2767 Composition II	3
TOTAL CREDIT HOURS	12

Semester 3	
BMGT 2216 Business Ethics	3
HOSP 2207 Hospitality Financial Analysis.....	3
HOSP 2271 Catering & Event Services.....	3
HOSP 2246 Hospitality Sales & Marketing.....	3
COMM 2200 Business Communications	3
TOTAL CREDIT HOURS	15

Semester 4	
HOSP 2901 Hospitality Cooperative Work Experience I	3
HOSP 2219 Food Production & Menu Management. **	5
HOSP 2224 Hospitality Supervision & Quality Management. **.....	3
HUM XXXX Refer to approved GE - HUM list.....	3
TOTAL CREDIT HOURS	14
TOTAL DEGREE CREDIT HOURS	69

**A grade of "C" or higher is required.

Restaurant and Foodservice Management Major – Baking and Pastry Arts Track

COURSE	CR
Semester 1	
HOSP 1101 Researching the Hospitality & Tourism Industry	2
HOSP 1110 Principles of Baking.....	2
HOSP 1122 Hospitality Facilities & Sanitation.....	2
HOSP 1107 Food Principles & Purchasing	4
HOSP 1109 Basic Food Production.....	4
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS	15
Semester 2	
ENGL 1100 Composition I.....	3
HOSP 1112 Breads	4
SBS XXXX Refer to approved GE - SBS list.....	3
MATH 1010 Mathematics for Business Applications.....	4
HNTR 1153 Nutrition for a Healthy Lifestyle.....	3
TOTAL CREDIT HOURS	17
Summer Semester	
HOSP 1113 Pastries I.....	4
BMGT 2216 Business Ethics	3
ENGL 2XX7 2367 or 2567 or 2667 or 2767 Composition II	3
TOTAL CREDIT HOURS	10

Semester 3	
HOSP 2207 Hospitality Financial Analysis.....	3
COMM 2200 Business Communication.....	3
HOSP 2114 Pastries II	4
BMGT 1102 Interpersonal Skills	2
GEOL 1101 Introduction to Earth Science.....	4
TOTAL CREDIT HOURS	16

Semester 4	
HOSP 2224 Hospitality Supervision & Quality Management**.....	3
PSY 1100 Introduction to Psychology	3
HOSP 2285 Baking & Pastry Project**.....	2
HUM XXXX Refer to approved GE - HUM list.....	3
HOSP 2901 Hospitality Cooperative Work Experience I.....	3
TOTAL CREDIT HOURS	14
TOTAL DEGREE CREDIT HOURS.....	72

** A grade of "C" or higher is required.

Approved General Education (GE) List

SBS	
GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT	
(SELECT ONE)	
ANTH 2202 Introduction to Cultural Anthropology	3
ECON 2200 Principles of Microeconomics	3
GEOG 2400 Economic and Social Geography.....	3
POLS 1100 American Government.....	3
PSY 1100* Introduction to Psychology	3
SOC 1101 Introduction to Sociology	3
* Optional course for Nutrition and Dietetics Major only	
HUM	
GE-ART/HUMANITIES REQUIREMENT	
(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/Non-American to 1500	3
HIST 1182 World Civ. II: Non-Western/Non-American since 1500.....	3
HIST 2223 African-American History I: 1451-1876	3
HIST 2224 African-American History II: 1877-Present	3
HUM 1100 Introduction to Humanities	3
HUM 1270 Comparative Religions.....	3
MUS 1251 Survey of Music History	3
PHIL 1101 Introduction to Philosophy.....	3
PHIL 1130 Ethics.....	3

Baking Certificate

COURSE	CR
Semester 1	
HOSP 1122 Hospitality Facilities & Sanitation.....	2
HOSP 1110 Baking Principles.....	2
TOTAL CREDIT HOURS	4
Semester 2	
HOSP 1112 Breads	4
HOSP 1113 Pastries I.....	4
TOTAL CREDIT HOURS	8
Summer Semester	
HOSP 2114 Pastries II	4
TOTAL CREDIT HOURS	4
TOTAL CERTIFICATE CREDIT HOURS	16

Casino Management Certificate

COURSE	CR
Semester 1	
HOSP 1122 Hospitality Facilities & Sanitation.....	2
HOSP 2271 Catering & Event Services.....	3
HOSP 2246 Hospitality Sales & Marketing.....	3
TOTAL CREDIT HOURS	8
Semester 2	
HOSP 2207 Hospitality Financial Analysis	3
HOSP 2224 Hospitality Supervision & Quality Management**.....	3
HOSP 2273 Gaming Operations	2
TOTAL CREDIT HOURS	8
Summer Semester	
HOSP 1143 Hospitality & Tourism Law	2
SES 2528 Casino Culture	3
SES 2711 Financial Controls & Regulations.....	3
TOTAL CREDIT HOURS	8
TOTAL CERTIFICATE CREDIT HOURS	24

**A minimum grade of "C" is required.

Meeting and Event Management Certificate

COURSE	CR
Semester 1	
HOSP 1122 Hospitality Facilities & Sanitation.....	2
HOSP 2271 Catering & Event Services.....	3
HOSP 2246 Hospitality Sales & Marketing.....	3
TOTAL CREDIT HOURS	8
 Semester 2	
SES 2529 Sport & Event Management.....	3
HOSP 2224 Hospitality Supervision & Quality Management**	3
HOSP 2226 Event Menu Planning.....	2
TOTAL CREDIT HOURS	8
 Summer Semester	
HOSP 2207 Hospitality Financial Analysis.....	3
HOSP 1143 Hospitality & Tourism Law	2
TOTAL CREDIT HOURS	5
TOTAL CERTIFICATE CREDIT HOURS	21

**A minimum grade of "C" is required.

Human Resources Management

Associate of Applied Science Degree

Over the last several decades, the human resource function has evolved 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.

Upon completion of the Associate Degree in Human Resources Management, the graduate will be able to:

- Research and apply human resources laws, cases, and issues using the Internet and other resources
- Apply human resources laws impacting private sector employers' day-to-day business operations
- Write, interpret, and communicate legal human resources policies, procedures, programs and employee handbook summaries for an organization
- Administer origination, retention, and disposal of manual and automated records to support the key tasks of the human resources department and meet the legislative requirements with which the organization must comply
- Develop protocol for and conduct the various types of interviews used in business
- Develop a job analysis questionnaire and write job descriptions and job specifications
- Administer a monetary compensation system
- Administer employee benefit programs
- Develop/administer a performance appraisal system
- Develop/administer workplace safety programs
- Develop and present employee training programs on human resources issues using in-person and computer based presentation methods
- Provide assistance in the union organizing, negotiating, grieving, and arbitrating processes.

Traditional Classes and Online/Distance Learning Choices

The Human Resources Management program is proud to offer traditional and online/distance learning (DL) options for our students. The traditional classroom experience continues to provide students with high quality instruction in a small classroom setting, primarily on campus. The basic Human Resources course, HRM 1121, and the Labor Relations course, HRM 1225, are offered at Columbus State Regional Learning Centers at least once per year. The Human Resources Management courses offered via online/distance learning modes provide the same high quality learning as traditional instruction, yet with the flexibility of being able to complete course work online. Courses offered online include HRM 1121 Human Resources Management, HRM 1225 Labor Relations, HRM 1827 Voluntary Benefits, HRM 2223 Workplace Safety (Blended), and HRM 2224 Human Resource Records Management



The Human Resources 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.

Human Resource Management Major

COURSE	CR		
Semester 1			
COLS 1100	1	First Year Experience Seminar	
ENGL 1100	3	Composition I	
BOA 1200	2	Business Language	
CSCI 1101	3	Computer Concepts & Applications	
BMGT 1111	3	Management	
BOA 1300	2	Business Applications	
HRM 1121	3	Human Resources Management	
TOTAL CREDIT HOURS	17		
Semester 2			
LEGL 2064	3	Legal Environment of Business	
HRM 1222	2	Personnel Interviewing	
HRM 1223	3	HR Policy & Procedure Writing	
HRM 1224	3	Employee Training	
HRM 1225	3	Labor Relations	
STAT 1350	3	Elementary Statistics	
TOTAL CREDIT HOURS	17		
Summer Semester			
HRM 1825	3	Monetary Compensation	
HRM 1826	3	Mandatory Benefits	
HRM 1827	2	Voluntary Benefits	
COMM 2268	3	Intercultural Communication	
BOA 1117	1	Payroll	
TOTAL CREDIT HOURS	12		
Semester 3			
HRM 2221	3	Staffing Under the Law	
HRM 2223	3	Workplace Safety	
HRM 2224	2	HR Records Management	
ECON 2200	3	Principles of Microeconomics	
HUM XXXX	3	Refer to Approved List	
TOTAL CREDIT HOURS	14		
Semester 4			
HRM 2240	3	Administration of Human Resources	
HRM 2901	3	HRM Practicum/Seminar	
XXXX XXXX	4	Natural Science – Refer to approved list	
POLS 1100	3	Introduction to American Government	
TOTAL CREDIT HOURS	13		
TOTAL DEGREE CREDIT HOURS	73		

Approved General Education (GE) List

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE)	CR
ARCH 2100	3
HART 1201	3
HART 1202	3
HIST 1111	3
HIST 1112	3
HIST 1151	3
HIST 1152	3
HIST 1181	3
HIST 1182	3
HIST 2223	3
HIST 2224	3
HUM 1100	3
HUM 1270	3
MUS 1251	3
PHIL 1101	3
PHIL 1130	3

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT

(SELECT ONE)	CR
ASTR 1141	3
ASTR 1161	3
ASTR 1162	3
ASTR 1400	1

BIO 1111	4
BIO 1112	4
BIO 1113	4
BIO 1114	4
BIO 1125	4
BIO 1127	4
BIO 2215	4
BIO 2232	4
CHEM 1100	5
CHEM 1111	4
CHEM 1112	4
CHEM 1171	5
CHEM 1172	5
GEOL 1101	4
GEOL 1105	3
GEOL 1121	4
GEOL 1122	4
GEOL 1151	3
PHYS 1103	3
PHYS 1200	5
PHYS 1201	5
PHYS 1250	5
PHYS 1251	5

Interactive Media

Interactive Media Associate Degree Video Game Art and Animation Track Digital Video and Sound Certificate

Companies today continued 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 a growing emphasis in web design development as well as social media and Web 2.0 trends.

The Interactive Media Associate Degree program is designed to impart four critical skills to its graduates:

- Design and aesthetic sensibility
- Scripting (source code and application), including HTML, CSS, MySQL, PHP, XML and Actionscript
- Familiarity with various design-oriented application programs including: Adobe Muse, Fireworks, Premiere, AfterEffects, Flash, Dreamweaver, PhoneGap, Maya, Edge, and ZBrush
- Experience in both the Macintosh and Windows platforms.

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.

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.

The jobs available in interactive multimedia are varied. Typical job possibilities for program graduates include front end designer, multimedia technician, multimedia developer, media specialist, instructional design technician, computer graphic artist, 3D computer animator, multimedia illustrator, desktop media publisher, interface designer, animator, script integrator, digital journalist, and presentation artist.

Upon completion of the Associate Degree program in Interactive Media, the graduate will be able to:

- Comprehend the relationship between design, marketing, and interactive multimedia projects and how it affects society and industry
- Understand the purpose and interrelationship among design, scripting, and software
- Be able to evaluate the strengths and weaknesses of project design including storyboarding, diagramming, flowcharting, and brand relevance
- Create a functional, interactive, animated Web presence from conceptual stages to finished product using Dreamweaver
- Possess extensive knowledge of industry standard Web animation software (Flash)
- Gain real-world experience working as an intern in a multimedia-related company after completing an interactive portfolio.

In addition to the Interactive Media competencies, graduates completing a Video Game Art and Animation track will be able to:

- Demonstrate an understanding of the history, current industry and occupations that constitute the digital gaming industry
- Understand narrative and design principles in development of game concepts
- Demonstrate appropriate content creation skills, utilizing both 2D and 3D creation software
- Understand the roles and responsibilities of team members and their collaboration in all phases of design, development and implementation
- Demonstrate and ability to work in a collaborative game development environment
- Develop a comprehensive professional portfolio to be used in pursuing jobs and/or internship opportunities.

Certification Courses:

A series of online courses are available for students interested in being certified in several Adobe software products: Dreamweaver, Photoshop and Flash. Each course is designed to prepare students to take the Adobe Certified Associate test for Web Communication. This test is sanctioned by Adobe and offered to qualified students through Columbus State Community College and the Certiport

testing system (sanctioned by Adobe). Students taking these courses will be introduced to each objective and principle designed into the corresponding certification test. While completing these courses does not guarantee success for students taking the certification test, the courses are a much focused preparatory tool for the certification test. These courses are designed for individuals with existing background in the individual software products. These courses are offered exclusively in an online format.

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.

Interactive Media Associate Degree

COURSE	CR
Semester 1	
ENGL 1100 Composition I.....	3
IMM 1100 Principles of Interactive Design.....	3
IMM 1500 Basics of Video and Sound.....	3
DDG 1100 Introduction to Computer Design.....	3
COLS 1100 First Year Experience Seminar.....	1
CSCI 1145 HTML.....	3
TOTAL CREDIT HOURS	16
Semester 2	
DDG 1525 Storyboarding.....	3
IMM XXXX Technical Elective.....	3
IMM 1140 Cascading Style Sheets.....	3
MKTG 1020 Branding.....	3
IMM 1160 Media Graphics and Optimization.....	3
TOTAL CREDIT HOURS	15
Summer Semester	
NAT XXXX Refer to approved GE - NAT list.....	4
HUM XXXX Refer to approved GE - HUM list.....	3
STAT 1350 Elementary Statistics.....	3
TOTAL CREDIT HOURS	10
Semester 3	
IMM 2370 Flash I & II.....	3
IMM XXXX Technical Elective.....	2-3
IMM XXXX Technical Elective.....	3
CSCI 2447 JavaScript Fundamentals.....	3
SBS XXXX Refer to approved GE - SBS list.....	3
TOTAL CREDIT HOURS	14-15

Semester 4	
IMM 2620 Website Design/Creation.....	3
IMM 2390 Advanced Flash III (Games).....	3
IMM 2710 Interactive Portfolio.....	3
IMM 2902 IMM Practicum.....	1
IMM 2802 IMM Seminar.....	1
CSCI 2412 Web Database Development.....	4
TOTAL CREDIT HOURS	15
TOTAL DEGREE CREDIT HOURS	70-71

Technical Electives

The following courses are approved for technical elective requirements:

DDG 1555 Adobe Photoshop I/A.....	3
DDG 2750 Adobe Illustrator I/A.....	3
FOTO 1140 Introduction to Digital Photography.....	3
IMM 1510 Audio Production.....	3
IMM 1520 Single Camera Video Production.....	3
IMM 1530 Screenwriting.....	3
IMM 1580 Motion Graphics (AfterEffects).....	2
IMM 2371 Adobe Edge.....	3
IMM 2372 Adobe PhoneGap.....	3
IMM 2520 Advanced Video Production.....	3
IMM 2600 DVD Creation (Encore).....	3
IMM 2621 Adobe Muse.....	3
IMM 2622 WordPress.....	3
IMM 1201 3D Modeling 1.....	4
IMM 2760 Web Communication.....	2

Interactive Media Associate Degree, Video Game Art and Animation Track

COURSE	CR
Semester 1	
IMM 1115 Survey of Gaming Industry.....	3
IMM 1201 3D Modeling 1.....	4
COLS 1100 First Year Experience Seminar.....	1
DDG 1525 Storyboarding.....	3
ENGL 1100 Composition I.....	3
STAT 1350 Elementary Statistics.....	3
TOTAL CREDIT HOURS	17
Semester 2	
IMM 1116 Storytelling for Games.....	3
IMM 1202 3D Modeling 2.....	3
DDG 1860 2D Animation.....	3
DDG 1870 Fundamentals of Design for Animation.....	3
DDG 2650 Digital Painting.....	3
TOTAL CREDIT HOURS	15
Summer Semester	
NAT XXXX Refer to approved GE - NAT list.....	4
HUM XXXX Refer to approved GE - HUM list.....	3
SBS XXXX Refer to approved GE - SBS list.....	3
TOTAL CREDIT HOURS	10

Semester 3	
IMM 2201 3D Modeling 3.....	3
IMM 2370 Flash I & II.....	3
IMM 2601 Game Development 1.....	2
MKTG 1020 Branding.....	3
TOTAL CREDIT HOURS	11

Semester 4	
IMM 2390 Advanced Flash III (Games).....	3
IMM 2602 Game Development 2.....	2
IMM 2603 Collaborative Project.....	2
IMM 2710 Interactive Portfolio.....	3
IMM 2802 IMM Seminar.....	1
IMM 2902 IMM Practicum.....	1
TOTAL CREDIT HOURS	14
TOTAL DEGREE CREDIT HOURS	67

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE)

		CR
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/Non-Amer to 1500.....	3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500.....	3
HIST 2223	African-American History I: 1451-1876.....	3
HIST 2224	African-American History II: 1877-Present.....	3
HUM 1100	Introduction to Humanities.....	3
HUM 1270	Comparative Religions.....	3
MUS 1251	Survey of Music History.....	3
PHIL 1101	Introduction to Philosophy.....	3
PHIL 1130	Ethics.....	3

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT

(SELECT ONE)

		CR
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	Introduction to Biology.....	4
BIO 1112	Human Biology.....	4
BIO 1113	Biological Sciences I.....	4
BIO 1114	Biological Sciences II.....	4
BIO 1125	Plant Biology.....	4
BIO 1127	Environmental Science I.....	4

BIO 2215	Introduction to Microbiology.....	4
BIO 2232	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 Physics II.....	5

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT

(SELECT ONE)

		CR
ANTH 2202	Introduction to Cultural Anthropology.....	3
ECON 2200*	Principles of Microeconomics.....	3
GEOG 2400	Economic and Social Geography.....	3
POLS 1100	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.

Digital Video and Sound Certificate

		CR
Semester 1		
IMM 1500	Basics of Video and Sound.....	3
IMM 1530	Screenwriting.....	3
TOTAL CREDIT HOURS		6
Semester 2		
IMM 1510	Audio Production.....	3
IMM 1520	Single Camera Video Production.....	3
TOTAL CREDIT HOURS		6
Semester 3		
IMM 1580	Motion Graphics (AfterEffects).....	2
IMM 2520	Advanced Video Production.....	3
TOTAL CREDIT HOURS		5
Semester 4		
IMM 2600	DVD Creation (Encore).....	3
TOTAL CREDIT HOURS		3
TOTAL DEGREE CREDIT HOURS		20

Interpreter Education Program

Interpreter Education Program Associate Degree American Sign Language/Deaf Studies Certificate

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 and 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 an agency interpreter.

To qualify for admission to the associate degree program, students must (1) have an entry-level knowledge of American Sign Language and Deaf culture (equivalent to CSCC's IEP 1100, IEP 1101, IEP 1109) (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 IEP 2901. A minimum skill level must be met in order to register for IEP 2901.

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. *Students must complete one semester of their Practicum experience in a K-12 educational setting. This requires that students be available during normal, day school hours for a minimum of 11 hours per week times 15 weeks during that Practicum experience.*

Upon completion of the Associate Degree in Interpreter Education Program, the graduate will be able to:

- Demonstrate knowledge of linguistics, cross-cultural and interpreting theories, approaches to ethical decision-making, and professional standards as they relate to the work of interpreters in various contexts.
- Demonstrate knowledge of diversity within the Deaf community including history, cultural norms and values, community resources; and their resulting implications for

interpreters.

- Collaborate with colleagues, faculty, staff, and consumers in a manner that reflects appropriate cultural norms and professional standards.
- 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.
- Demonstrate proficiency and flexibility in English by effectively communicating in a wide range of personal and professional situations with a diverse population of speakers.
- 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.
- 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.
- 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).
- Assess the effectiveness of interpreting performance of self and peers during/post assignment.
- Demonstrate the ability to effectively assess and monitor one's performance as a team interpreter in both lead and support roles.
- Demonstrate self-awareness and discretion by monitoring and managing personal and professional behaviors, and applying professional conflict resolution strategies when appropriate.

***In Ohio, licensure from the Ohio Department of Education is required for employment in a Public School K-12 setting as an interpreter for the Hearing-Impaired. Successful completion of IEP 2903 K-12 Educational Interpreting Practicum AND the Columbus State IEP Associate of Applied Science degree fulfills one of the requirements to obtain the Associate License of Interpreter for the Hearing Impaired from ODE. Students who choose to successfully complete IEP 2901 Community Interpreting Practicum I and IEP 2902 Community Interpreting Practicum II and do NOT complete IEP 2903 K-12 Educational Interpreting Practicum are NOT eligible for the ODE Hearing Impaired Licensure, and the IEP program representative will NOT sign off on the paperwork for licensure.**

The CSCC Interpreter Education Program is approved by the State of Ohio Department of Education. Upon completion of all degree requirements, graduates should contact the program coordinator for further information about licensure.

Specific Program Admissions Information

Listed below are additional requirements for admission to Interpreter Education Program.

High school graduate or GED equivalency.

Entry-level American Sign Language skills equivalent to Columbus State's Beginning ASL (IEP 1101), Fingerspelling & Numbers (IEP 1109), and Introduction to the Deaf Community (IEP 1100)—all with grade of "C" or better. These three courses are offered all semesters. Individuals with ASL experience may meet this requirement by taking an ASL placement exam. Contact Christine Evenson at cevenson@csc.edu.

Compass test placement into ENGL 1100 Composition I or above, and "No Reading Required."

Complete the form "Application to Become an Interpreting/ASL Education Major." This form can be obtained ONLY from the coordinator during a Mandatory Information Session. Contact the coordinator of the Interpreter Education program, Christine Evenson, (614) 287-5616 or cevenson@csc.edu, for dates/times of the next Mandatory Information Session.

Submit all previous college and university transcripts to the

Registrar's Office.

Admitted with, and maintain, a minimum 2.0 GPA.

Students who go out-of-sequence may re-enter the Interpreting program providing space is available. Those students will be required to meet with an advisor, take applicable skills/assessment exams, and must follow the current year's Plan of Study for graduation, including any and all course work that has been added to the curriculum since their original start of the program.

All IEP courses require a grade of "C" or higher to satisfy prerequisite and degree requirements, except IEP 2901, IEP 2902 and IEP 2903 which require a "B" or higher.

Note: American Sign Language/Deaf Studies Certificate candidates do not need to attend a Mandatory Information Session.

Interpreter Education Program Associate Degree

Please check course descriptions for prerequisites to all courses in this curriculum.

COURSE	CR
Semester 1	
IEP 1102 Intermediate ASL.....	4
IEP 1120 Introduction to Interpreting Profession.....	3
IEP 1150 Linguistics of ASL & English.....	3
ENGL 1100 Composition I.....	3
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS	14
Semester 2	
IEP 1103 Advanced ASL.....	4
IEP 1201 Beginning Interpreting.....	4
IEP 1401 Theoretical Foundations of Interpreting.....	3
PSY 1100 Introduction to Psychology.....	3
TOTAL CREDIT HOURS	14
Summer Semester	
IEP 2202 Intermediate Interpreting.....	3
IEP 2402 Ethics & Decision Making for Interpreters.....	3
IEP 2204 ASL to English Interpreting.....	3
XXXX XXXX Basic Related Elective - See advisor for options.....	4
MATH 1030 Beginning Algebra II - See advisor for MATH options if you plan to transfer from CSCC.....	3
TOTAL CREDIT HOURS	16
Semester 3	
IEP 2203 Advanced Interpreting.....	3
IEP 2403 Educational Interpreting.....	3

IEP 2901 Community Interpreting Practicum I* or	
IEP 2903 K-12 Educational Practicum*.....	3.5
HUM XXXX Refer to approved GE - HUM list.....	3
COMM 1105 Oral Communication or.....	
COMM 1115 Oral Interpretation.....	3
TOTAL CREDIT HOURS	15.5

Semester 4	
IEP 2404 Specialized Interpreting.....	2
IEP 2902 Interpreting Practicum II* or	
IEP 2903 K-12 Educational Practicum*.....	3.5
COMM 2200 Business Communication.....	3
BIO 1111 Introduction to Biology.....	4
IEP1XXX Technical Elective.....	1
TOTAL CREDIT HOURS	13.5
TOTAL DEGREE CREDIT HOURS	73

Technical Electives

The following courses are approved for technical elective requirements:

IEP 1194 Special Topics in Interpreting.....	1-5
IEP 1294 Special Topics in ASL.....	1-5
IEP 1394 Special Topics in Deaf Studies.....	1-5
IEP 2701 Processing.....	1
IEP 2703 Advanced Fingerspelling.....	1
IEP 2704 Religious Interpreting.....	1

*Practicum courses require grade of "B" or better to satisfy graduation requirements.

Approved General Education (GE) List

HUM	GE-ART/HUMANITIES REQUIREMENT (SELECT ONE).....	CR
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/Non-Amer to 1500.....	3

HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500.....	3
HIST 2223	African-American History I: 1451-1876.....	3
HIST 2224	African-American History II: 1877-Present.....	3
HUM 1100	Introduction to Humanities.....	3
HUM 1270	Comparative Religions.....	3
MUS 1251	Survey of Music History.....	3
PHIL 1101	Introduction to Philosophy.....	3
PHIL 1130	Ethics.....	3

American Sign Language/Deaf Studies Certificate

For those individuals wanting to learn about people who are Deaf, their unique culture and community, and to be able to converse with them via American Sign Language (ASL), Columbus State offers a certificate program. This program does not prepare individuals to become interpreters; it is strictly a program to enhance/establish communication skills and to learn about deafness. Attending a Mandatory Information Session with the coordinator is not required; students simply register for the courses. Once all courses have been successfully completed with a "C" or better, students apply for the certificate by contacting the Interpreter Education Program coordinator. Individuals successfully completing the following six courses (20 credit hours) must apply for their certificate within three semesters of completing Advanced ASL (IEP 1103).

For additional information about the American Sign Language/Deaf Studies Certificate, please see the Interpreter Education Program coordinator. Individuals who have ASL experience may take an ASL placement test. Contact Christine Evenson at cevenson@csc.edu for more information. All courses are offered all semesters.

For more information about the Interpreter Education Program Associate Degree, Deaf Studies Certificate, and ASL classes, www.csc.edu/Programs/descriptions/iep.

Deaf Studies Certificate

COURSE	CR
Semester 1	
IEP 1101 Beginning ASL.....	4
IEP 1109 Fingerspelling & Numbers.....	2
IEP 1100 Introduction to the Deaf Community.....	3
TOTAL CREDIT HOURS.....	9
Semester 2	
IEP 1102 Intermediate ASL.....	4
IEP 1150 Linguistics of ASL & English.....	3
TOTAL CREDIT HOURS.....	7
Semester 3	
IEP 1103 Advanced ASL.....	4
TOTAL CREDIT HOURS.....	4
TOTAL CERTIFICATE CREDIT HOURS.....	20

*All courses require a "C" or better to satisfy certificate requirements.

Landscape Design and Management

Landscape Design and Management Associate Degree Landscape Certificate

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.

Upon completion of the Associate Degree in Landscape Design and Management the graduate will be able to:

- Assist with the preparation of contract/design documents and construction specifications

- Assist landscape professionals with the management and implementation of construction processes
- Select suitable herbaceous and woody plants and properly install them
- Estimate residential landscape project costs by utilizing take-off and costing methods
- Be able to read and interpret plans and drawings
- Assist in the survey and stake out of the job site
- Create manual and/or computer generated designs of landscape projects
- Create presentation materials using a variety of graphic techniques
- Assist in the maintenance of both commercial and residential landscapes
- Assist in the construction of landscapes and outdoor environments
- Assist in the design and installation of irrigation systems
- Identify common pests, diseases and problems as they relate to the landscape.

Landscape Design and Management Associate Degree

COURSE	CR
Semester 1	
HORT 1130 Plant Sciences	3
LAND 1160 Landscape Principles	2
NAT XXXX Refer to approved GE - NAT list	3
ARCH 1110 Basic Manual Drafting	1
ARCH 1112 Basic CAD Drafting	1
ITST 1101 Computer Apps in Construction/Engineering Tech I	2
LAND 1165 Landscape Survey	1
ENGL 1100 Composition I	3
COLS 1100 First Year Experience Seminar	1
TOTAL CREDIT HOURS	17

Semester 2	
HORT 1530 Spring Plants	3
LAND 1560 Residential Design	4
LAND 1590 Land Management I	3
LAND 1565 Landscape Graphics	2
MATH 1075 Intermediate Algebra	4
COMM 1110 Small Group Communication	3
TOTAL CREDIT HOURS	19

Summer Semester	
LAND 2900 Field Experience	3
TOTAL CREDIT HOURS	3

Semester 3	
HORT 2130 Autumn Plants	3
LAND 2160 Landscape Construction	4
LAND 2190 Land Management II	3
BMGT 1111 Management	3
HORT 2530 Herbaceous Plants	3
TOTAL CREDIT HOURS	16

Semester 4	
LAND 2560 Planting Design	4
LAND 2590 Landscape Operations	3
LAND XXXX Technical Elective	2
HUM XXXX Refer to approved GE - HUM list	3
COMM 2204 Technical Writing	3
SBS XXXX Refer to approved GE - SBS list	3
TOTAL CREDIT HOURS	18
TOTAL DEGREE CREDIT HOURS	73

Technical Electives

The following courses are approved for technical elective requirements:

ESSH 1160 OSHA 10-Hr Construction Safety & Health	1
HORT 1535 Arboriculture	2
LAND 1100 Introduction to the Landscape Profession	2
LAND 1106 Landscape for the Home Gardener	3
LAND 1545 Landscape Computer Applications	2
LAND 2145 Specialty Gardens	3
LAND 2155 Sustainable Practices	3
LAND 2165 Landscape Irrigation	3
LAND 2175 Sustainable Sites	4
LAND 2994 Special Topics: LAND	1-3
SPAN 1121 Spanish for Landscaping	2
SURV 1410 Introduction to Surveying	3

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT

(SELECT ONE)	CR
ANTH 2202 Introduction to Cultural Anthropology	3
ECON 2200 Principles of Microeconomics	3
GEOG 2400 Economic and Social Geography	3
POLS 1100 American Government	3
PSY 1100 Introduction to Psychology	3
SOC 1101 Introduction to Sociology	3

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE) ARCH 2100 - PREFERRED	CR
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/Non-Amer to 1500	3
HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223 African-American History I: 1451-1876	3
HIST 2224 African-American History II: 1877-Present	3
HUM 1100 Introduction to Humanities	3
HUM 1270 Comparative Religions	3
MUS 1251 Survey of Music History	3
PHIL 1101 Introduction to Philosophy	3
PHIL 1130 Ethics	3

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT

(SELECT ONE)	CR
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 Introduction to Biology	4
BIO 1112 Human Biology	4
BIO 1113 Biological Sciences I	4
BIO 1114 Biological Sciences II	4
BIO 1125 Plant Biology	4
BIO 1127 Environmental Science I	4
BIO 2215 Introduction to Microbiology	4
BIO 2232 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

Landscape Certificate

COURSE	CR
Semester 1	
HORT 1130 Plant Sciences	3
HORT XXXX Horticulture Elective (select from list)	3
LAND 1160 Landscape Principles	2
TOTAL CREDIT HOURS	8

Semester 2	
HORT XXXX Horticulture Elective (select from list)	3
LAND 1590 Land Management	3
TOTAL CREDIT HOURS	6
TOTAL CERTIFICATE CREDIT HOURS	14

Horticulture Electives

HORT 1530 Spring Plants	3
HORT 2130 Autumn Plants	3
HORT 2530 Herbaceous Plants	3

Marketing

Marketing Associate Degree
Digital Marketing Major
Retail Management Major
Customer Service Certificate
Digital Marketing Certificate
Electronic Marketing Certificate
Pre-MBA Certificate
Retail Management Certificate
Social Media Certificate

Marketing is at the heart of what every business must do to be successful: attract and retain customers. Marketing professionals are responsible for knowing how to produce, price, promote, and distribute goods and services. Program graduates enjoy career opportunities in such diverse areas as product management, advertising, retailing, public relations, web-based businesses, customer service and sales.

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, public relations, and advanced sales techniques. All of the courses in the Marketing Associate Degree program can be completed in both a traditional and distance learning option. The traditional class room experience continues to provide students with high quality instruction in a small classroom setting on one of our campuses or at one of our regional learning centers. The distance learning option provides the same high quality learning as traditional instruction, with the flexibility of being able to complete coursework online.

The Digital Marketing and Retail Management majors build on a solid foundation in marketing to provide advanced skills in these specialized areas. The Digital Marketing major provides graduates with a survey of the major components of direct marketing including creative design, list selection, database management, and financial evaluation of direct marketing programs. Particular emphasis is placed on interactive technologies and their impact on direct marketing. The Retail Management major provides in-depth exposure to retail management principles and a strong internship program supported by many of the city's leading retail operations.

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 other professionals 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. All of the courses in this certificate can be completed online.

Transfer agreements are available that enable Marketing graduates to transfer to other institutions to complete their baccalaureate degree. Please contact a program advisor if interested in this option.

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.

Upon completion of the Associate Degree in Marketing, the graduate will be able to:

- 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.
- Explain the role of branding, the concept of brand equity, and brand elements in designing marketing programs and strategies in global economy.
- Differentiate between competitive marketing strategies for services and non-profit organizations.
- 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.
- Identify issues and opportunities that arise in global marketing, and describe the basic mechanisms for doing business in international markets.
- 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.
- Explain the major components of direct marketing and database management with particular emphasis on interactive technologies and the financial evaluation of direct marketing campaigns.
- 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.

- 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.
- Analyze sales and customer services processes as they relate to consumer and business-to-business purchasing and customer retention.

Digital Marketing Major

In addition to the Marketing competencies, a graduate with a Digital Marketing major will be able to:

- Select and use the appropriate methodology to assess the costs of direct marketing efforts
- Evaluate and utilize interactive direct marketing media.

Retail Management Major

In addition to the Marketing competencies, a graduate with a Retail Management major will be able to:

- Identify the various types of stock control systems appropriate for a merchandise mix
- Explain the basic concepts of store operations
- Demonstrate and apply retail mathematical tools that aid in merchandise planning, selection, and pricing.

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-based sections of a particular course. Check with the program advisor to discuss specific course needs and options.

Marketing Associate Degree

COURSE	CR
Semester 1	
ENGL 1100 Composition I.....	3
STAT 1350 Elementary Statistics.....	3
MKTG 1105 Retailing.....	3
ECON 2200 Principles of Microeconomics.....	3
IMM 1220 Digital Media Preparation.....	2
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS	15
Semester 2	
MKTG 1110 Marketing Principles.....	3
MKTG 1120 Branding.....	3
MKGT 1125 Introduction to Social Media	3
ACCT 1211 Financial Accounting.....	3
SCM 1100 Supply Chain Management Principles.....	3
TOTAL CREDIT HOURS	15
Summer Semester	
MKTG 1230 Customer Service & Sales	3
HIST XXXX 1111, 1112, 1151, (or) 1152.....	3
TOTAL CREDIT HOURS	6
Semester 3	
MKTG 2200 Digital Marketing.....	3
MKTG 2400 Advertising & Promotion.....	3
MKTG 2290 Business-to-Business Marketing.....	3
MKTG 2400 Advertising & Promotion.....	3

MKTG 2550 Marketing Info & Consumer Analysis.....	3
ACCT 1212 Managerial Accounting.....	3
TOTAL CREDIT HOURS	15
Semester 4	
MKTG 2750 Global Marketing.....	3
MKTG 2802 Marketing Seminar.....	1
MKTG 2902 Marketing Practicum.....	1
BMGT 2250 Project Management Principles	3
NAT XXXX Natural Science – Refer to approved list	3
XXXX XXXX Technical Elective – Refer to approved list	3
TOTAL CREDIT HOURS	14
TOTAL DEGREE CREDIT HOURS	65

Technical Electives

The following courses are approved for technical elective requirements:

MKTG 2100 Social Media Marketing Strategy	3
MKTG 2360 Direct & Database Marketing	3
MKTG 2994 Marketing Current Topics	1 - 3

Digital Marketing Certificate

Semester 13	
MKTG 1125 Social Media	3
MKTG 2200 Digital Marketing.....	3
MKTG 2360 Direct & Database Marketing.....	3
MKTG 2550 Marketing Information & Consumer Analysis	3
CSCI 1320 Database Fundamentals	2
TOTAL CREDIT HOURS	14
TOTAL CERTIFICATE CREDIT HOURS	14

Pre-MBA Certificate**

Semester 1	
MKTG 1110 Marketing Principles.....	3
BMGT 1111 Management.....	3
ECON 2200 Principles of Microeconomics	3
STAT 1350 Elementary Statistics.....	3
ACCT 1211 Financial Accounting	3
FMGT 2201 Corporate Finance.....	3
TOTAL CREDIT HOURS	18
TOTAL CERTIFICATE CREDIT HOURS	18

Electronic Marketing Certificate

Semester 1	
MKTG 2200 Digital Marketing.....	3
MKTG 2360 Direct & Database Marketing.....	3
MKTG 2290 Business-to-Business Marketing.....	3
IMM 1120 Fundamentals of Interactive Media	4
TOTAL CREDIT HOURS	13
TOTAL CERTIFICATE CREDIT HOURS	13

**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 business disciplines. Please meet with an advisor to discuss this program.

Direct Marketing Major

COURSE	CR		CR		CR
Semester 1					
MKTG 1105	3	Retailing.....	3	MKTG 2200	3
COLS 1100	1	First Year Experience Seminar.....	1	MKTG 2290	3
ECON 2200	3	Principles of Microeconomics.....	3	MKTG 2550	3
ENGL 1100	3	Composition I.....	3	ACCT 1212	3
IMM 1220	2	Digital Media Preparation.....	2	TOTAL CREDIT HOURS	12
STAT 1350	3	Elementary Statistics.....	3		
1105	15	TOTAL CREDIT HOURS	15	Semester 3	
Semester 2					
MKTG 1110	3	Marketing Principles.....	3	MKTG 2100	3
MKTG 1125	3	Introduction to Social Media.....	3	MKTG 2750	3
MKTG 1230	3	Customer Service & Sales.....	3	MKTG 2802	1
ACCT 1211	3	Financial Accounting.....	3	MKTG 2902	1
BMGT 2554	3	Negotiations.....	3	BMGT 2250	3
CSCI 1320	2	Database Fundamentals.....	2	CSCI 1320	2
TOTAL CREDIT HOURS	15			TOTAL CREDIT HOURS	13
Summer Semester					
HIST XXXX	3	1111, 1112, 1151, or 1152.....	3	TOTAL DEGREE CREDIT HOURS	61
NAT XXXX	3	Refer to approved GE - NAT list.....	3		
TOTAL CREDIT HOURS	6				

Retail Management Major

COURSE	CR		CR		CR
Semester 1					
MKTG 1105	3	Retailing.....	3	MKTG 2290	3
COLS 1100	1	First Year Experience Seminar.....	1	MKTG 2550	3
ECON 2200	3	Principles of Microeconomics.....	3	MKTG 2650	3
ENGL 1100	3	Composition I.....	3	TOTAL CREDIT HOURS	1815
IMM 1220	2	Digital Media Preparation.....	2		
STAT 1350	3	Elementary Statistics.....	3	Semester 4	
TOTAL CREDIT HOURS	15			MKTG 2750	3
Semester 2					
MKTG 1110	3	Marketing Principles.....	3	MKTG 2802	1
ACCT 1211	3	Financial Accounting.....	3	MKTG 2902	1
SCM 1100	3	Supply Chain Management Principles.....	3	BMGT 2250	3
MKTG 1120	3	Branding.....	3	BMGT 2554	3
MKTG 1230	3	Customer Service & Sales.....	3	XXXX XXXX	3
TOTAL CREDIT HOURS	15			TOTAL CREDIT HOURS	14
Summer Semester					
HIST XXXX	3	1111, 1112, 1151, or 1152.....	3	TOTAL DEGREE CREDIT HOURS	65
NAT XXXX	3	Refer to approved GE - NAT list.....	3		
TOTAL CREDIT HOURS	6			Technical Electives	
Semester 3					
MKGT 1125	3	Introduction to Social Media.....	3	The following courses are approved for technical elective requirements:	
MKTG 2200	3	Digital Marketing.....	3	MKTG 2100	3
				MKTG 2360	3
				MKTG 2994	1 - 3

Retail Management Certificate

Semester 1		
MKTG 1105	Retailing.....	3
MKTG 1125	Introduction to Social Media	3
MKTG 1230	Customer Service & Sales	3
MKTG 2200	Digital Marketing.....	3
SCM 1100	Supply Chain Management Principles.....	3
TOTAL CREDIT HOURS		15
TOTAL CERTIFICATE CREDIT HOURS.....		15

Customer Service Certificate

Semester 1		
MKTG 1105	Retailing.....	3
MKTG 1125	Introduction to Social Media	3
MKTG 1230	Customer Service & Sales	3
BMGT 2554	Negotiations	3
SCM 1100	Supply Chain Management Principles.....	3
TOTAL CREDIT HOURS		15
TOTAL CERTIFICATE CREDIT HOURS.....		15

Social Media Certificate

Semester 1		
MKTG 1125	Introduction to Social Media	3
MKTG 2100	Social Media Marketing Strategy	3
MKTG 2200	Digital Marketing.....	3
CSCI 1320	Database Fundamentals	2
IMM 1220	Digital Media Preparation.....	2
TOTAL CREDIT HOURS		13
TOTAL CERTIFICATE CREDIT HOURS.....		13

Approved General Education (GE) List

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT

(SELECT ONE)

	CR				
ASTR 1141	Life in the Universe.....	3	CHEM 1112	Elementary Chemistry II.....	4
ASTR 1161	The Solar System	3	CHEM 1171	General Chemistry I.....	5
ASTR 1162	Stars and Galaxies.....	3	CHEM 1172	General Chemistry II.....	5
ASTR 1400	Astronomy Laboratory.....	1	GEOL 1101	Introduction to Earth Science.....	4
BIO 1111	Introduction to Biology.....	4	GEOL 1105	Geology and the National Parks.....	3
BIO 1112	Human Biology	4	GEOL 1121	Physical Geology	4
BIO 1113	Biological Sciences I.....	4	GEOL 1122	Historical Geology	4
BIO 1114	Biological Sciences II.....	4	GEOL 1151	Natural Disasters	3
BIO 1125	Plant Biology.....	4	PHYS 1103	World of Energy	3
BIO 1127	Environmental Science I.....	4	PHYS 1200	Algebra-Based Physics I.....	5
BIO 2215	Introduction to Microbiology.....	4	PHYS 1201	Algebra-Based Physics II.....	5
BIO 2232	Human Physiology.....	4	PHYS 1250	Calculus-Based Physics I.....	5
CHEM 1100	Chemistry and Society	5	PHYS 1251	Calculus-Based Physics II.....	5
CHEM 1111	Elementary Chemistry I	4			

Massage Therapy

Massage Therapy/Entrepreneurship Associate of Technical Studies Degree Massage Therapy Certificate Massage Therapy Advanced Techniques Certificate

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.

The Massage Therapy Advanced Techniques Certificate includes training in various advanced topics in massage therapy designed to prepare students for positions in specialized areas.

Upon completion of the Associate of Technical Studies Degree in Massage Therapy/Entrepreneurship, the graduate will be able to:

- Demonstrate and perform soft tissue manipulation techniques which may be appropriate for use in the treatment of disorders of the human body
- Effectively communicate the beneficial effects of massage to patients
- Demonstrate the ability to assess and appropriately treat disorders of the human body, which may benefit from massage

- Display an understanding and demonstrate the ability to establish and maintain appropriate patient and business records
- Display an understanding of skills necessary to establish and operate a massage therapy practice or integrate into a multidisciplinary environment
- Demonstrate the ability to communicate effectively with other health care providers as to the advisability of massage
- Display an understanding of and demonstrate the effective use of complementary therapeutic modalities in the treatment of ailments of the human body
- Display an understanding of, and effectively educate patients in, the proper care and prevention of musculoskeletal injuries
- 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.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Massage Therapy degree program:

- High school graduate or GED equivalency
- Placement into ENGL 1100
- Placement into MATH 1010
- Student must complete the program prerequisites (first summer semester) with a minimum of a 2.5 GPA and grade of “C” or better in each of the courses.
- Required meeting with a Massage Therapy Program academic or faculty advisor to complete the program enrollment process.

Massage Therapy/Entrepreneurship Associate of Technical Studies Degree

COURSE	CR
Summer Semester	
BIO 2300 Human Anatomy	4
COLS 1100 First Year Experience Seminar.....	1
MULT 1110 Medical Terminology.....	2
MULT 1170 Current Issues: HIV Infection.....	1
TOTAL CREDIT HOURS	8
Semester 1	
BIO 2232 Human Physiology.....	4
MASS 1261 Massage Techniques	4
MATH 1010 Math for Business Applications.....	4
MASS 1236 Massage Therapy Law & Ethics	2
TOTAL CREDIT HOURS	14
Semester 2	
MASS 1273 Massage Pathophysiology.....	4
MASS 2240 Fundamentals of a Massage Therapy Practice.....	2
MASS 2891 Massage Clinical.....	4
BOA 1111 Bookkeeping I.....	3
SOC 1101 Introduction to Sociology	3
TOTAL CREDIT HOURS	13
Summer Semester	
MASS 228X Technical Elective.....	2
MASS 228X Technical Elective.....	2
MASS 2240 Fundamentals of a Massage Therapy Practice.....	2

MASS 2296 Massage Therapy Board Review	2
BOA 1122 QuickBooks	2
SOC 1101 Introduction to Sociology	3
ENGL 1100 Composition I.....	3
TOTAL CREDIT HOURS	14
Semester 3	
BMGT 1102 Interpersonal Skills	2
HUM XXXX Refer to approved GE - HUM list.....	3
LEGL 2064 Legal Environment of Business	3
MKTG 1110 Marketing Principles	3
MULT 1130 Responding to Emergencies.....	2
TOTAL CREDIT HOURS	13
TOTAL DEGREE CREDIT HOURS	62

Technical Electives

The following courses are approved for technical elective requirements:

MASS 2280 Nationwide Children’s Hospital Advanced Studies	2
MASS 2281 Hot Stone Massage	2
MASS 2282 Trigger Point I.....	4
MASS 2284 Sports Massage	2
MASS 2285 Aromatherapy Basics for Massage Therapy	2
MASS 2286 Spa Services for Massage Therapy	2

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE)

	CR		
ARCH 2100 History of Architecture	3	HIST 1181 World Civ. I: Non-Western/Non-Amer to 1500	3
HART 1201 History of Art I.....	3	HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500	3
HART 1202 History of Art II	3	HIST 2223 African-American History I: 1451-1876	3
HIST 1111 European History to 1648	3	HIST 2224 African-American History II: 1877-Present	3
HIST 1112 European History since 1648.....	3	HUM 1100 Introduction to Humanities	3
HIST 1151 American History to 1877.....	3	HUM 1270 Comparative Religions.....	3
HIST 1152 American History since 1877.....	3	MUS 1251 Survey of Music History.....	3
		PHIL 1101 Introduction to Philosophy.....	3
		PHIL 1130 Ethics.....	3

Massage Therapy Certificate Program

Specific Program Admissions Information

Listed below are additional requirements for admission to the Massage Therapy Certificate program:

High school graduate or GED

Placement into ENGL 1100

Placement into MATH 1010

Student must complete the program prerequisites (first Summer Semester) with a minimum of a 2.5 GPA and grade of “C” or better in each of the courses.

Required meeting with a Massage Therapy program academic or faculty advisor to complete the program enrollment process.

COURSE			CR
Summer Semester			
MULT 1110 Medical Terminology.....	2		
BIO 2300 Human Anatomy	4		
MULT 1170 Current Issues: HIV Infection.....	1		
COLS 1100 First Year Experience Seminar.....	1		
TOTAL CREDIT HOURS	8		

Semester 1			
MASS 1261 Massage Techniques	4		

MASS 1236 Massage Therapy Law & Ethics	2
BIO 2232 Human Physiology.....	4
TOTAL CREDIT HOURS	10

Semester 2	
MASS 2891 Massage Clinical.....	4
MASS 1273 Massage Pathophysiology.....	4
TOTAL CREDIT HOURS	8

Summer Semester	
MASS 2240 Fundamentals of a Massage Therapy Practice	2
MASS 228X Technical Elective	2
MASS 228X Technical Elective	2
MASS 2296 Massage Therapy Board Review	2
TOTAL CREDIT HOURS	8
TOTAL CERTIFICATE CREDIT HOURS	34

Technical Electives

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 Basics for Massage Therapy	2
MASS 2286 Spa Services for Massage Therapy	2

Massage Therapy Advanced Techniques Certificate

Specific Program Admissions Information

Placement into ENGL 1100

Completion of State Medical Board of Ohio massage therapy coursework

Required meeting with a Massage Therapy program academic or faculty advisor.

Semester 1			
MASS 228X Technical Elective	2		
MASS 228X Technical Elective	2		
MASS 228X Technical Elective	2		
TOTAL CREDIT HOURS	6		

Semester 2			
MASS 228X Technical Elective	2		
MASS 228X Technical Elective	2		
TOTAL CREDIT HOURS	4		
TOTAL CERTIFICATE CREDIT HOURS	10		

Technical Electives

MASS 2280 Nationwide Children’s Hospital Advanced Studies	2
MASS 2281 Hot Stone Massage	2
MASS 2282 Trigger Point I	4
MASS 2284 Sports Massage.....	2
MASS 2285 Aromatherapy Basics for Massage Therapy.....	2
MASS 2286 Spa Services for 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 better in all Massage Therapy course work.

Mechanical Engineering Technology

Mechanical Engineering Technology Associate 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.

Upon completion of the Associate Degree in Mechanical Engineering Technology, the graduate will be able to:

- Interpret and create engineering graphics
- Solve engineering and design problems
- Assist in the development and improvement of manufacturing processes
- Use computers in a manufacturing environment

Mechanical Engineering Technology Associate Degree

COURSE	CR
Semester 1	
MECH 1150 Manufacturing Materials & Processes	3
ENGT 1100 Introduction to Engineering Technology	2
ENGT 1115 Engineering Graphics.....	3
COLS 1100 First Year Experience Seminar.....	1
ITST 1101 Computer Apps in Construction/Engineering Tech I.....	2
MATH 1113 Technical Mathematics	5
TOTAL CREDIT HOURS	16
Semester 2	
MECH 1130 Statics.....	3
MECH 1145 CAD I.....	3
MECH 1240 Machine Tools.....	3
ENGL 1100 Composition I.....	3
PHYS 1200 Algebra-Based Physics I.....	5
TOTAL CREDIT HOURS	17
Semester 3	
MECH 2215 CAD II	3
MECH 2242 Strength of Materials.....	3
ENGT 2260 Basic Mechanisms and Drives	4
SBS XXXX Refer to approved GE - SBS list.....	3
COMM 1105 Oral Communication or	3
COMM 1110 Small Group Communication	3
XXXX XXXX Basic Elective.....	2
TOTAL CREDIT HOURS	18

Semester 4	
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 Refer to approved GE - HUM list.....	3
TOTAL CREDIT HOURS	16
TOTAL DEGREE CREDIT HOURS	67

Basic Electives

The following courses are approved for basic elective requirements:

EMEC 1250 Motors and Control Logic.....	4
ESSH 1700 OSHA 30-Hr General Industry Safety & Health	2
ITST 1102 Computer Apps Construction/Engineering Tech II.....	2
ITST 2252 Computer Programming for Technicians.....	2
PHYS 1201 Algebra-Based Physics II.....	5
SKTR 1180 Welding: Introduction to Stick	2

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE) PHIL 1130 PREFERRED		CR
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/Non-Amer to 1500.....	3
HIST 1182	World Civ. II: Non-Western/Non-Amer-since 1500.....	3
HIST 2223	African-American History I: 1451-1876.....	3
HIST 2224	African-American History II: 1877-Present.....	3
HUM 1100	Introduction to Humanities.....	3
HUM 1270	Comparative Religions.....	3

MUS 1251	Survey of Music History.....	3
PHIL 1101	Introduction to Philosophy.....	3
PHIL 1130	Ethics.....	3

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT

(SELECT ONE) ECON 2200 PREFERRED.....		CR
ANTH 2202	Introduction to Cultural Anthropology.....	3
ECON 2200	Principles of Microeconomics.....	3
GEOG 2400	Economic and Social Geography.....	3
POLS 1100	American Government.....	3
PSY 1100	Introduction to Psychology.....	3
SOC 1101	Introduction to Sociology.....	3

Medical Assisting

Medical Assisting Associate of Technical Studies Degree Medical Assisting Certificate

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, perform 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)
1361 Park Street
Clearwater, FL 33756
727-210-2350
www.caahep.org

This program provides students with the knowledge to prepare competent entry-level medical assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.

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).

Upon completion of the Certificate program in Medical Assisting, the graduate will be able to:

- Perform clerical functions to include execution of bookkeeping principles and special accounting entries
- Process insurance claims, including the application of managed care policies’ diagnostic and procedural coding
- Identify medical/legal issues within the medical office, respecting confidentiality and documenting appropriately in the medical record
- Perform risk-management procedures and patient instruction

- for follow-up care health maintenance and disease prevention
- Properly handle and dispose of infectious waste and biohazard materials in compliance with government regulations
- Perform and collect various specimens in compliance with Standard Precautions set forth by the Centers for Disease Control and Prevention
- Perform various diagnostic tests ordered by the physician, utilizing quality control procedures
- Conduct various patient care procedures (administrative, clinical and/or lab-related) including preparation and administration of oral and parenteral medications as directed by the physician
- Maintain and perform inventory of administrative and clinical supplies and equipment following office policy.

Listed below are additional requirements for admission to the Medical Assisting program:

- A. High school graduate or GED equivalency
- B. Placement into MATH 1020 Beginning Algebra I or completion of DEV 0114 with grade of “C” or higher
- C. Placement into ENGL 1100 Beginning Composition or completion of ENGL 0190 with grade of “C” or higher
- D. Placement OUT of reading requirements or completion of DEV 0145
- E. Attend a Medical Assisting program information session (Program applications are available *only* at the information sessions.)
- F. Completion of MULT 1110 or HIMT 1121 with grade of “C” or higher
- G. Completion of CSCI 1101 with grade of “C” or higher
- H. Current American Heart Association or American Red Cross Health Care Provider CPR with AED certification or completion of MULT 1130 with grade of “C” or higher and CPR certification
- I. Current American Heart Association or American Red Cross First Aid certification or completion of MULT 1130 with grade of “C” or higher and First Aid certification
- J. BIO 1121 and 1122 require: High school biology or passing departmental biology placement test or BIO 0100 or BIO 1101. Contact the Biology Department (Nestor Hall, 4th Floor) for the most current information, 614-287-2522 or 5107.
- K. Students are required to maintain a grade of “C” or higher in all technical studies.
- L. Drug screening and a background check are required.

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, 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, 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.

Approved General Education (GE) List

HUM		CR
GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)		
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/Non-Amer to 1500.....	3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500.....	3
HIST 2223	African-American History I: 1451-1876.....	3
HIST 2224	African-American History II: 1877-Present.....	3
HUM 1100	Introduction to Humanities.....	3
HUM 1270	Comparative Religions.....	3
MUS 1251	Survey of Music History.....	3
PHIL 1101	Introduction to Philosophy.....	3
PHIL 1130	Ethics.....	3

Medical Assisting Certificate

COURSE	CR
Semester 1	
MAT 1122	Administrative Medical Assisting.....4
MAT 1123	Administrative Medical Assisting Lab.....1
MAT 1100	Clinical Medical Assisting I.....2
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 & Physiology I.....4
COLS 1100	First Year Experience Seminar.....1
TOTAL CREDIT HOURS	16
Semester 2	
MAT 1230	Pharmacology.....2
MAT 1231	Pharmacology Lab.....1
MAT 1238	Computer Applications for the Medical Office Lab.....1
MAT 1240	Laboratory Techniques for the Medical Office.....2
MAT 1241	Physician's Office Laboratory Lab.....2
BIO 1122	Anatomy & Physiology II.....4
MATH 1000	Mathematic Skills for Health Care Professionals.....1
TOTAL CREDIT HOURS	13
Summer Semester	
MAT 2950	Clinical Practicum: Medical Assisting.....2
MAT 2800	Seminar: Medical Assisting.....1
ENGL 1100	Composition I.....3
HIMT 1274	Introduction to Medical Coding & Reimbursement.....2
TOTAL CREDIT HOURS	8
TOTAL CERTIFICATE CREDIT HOURS.....37	

Medical Assisting Associate of Technical Studies Degree

COURSE	CR
Semester 1	
MAT 1122	Administrative Medical Assisting.....4
MAT 1123	Administrative Medical Assisting Lab.....1
MAT 1100	Clinical Medical Assisting I.....2
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 & Physiology I.....4
COLS 1100	First Year Experience Seminar.....1
TOTAL CREDIT HOURS	16
Semester 2	
MAT 1230	Pharmacology.....2
MAT 1231	Pharmacology Laboratory.....1
MAT 1238	Computer Applications for the Medical Office Lab.....1
MAT 1240	Laboratory Techniques for the Medical Office.....2
MAT 1241	Physician's Office Laboratory Lab.....2
BIO 1122	Anatomy & Physiology II.....4
MATH 1000	Mathematics Skills for Health Care Professionals.....1
TOTAL CREDIT HOURS	13
Summer Semester	
MAT 2950	Clinical Practicum: Medical Assisting.....2
MAT 2800	Seminar: Medical Assisting.....1
ENGL 1100	Composition I.....3
HIMT 1274	Introduction to Medical Coding & Reimbursement.....2
TOTAL CREDIT HOURS	8
Semester 3	
PSY 1100	Introduction to Psychology.....3
MATH 1010	Mathematics for Business Applications.....4
BMGT 1111	Management.....3
BMGT 2216	Business Ethics.....3
BMGT 1102	Interpersonal Skills.....2
HIMT 1121	Advanced Medical Terminology.....2
TOTAL CREDIT HOURS	17
Semester 4	
HUM XXXX	Refer to approved GE - HUM list.....3
HIMT 1245	ICD-10-CM/PCS Coding.....3
LEGL 2064	Legal Environment of Business.....3
BMGT 2253	Conflict Management.....3
HIMT 1255	CPT-4 Coding.....3
HIMT 1265	Medical Reimbursement.....3
TOTAL CREDIT HOURS	18
TOTAL DEGREE CREDIT HOURS	72

Medical Imaging

(formerly Radiography)

Medical Imaging Associate Degree GXMO Medical Imaging Certificate

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
(312) 704-5300
Fax: (312) 704-5304
www.jrcert.org
mail@jrcert.org

Columbus State offers two programs designed to meet accreditation, certification, and licensing needs for medical imaging.

The Medical Imaging Associate Degree graduate is eligible for accreditation through the American Registry of Radiologic Technologists. This accreditation is recognized for licensure in all 50 states.

Diagnostic Imaging which “looks at” internal organs, bones, cavities and foreign objects; DR includes cardiovascular imaging and interventional radiography, Fluoroscopy, which is live-motion imaging (constant radiation) usually used to visualize the digestive system, monitor the administration of contrast agents to highlight vessels and organs, or to help position devices within the body (such as pacemakers, guide wires, stents, etc.).

The General X-ray Machine Operator (GXMO) /Medical Imaging Certificate is the only plan of study with no clinical practice. This program is designed to prepare students for limited licensure in Ohio only, with no professional accreditation. Students who complete this plan of study cannot practice in any of the advanced modalities, portable, or mobile imaging, and cannot administer contrast media.

Radiographers employ a wide range of sophisticated equipment to produce medical images with the least amount of radiation to the patient, so that doctors and other medical professionals may better diagnose and treat injury or disease. Radiologic technologists use their expertise and knowledge of physics, anatomy, physiology and pathology to assess the patient, develop optimal radiographic technique and evaluate resulting radiographic images to determine if additional procedures are warranted. They care for the patient even when he/she is acutely ill or traumatized.

Technology classes begin autumn semester. Admission to the program is competitive with a completed applications packet consisting of a completed application, observation hours, HESI A2 test results, a letter of interest, official transcripts and current admissions worksheet. The application packet is received annually. Because students and health care workers in the field may be exposed to infectious materials and communicable diseases, the program emphasizes safety and prevention.

Program Mission

The mission of the Columbus State Community College Medical Imaging program is to provide a quality educational program that meets the lifelong learning needs of its community. This is achieved by preparing graduates for entry-level employment as radiography science professionals. This mission is consistent with the college’s mission statement.

Program Mission Statement and Goals

The program holds as its primary objectives the education and training of qualified applicants to become competent radiographers. The program endeavors to instill in students, and subsequently graduates, the following goals:

1. Develop graduates who will recognize the need for life-long learning in their chosen profession.
2. Graduate students with the ability to behave in a compassionate, ethical and professional manner.
3. Graduate students who will successfully complete all program requirements, meet entry-level expectations of employers, and successfully complete the ARRT national certification exam.
4. To develop applied skills in effective communication, critical thinking, and problem solving in the practice of the radiography profession.

Specific Admissions Information for Program

Prospective students are required to attend a mandatory information session to learn detailed program requirements and career opportunities. These sessions are held several times each semester and are very helpful in answering student questions. Information

session dates are available on our website: <http://www.csc.edu/academics/departments/medicalimaging/admissions.shtml>. or by contacting the /Medical Imaging Department at (614)-287-5215. The yearly deadline for applications to be submitted to the Medical Imaging program is March 1 (for classes beginning the following autumn semester). Applications are available **only by attending one of the MANDATORY Information Sessions. If you are a previous applicant that has attended a session, you must attend one for the application year (i.e., Admissions Year 2015, Admissions Year 2016).**

Medical Imaging Program Admission Criteria & Requirements Information

The Medical Imaging Program is a rigorous competency-based program of study. Admission is selective and competitive. For assistance with creating a path to the Medical Imaging program, contact a Health and Human Services advisor at 614-287-2779. They can also be reached at HHSadvising@csc.edu. The office is located in Union Hall, Room 427.

Applications for admission to the program will be evaluated based on completion of admission requirements. The admission requirements are as follows:

- High School graduate or GED.
- Required high school (or equivalent) courses in Biology (grade of “C” or better), Chemistry (grade of “C” or better) and Physics (grade of “C” or better)
- Placement into Math 1148.
- Placement out of reading requirement or completion of DEV 0145.
- High School Biology within the last 5 years or completion of BIO 0100 or equivalent. This course may be “in progress” spring semester 2016.
- High School Chemistry within the last 5 years or completion of CHEM 0100 or equivalent. This course may be “in progress” spring semester 2016.
- High School Physics within the last 5 years or completion of PHYS 0100 or equivalent. This course may be “in progress” spring semester 2016.
- Achievement of a minimum overall GPA of 2.75 on a 4-point scale through the most recently completed coursework.
- Attendance at a Medical Imaging Information Session:
- All applicants are required to attend a mandatory Medical Imaging Information Session for the year of application. Sessions are held during spring, summer and autumn.
- Observation of a Radiographer at work in a Hospital, clinic or other Medical Imaging setting is required. 16 hours of observation must be documented on the observation form and must be signed and returned by the institution where the observation took place. The observation form and information regarding the documentation will be distributed at an Information session.
- Completion of the HESI A2 Exam is required for admission to Medical Imaging. Applicants have two attempts to complete the HESI A2 per application year. The HESI A2 is a computerized test. To register to take the HESI A2, contact the Community & Professional Testing Center (614) 287-5750. The HESI A2 will cost approximately \$55.00 payable at the Cashier’s Office in Rhodes Hall. On the day of the test, bring a picture ID and your paid receipt with you to the Community & Professional Testing Center. See

campus map on-line at the CSCC web site for location. You must inform the Community & Professional Testing Center that you are a Medical Imaging applicant. The staff in the Community & Professional Testing Center will NOT advise you or discuss your results with you. The results of your HESI A2 will be presented to you when you leave. You MUST complete the HESI A2 no later than January 22nd. Applicants are strongly encouraged to schedule the HESI A2 as soon as possible as scheduled testing times fill very quickly.

- Students who have completed a Bachelor’s Degree will receive credit in the admissions process.

Required School Documentation to be submitted to the Columbus State Community College Admissions/Records and Registration Office:

- Final official high school transcript (sent directly by the high school to Columbus State’s Records Office) verifying date of graduation OR General Education Development (GED) test results with a minimum average standard score of 45 and a minimum of 35 in each subject.
- Official transcripts from other college(s) attended (sent directly by the other college(s) to Columbus State’s Records Office). A photocopy of all previous college transcripts MUST be included with your Medical Imaging application as well.
- Application to Columbus State (if not a current student). Note: Students MUST apply to Columbus State Community College before they can apply to the Medical Imaging program.
- Completion of COMPASS Placement test, unless applicant has a Bachelor’s Degree.

International Students:

As well as submitting the above information, international students must also submit foreign high school AND college transcripts to one of the following transcript evaluation agencies.

- Educational Credential Evaluators, Inc., <http://www.ece.org> or
- World Education Services, <http://www.wes.org>

DEADLINE for submission to transcript evaluation agency: November 30th. (Cost of transcript evaluation is the responsibility of the student.) Please ask the agency to send one copy of the completed evaluation directly to Columbus State’s Admissions Office (Madison Hall, 550 E. Spring Street, P.O. Box 1609, Columbus, Ohio, 43216-1609) and one copy to you. You must then provide the Medical Imaging program with your copy of the completed evaluation. The transcript evaluation MUST include a “Course-by-Course” evaluation which shows equivalent credit for the General Education and Basic Related courses in the Radiography/Medical Imaging Plan of Study.

Required Application Documentation to be submitted to the Medical Imaging Program.....Note: We will only accept your application IF it is included as part of your application packet. You must sign the Medical Imaging Application Worksheet indicating that ALL items are included in the packet. If ALL items are not included in the packet, your application will not be considered. Items to be included in the packet (must be returned in Columbus State envelope given to you at the mandatory information session) are:

- Medical Imaging Program Application: This is distributed ONLY at the mandatory Information sessions. (Yellow form)

•Radiography Observation Form: This is distributed ONLY at the Information sessions and must be returned in the postage paid envelope provided at the information session. These will be returned by the institution where the observation takes place.

•Copy of transcripts from other college(s) attended. When you contact your other college(s) to request that your official transcript be sent to Columbus State's Records Office, you must also request that your other college(s) send you a copy of your transcript. You must then provide the Radiography/Medical Imaging program with your copy of your transcript.

•HESI A2 results.

The Medical Imaging Admissions Committee will make the final decision of accepted students.

Individuals must have a license from the Ohio Department of Health to practice as a Radiation Therapist or a General X-Ray Machine Operator in the State of Ohio.

Candidates pursuing primary pathway certification in Radiography, Radiation Therapy, Magnetic Resonance Imaging, or Sonography must have — within the past five years* — successfully completed an educational program that is accredited by a mechanism acceptable to the ARRT**. Beginning January 1, 2015, all candidates for primary pathway certification must have earned an academic degree before becoming certified.

As part of their education, candidates must also demonstrate competency in didactic coursework and an ARRT-specified list of clinical procedures by completing competency requirements established for the discipline in which they are seeking certification.

* Candidates graduating from an educational program beginning January 1, 2013, will have three years to establish eligibility for ARRT certification, as opposed to the five years that is available to those who complete their program by December 31, 2012.

More information about ARRT certification is available at <https://www.rrt.org/Educators-Students>.

Statement Regarding Infectious Diseases:

Students in any of the Allied Health programs, including Medical Imaging, perform their clinical work on real people. Columbus State does not discriminate against students, faculty, or patients in any way, or based on sex, race, color, religion, national origin, ancestry, age, disability, genetic information (GINA), military status, sexual orientation, and gender identity and expression. The patient populations with whom we work come from all walks of life, and the 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, TB, measles, mumps, rubella, rubeola, varicella, etc.

All students are required to have appropriate immunizations after they are admitted to the program, and before summer orientation session. 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 to infectious diseases. All students entering the Medical Imaging program must be aware of this slight, but real, potential. All students are required to have personal health insurance in effect by the first day of class.

NOTE: Individuals who have been convicted of, plead guilty to, or plead nolo contendere to a crime may not be eligible to take the American Registry of Radiologic Technologists (ARRT) Radiography Examination according to the ARRT Code of Ethics, Section B.3 Rules of Ethics. For additional information, contact the ARRT (www.rrt.org).

Any individual who performs radiologic procedures on humans must hold a valid Ohio radiologic license, according to the Ohio Revised Code. Radiologic licenses are issued for the following categories: Radiographer, Nuclear Medicine Technologist, Radiation Therapist and General X-ray Machine Operator (GXMO).

Radiographers must pass a national credentialing examination (primary pathway certification) prior to obtaining an Ohio Department of Health License.

Individuals must have a license from the Ohio Department of Health to practice as a Radiation Therapist or a General X-Ray Machine Operator in the State of Ohio.

Candidates pursuing primary pathway certification in Medical Imaging, must have — within the past five years* — successfully completed an educational program that is accredited by a mechanism acceptable to the ARRT**. Beginning January 1, 2015, all candidates for primary pathway certification must have earned an academic degree before becoming certified

As part of their education, candidates must also demonstrate competency in didactic coursework and an ARRT-specified list of clinical procedures by completing competency requirements established for the discipline in which they are seeking certification.

* Candidates graduating from an educational program beginning January 1, 2013, will have three years to establish eligibility for ARRT certification, as opposed to the five years that is available to those who complete their program by December 31, 2012.

More information about ARRT certification is available at <https://www.rrt.org/Educators-Students>.

Medical Imaging Associate Degree

COURSE	CR	
Semester 1		
IMAG 1111	1	Introduction to Radiologic Tech
IMAG 1141	3	Radiographic Procedures I
IMAG 1901	1	RAD Field Experience/Internship I
MATH 1148	4	College Algebra
BIO 2300	4	Human Anatomy
COLS 1100	1	First Year Experience Seminar
TOTAL CREDIT HOURS	14	
Semester 2		
IMAG 1113	2	Radiologic Science
IMAG 1142	3	Radiographic Procedures II
IMAG 1902	1	RAD Field Experience/Internship II
BIO 2232	4	Human Physiology
TOTAL CREDIT HOURS	10	
Summer Semester		
IMAG 1118	2	Radiographic Exposure & Processing
IMAG 1143	3	Radiographic Special Procedures
IMAG 1903	1	RAD Field Experience/Internship III
CSCI 1101	3	Computer Concepts & Applications
MULT 1110	2	Medical Terminology
COMM 1105	3	Oral Communication
TOTAL CREDIT HOURS	14	
Semester 3		
IMAG 2222	2	Radiographic Digital Imaging
IMAG 2904	3	RAD Direct Practice I
Semester 4		
IMAG 2126	2	RAD Biology and Protection
IMAG 2905	3	RAD Direct Practice II
IMAG2800	1	RAD/Medical Imaging Seminar
IMAG 2620	2	Radiographic Pathology
IMAG XXXX	3	Technical Elective
HUM XXXX	3	Refer to approved GE - HUM list
TOTAL CREDIT HOURS	14	
TOTAL DEGREE CREDIT HOURS	65	
TECHNICAL ELECTIVES		
CR		
IMAG 1101	0.5	Introduction RAD Equipment/Patient Care
IMAG 1102	0.5	RAD Positioning of Upper Extremities
IMAG 1103	0.5	RAD Positioning of Lower Extremities
IMAG 1104	0.5	RAD Positioning Chest & Abdomen
IMAG 1105	0.5	RAD Positioning Spine, Skull & Sinuses
IMAG 1190	1.5	Rad Protection General Machine Operators
IMAG 2806	1	Post Primary Seminar I
IMAG 2807	1	Post Primary Seminar II
IMAG 2906	2	Post Primary Imaging I
IMAG 2907	2	Post Primary Imaging II
MULT 1916	2	Venipuncture for Health Care Providers

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)		CR
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/Non-Amer to 1500	3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223	African-American History I: 1451-1876	3
HIST 2224	African-American History II: 1877-Present	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3

MUS 1251	Survey of Music History	3
PHIL 1101	Introduction to Philosophy	3
PHIL 1130	Ethics	3

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT (SELECT ONE)		CR
ANTH 2202	Introduction to Cultural Anthropology	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic and Social Geography	3
POLS 1100	American Government	3
SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology	3

GXMO Medical Imaging Certificate

The GXMO Medical Imaging Certificate is the only plan of study with no clinical practice. This program is designed to prepare students for limited licensure in Ohio only, with no professional accreditation. Students who complete this plan of study cannot practice in any of the advanced modalities, portable, or mobile imaging, and cannot administer contrast media.

Any individual who performs radiologic procedures on humans must hold a valid Ohio radiologic license, according to the Ohio Revised Code. Radiologic licenses are issued for the following categories: Radiographer, Nuclear Medicine Technologist, Radiation Therapist and General X-ray Machine Operator (GXMO).

Individuals must have a license from the Ohio Department of Health to practice as a Radiation Therapist or a General X-Ray Machine Operator in the State of Ohio.

General X-ray machine operator (GXMO) applicants must complete a GXMO didactic educational program accredited by the Ohio Department of Health (ODH), pass the state GXMO examination and complete at least one GXMO clinical educational program accredited by ODH before submitting an initial license application. ODH has approved clinical educational programs for the following clinical training modules: Chest and Abdomen,

Extremities, Skull and Sinuses, Spine and Bone Densitometry. The GXMO Program at Columbus State Community College is accredited by the Ohio Department of Health. More detailed information on licensure is available at; <http://www.odh.ohio.gov/odhprograms/rp/rlic/rlic1.aspx>.

At the completion of the certificate program, the learner will be able to:

- Demonstrate competence in academic technical courses that meet the ODH requirements
- Be eligible to apply for the ODH General X-Ray Machine Operator (GXMO) State Examination
- Demonstrate competence in patient-care skills and radiographic positioning and imaging skills specific to a GXMO
- Incorporate general education outcomes for effective communication as necessary in a health care setting
- Incorporate basic related course content to support technical course academic theory and practice
- Develop technical skills required for employment in outpatient imaging facilities, urgent care centers, and physician practices
- Develop additional clinical skills needed for employment in subspecialty areas in imaging. Examples include podiatry, chiropractic, general practitioner, outpatient imaging facilities, etc.
- Move seamlessly from the certificate program to the associate degree program at Columbus State, if desired.

GXMO Medical Imaging Certificate

COURSE	CR
Semester 1	
IMAG 1190 RAD Protection General Machine Operators	1.5
ENGL 1100 Composition I.....	3
MATH 1030 Beginning Algebra II.....	3
IMAG 1111 Introduction to RAD Tech.....	1
BIO 1101 Fundamentals of Human Anatomy & Physiology	3
TOTAL CREDIT HOURS	11.5
Semester 2	
IMAG 1101 Introduction RAD Equipment/Patient Care.....	0.5
IMAG 1102 RAD Positioning of Upper Extremities	0.5
IMAG 1103 Radiographic Positioning of Lower Extremities.....	0.5
IMAG 1104 RAD Positioning Chest & Abdomen.....	0.5
IMAG 1105 RAD Positioning Spine, Skull & Sinuses.....	0.5
TOTAL CREDIT HOURS	2.5

Summer Semester	
CSCI 1101 Computer Concepts & Applications	3
MULT 1110 Medical Terminology	2
PHIL 1130 Ethics.....	3
TOTAL CREDIT HOURS	8
TOTAL CERTIFICATE CREDIT HOURS	22

Medical Laboratory Technology

Medical Laboratory Technology Associate Degree Clinical Laboratory Assisting Certificate

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 Registry 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 technologist, 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 over 800 graduates in the past 35 years 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.

Medical Laboratory Technology

Upon completion of the Associate Degree in Medical Laboratory Technology, the graduate will be able to demonstrate entry-level competencies in the following areas of professional practice:

- Pre-analytical, analytical, and post-analytical processes in all disciplines of the clinical laboratory

- Theoretical knowledge needed to assure accuracy and validity of test results by clinical correlation and quality control performance
- Professional attitudes and behaviors which are necessary for gaining and maintaining the confidence of the health care community
- Meeting the requirements to take a national certifying examination for Medical Laboratory Technicians.

Specific Program Admission Information

Listed below are additional requirements for admission to the Medical Laboratory Technology:

- A. Place into NO READING REQUIRED or completion of DEV 0145
- B. High school biology with grade of "C" or higher and completed within the last 5 years, or completion of BIO 0100 or BIO 1101 with grade of "C" or higher or equivalent college credit
- C. Completion of ENGL 0190 with grade of "C" or higher or placement into ENGL 1100
- D. Completion of MATH 1030 or MATH 1050 or placement into STAT 1350
- E. Completion of CHEM 1113 with "C" or higher, or equivalent college credit
- F. Completion of MLT 1100 with grade of "C" or higher
- G. Completed health record on file in Health Records Office
- H. GPA of 2.5 or higher through most recently completed course work
- I. Acceptance is conditional on submission and clearance of student background check and drug screening
- J. Students may be required to complete a Basic Entrance Exam.

Clinical Laboratory Assisting Certificate

The CLA 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.

Upon completion of the certificate in Clinical Laboratory Assisting, the graduate will be able to:

- Prepare blood and body fluid specimens for analysis according to clinical laboratory industry standards
- Prepare reagents, standards, and control materials for analysis according to clinical laboratory industry standards
- Populate patient data into the Laboratory Information System (LIS) with accuracy
- Demonstrate safety practices consistent with clinical laboratory industry standards
- Perform waived laboratory testing with accuracy and precision and correlate with clinical conditions.

Specific Program Admission Information

Listed below are requirements for admission to the Clinical Laboratory Assisting Certificate program:

- A. Placement into NO READING REQUIRED or completion of DEV 0145 with a grade of “C” or higher

- B. High school biology with grade of “C” or higher and completed within the last 5 years, or completion of BIO 0100 or BIO 1101 with grade of “C” or higher or equivalent college credit
- C. Placement into ENGL 1100.

Medical Laboratory Technology Associate Degree

COURSE	CR
Semester 1	
MLT 1110 Intro to MLT Lecture	1
MLT 1111 Intro to MLT Lab	1
MLT 1120 Hematology I Lecture	2
MLT 1121 Hematology I Lab	2
COLS 1100 First Year Experience Seminar	1
STAT 1350 Elementary Statistics	3
BIO 2300 Human Anatomy	4
TOTAL CREDIT HOURS	14
Semester 2	
MLT 1130 Immunology Lecture	2
MLT 1131 Immunology Lab	1
BIO 2215 General Microbiology	4
MLT 1140 Clinical Chemistry Lecture	3
MLT 1141 Clinical Chemistry Lab	2
BIO 2232 Human Physiology	4
TOTAL CREDIT HOURS	16
Semester 3	
MLT 2260 Clinical Microbiology Lecture	4
MLT 2261 Clinical Microbiology Lab	3
MLT 2250 Body Fluids Lecture	2
MLT 2251 Body Fluids Lab	1
ENGL 1100 Composition I	3
SBS XXXX Refer to approved GE - SBS list	3
MULT 1916 Venipuncture for HC Providers	2
TOTAL CREDIT HOURS	18

Semester 4	
MLT 2270 Immunohematology Lecture	3
MLT 2271 Immunohematology Lab	2
MLT 2290 Medical Lab Case Studies	2
MLT XXXX Basic Elective	4
MLT 2280 Hematology II Lecture	2
MLT 2281 Hematology II Lab	1
TOTAL CREDIT HOURS	14

Semester 5	
MLT 2900 MLT Clinical Practicum	4
MLT 2800 MLT Clinical Seminar	1
HUM XXXX Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS	8
TOTAL DEGREE CREDIT HOURS	70

Basic Electives:

The following courses are approved for basic elective requirements:

HIMT 1274 Intro to Medical Coding & Reimbursement	2
MULT 1010 Medical Terminology	2
MULT 2072 Health Care Resource Management	2
COMM 2200 Business Communication	3
CLA 1100 Laboratory Theory for Health Related Industry	2
CLA 1101 Laboratory Techniques for Health Related Industry	1

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT

(SELECT ONE)	CR
ANTH 2202 Introduction to Cultural Anthropology	3
ECON 2200 Principles of Microeconomics	3
GEOG 2400 Economic and Social Geography	3
POLS 1100 American Government	3
PSY 1100 Introduction to Psychology	3
SOC 1101 Introduction to Sociology	3

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE)	CR
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/Non-Amer to 1500	3
HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223 African-American History I: 1451-1876	3
HIST 2224 African-American History II: 1877-Present	3
HUM 1100 Introduction to Humanities	3
HUM 1270 Comparative Religions	3
MUS 1251 Survey of Music History	3
PHIL 1101 Introduction to Philosophy	3
PHIL 1130 Ethics	3

Clinical Laboratory Assisting Certificate

COURSE	CR
Semester 1	
MLT 1100 Basic Concepts in Health Care	2
HIMT 1274 Introduction to Medical Coding & Reimbursement	2
CLA 1100 Lab Theory for Health Related Industries	2
CLA 1101 Lab Techniques for Health Related Industries	1
TOTAL CREDIT HOURS	7
TOTAL CERTIFICATE CREDIT HOURS	7

Multi-Skilled Health

**Associate of Applied Science Degree or
Associate of Technical Studies Degree
Basic Electrocardiography Certificate
Health Care Manager Certificate
Pharmacy Technician Certificate
Phlebotomy Certificate (Approved by NAACLS)
ASL/Deaf Studies Certificate (IEP)
Bioscience Technology (BISI)
Clinical Laboratory Assisting Certificate (CLA)
Health Information Management Technician Certificate (HIMT)
Massage Therapy Certificate (MASS)
Nursing Certificate Programs (NURC)
Occupational Health and Safety Certificate (ESSH)
Sterile Processing Technology Certificate (SPT)
Surgical Technology Certificate (SURG)**

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.)

Upon completion of the Associate Degree requirements in Multi-Skilled Health, the graduate will be able to:

- Use medical terminology correctly
- Recognize life-threatening situations and take appropriate action
- Demonstrate proficiency in technical skills
- Work in a health care organization as a valued member of the health care team

- Demonstrate interpersonal communication skills
- Demonstrate effective infection control and safety practices.

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.

Basic Electrocardiography (EKG) Certificate

- A student completing the EKG Certificate will be able to:
- Position leads and operate electrocardiographic equipment correctly
- Obtain and prepare an electrocardiography recording for analysis by a physician
- Recognize and correct technical errors in an electrocardiography recording
- Provide safe, professional, direct patient contact, specifically in the areas of infection control, electrical safety, privacy and environmental safety.

NOTE: Completion of a current health record, fingerprinting and drug screening are required for the EKG Certificate.

Health Care Manager Certificate (Online Certificate) A student

completing the Health Care Manager Certificate will be able to:

- 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.

All of the Health Care Management Certificate courses are completed online.

Basic Electrocardiography (EKG) Certificate

COURSE	CR
Semester 1	
MULT 1910* Basic EKG	3
TOTAL CREDIT HOURS	3
TOTAL CERTIFICATE CREDIT HOURS	3

*A minimum grade of 'C' or higher is required in all courses.

Health Care Manager Certificate

COURSE	CR
Semester 1	
MULT 2070* Human Resource Management for Health Services	2
MULT 2072* Healthcare Resource Management.....	2
BMGT 1111* Management	3
TOTAL CREDIT HOURS	7
Semester 2	
MULT 2074* TQM/UM/Accreditation.....	2
MULT 2076* Legal Aspects of Risk Management.....	2
CSCI 1101* Computer Concepts & Applications.....	3
TOTAL CREDIT HOURS	7
TOTAL CERTIFICATE CREDIT HOURS	14

*A minimum grade of 'C' or higher is required in all courses.

Pharmacy Technician Certificate

COURSE	CR
Semester 1	
MULT 1500 Concepts for the Pharmacy Technician.....	4
BMGT 1008 21st Century Workplace Skills.....	2
MATH 1000 Mathematics Skills for Health Professionals.....	1
MKTG `1230 Customer Service & Sales	3
TOTAL CREDIT HOURS	10
TOTAL CERTIFICATE CREDIT HOURS	10

Phlebotomy Certificate

COURSE	CR
Semester 1	
MULT 1950* Phlebotomy	3.5
TOTAL CREDIT HOURS	3.5
Semester 2	
MULT 2950** Phlebotomy Practicum II	1
TOTAL CREDIT HOURS	1
TOTAL CERTIFICATE CREDIT HOURS	4.5

*A minimum grade of 'C' is required.
 ** A minimum grade of 'S' is required.

Pharmacy Technician Certificate

A student completing the Pharmacy Technician Certificate will be able to:

- Perform pharmacy-related functions and provide pharmaceutical care services under the supervision of a licensed pharmacist.
- Sit for the national Pharmacy Technician Certification Examination, as administered by the Pharmacy Technician Certification Board (PTCB).

Phlebotomy Certificate

A student completing the Phlebotomy Certificate will be able to:

- 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.
- 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.
- Exhibit the professional attitudes and behaviors that are necessary for gaining and maintaining the confidence of the health care community.
- Meet the requirements to take a national certifying examination for Phlebotomy Technicians.

Following are the academic and non-academic criteria for admission to the Phlebotomy Certificate program:

Academic Standards

- 1) Medical Terminology, MULT 1110 or HIMT 1121 with a grade of 'C' or higher Placement into NO READING REQUIRED or completion of DEV 0145
- 2) Placement into ENGL 1100 or completion of ENGL 0190

Non-Academic Standards

- 1) Completion of current health record requirements (For most current information, contact the Health Records Office, Union Hall 132, 614-287-2450).
- 2) Completion of a background check: Access the instructions for completing the background check by going to www.csc.edu/phlebotomy. Completion of a drug screen: Access the instructions for completing the drug screen by going to www.csc.edu/phlebotomy. The drug screen must be completed within seven days after the start of the semester in which you are registered for MULT 1950.

ASL/Deaf Studies Certificate (See IEP)

A student completing the Deaf Studies Certificate will be able to:

- Demonstrate knowledge of linguistics, cross-cultural and interpreting theories, and approaches to ethical decision-making and professional standards as they relate to the work of interpreters in various contexts
- Demonstrate knowledge of diversity within the Deaf community including history, cultural norms and values, community resources; and their resulting implications for interpreters
- Collaborate with colleagues, faculty, staff, and consumers in a manner that reflects appropriate cultural norms and professional standards

- 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
- Demonstrate proficiency and flexibility in one's native language (L1) by effectively communicating in a wide range of personal and professional situations with a diverse population of speakers
- Demonstrate proficiency and flexibility in one's second language (L2) by effectively communicating in a wide range of routine personal and professional situations with a diverse population of native and non-native speakers
- 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
- 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)
- Assess the effectiveness of interpreting performance of self and peers during/post assignment
- Demonstrate the ability to effectively assess and monitor one's performance as a team interpreter in both lead and support roles
- Demonstrate self-awareness and discretion by monitoring and

Multi-Skilled Health Associate of Applied Science Degree

This degree requires two or more certificate programs, one of which must be in MULT and the other may be in MULT, BISI, CLA, ESSH, HIMT, IEP, NURC/NURS, SPT, or SURG, and at least six hours of Technical Options courses for a minimum of 30 technical hours. The following is a suggested curriculum plan.

COURSE	CR
Semester 1	
ENGL 1100 Composition I	3
MLT 1100 Basic Concepts in Health Care	2
MULT 1110 Medical Terminology or	
HIMT 1121 Advanced Medical Terminology	2
MULT Technical Certificate	1 - 4
COLS 1100 First Year Experience Seminar	1
TOTAL CREDIT HOURS	9 to 12

Semester 2	
HUM XXXX Refer to approved GE - HUM list	3
MULT Technical Certificate	1 - 4
MULT Technical Certificate	1 - 4
MULT XXXX Technical Elective	0.5 - 4
MULT 1160 Exploring Health Care Professions	1
STAT 1350 Elementary Statistics	3
TOTAL CREDIT HOURS	9.5 - 19

Summer Semester	
BIO 1101 Fundamentals of Anatomy and Physiology	3
MULT Technical Certificate	1 - 4
SBS XXXX Refer to approved GE - SBS list	3
MULT Technical Certificate	1 - 4
TOTAL CREDIT HOURS	8 - 14

Semester 3	
MULT XXXX Basic Elective (see list)	2
MULT XXXX Technical Elective	0.5 - 4
MULT Technical Certificate	1 - 4
COMM 1105 Oral Communication or	
COMM 1110 Small Group Communication	3
MULT Technical Certificate	1 - 4
TOTAL CREDIT HOURS	7.5 - 17

Semester 4	
BIO 2215 Introduction to Microbiology	4
MULT XXXX Technical Elective	0.5 - 4
MULT Technical Certificate	1 - 4
MULT 1120 CPR	0.5
MULT 1170 Current Issues: HIV Infection	1
CHEM 1113 Elements of Organic Chemistry & Biochemistry	4
TOTAL CREDIT HOURS	11 - 17.5
TOTAL DEGREE CREDIT HOURS	61

Basic Electives:	
CLA 1100 Laboratory Theory for Health Related Industries	2
HIMT 1121 Advanced Medical Terminology	2
HIMT 1274 Introduction to Medical Coding and Reimbursement	2

Technical Electives:	
MULT 1130 Responding to Emergencies	2
MULT 1140 Adult and Pediatric CPR	0.5
MULT 1500 Concepts for the Pharmacy Technician	4
MULT 1910 Basic EKG	3
MULT 1950 Phlebotomy	3.5
MULT 2950 Phlebotomy Practicum II	1
MULT 2070 Human Resource Management for Health Services	2
MULT 2072 Health Care Resource Mgmt.	2
MULT 2074 TQM/UM/Accreditation	2
MULT 2076 Legal Aspects of Risk Management	2

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVIORIAL SCI. REQUIRMT (SELECT ONE)	CR
ANTH 2202 Introduction to Cultural Anthropology	3
ECON 2200 Principles of Microeconomics	3
GEOG 2400 Economic and Social Geography	3
POLS 1100 American Government	3
PSY 1100 Introduction to Psychology	3
SOC 1101 Introduction to Sociology	3

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)	CR
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/Non-Amer to 1500	3
HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223 African-American History I: 1451-1876	3
HIST 2224 African-American History II: 1877-Present	3
HUM 1100 Introduction to Humanities	3
HUM 1270 Comparative Religions	3
MUS 1251 Survey of Music History	3
PHIL 1101 Introduction to Philosophy	3
PHIL 1130 Ethics	3

managing personal and professional behaviors, and applying professional conflict resolution strategies when appropriate.

Bioscience Technology (see BISI)

Bioscience comprises a diverse group of industries and activities that apply the knowledge of living systems to develop and manufacture tomorrow's products and solutions, including:

- Agricultural Feed stocks & Chemicals
- Drugs & Pharmaceuticals
- Medical Devices & Equipment
- Research & Testing

Bioscience entry level careers include:

- Aseptic Fill Technician – Prepares finished product from purified active pharmaceutical ingredients, operates/maintains equipment, and maintains records.
- Machine Operator – Coordinates and consults with other workers to design, lay out, and/or detail components and systems.
- Manufacturing Technician – Assists manufacturing staff in special operations, operates and maintains production equipment, assists in manufacturing production-scale products, maintains records.
- Material Handler – Collects and distributes materials between departments and shipping, wraps and protects materials for safe transport, loads and unloads materials.

Clinical Laboratory Assisting Certificate (See MLT/CLA)

A student completing the Clinical Laboratory Assisting Certificate will be able to:

- Prepare blood and body fluid specimens for analysis according to clinical laboratory industry standards
- Prepare reagents, standards, and control materials for analysis according to clinical laboratory industry standards
- Populate patient data into the Laboratory Information System (LIS) with accuracy
- Demonstrate safety practices consistent with clinical laboratory industry standards
- Perform waived laboratory testing with accuracy and precision and correlate with clinical conditions
- Demonstrate professional attitudes and behaviors

Complementary Care Certificate (See NURS/NURC)

A student completing the Complementary Care Certificate will be able to:

- Define terms associated with complementary care practices
- Identify the different types of complementary care practices
- Discuss the use of complementary care methods for health maintenance
- Discuss the role of research in the evaluation of complementary care

Health Information Management Technician Certificate (see HIMT)

Upon completion of the Health Information Management Technician Certificate, the student will be able to:

- Demonstrate knowledge of medical terminology and clinical data as it relates to the collection and use of health information.
- Perform assembly and analysis of health records for completeness and accuracy.
- Perform concurrent and retrospective ongoing reviews of health records to ensure compliance with standards for health

record documentation.

- Compile statistical data, such as admissions, discharges, deaths, births, and types of treatment given.
- 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.
- Assist clinical and administrative team in chart completion by running reports.
- Perform release of information (ROI) function.
- Demonstrate ethical practices as outlines in the American Health Information Management Association (AHIMA) Code of Ethics.

Massage Therapy Certificate (see MASS)

Nurse Aide Training Program Certificate (See NURS/NURC)

A student completing the Nurse Aide Training Program Certificate will be able to:

- Effectively communicate in the health care setting
- State and demonstrate principles of medical asepsis and standard precautions
- Identify and demonstrate the principles of safe resident care
- Discuss and demonstrate correct basic nursing skills
- Meet the requirements set forth in the Omnibus Budget Reconciliation Act of 1987
- Meet the eligibility requirements needed to apply to take the state test for nurse aides

Occupational Health and Safety Certificate (see ESSH)

Patient Care Skills Certificate (See NURS/NURC)

A student completing the Patient Care Skills Certificate will be able to:

- Effectively communicate in the health care setting
- State and demonstrate principles of medical asepsis and standard precautions
- State and demonstrate the principles of surgical asepsis
- Identify and demonstrate the principles of safe resident care in an acute care setting
- Discuss and demonstrate correct basic nursing skills commonly performed in the acute care setting

Registered Nurse First Assistant Certificate (See NURS/NURC)

A student completing the Registered Nurse First Assistant Certificate will be able to:

- Act effectively and safely as a first assistant in surgery
- Meet eligibility requirements to take the RNFA certificate examination.

Sterile Processing Technology Certificate (see SPT)

Surgical Technology Certificate (see SURG)

Train the Trainer Certificate (See NURS/NURC)

A student completing the Train the Trainer Certificate will be able to:

- Teach, coordinate, and supervise a Nurse Aide Training Program
- Meet the requirements established by the Ohio Department of Health.

Nursing

Nursing Associate Degree Practical Nursing Certificate (PNUR) Nursing Certificate Programs (NURC)

Nursing Associate 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. 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 42 credit hours of nursing courses and 31 credit hours in the arts and sciences. An elective of at least 2 credit hours is required. 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. Assessment Technologies Institute (ATI) consists of preliminary examinations and remediation activities. Students will be required to purchase the program directly from ATI or the Columbus State Bookstore. It will be adjacent to the textbooks. Each course will have some points allotted to testing and remediation.

Students who successfully complete the associate degree program are qualified 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), 3343 Peachtree Road, NE Suite 850 Atlanta, Georgia 30326, (404) 975-5000, the North Central Association of Colleges, and is approved by the Ohio Board of Nursing.

Upon completion of the Associate Degree in Nursing, the graduate will be able to:

- Implement safe, competent, nurturing care in the role of the Associate Degree Nurse
- Plan care for persons of all ages using the nursing process
- Communicate effectively, including the use of teaching and counseling techniques, in the promotion, maintenance, and restoration of health
- Manage nursing care for a diverse population of clients in a variety of practice settings
- Synthesize knowledge from nursing and related disciplines using critical thinking skills
- Analyze legal, ethical, and economic concepts that influence nursing practice
- Plan for maintaining competence and personal growth.

Program Admissions Information

Listed below are general requirements for admission to Nursing. For specific directions, see Nursing admission requirements available in Nursing, Records and Registration, Advising Services, the Admissions Office, and on the Nursing home page within the Columbus State Community College website. Academic advising is available in Advising Services to help guide new students through the admission process. A separate application is required for Nursing and is distributed after attending a required nursing information session. Admission to the Nursing program is competitive.

It is highly recommended that those interested in Nursing make an appointment with an academic advisor in Advising Services, (614) 287-2779. There are two tracks available for the Nursing program: 1) the blended track; 2) the traditional track. Admission to the Nursing program is competitive.

Admission into Nursing requires completion of:

1. Required Documentation

After all the admission criteria have been completed, an application specific to Nursing must be submitted, during an open application period, directly to the Nursing program. Information about application periods will be posted on the Nursing homepage at www.csc.edu/nursing.

Achievement of a minimum GPA of 2.8 on a 4-point scale based on completion of courses at the school or college most recently attended (high school, vocational program, or higher education institution). Official transcripts must be on file in the Records and Registration Office to verify GPA by the deadline

dates. Students who do not have a minimum 2.8 GPA for their most recent coursework must complete at least 12 credit hours of college-level coursework at Columbus State with a minimum GPA of 2.8 for admission to the Nursing program. The minimum 2.8 GPA must be maintained through the start of classes in Nursing.

2. COMPASS Placement Tests

Math Skills: Placement above MATH 1030 (Beginning Algebra II) or completion of MATH 1030. Students with transfer credit awarded by Columbus State for MATH 1030 are not required to take the Math Skills Test. Credit awarded for STAT 1350 will not substitute for the MATH 1030 requirement.

Writing Skills: Placement into ENGL 1100 (Composition I) or completion of ENGL 0190 (Introduction to Composition). Students awarded transfer credit by Columbus State for ENGL 1100 are not required to take the Writing Skills Test.

3. College Courses

Must have completed the courses listed below with a grade of “C” or better.

NURC 1001 (Nurse Aide Training Program) or Prior Learning Assessment credit (“N” credit) or copy of current Ohio Practical Nurse License (LPN). Requires completion of health records before registering for the course.

NURC 1102 (Patient Care Skills) or copy of current Ohio Practical Nurse License (LPN).

CHEM 1113 (Elements of Organic/Biochemistry)

PSY 1100 (Intro to Psychology) or **PSY 2340** (Human Growth and Development through the Life Span)

4. Health Education Systems, Inc. (HESI) Admission Assessment (A2) Exam

Completion of the A2 Exam with a score of 75 is required for admission. This score reflects a necessary reading, science, and math knowledge foundation to be successful in the Nursing Program. Applicants are encouraged to utilize the Evolve Reach Admission Assessment Exam Review by HESI prior to taking the A2 exam. This exam review is available for purchase at the Columbus State Bookstore.

Additional Admission Information

The college admissions application form is online (www.csc.edu). If it has been more than three years since you attended classes at Columbus State, call (614) 287-2453 or 1-800-621-6407 ext. 2453 to reactivate your student file.

Placement tests are administered in the Testing Center, Aquinas Hall 002 (Lower Level) on the Columbus Campus or in the Testing Center in Moeller Hall on the Delaware Campus. Check the college website for hours of operation.

To register to take the A2 Admission Exam, contact the Testing & Talent Assessment Center at (614) 287-5750. The initial cost of the exam is \$55 payable at the Cashiers and Student Accounting Office in Rhodes Hall. The cost to repeat the exam is \$65. On the day of the test, bring a picture ID and paid receipt to the Community and Professional Testing office located in the Center for Workforce Development, Room 223. Retesting eligibility begins 6 months from the

date of the previous A2 exam. The A2 exam may be taken a maximum of two times. A2 exam scores from other schools will not be accepted. The A2 scores will be valid for four years.

Contact the Records and Registration Department, Room 201, Madison Hall, (614) 287-2658, for information about the processing of college transfer credit from other institutions of higher education

Applicants currently licensed as Practical Nurses should refer to “Admission Procedure to Associate Degree Nursing program for Licensed Practical Nurses (LPNs)” available from the Nursing program or online at www.csc.edu/nursing.

Applicants for admission from another program preparing students to take NCLEX-RN should refer to Nursing Procedure for Transfer Students. The information is available from the Nursing program.

Please be advised of the following:

From the Ohio Revised Code Chapter 4723.09 License Application:

(b) For an applicant who entered a pre-licensure nursing education program on or after June 1, 2003, the results of a criminal records check conducted in accordance with section 4723.091 of the Revised Code demonstrate that the applicant is not ineligible for licensure as specified in section 4723.092 of the Revised Code.

(c) For all applicants, the board determines that the applicant has not committed any act that is grounds for disciplinary action under section 3123.47 or 4723.28 of the Revised Code or determines that an applicant who has committed any act that is grounds for disciplinary action under either section has made restitution or has been rehabilitated, or both.

It is the applicant’s responsibility to notify the Nursing program chairperson of felony convictions, as admission may be revoked due to clinical placement denial.

From the Ohio Revised Code 4723-5-12:

(13) A student shall not self-administer or otherwise take into the body any dangerous drug, as defined in section 4729.01 of the Revised Code, in any way not in accordance with a legal, valid prescription issued for the student.

(14) A student shall not habitually indulge in the use of controlled substances, other habit-forming drugs, or alcohol or other chemical substances to an extent that impairs ability to practice.

(15) A student shall not have impairment of the ability to practice according to acceptable and prevailing standards of safe nursing care because of the use of drugs, alcohol, or other chemical substances.....

(16) A student shall not have impairment of the ability to practice according to acceptable and prevailing standards of safe nursing care because of a physical or mental disability.

A new federal law, PRWORA, known as the “Personal Responsibility Act” limits licensure to U.S. citizens and other qualified applicants. The State Board of Nursing is required to keep assurance of citizenship on record with applications for licensure.

Admission to Nursing is offered for a specific semester only. Students who decline the offer of admission or who fail to respond must re-apply if they wish to be considered for a future class and must meet the admission criteria in effect for that class. A student may apply to the nursing program and be offered admission only twice. Admission opportunities are (1) starting the program and having 2 withdraw failing or failures or (2) being offered admission and not starting the program.

A minimum grade of “C” or better is required in all nursing, electives, science, psychology and math courses in the curriculum. Students accepted to Nursing who do not achieve a minimum grade of “C” or better in any of the following support courses must retake the course(s) prior to the start of their NURS classes or during the semester in which the course(s) is (are) required in the curriculum plan, in order to remain a student in good standing in the program. The support courses are:

BIO 2300 (Human Anatomy); BIO 2232 (Human Physiology); PSY 2340 (Human Growth and Development through the Life Span); BIO 2215 (Introduction to Microbiology); BIO 2263 (Human Pathophysiology); STAT 1350 (Elementary Statistics)

Columbus State Community College makes every effort to inform prospective students of the admission requirements for the Nursing program. Students are responsible for maintaining awareness of the application periods, of the admission requirement, and any changes made to those requirements over time. Any questions about admission criteria should be directed to Columbus State Advising Services at (614) 287-2779.

If waiting to start Nursing, students should first complete admission requirements and then work on General Education and basic related courses listed on the plan of study. Please continue to work with an academic advisor to complete your pre-admission checklist and to plan a schedule of other courses.

Clinical agencies have set requirements for patient safety. Students accepted to the program will be informed of the specific requirements for health, fingerprinting, drug screening and CPR, which must be met prior to starting and while continuing the NURS sequence of courses.

Application Process

Applications for the Nursing program will be available twice a year. Please refer to the Nursing homepage on the college website for the application dates and deadlines.

Practical Nursing Certificate

The Practical Nursing Certificate program is a part-time evening and weekend 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 successful completion of the program and passing the PN licensing examination. After obtaining their practical nursing license, graduates of the PN certificate program may apply for articulation into the associate

degree nursing program at Columbus State Community College.

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, and practicum experiences. All students are required to purchase the ATI online learning systems program, a comprehensive tutorial and testing package that is used throughout the program. 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 14 hours in arts and sciences for a total of 38 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.

Upon completion of the Practical Nursing Certificate program, the graduate will be able to:

- Demonstrate the role and scope of practice for the practical nurse in Ohio
- Apply knowledge from the biological, behavioral, and nursing sciences to the care of clients
- Utilize the nursing process to provide safe and effective nursing care to a diverse population in a variety of health care settings
- Communicate effectively with clients and families, health care providers, and community members for the purpose of health promotion, maintenance and restoration
- Safely perform nursing skills according to accepted standards of practice
- Demonstrate professionalism by engaging in legal, ethical, and accountable behaviors and utilizing economic concepts as they relate to the health care arena
- Synthesize knowledge from nursing and related disciplines using critical thinking skills
- Demonstrate caring behaviors by respecting the diversity of each person by treating them with dignity and integrity
- Collaborate with the health care team to provide and delegate nursing care according to Ohio Board of Nursing rules.

Program Admissions Information

Students need to apply to Columbus State and adhere to admission criteria. Specific requirements for admission to the Practical Nursing Certificate Program are listed below.

- Completion of the Practical Nurse Certificate program application
- High school biology, with grade of “C” or better, within

the past 5 years or BIO 0100 Foundations of Biology, or a college-level biology

- Completion of BIO 2300 Human Anatomy
- Completion of ENGL 1100 Composition I
- Completion of MATH 1030 Beginning Algebra II (or higher placement)
- Completion of the following college courses with a grade of “C” or better: NURC 1001 Nurse Aide Training Program or STNA and MULT 1110 Medical Terminology
- Completion of Test of Essential Academic Skills (TEAS) with scores of 73% in Reading, 63% in English, 46% in Science, and 60% in Math or completion of the HESI A2 Test with a minimum average score of 75%
- Grade point average of 2.6 or better in most recently completed college course work.
- Completion of COLS 1100 First Year Experience Seminar is recommended.

The Ohio Board of Nursing Felony Policy, Section 4723.28 of the Ohio Revised Code, states that the Board may deny a convicted felon a license or the privilege of sitting for the licensure examination. A student with a history of felony conviction is responsible for informing the program coordinator.

The Ohio Board of Nursing Licensure Application includes the requirement that all applicants for licensure identify existing psychiatric conditions(s). Please check with the Board of Nursing, (614) 466-3947 or www.nursing.ohio.gov, for further clarification.

A federal law known as the “Personal Responsibility Act” (PRWORA) limits licensure to U.S. citizens and other qualified applicants. The State Board of Nursing is required to keep assurance of citizenship on record with applications for licensure.

Nursing Associate Degree

(Autumn enrollment; see department for Spring enrollment)

COURSE	CR
COLS 1100 First Year Experience Seminar.....	1
NURS 1861 Foundations of Nursing.....	7
BIO 2300 Human Anatomy.....	4
PSY 2340 Human Growth & Development*.....	3
TOTAL CREDIT HOURS	15

Semester 2

NURS 1862 Introduction to Nursing Concepts of Health Maintenance & Restoration.....	8
NURS 1130 Concepts of Pharmacology.....	2
BIO 2232 Human Physiology.....	4
TOTAL CREDIT HOURS	14

Summer Semester

NURS 1863 Health Promotion of Family & Community.....	6
BIO 2263 Human Pathophysiology*.....	3
ENGL 1100 Composition I.....	3
STAT 1350 Elementary Statistics*.....	3
TOTAL CREDIT HOURS	15

Semester 3

NURS 2861 Nursing Concepts of Health Maintenance & Restoration.....	5
COMM 2232 Interpersonal Communications.....	3
BIO 2215 Introduction to Microbiology.....	4
NURS 2862 Psychiatric Mental Health Nursing.....	4
TOTAL CREDIT HOURS	16

Semester 4

NURS 2863 Advanced Concepts of Nursing, Leadership & Mgmt.....	8
NURS XXXX Technical Elective.....	2
HUM XXXX Refer to approved GE - HUM list.....	3
TOTAL CREDIT HOURS	13
TOTAL DEGREE CREDIT HOURS	73

* A grade of “C” or better is required in order to continue in the nursing sequence.

Technical Electives

The following courses are approved for technical elective requirements:

HNTR 1153 Nutrition for a Healthy Lifestyle.....	3
NURS 1100 Spiritual Nursing Care.....	2
NURS 1101 Neonatal Nursing.....	2
NURS 1102 Principles of Basic Trauma Nursing.....	2
NURS 1103 Holistic Intervention.....	2
NURS 1104 Gerontological Nursing.....	2
NURS 1105 End of Life Care.....	2
NURS 1106 Critical Care Nursing.....	2
NURS 1107 Current Trends in Pediatric Nursing.....	2
NURS 1108 Information Technology in Health Care.....	2
NURS 1109 Cultural Immersion in Health Promotion of *Family and Community.....	1

*(second hour is waived for elective requirement)

Approved General Education (GE) List for Nursing Associate Degree

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)	CR
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/Non-Amer to 1500.....	3

HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500.....	3
HIST 2223 African-American History I: 1451-1876.....	3
HIST 2224 African-American History II: 1877-Present.....	3
HUM 1100 Introduction to Humanities.....	3
HUM 1270 Comparative Religions.....	3
MUS 1251 Survey of Music History.....	3
PHIL 1101 Introduction to Philosophy.....	3
PHIL 1130 Ethics.....	3

Nursing Certificate Programs (NURC)

Several certificate programs are offered through the Nursing Department. These are focused programs that result in a certificate of completion. Many area health care employers are interested in students who have successfully completed these programs. A Nursing Certificate program may fulfill one of the certificate requirements for the Associate of Applied Science (A.A.S.) in Multi-Competency Health.

Clinical agencies have set requirements for patient safety. Students enrolling in programs with a clinical component will be informed of the specific requirements for health, fingerprinting, and/or drug screening prior to enrollment.

Complementary Care Certificate

A student completing the Complementary Care Certificate will be able to:

- Define terms associated with complementary care practices
- Identify the different types of complementary care practices
- Discuss the use of complementary care methods for health maintenance
- Discuss the role of research in the evaluation of complementary care.

Nurse Aide Training Program Certificate

A student completing the Nurse Aide Training Program Certificate will be able to:

- Communicate effectively in the health care setting
- State and demonstrate principles of medical asepsis and standard precautions
- Identify and demonstrate the principles of safe resident care
- Discuss and demonstrate basic nursing care skills

- Meet requirements set forth in the Omnibus Budget Reconciliation Act of 1987
- Meet eligibility requirements needed to take the state test for nurse aides.

Patient Care Skills Certificate

A student completing the Patient Care Skills Certificate will be able to:

- Communicate effectively in the health care setting
- State and demonstrate principles of medical asepsis and standard precautions
- State and demonstrate the principles of surgical asepsis
- Identify and demonstrate the principles of safe patient care in an acute care setting
- Discuss and demonstrate basic nursing care skills commonly performed in the acute care setting.

Registered Nurse First Assistant Certificate

A student completing the Registered Nurse First Assistant Certificate will be able to:

- Act effectively and safely as a first assistant in surgery
- Meet eligibility requirements to take the RNFA certificate examination.

Train the Trainer Certificate

A student completing the Train the Trainer Certificate will be able to:

- Teach, coordinate, and supervise a Nurse Aide Training Program
- Meet the requirements established by the Ohio Department of Health.

Practical Nursing Certificate

COURSE	CR
Pre-Admission Semester	
BIO-0100 Foundations of Biology OR	3
HShigh school Biology within the past 5 years)	
BIO 2300 Human Anatomy	4
ENGL 1100 Composition I.....	3
MATH 1030 Beginning Algebra II (or higher MATH placement).....	3
MULT 1110 Medical Terminology	1
NURC 1001 Nurse Aide Training OR	3
STNA credential	
TOTAL CREDIT HOURS	7-17
Semester 1	
PNUR 1100 Practical Nursing Fundamentals	2
PNUR XXXX Technical Elective	1
BIO 2232 Human Physiology.....	4
NURC 1102 Patient Care Skills.....	3
TOTAL CREDIT HOURS	10
Semester 2	
PNUR 1300 Pharmacology I for the Practical Nurse	2
PNUR 1765 PN Maternal & Child Care	2
PNUR 1865 PN Maternal & Child Care Clinical.....	1
PNUR 1766 PN Concepts Related to Health Promo & Rest I	2

PNUR 1866	PN Concepts Related to Health Promo & Rest I Clinical.....	1
PSY 1100	Introduction to Psychology	3
TOTAL CREDIT HOURS		11

Semester 3		
PNUR 1200	Mental Health Concepts for the Practical Nurse.....	1
PNUR 1400	Pharmacology II for the Practical Nurse.....	2
PNUR 1767	PN Concepts Related to Health Promo & Rest II	2
PNUR 1867	PN Concepts Related to Health Promo & Rest II Clinical	2
PNUR 1900	PN Transition to Practice	2
PNUR 1906	PN Transition to Practice Practicum	1
TOTAL CREDIT HOURS		10
TOTAL CERTIFICATE CREDIT HOURS		38

Technical Electives

The following courses are approved for technical elective requirements:

PNUR 1201	Introduction to Relaxation Techniques	1
PNUR 1202	Care of the Older Adult.....	1
PNUR 1203	Transcultural Nursing	1
PNUR 1204	Ethical Issues in Health Nursing.....	1
PNUR 1205	PN Role with ECGs	1
PNUR 1206	Care of Immobile Patients	1
PNUR 1294	SPT: Practical Nursing.....	1

NOTE: A grade of 'C' or higher is required in every course

Nurse Aide Training Program Certificate

COURSE	CR
Semester 1	
NURC 1001 Nurse Aide Training Program	3
TOTAL CREDIT HOURS	3
TOTAL CERTIFICATE CREDIT HOURS	3

Patient Care Skills Certificate

COURSE	CR
Semester 1	
NURC 1102 Patient Care Skills Course	3
TOTAL CREDIT HOURS	3
TOTAL CERTIFICATE CREDIT HOURS	3

Complementary Care Certificate

COURSE	CR
Semester 1	
NURC 1170 Holistic Healing Methods	3
TOTAL CREDIT HOURS	3
Semester 2	
NURC 1171 Fundamentals of Herbology	3
TOTAL CREDIT HOURS	3
Semester 3	
NURC 1172 Principles of Homeopathy or	3
PNUR 1201 Relaxation Techniques	1
TOTAL CREDIT HOURS	1 - 3
TOTAL CERTIFICATE CREDIT HOURS	7-10

Train the Trainer Certificate

COURSE	CR
Semester 1	
NURC 1250 Train the Trainer Program	2
TOTAL CREDIT HOURS	2
TOTAL CERTIFICATE CREDIT HOURS	2

Registered Nurse First Assistant Certificate

COURSE	CR
Semester 1	
NURC 1901 Registered Nurse First Assistant	4
TOTAL CREDIT HOURS	4
Semester 2	
NURC 1902 RNFA Experience in the Operating Room	4
TOTAL CREDIT HOURS	4
TOTAL CERTIFICATE CREDIT HOURS	8

Paralegal Studies

Paralegal Studies Associate Degree Paralegal Studies Certificate (Post Baccalaureate Option)

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.

The Paralegal Studies Certificate (Post Baccalaureate Option) is designed for persons who currently possess a bachelor's, master's, or doctoral degree.

Paralegals have traditionally been utilized in legal environments that are intensive in both client contact and document preparation.

Upon completion of the Associate Degree in Paralegal Studies, the graduate will be able to:

- Demonstrate proficiency in manual and computer-assisted research of legal questions and incorporate the same into properly cited memoranda of law
- Demonstrate an understanding of the legal and ethical responsibilities of a legal assistant
- Demonstrate an ability to use municipal, county, state, and

Paralegal Studies Associate Degree

COURSE	CR
Semester 1	
ENGL 1100 Composition I.....	3
MATH 1010 Math for Business Apps (4) or	3
STAT 1350 Elementary Statistics.....	3
LEGL 1101 Introduction to Paralegal Studies & Ethics.....	3
LEGL 1102 Law Office Technology.....	3
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS	13-14
Note: Students who wish to transfer to a four-year program should take MATH 1050 or STAT 1350.	
Semester 2	
ENGL 2XXX 2367 or 2567 or 2667 or 2767 Composition II	3
CSCI 1101 Computer Concepts & Applications	3
LEGL 1105 Torts & Contracts.....	3
LEGL 1111 Legal Research & Writing	3
TOTAL CREDIT HOURS	12
Summer Semester	
BIO 1127 Introduction to Environmental Science	4
SOC 1101 Introduction to Sociology or.....	3
SOC 2380 American Race & Ethnic Relations.....	3
LEGL 2026 Administrative Law	3
LEGL 2024 Business Organizations.....	3
TOTAL CREDIT HOURS	13
Semester 3	
COMM 1105 Oral Communication or.....	3
COMM 1110 Small Group Communications.....	3
LEGL 2012 Advanced Legal Research.....	3
LEGL 2005 Civil Practice & Procedure	3
LEGL 2XXX Technical Elective.....	2
LEGL 2XXX Technical Elective.....	2
TOTAL CREDIT HOURS	13

Semester 4	
HUM XXXX Refer to approved GE - HUM list.....	3
LEGL 2014 Family Law	3
LEGL 2815 Legal Practicum/Seminar.....	2
LEGL 2XXX Technical Elective.....	2
PSY 1100 Introduction to Psychology	3
TOTAL CREDIT HOURS	13
TOTAL DEGREE CREDIT HOURS	63-64

Technical Electives

The following courses are approved for technical elective requirements:

Litigation:

LEGL 2010 Criminal Law & Procedure.....	3
LEGL 2015 Electronic Discovery.....	3
LEGL 2038 Insurance Law	2
LEGL 2043 Alternative Dispute Resolution.....	3

Technology:

LEGL 2050 Intellectual Property.....	3
LEGL 2051 Computer Assisted Legal Research	2

General Practice:

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:

LEGL 2043 Alternative Dispute Resolution.....	3
LEGL 2072 Mediation	2
LEGL 2194 Special Topics in Paralegal	1-3

- federal clerks of court, and other recording offices
- Prepare deeds, notes, and other documents for residential real estate transfer
- Draft documents required to complete family law matters
- Draft pleadings, motions and other documents within the applicable rules of evidence and procedure to prepare and complete civil and criminal litigation
- Prepare documents for use in corporate, partnership, and other business-related matters

- Draft wills, trusts, and other documents necessary for estate administration
- Describe the legislative and judicial functions of administrative agencies.

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.

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)

	CR		
ARCH 2100	3	HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500 .....3
HART 1201	3	HIST 2223	African-American History I: 1451-1876 .....3
HART 1202	3	HIST 2224	African-American History II: 1877-Present .....3
HIST 1111	3	HUM 1100	Introduction to Humanities .....3
HIST 1112	3	HUM 1270	Comparative Religions .....3
HIST 1151	3	MUS 1251	Survey of Music History .....3
HIST 1152	3	PHIL 1101	Introduction to Philosophy .....3
HIST 1181	3	PHIL 1130	Ethics .....3

Paralegal Studies Certificate (Post Baccalaureate Option)

COURSE

Semester 1

	CR
LEGL 1101	3
LEGL 1102	3
LEGL 1105	3
LEGL 1111	3
TOTAL CREDIT HOURS	12

Semester 2

LEGL 2012	3
LEGL 2024	3
LEGL 2026	3
TOTAL CREDIT HOURS	9

Semester 3

LEGL 2005	3
LEGL 2014	3
LEGL 2XXX	2 - 3
TOTAL CREDIT HOURS	8 - 9

Semester 4

LEGL 2815	2
LEGL 2XXX	2 - 3
TOTAL CREDIT HOURS	-4-5
TOTAL CERTIFICATE CREDIT HOURS	-33-35

Technical Electives

The following courses are approved for technical elective requirements:

LEGL 2010	3
LEGL 2015	3
LEGL 2018	3
LEGL 2019	3
LEGL 2023	3
LEGL 2029	3
LEGL 2038	2
LEGL 2043	3
LEGL 2050	3
LEGL 2072	2

Quality Assurance Technology

Quality Assurance Technology Associate Degree Bioscience Technology Certificate

Individuals who have high standards, are logical and observant, good at problem solving, and have an investigative mind, are a great fit for a career as a Quality Assurance Technician. Quality assurance technicians are responsible for monitoring, testing, and continuously improving the quality of products and services for today's businesses.

Coursework in Columbus State's Quality Assurance program will include an introduction to manufacturing, statistical process control, value engineering, and technical writing. Participants will study and practice the major elements and concepts of total quality management, including principles and styles of systems thinking, continuous improvement, management by data, and historic influences of leaders in quality management. Students will

learn statistical methods to determine reliability, the effectiveness of data analysis, the use of simulations, and ways to improve system performance.

Graduates will find a wide range of opportunities in fields as diverse as manufacturing, banking, insurance, or food processing. As valuable members of the business team, graduates will apply the tools of their chosen field in a problem-solving process to achieve significant gains for the company. These gains include product improvement, reducing scrap, shortening cycle time, and improving profitability. Quality assurance technicians have the satisfaction of working in an area that is essential, not only to profitability, but also to survival of the business.

Quality Assurance Technology Associate Degree

COURSE	CR
Semester 1	
ENGL 1100 Composition I.....	3
MATH 1113 Technical Mathematics.....	5
ENGT 1115 Engineering Graphics.....	3
MECH 1150 Manufacturing Materials & Processes.....	3
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS.....	15
Semester 2	
PHYS 1200 Algebra Based Physics I.....	5
HUM XXXX Refer to approved GE - HUM list.....	3
QUAL 1112 Total Quality Management.....	4
MECH 1240 Machine Tools.....	3
TOTAL CREDIT HOURS.....	15
Semester 3	
SBS XXXX Refer to approved GE - SBS list.....	3

COMM 2204 Technical Writing.....	3
BMGT 1008 21st Century Workplace Skills.....	2
QUAL 2111 Reliability System Analysis.....	4
BISI 1101 Bioscience Tech I.....	4
TOTAL CREDIT HOURS.....	16
Semester 4	
BISI 1103 Bioscience Tech II.....	4
QUAL 2900 Field Experience: Quality Assurance.....	2
MECH 2270 Engineering Statistics.....	3
BMGT 2250 Project Management Principles.....	3
SPT 1863 Sterile Processing Tech I BIO Ohio.....	3
TOTAL CREDIT HOURS.....	15
TOTAL DEGREE CREDIT HOURS.....	61

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)		CR
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/Non-Amer to 1500.....		3
HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500.....		3
HIST 2223 African-American History I: 1451-1876.....		3
HIST 2224 African-American History II: 1877-Present.....		3
HUM 1100 Introduction to Humanities.....		3
HUM 1270 Comparative Religions.....		3

MUS 1251 Survey of Music History.....	3
PHIL 1101 Introduction to Philosophy.....	3
PHIL 1130 Ethics.....	3

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT (SELECT ONE)

	CR
ANTH 2202 Introduction to Cultural Anthropology.....	3
ECON 2200 Principles of Microeconomics.....	3
GEOG 2400 Economic and Social Geography.....	3
POLS 1100 American Government.....	3
PSY 1100 Introduction to Psychology.....	3
SOC 1101 Introduction to Sociology.....	3

Quick Notes on QA:

- Salaries for QA technician job postings in Columbus are seven percent higher than the national average. (*Source: Indeed.com*)
- Students work on quality improvement projects for local organizations as part of their course work.
- The quality movement started in manufacturing, but it is now applied to service, health care, education and government sectors.
- A career in QA may combine technical knowledge, change management, people skills and teaching.

The Quality Assurance Technology also shares related courses with the Electronic Engineering Technology and the Mechanical Engineering Technology. For additional information, refer to Electronic Engineering Technology and Mechanical Engineering Technology, which are listed in this section of the catalog.

Upon completion of the Associate Degree in Quality Assurance Technology, the graduate will be able to:

- Improve products, processes and systems in manufacturing and service environments by selectively applying statistical and quality improvement tools according to the Shewhart Cycle.
- Apply a variety of teamwork, leadership, and communications skills (verbal, written, and graphic) to communicate effectively with clients, suppliers, co-workers and others in the work environment.
- Apply fundamental principles of project management.
- Read and interpret engineering blueprints, drawings, specifications and quality charts.
- Apply a basic knowledge of physics, electronics, manufacturing processes, metrology, and materials testing and analysis to improving, and/or designing new products and processes.
- Apply knowledge of specifications, sampling plans and testing techniques to the analysis of materials, components and systems.
- Apply cost estimating techniques and cost containment procedures to new and existing products and systems, while maintaining or improving quality.
- Apply the elements of current quality management trends including inspection, traceability/documentation, quality audits, and nonconforming identification and review processes to business elements within an organization.

Bioscience Technology (BISI)

Bioscience comprises a diverse group of industries and activities that apply the knowledge of living systems to develop and manufacture tomorrow's products and solutions, including:

- Agricultural Feedstocks & Chemicals
- Drugs & Pharmaceuticals
- Medical Devices & Equipment
- Research & Testing

Bioscience entry level careers include:

- Aseptic Fill Technician – Prepares finished product from purified active pharmaceutical ingredients, operates/maintains equipment, maintains records.
- Machine Operator – Coordinates and consults with other workers to design, lay out, and/or detail components and systems.
- Manufacturing Technician – Assists manufacturing staff in special operations, operates and maintains production equipment, assists in manufacturing production-scale products, maintains records.
- Material Handler – Collects and distributes materials between departments and shipping, wraps and protects materials for safe transport, loads and unloads materials.

Columbus State has partnered with BioOhio for the development of a statewide Bioscience Technology Certificate. Instruction will be provided on common types of process control systems and common process variables used to manufacture pharmaceutical, food, and medical products and in sterile process technology. Good Manufacturing Practices (GMP) and FDA regulations for the bioscience industry will be emphasized. Students will demonstrate competency in key knowledge and skill areas through a capstone project. This training will also include workplace skills for team building, communication, time management, and other related areas.

Bioscience Technology Certificate

COURSE	CR
Semester 1	
BMGT 1008 21st Century Workplace Skills	2
BISI 1101 Bioscience Technology I.....	4
TOTAL CREDIT HOURS.....	6
Semester 2	
BISI 1103 Bioscience Technology II	4
SPT 1863 Sterile Processing Tech I BIO Ohio	3
TOTAL CREDIT HOURS.....	7
TOTAL CERTIFICATE CREDIT HOURS	13

Real Estate

- Real Estate Associate Degree**
- Appraisal Certificate**
- Real Estate Broker Certificate**
- Real Estate Pre-Licensure Certificate**
- Real Estate Property Management Certificate**

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 estate

licensing exam are more successful when they take courses as shown in the plan of study.

Upon completion of the Associate Degree in Real Estate, the graduate will be able to:

- Demonstrate understanding of key principles and concepts involved in a real estate transaction
- Prepare and present correctly all forms necessary to complete a real estate transaction
- Create effective promotional plans to market property
- Identify and explain different construction materials
- Apply one of three appraisal techniques to the evaluation of a residential or commercial property
- Manage a real estate property sales force effectively
- Apply relevant formulas and microcomputer applications to the practice of real estate
- Effectively apply current technology to real estate activity.

Real Estate Associate Degree

COURSE		CR
Semester 1		
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I.....	3
MATH 1010	Mathematics for Business Applications	4
REAL 1011	Real Estate Principles & Practices.....	3
REAL 1013	Real Estate Finance.....	2
TOTAL CREDIT HOURS.....		13
Semester 2		
ACCT 1211	Financial Accounting	3
REAL 1012	Real Estate Law	3
REAL 1014	Real Estate Appraisal or	
APPR 1101	Principles of Appraisal	2
REAL 1221	Residential Sales Practices	2
REAL or APPR XXXX	Technical Elective.....	2
TOTAL CREDIT HOURS		12
Summer Semester		
COMM 1105	Oral Communication	3
PSY 1100	Introduction to Psychology.....	3
HUM XXXX	Refer to approved GE - HUM list.....	3
LEGL 2064	Legal Environment of Business.....	3
TOTAL CREDIT HOURS		12
Semester 3		
COMM 2200	Business Communication	3
CMGT 1115	Construction Methods	3
FMGT 2201	Corporate Finance.....	3
REAL 2220	Real Estate Ethics & Etiquette.....	2
REAL or APPR XXXX	Technical Elective.....	2
REAL or APPR XXXX	Technical Elective	2
TOTAL CREDIT HOURS.....		15

Semester 4	
BIO 1111	Introduction to Biology OR
GEOL 1101	Introduction to Earth Science
BMGT 1111	Management
ECON 1110	Introduction to Economics.....
HRM 1121	Human Resources Management
MKTG 1230	Customer Service & Sales
REAL 2950	Real Estate Practicum/Seminar
TOTAL CREDIT HOURS	18
TOTAL DEGREE CREDIT HOURS	70

Technical Electives

The following courses are approved for technical elective requirements:

APPR 1101	Principles of Appraisal	2
APPR 1102	Procedures of Appraisal	2
APPR 1103	USPAP & Fair Housing	1.5
REAL 2221	Professional Property Management	2
REAL 2250	Commercial Real Estate	2
REAL 2270	Introduction to Real Estate Investing.....	2
REAL 2275	Introduction to Property Renovation	2
REAL 2194	SPT: Real Estate	1
REAL 2294	SPT: Real Estate	2
REAL 2394	SPT: Real Estate	3

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE).....CR	
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/Non-Amer to 1500 .....3

HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500.....3
HIST 2223	African American History I: 1451-1876 .....3
HIST 2224	African American History II: 1877-Present .....3
HUM 1100	Introduction to Humanities .....3
HUM 1270	Comparative Religions .....3
MUS 1251	Survey of Music History .....3
PHIL 1101	Introduction to Philosophy 3
PHIL 1130	Ethics .....3

Appraisal Certificate

The Appraisal Certificate Program will not be offered after Summer Semester 2016. Students who want to earn the certificate must complete the three-course sequence by the end of Summer Term 2016. For Spring Semester 2016, any new student in the program must take APPR 1101 and APPR 1103, and follow up with APPR 1102 in Summer 2016. All three courses (APPR 1101, 1102, and 1103) will be offered in Spring, 2016. APPR 1102 class will be the only course offered in summer.

The Appraisal Certificate classes offered at Columbus State will prepare a student to become a State Registered Real Estate Appraiser Assistant. The certificate program provides the knowledge and skills necessary to prepare individuals for entry into the real estate appraisal profession.

Those interested in becoming a State Registered Real Estate Appraiser Assistant must complete a minimum of 75 pre-registration education hours. Columbus State students may add other general education classes to this schedule. This certificate plan of study satisfies the required 75 classroom hours and includes APPR 1101, 1102, and 1103.

Upon completion of the Appraisal Certificate program, students will be able to:

- Determine the best method to arrive at real property value
- Complete various standard appraisal forms and reports
- Demonstrate market analysis techniques and applications
- Apply appropriate technology as needed within the appraisal profession
- Continue appraisal education
- Qualify to become a State Registered Real Estate Appraiser Assistant.

Appraisal Certificate*

COURSE	CR
Semester 1	
APPR 1101 Principles of Appraisal	2
TOTAL CREDIT HOURS	2
Semester 2	
APPR 1102 Practice of Appraisal	2
APPR 1103 USPAP and Fair Housing	1.5
TOTAL CREDIT HOURS	3.5
TOTAL CERTIFICATE CREDIT HOURS.....	5.5

*The three appraisal courses are also offered as real estate major electives.

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 Realtors® and meets all classroom requirements needed to be able to sit for the state licensing exam.

Upon completion of the Real Estate Pre-Licensure Certificate program, the student will be able to:

- Demonstrate understanding of key principles and concepts involved in a real estate transaction
- Prepare and present correctly all forms necessary to complete a real estate transaction
- Qualify to take the state licensing exam.

Real Estate Pre-Licensure Certificate

COURSE	CR
Semester 1	
REAL 1011 Real Estate Principles & Practice.....	3
REAL 1013 Real Estate Finance.....	2
TOTAL CREDIT HOURS	5
Semester 2	
REAL 1012 Real Estate Law	3
REAL 1014 Real Estate Appraisal or	
APPR 1101 Principles of Appraisal.....	2
TOTAL CREDIT HOURS	5
TOTAL CERTIFICATE CREDIT HOURS	10

*Students may not audit pre-licensure courses.

*Pre-licensure courses are not available for Good as Gold program

Real Estate Broker Certificate

The Real Estate Broker Certificate program would help prepare students and current license real estate agents interested in obtaining their Real Estate Broker's License. These courses satisfies 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.

COURSE	CR
Semester 1	
REAL 1011 Real Estate Principles & Practice.....	3
REAL 1013 Real Estate Finance.....	2
REAL 1012 Real Estate Law	3
REAL 1014 Real Estate Appraisal or	
APPR 1101 Principles of Appraisal.....	2
TOTAL CREDIT HOURS	10

Semester 2	
HRM 1121	Human Resource Management 3
LEGL 2064	Legal Environment of Business 3
FMGT 2201	Corporate Finance 3
ECON 1110	Introduction to Economics 3
TOTAL CREDIT HOURS	..... 12
TOTAL CERTIFICATE CREDIT HOURS	..... 22

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. Specific topics include the Ohio Tenant Landlord Act, forcible entry and detainer, typical leases, office management, advertising, collection problems and maintenance. Upon completion of the Real Estate Property Management Certificate, students will be able to:

- Apply appropriate technology as needed within the property management business
- Demonstrate understanding of key principles and concepts involved in property management
- Examine current market and develop a marketing program
- Promoting the management company and how fees are determined

- Criteria for establishing rental rates, maintenance schedules, and safety and security
- Managing residential rental housing and maintenance issues

COURSE	CR
Semester 1	
REAL 1011	Real Estate Principles & Practice..... 3
REAL 1012	Real Estate Law 3
COMM 1105	Oral Communication..... 3
TOTAL CREDIT HOURS	..... 9

Semester 2	
BMGT 1111	Business Management 3
CSCI 1101	Computer Concepts & Applications..... 3
ACCT 1211	Financial Accounting 3
TOTAL CREDIT HOURS	..... 9

Semester 3	
REAL 2275	Introduction to Property Renovation..... 2
REAL 2270	Introduction of Real Estate Investing..... 2
REAL 2221	Professional Property Management 2
HRM 1121	Human Resource Management 3
TOTAL CREDIT HOURS	..... 9
TOTAL CERTIFICATE CREDIT HOURS	..... 27

Respiratory Care

Respiratory Care Associate 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 Respiratory Care Board is required for employment. Graduates are eligible to become licensed as a Respiratory Care Practitioner by the Ohio Respiratory Care Board after obtaining the Registered Respiratory Therapist credential. (<http://www.respiratorycare.ohio.gov/>).

Upon completion of the Associate Degree in Respiratory Care, the graduate will be able to:

- Demonstrate the ability to collect and evaluate patient data; and recommend procedures to obtain additional data
- Demonstrate the ability to correctly assemble, use and maintain respiratory care equipment using principles of infection control and quality assurance
- Initiate, conduct, and independently modify prescribed therapeutic procedures and recommend modifications based on patient response
- Demonstrate personal and professional behaviors required for successful employment.

Specific Respiratory Care Program Admission Information

Admission to the program is competitive and based on a point system. Students receive information about the admission process at the mandatory information sessions.

Requirements for admission to the 2016 Respiratory Care program:

- A. Placement into STAT 1350 Elementary Statistics
- B. Placement into ENGL 1100 Composition I
- C. Placement into “No Reading Required” or completion of DEV 0145 or a previous degree
- D. NURC 1001 with grade of “C” or above
- E. Minimum Total GPA of 2.50 or above
- F. Attendance at a mandatory information session
- G. Completion of the HESI A2 Examination Completed health record on file in the Health Records Office
- H. Students must complete a criminal background check and drug screen testing upon being accepted into the program. Acceptance is conditional until the background check and drug screening is submitted and cleared. Failure to complete this process by the deadline will result in loss of program acceptance. Students will receive instructions on the testing procedure upon acceptance into the program.

NOTE: All admission criteria MUST be met by the first day of Spring Semester of the application year.

Prospective students may obtain information at regularly held program information sessions. Students can obtain additional information by visiting www.csc.edu/respiratory or by contacting Vincent Coccozza at vcoccozza@csc.edu or 614-287-2521.

Statement Regarding Infectious Diseases

Students in this program perform their clinical work on patients in health care facilities and may therefore be exposed to many types of communicable diseases and infectious materials. These are not limited to, but may include, hepatitis (A, B, C or D), HIV/AIDS, tuberculosis, measles, German measles, and mumps.

NOTE: ALL students are required to have appropriate immunizations after they are admitted to the program (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 have an accidental exposure. All students entering the program must be aware of this slight, but real, potential risk. All students are encouraged to have personal health insurance in effect by the first day of class.

Respiratory Care Associate Degree

COURSE	CR
Semester 1	
MATH 1148 College Algebra	4
ENGL 1100 Composition I	3
COLS 1100 First Year Experience Seminar	1
BIO 2232 Human Physiology	4
MULT 1130 Responding to Emergencies	2
RESP 1220 Cardiopulmonary Anatomy & Physiology	3
TOTAL CREDIT HOURS	17
Semester 2	
CHEM 1113 Elements of Organic Chemistry & Biochemistry	4
RESP 1110 Introduction to Respiratory Care	3
RESP 1230 Respiratory Pharmacology	2
RESP 1370 Respiratory Equipment I	1
RESP 1861 Introduction to the Clinical Experience	1
MULT 1110 Medical Terminology	2
TOTAL CREDIT HOURS	13
Semester 3	
BIO 2215 Microbiology	4
SOC 1101 Introduction to Sociology	3
RESP 1240 Patient Assessment I	2
RESP 1350 Respiratory Pathophysiology I	2
RESP 1862 Clinical Practice I	2
RESP 1360 Therapeutic Procedures I	3
TOTAL CREDIT HOURS	16

Summer Semester	
RESP 2442 Patient Assessment II	2
RESP 2452 Respiratory Pathophysiology II	2
RESP 2870 Clinical Practice II	2
RESP 2462 Therapeutic Procedures II	3
RESP 2472 Respiratory Equipment II	1
PHIL 1130 Ethics	3
TOTAL CREDIT HOURS	13

Semester 4	
RESP 2890 Clinical Practice III	2
RESP 2530 Therapeutic Procedures III	3
RESP 2950 Clinical Practicum	2
RESP 2850 Practicum Seminar	1
TOTAL CREDIT HOURS	8
TOTAL DEGREE CREDIT HOURS	67

Skilled Trades Technology

Apprenticeship Partnership Degree Programs
Associate of Technical Studies Degree in Construction Trades
Facilities Maintenance Associate Degree
Welding Associate Degree
Facilities Maintenance Certificate
Facilities Module Certificates
 Carpentry Module Certificate
 Electrician Module Certificate
 Plumbing Module Certificate
 Welding Module Certificate
Intermediate Pipe & Plate Tig Welder Certificate
Intermediate Pipe I Welder Certificate
Intermediate Pipe II Welder Certificate
Intermediate Welder Certificate
Carpenter Apprenticeship Readiness Certificate
Electrician Apprenticeship Readiness Certificate
Plumbing Apprenticeship Readiness Certificate
Sheet Metal Apprenticeship Readiness Certificate

The mission of Skilled Trades is to develop and implement partnership programs with area employers that include the use of college coursework as a part of their employee career preparation programs. The department collaborates with local industry partners to custom build certificate and/or degree programs that will best meet their educational and training needs. These programs can include employer-specific courses as well as integration of their employees into mainstream college coursework.

The goal of this initiative is to meet all of the educational and training needs of employers at all levels within their organization. These partnerships actively involve local employers in the educational process, including recruiting, selection, curriculum development, related work experience, and final placement.

Upon completion of the Associate Degree in Skilled Trades, the graduate will be able to:

- Understand the role and function of the skilled trades in the construction industry
- Discriminate the work they perform and how it interrelates with the other trades in the overall scope of a construction project
- Apply underlying theories and principles that are foundational to the trade that they have chosen
- Demonstrate skills and proper work practices in all building, renovation, or repair activities
- Be qualified and prepared to become a lead worker and/or mentor to others on construction and maintenance job sites
- Read, interpret, and follow construction drawings
- Apply current industry-specific building codes in the planning and execution of work
- Demonstrate the use of proper safety procedures in all activities.

For more information about the Skilled Trades programs, contact Scott Laslo, On-Campus Programs Coordinator, 614-287-2653, slaslo1@cscce.edu; or contact J.D. White, Apprenticeship Programs Coordinator, 614-287-5211, jwhite02@cscce.edu.

Apprenticeship Partnership Degree Programs

These Skilled Trades degree programs are part of partnerships between area trades apprenticeship programs and the college. Participation in these programs is limited to students who are currently enrolled in the full-time apprenticeship programs offered by the college's industry partner trades organizations.

Students in the Skilled Trades degree programs combine apprenticeship courses, advanced technical coursework, and basic and general education courses to earn an Associate of Applied Science in Skilled Trades. Electrician, carpentry, millwright, sheet metal and operating engineer majors are currently available.

For more information, students can refer to the website www.cscce.edu/skilledtrades and/or contact Skilled Trades Program Coordinator J.D. White, 614-287-5211, jwhite02@cscce.edu.

Associate of Technical Studies Degree in Construction Trades

In partnership with several central Ohio trades apprenticeship programs, the college offers apprentices the opportunity to earn college credit in their apprenticeship programs. Students are awarded college credit for technical courses taken during each year of the apprenticeship, leading to a certificate in the program upon successful completion of their apprenticeship. Students who wish to continue their education can apply the credits they have earned toward an Associate of Technical Studies in Construction Trades with a tech-

nical minor in their trade and a major in construction management. All Skilled Trades partnership programs have restricted enrollment, requiring that participants are accepted into their respective trade apprenticeship programs prior to enrollment in one of these Associate of Technical Studies Degree programs.

Facilities Maintenance Associate Degree

The Skilled Trades Associate Degree Program in Facilities Maintenance prepares individuals for careers in technical jobs supporting 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 nontechnical 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.

Upon completion of the **program, students earn an Associate of Applied Science Degree in Skilled Trades–Facilities Maintenance Major. The program is designed to:**

- Provide students with basic skills and knowledge in the core trades of carpentry, electricity, plumbing, heating and air conditioning, and welding
- Provide students with the foundational academic skills to support their success in trades-related employment
- Prepare students for entry-level positions in facilities maintenance.

With their knowledge in this wide-range of technical trades, graduates will be prepared to enter the workforce as facilities maintenance technicians. Those who are interested in specializing in a specific trade may use this education as a foundation to help them qualify for entry into any of a variety of skilled trades registered apprenticeship programs.

Facilities Maintenance Associate Degree

COURSE	CR
Semester 1	
SKTR 1110 Electric: Fundamentals	2
SKTR 1120 Carpentry: Fundamentals.....	2
SKTR 1140 Plumbing: Introduction Supply Systems.....	2
SKTR 1180 Welding: Introduction to Stick.....	2
ARCH 1110 Basic Manual Drafting.....	1
COLS 1100 First Year Experience Seminar	1
CSCI 1101 Computer Concepts & Applications.....	3
ENGL 1100 Composition I.....	3
ESSH 1170 OSHA 10-Hour General Industry Safety & Health	1
TOTAL CREDIT HOURS	17
Semester 2	
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	2
HVAC 1140 Principles of Refrigeration.....	3
CMGT 1121 Construction Drawings	3
PHYS 1103 World of Energy.....	3
TOTAL CREDIT HOURS	17
Semester 3	
SKTR 1300 Construction Industry Employability Skills.....	2
SKTR 2010 Electrical: Wiring II	2
SKTR 2020 Carpentry: Structural Framing II	2
SKTR 2040 Plumbing: Intermediate Supply & DWV.....	2
HUM XXXX Refer to approved GE - HUM list	3
COMM 1105 Oral Communication or	3
COMM 1110 Small Group Communication.....	3
COMM 2204 Technical Writing.....	3
TOTAL CREDIT HOURS	17
Semester 4	
SKTR 2110 Electrical: Repair & Service Practices	2
SKTR 2120 Carpentry: Interior/Exterior Finish Systems	2
SKTR 2140 Plumbing: Repair & Service Practices	2
XXXX XXXX Technical Elective	2
SBS XXXX Refer to approved GE - SBS list.....	3
MATH 1110 Mathematics for the Skilled Trades.....	3
TOTAL CREDIT HOURS	14
TOTAL DEGREE CREDIT HOURS	65

Technical Electives

The following courses are approved for technical elective requirements:

GENERAL:

EMEC 1250 Motors & Control Logic	4
EMEC 1251 Control Logic & PLC's.....	4
SKTR 1894 Special Topics: Skilled Trades I	1-4
SKTR 1994 Special Topics: Skilled Trades II	1-4
SKTR 2894 Special Topics: Skilled Trades III.....	1-4
SKTR 2994 Special Topics: Skilled Trades IV.....	1-4

CARPENTRY:

SKTR 1520 Carpentry: Steel Framing Construction.....	2
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ELECTRICAL:

SKTR 1510 Electrical: Low Volt Systems I	2
SKTR 2210 Electrical: Photovoltaic System.....	3
SKTR 2410 Electrical: NFPA 70E Workplace Safety	1
SKTR 2710 Electrical: NEC & Electrical Contracting.....	4

WELDING:

SKTR 1280 Welding: OxyFuel Methods & Plasma Cutting	2
SKTR 1380 Welding: Introduction to MIG	2
SKTR 1470 Welding: Layout & Fit Up.....	2
SKTR 1480 Welding: Specifications & Drawings	2
SKTR 1570 Welding: Codes & Inspection.....	2
SKTR 1580 Welding: Introduction to TIG Processes	3
SKTR 1670 Welding: Metallurgy	2
SKTR 1675 Welding: Basic Principles of NDT.....	2
SKTR 1770 Welding: GRAW PLATE.....	3
SKTR 2070 Welding: GTAW PIPE I.....	3
SKTR 2080 Welding: Intermediate Stick and MIC.....	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

Welding Associate Degree

COURSE	CR
Semester 1	
SKTR 1101 Survey of the Construction Industry.....	2
SKTR 1180 Welding: Introduction to Stick.....	2
SKTR 1280 Welding: OxyFuel Methods & Plasma Cutting.....	2
SKTR 1300 Construction Industry Employability Skills.....	2
SKTR 1380 Welding: Intro to MIG.....	2
ENGT 1115 Engineering Graphics.....	3
SKTR 1110 Electric: Fundamentals.....	2
TOTAL CREDIT HOURS.....	15

Semester 2	
SKTR 1470 Welding: Layout & Fit Up.....	2
SKTR 1480 Welding: Specifications & Drawings.....	2
SKTR 1580 Welding: Introduction to TIG Processes.....	3
SKTR 1670 Welding: Metallurgy I.....	2
ENGL 1100 Composition I.....	3
PHYS 1103 World of Energy.....	3
TOTAL CREDIT HOURS.....	15

Semester 3	
SKTR 2080 Welding: Intermediate Stick & MIG.....	2
SKTR 2180 Welding: Intermediate Applications I.....	2
SKTR 2185 Welding: Intermediate Applications II.....	2
CMGT 1121 Construction Drawings.....	3
COMM 1105 Oral Communication OR	3
COMM 1110 Small Group Communication.....	3
CSCJ 1101 Computer Concepts & Applications.....	3
TOTAL CREDIT HOURS.....	15

Semester 4	
XXXX XXXX Technical Elective.....	3
XXXX XXXX Technical Elective.....	2
HUM XXXX Refer to approved GE - HUM list.....	3
SBS XXXX Refer to approved GE - SBS list.....	3
ESSH 1170 OSHA 10 Hour General Industry Safety & Health.....	1
MATH 1110 Mathematics for the Skilled Trades.....	3
TOTAL CREDIT HOURS.....	15
TOTAL DEGREE CREDIT HOURS.....	60

Technical Electives

The following courses are approved for technical elective requirements:

GENERAL:

SKTR 1570 Welding: Codes & Inspections.....	2
SKTR 1675 Welding: Basic Principles of NDT.....	2
SKTR 1770 Welding: GRAW Plate.....	3
SKTR 2070 Welding: GTAW Pipe.....	3
SKTR 2280 Welding: Intermediate "V" Groove & Pipe I.....	3
SKTR 2370 Welding: SMAW Pipe I.....	3
SKTR 2470 Welding: SMAW Pipe II.....	3
SKTR 2570 Welding: GMAW Pipe.....	3
SKTR 2670 Welding: FCAW Pipe.....	3
SKTR 2780 Welding: Certification Preparation I.....	1

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT

(SELECT ONE)

	CR
ANTH 2202 Introduction to Cultural Anthropology.....	3
ECON 2200 Principles of Microeconomics.....	3
GEOG 2400 Economic and Social Geography.....	3
POLS 1100 American Government.....	3
PSY 1100 Introduction to Psychology.....	3
SOC 1101 Introduction to Sociology.....	3

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)

	CR
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/Non-Amer to 1500.....	3
HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500.....	3
HIST 2223 African-American History I: 1451-1876.....	3
HIST 2224 African-American History II: 1877-Present.....	3
HUM 1100 Introduction to Humanities.....	3
HUM 1270 Comparative Religions.....	3
MUS 1251 Survey of Music History.....	3
PHIL 1101 Introduction to Philosophy.....	3
PHIL 1130 Ethics.....	3

Facilities Maintenance Certificate Program

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.

Semester 1		CR
SKTR 1110	Electric: Fundamentals	2
SKTR 1120	Carpentry: Fundamentals.....	2
SKTR 1140	Plumbing: Introduction Supply Systems.....	2
SKTR 1180	Welding: Introduction to Stick.....	2
HVAC 1140	Principles of Refrigeration.....	3
TOTAL CREDIT HOURS		11

Semester 2		
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
TOTAL CREDIT HOURS		11

Semester 3		
SKTR 2010	Electrical: Wiring II	2
SKTR 2020	Carpentry: Structural Framing II	2
SKTR 2040	Plumbing: Intermediate Supply & DWV Systems	2
MULT 1140	Adult & Pediatric CPR	0.5
TOTAL CREDIT HOURS		6.5
TOTAL CERTIFICATE CREDIT HOURS.....		28.5

Facilities Maintenance Module Certificates

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.

Carpentry Module Certificate

COURSE		CR
Semester 1		
SKTR 1101	Survey of the Construction Industry.....	2
SKTR 1120	Carpentry: Fundamentals.....	2
SKTR 1300	Construction Industry Employability Skills.....	2
SKTR 1320	Carpentry: Structural Framing I	2
Semester 2		
SKTR 2020	Carpentry: Structural Framing II	2
SKTR 2120	Carpentry: Interior/Exterior Finish Systems	2
ESSH 1170	OSHA 10-Hour General Industry Safety & Health.....	1
TOTAL CREDIT HOURS		13
TOTAL CERTIFICATE CREDIT HOURS.....		13

Electrician Module Certificate

COURSE		CR
Semester 1		
SKTR 1101	Survey of the Construction Industry.....	2
SKTR 1110	Electric: Fundamentals	2
SKTR 1300	Construction Industry Employability Skills	2
SKTR 1310	Electric: Wiring I.....	2
Semester 2		
SKTR 2010	Electric: Wiring II	2
SKTR 2110	Electric: Repair & Service Practices	2
ESSH 1170	OSHA 10-Hour General Industry Safety & Health.....	1
TOTAL CREDIT HOURS.....		13
TOTAL CERTIFICATE CREDIT HOURS.....		13

Plumbing Module Certificate

COURSE		CR
Semester 1		
SKTR 1101	Survey of the Construction Industry.....	2
SKTR 1140	Plumbing: Introduction to Supply Systems.....	2
SKTR 1300	Construction Industry Employability Skills	2
SKTR 1340	Plumbing: Introduction to DWV Systems	2
Semester 2		
SKTR 2040	Plumbing: Intermediate Supply & DWV Systems	2
SKTR 2140	Plumbing: Repair & Service Practices	2
ESSH 1170	OSHA 10-Hour General Industry Safety & Health	1
TOTAL CREDIT HOURS.....		13
TOTAL CERTIFICATE CREDIT HOURS.....		13

Welding Module Certificate

COURSE		CR
Semester 1		
SKTR 1101	Survey of the Construction Industry.....	2
SKTR 1180	Welding: Introduction to Stick.....	2
SKTR 1300	Construction Industry Employability Skills	2
SKTR 1380	Welding: Introduction to MIG.....	2
Semester 2		
SKTR 2080	Welding: Intermediate Stick & MIG.....	2
SKTR 2180	Welding: Intermediate Applications I.....	2
ESSH 1170	OSHA 10-Hour General Industry Safety & Health	1
TOTAL CREDIT HOURS.....		13
TOTAL CERTIFICATE CREDIT HOURS.....		13

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.

COURSE	CR
Semester 1	
SKTR 1180 Welding: Introduction to Stick.....	2
SKTR 1380 Welding: Introduction to MIG.....	2
ENGT 1115 Engineering Graphics.....	3
TOTAL CREDIT HOURS.....	7

Semester 2	
SKTR 1470 Welding: Layout & Fit Up.....	2
SKTR 1480 Welding: Specifications & Drawings.....	2
SKTR 2080 Welding: Intermediate Stick & MIG.....	2
ESSH 1170 OSHA 10-Hour General Industry Safety & Health.....	1
TOTAL CREDIT HOURS.....	7

Semester 3	
SKTR 2180 Welding: Intermediate Applications I.....	2
SKTR 2185 Welding: Intermediate Applications II.....	2
MATH 1110 Mathematics for the Skilled Trades.....	3
TOTAL CREDIT HOURS.....	7

Semester 4	
SKTR 2370 Welding: SMAW PIPE I.....	3
SKTR 2470 Welding: SMAW PIPE II.....	3
SKTR 2780 Welding: Certification Preparation I.....	1
TOTAL CREDIT HOURS.....	7
TOTAL DEGREE CREDIT HOURS.....	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.

COURSE	CR
Semester 1	
SKTR 1180 Welding: Introduction to Stick.....	2
SKTR 1380 Welding: Introduction to MIG.....	2
ENGT 1115 Engineering Graphics.....	3
TOTAL CREDIT HOURS.....	7

Semester 2	
SKTR 1470 Welding: Layout & Fit Up.....	2
SKTR 1480 Welding: Specifications & Drawings.....	2
SKTR 2080 Welding: Intermediate Stick & MIG.....	2
ESSH 1170 OSHA 10-Hour General Industry Safety & Health.....	1
TOTAL CREDIT HOURS.....	7

Semester 3	
SKTR 2180 Welding: Intermediate Applications I.....	2
SKTR 2185 Welding: Intermediate Applications II.....	2
MATH 1110 Mathematics for the Skilled Trades.....	3
TOTAL CREDIT HOURS.....	7

Semester 4	
SKTR 2570 Welding: GMAW PIPE.....	3
SKTR 2670 Welding: FCAW Pipe.....	3
SKTR 2780 Welding: Certification Preparation I.....	1
TOTAL CREDIT HOURS.....	7
TOTAL DEGREE CREDIT HOURS.....	28

Intermediate Pipe & 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.

COURSE	CR
Semester 1	
SKTR 1180 Welding: Introduction to Stick.....	2
SKTR 1280 Welding: OxyFuel Methods & Plasma Cutting.....	2
SKTR 1380 Welding: Introduction to MIG.....	2
ENGT 1115 Engineering Graphics.....	3
TOTAL CREDIT HOURS.....	9

Semester 2	
SKTR 1480 Welding: Specifications & Drawings.....	2
SKTR 1580 Welding: Introduction to TIG Processes.....	3
ESSH 1170 OSHA 10-Hour General Industry Safety & Health.....	1
TOTAL CREDIT HOURS.....	6

Semester 3	
SKTR 1470 Welding: Layout & Fit Up.....	2
SKTR 2080 Welding: Intermediate Stick & MIG.....	2
MATH 1110 Mathematics for the Skilled Trades.....	3
TOTAL CREDIT HOURS.....	7

Semester 4	
SKTR 1770 Welding: GTAW PLATE.....	3
SKTR 2070 Welding: GTAW PIPE.....	3
SKTR 2780 Welding: Certification Preparation I.....	1
TOTAL CREDIT HOURS.....	7
TOTAL DEGREE CREDIT HOURS.....	29

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.

COURSE	CR
Semester 1	
SKTR 1180 Welding: Introduction to Stick.....	2
SKTR 1280 Welding: OxyFuel Methods & Plasma Cutting.....	2
SKTR 1380 Welding: Introduction to MIG.....	2
ENGT 1115 Engineering Graphics.....	3
TOTAL CREDIT HOURS.....	9
Semester 2	
SKTR 1480 Welding: Specifications & Drawings.....	2
SKTR 1580 Welding: Introduction to TIG Processes.....	3
ESSH 1170 OSHA 10-Hour General Industry Safety & Health.....	1
TOTAL CREDIT HOURS.....	6
Semester 3	
SKTR 2080 Welding: Intermediate Stick & MIG.....	2
SKTR 2180 Welding: Intermediate Applications I.....	2
MATH 1110 Mathematics for the Skilled Trades.....	3
TOTAL CREDIT HOURS.....	7
Semester 4	
SKTR 2185 Welding: Intermediate Applications II.....	2
SKTR 2280 Welding: Intermediate "V" Groove & Pipe.....	3
SKTR 2780 Welding: Certification Preparation I.....	1
TOTAL CREDIT HOURS.....	6
TOTAL CERTIFICATE CREDIT HOURS.....	28

Apprenticeship Readiness Certificate Programs

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 J.D. White, 614-287-5211, jwhite02@cscc.edu.

Carpenter Apprenticeship Readiness Certificate

COURSE	CR
Semester 1	
SKTR 1101 Survey of the Construction Industry.....	2
SKTR 1120 Carpentry: Fundamentals.....	2
SKTR 1320 Carpentry: Structural Framing I.....	2
ARCH 1110 Basic Manual Drafting.....	1
ENGL 1100 Composition I.....	3
MATH 1020 Beginning Algebra I.....	2
TOTAL CREDIT HOURS.....	12
Semester 2	
CMGT 1171 Sustainability Management.....	3
SKTR 1300 Construction Industry Employability Skills.....	2
SKTR 2020 Carpentry: Structural Framing 2.....	2
SKTR 2120 Interior/Exterior Finish Systems.....	2
CMGT 1121 Construction Drawings.....	3
ESSH 1160 OSHA 10 Hour Construction Safety & Health.....	1
TOTAL CREDIT HOURS.....	13
TOTAL DEGREE CREDIT HOURS.....	25

Electrician Apprenticeship Readiness Certificate

COURSE	CR
Semester 1	
SKTR 1101 Survey of the Construction Industry.....	2
SKTR 1110 Electrical: Fundamentals.....	2
SKTR 1310 Electrical: Wiring I.....	2
ARCH 1110 Basic Manual Drafting.....	1
ENGL 1100 Composition I.....	3
MATH 1020 Beginning Algebra I.....	2
TOTAL CREDIT HOURS.....	12
Semester 2	
HVAC 1280 Wiring Circuits II.....	3
SKTR 1300 Construction Industry Employability Skills.....	2
SKTR 2010 Electrical: Wiring II.....	2
SKTR 2110 Electrical: Repair & Service Practices.....	2
CMGT 1121 Construction Drawings.....	3
ESSH 1160 OSHA 10 Hour Construction Safety & Health.....	1
TOTAL CREDIT HOURS.....	13
TOTAL DEGREE CREDIT HOURS.....	25

Plumbing Apprenticeship Readiness Certificate

COURSE	CR
Semester 1	
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 1110 Basic Manual Drafting.....	1
ENGL 1100 Composition I.....	3
MATH 1020 Beginning Algebra I.....	2
TOTAL CREDIT HOURS.....	12
Semester 2	
SKTR 1300 Construction Industry Employability Skills.....	2
SKTR 2040 Plumbing: Intermediate Supply & DWV Systems.....	2
SKTR 2140 Plumbing: Repair & Service Practices.....	2
HVAC 1140 Principles of Refrigeration.....	3
CMGT 1121 Construction Drawings.....	3
ESSH 1160 OSHA 10 Hour Construction Safety & Health.....	1
TOTAL CREDIT HOURS.....	13
TOTAL DEGREE CREDIT HOURS.....	25

Sheet Metal Apprenticeship Readiness Certificate

COURSE	CR
Semester 1	
SKTR 1101 Survey of the Construction Industry.....	2
SKTR 1180 Welding: Introduction to Stick.....	2
SKTR 1380 Welding: Introduction to MIG.....	2
ARCH 1110 Basic Manual Drafting.....	1
ENGL 1100 Composition I.....	3
MATH 1020 Beginning Algebra I.....	2
TOTAL CREDIT HOURS.....	12
Semester 2	
SKTR 1300 Construction Industry Employability Skills.....	2
SKTR 2080 Welding: Intermediate Stick & MIG.....	2
SKTR 2180 Welding: Intermediate Applications I.....	2
HVAC 1120 Load Calculations.....	3
CMGT 1121 Construction Drawings.....	3
ESSH 1160 OSHA 10 Hour Construction Safety & Health.....	1
TOTAL CREDIT HOURS.....	13
TOTAL DEGREE CREDIT HOURS.....	25

Social and Human Services

(formerly Mental Health/Addiction Studies/Developmental Disabilities)

Associate Degree – Social and Human Services
Advanced Addiction Studies Certificate
Advanced Developmental Disabilities Certificate
Advanced Mental Health Certificate
Chemical Dependency Counselor Assistant (CDCA) Certificate
Community/Habilitation Assistant Certificate
Prevention Certificate
Supported Employment Specialist Certificate
Supportive Housing Assistant Certificate
Supportive Housing Specialist Certificate

With social, economic, and moral issues constantly changing, society is faced with increasingly complex problems which require professional, caring helpers. This evolution has created a high demand for human service specialists. Human service specialists have a professionally and personally challenging role in providing services to both children and adults with a variety of needs and/or disabilities. Students in this program are prepared to provide support to persons in difficult life situations, persons with developmental disabilities, emotional/social/environmental concerns, mental health disorders, and substance use disorders as well as individuals who have co-occurring disorders. Graduates work with treatment providers, case managers, service coordinators, behavior specialists, educators, psychiatrists, psychologists, counselors, and social workers.

Diverse educational approaches including videotaping, simulated situations, role-playing, online discussion boards and interaction in small group seminars are used to help students develop the knowledge, helping and engagement skills, and attitudes necessary to succeed in this profession. The program stresses development and exploration of both personal and professional characteristics graduates will need to be effective helpers.

The associate degree program prepares students with knowledge and skills to support individuals with diverse needs in a variety of settings. The five semester program includes 420 hours of hands-on experience under the direct supervision of professionals in local and adjacent county agencies. Practicum experiences may occur in a variety of community agencies which include mental health centers, day habilitation programs, psychiatric and general hospitals, schools, community and senior centers, rehabilitation facilities, drug and alcohol treatment centers, homeless shelters, supported living and residential environments, vocational and supported employment, foster care facilities, youth treatment programs, and treatment programs within the criminal justice system. Practicum assignments cannot be guaranteed for persons with prior criminal convictions, and for those with limited availability for practicum hours or locations.

SAHS 1114: Introduction to Addiction Studies meets the Ohio Chemical Dependency Board (OCDP) chemical dependency specific education requirements for the CDCA Phase I. SAHS 2114: CDCA Phase II meets the OCDP chemical dependency education require for the CDCA Phase II. Graduates who complete the associate degree program meet the Licensed Chemical Dependency Counselor II (LCDC II) degree requirement and are eligible to apply for a Certificate of Registration as a Social Work Assistant with the State of Ohio Counselor/Social Worker and Marriage and Family Therapist Board.

The Social and Human Services program offers two classes that meet the Ohio Board of Regents Transfer Assurance Guidelines (TAG). SAHS 1111: Introduction to Social Work/Mental Health and SAHS 2251: Social Welfare and Policy

The program also offers the certificate programs listed below.

Advanced Mental Health Certificate

This 28-hour 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.

Advanced Addiction Studies Certificate

This is a 28-hour program for students with an associate degree in a related field or a bachelor's or a master's degree in any field. Completion of this certificate meets the acceptable chemical dependency education hours required for licensure in the state of Ohio. Students may participate in up to 420 hours of supervised clinical practicum in addiction studies. An interview with the certificate coordinator is required prior to acceptance into the certificate program.

Advanced Developmental Disabilities Certificate

This 28-hour program is designed for students with an associate degree in a related field, a bachelor's or master's degree in any field. The curriculum offers courses focused on the knowledge and skills necessary to support individuals with Developmental Disabilities. 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.

Community/Habilitation Assistant Certificate

This is a 16 credit-hour program for students who have a developmental disability. Course work is adapted to a fifth grade reading level. The curriculum provides students with the knowledge and skills necessary to work as an assistant in the Developmental Disabilities field. Students participate in two clinical practicum experiences in a variety of human service agencies.

Prevention Certificate

This certificate meets both the required Prevention Assistant education hours as well as the content in the specified foundations and domains for the Ohio Certified Prevention Specialist I (OCPS). The Practicum will meet the practical experience required in the five performance domain areas for the OCPS I.

Supported Employment Specialist Certificate

This certificate assists with workforce development to better prepare individuals to work in the supported employment arena. Acceptance by department faculty is required.

Supportive Housing Specialist Certificate

This certificate assists with workforce development to better prepare individuals to work in the supported housing arena. Acceptance by department faculty is required.

Courses for licensure and certification:

Courses SAHS 1112, SAHS 1115, SAHS 1130, SAHS 1150, SAHS 2861, SAHS 2862, SAHS 2951 and SAHS 2952 are approved by the Ohio Department of Developmental Disabilities in obtaining adult service certification.

All SAHS courses are accepted by Ohio Chemical Dependency Professionals Board and the Ohio Counselor, Social Worker, Marriage & Family Therapist Boards for certification and licensure renewal hours.

Program Outcomes:

Upon completion of the Associate Degree in Social and Human Services, the graduate will be able to:

- Recognize the diverse settings and roles of human service workers in social work, mental health, developmental disabilities, and addictions treatment
- Collect data, make assessments, develop and implement individualized, person-centered treatment/service or relapse prevention plans
- Use helping and engagement skills
- Recognize and utilize the 12-core functions of an addictions counselor
- Utilize the group setting as a treatment modality
- Apply conflict resolution skills

- Recognize stages of change and implement appropriate intervention strategies
- Utilize a variety of recovery resources
- Apply the principles of motivational interviewing in the helping relationship
- Demonstrate ethical behavior
- Apply service coordination/case management skills
- Demonstrate self-assessment skills.

The Social and Human Services Program has, or is in the process of negotiating, articulation agreements and/or transfer relationships with the following four-year colleges/universities: Capital University, The Ohio State University, Ohio Christian University, Mount Vernon Nazarene University, University of Tiffin, Ohio Dominican University, Otterbein University, Franklin University, Indiana Wesleyan University and the University of Cincinnati.

Because students and workers in the health care field may be exposed to infectious materials and communicable diseases, the program emphasizes safety, prevention and the use of universal precautions. Any exposure or safety concern must be reported to the clinical coordinator.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Social and Human Services Program:

1. Submission of an official copy of high school transcript verifying graduation or GED to the Records and Registration department
2. Attendance at a Social and Human Services program information session
3. Completion of ENGL 1100 and PSY 1100 with grade of "C" or higher
4. Completion of DEV 0114 or placement into MATH 1020
5. Completion of the following four SAHS courses with grade of "C" or higher:
 - a. SAHS 1111 Introduction to Social Work/Mental Health
 - b. SAHS 1112 Introduction to Dev. Disabilities
 - c. SAHS 1114 Introduction to Addiction Studies
 - d. SAHS 1115 Introductory Helping Skills
6. Completion of CSCI 1101 Computer Concepts & Applications
7. Admission to the Social and Human Services program will require student to have a minimum GPA of 2.5 in prerequisites courses
8. Compliance with and completion of all additional program requirements outlined in the program's admission policy
9. Completion of criminal background check process with the results prior to attending the admission interview.
10. Completion and submission of the SAHS Admissions packet prior to attendance of the admission interview
11. Mandatory attendance at both a program information session and a group admissions interview
12. The SAHS Program has a limited number of practicum opportunities for individuals with prior criminal offenses and will institute a priority admission process, as needed, to be determined by a student's GPA.

All SAHS courses must be completed with grade of "C" or higher.

Social and Human Services

COURSE	CR
Semester 1	
SAHS 1111 Introduction to Social Work/Mental Health.....	3
SAHS 1112 Introduction to Developmental Disabilities.....	3
COLS 1100 First Year Experience Seminar.....	1
ENGL 1100 Composition I.....	3
PSY 1100 Introduction to Psychology.....	3
TOTAL CREDIT HOURS	13
Semester 2	
SAHS 1114 Introduction to Addiction Studies.....	3
SAHS 1115 Introductory Helping Skills.....	3
CSCI 1101 Computer Concepts & Applications.....	3
PSY 2331 Abnormal Psychology.....	3
SOC 1101 Introduction to Sociology.....	3
TOTAL CREDIT HOURS	15
Semester 3	
SAHS 1120 Service Delivery & Ethics in Human Serv/Social Work.....	2
SAHS 1130 Intervention Strategies.....	2
SAHS 1140 Family & Aging Services.....	2
SAHS 1150 Pharmacology in Human Services.....	1
MATH 1050 Elementary Algebra.....	5
XXXX XXXX Basic Elective - See advisor for transfer course options.....	2
TOTAL CREDIT HOURS	14
Semester 4	
SAHS 2241 Advanced Helping Skills.....	2
SAHS 2861 Fundamentals in Social & Human Services.....	4
SAHS 2901 Practicum & Seminar I in Social & Human Services.....	4
NAT XXXX Refer to approved GE-NAT list.....	4
TOTAL CREDIT HOURS	14
Semester 5	
SAHS 2251 Social Welfare & Policy.....	3
SAHS 2862 Treatment Approaches in Social & Human Services.....	4
SAHS 2922 Practicum & Seminar II Social & Human Services.....	4
SAHS XXXX Technical Elective.....	1
HUM XXXX Humanities elective - see advisor for transfer course options.....	3
TOTAL CREDIT HOURS	16
TOTAL DEGREE CREDIT HOURS	72

Technical Electives

The following courses are approved for technical elective requirements:

SAHS 1110	Careers in Human Services.....	1
SAHS 1300	Supported Employment.....	2
SAHS 1301	Supportive Housing.....	2
SAHS 1400	Screening Substance Use Disorders using SBIRT.....	1
SAHS 1401	Integrated Healthcare.....	2
SAHS 1402	Self-care for Human Services Professionals.....	2
SAHS 2114	CDCA Phase II.....	2
SAHS 2194	Special Topics in Social and Human Serv.....	1 to 4
SAHS 2234	Therapeutic Laughter.....	2
SAHS 2236	Prevention Strategies.....	3
SAHS 2261	Advanced Addictions Treatment.....	2
SAHS 2271	Assessment & Treatment of Problem Gambling.....	2
SAHS 2905	Intervention Strategies Practicum & Seminar in Developmental Disabilities.....	4
SAHS 2931	Mental Health Practicum & Seminar I.....	3.5
SAHS 2932	Mental Health Practicum & Seminar II.....	3.5
SAHS 2936	Practicum in Prevention Strategies.....	3.5
SAHS 2941	Addiction Studies Practicum & Seminar I.....	3.5
SAHS 2942	Addiction Studies Practicum & Seminar II.....	3.5
SAHS 2951	Developmental Disabilities Practicum & Seminar I.....	3.5
SAHS 2952	Developmental Disabilities Practicum & Seminar II.....	3.5

Basic Electives

The following courses are approved for basic elective requirements:

ANTH 2202	People & Cultures: Intro to Cultural Anthropology.....	3
BIO 1112	Human Biology.....	4
COMM 1105	Oral Communication.....	3
COMM 2200	Business Communication.....	3
ECON 2200	Principles of Microeconomics.....	3
GEOG 2400	Economic & Social Geography.....	3
PHIL 1101	Introduction to Philosophy.....	3
POLS 1100	Introduction to American Government.....	3
PSY 2340	Human Growth & Development.....	3
PSY 2530	Psychology of Personality.....	3
SOC 2202	Social Problems.....	3
THEA 1100	Introduction to Theatre.....	3

Approved General Education (GE) List

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT (SELECT ONE)

COURSE	CR
ANTH 2200 Introduction to Biological Anthropology.....	3
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 Introduction to Biology.....	4
BIO 1112 Human Biology.....	4
BIO 1113 Biological Sciences I.....	4
BIO 1114 Biological Sciences II.....	4
BIO 1125 Plant Biology.....	4
BIO 1127 Environmental Science I.....	4
BIO 2215 Introduction to Microbiology.....	4
BIO 2232 Human Physiology.....	4
BIO 2300 Human Anatomy.....	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
CHEM 1200 Introduction to General and Organic Chemistry.....	5
GEOG 1900 Weather & Climate.....	4
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 Physics II.....	5

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE).....CR

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/Non-Amer to 1500.....	3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500.....	3
HIST 2223	African-American History I: 1451-1876.....	3
HIST 2224	African-American History II: 1877-Present.....	3
HUM 1100	Introduction to Humanities.....	3
HUM 1270	Comparative Religions.....	3
MUS 1251	Survey of Music History.....	3
PHIL 1101	Introduction to Philosophy.....	3
PHIL 1130	Ethics.....	3

Advanced Mental Health Certificate *

COURSE		CR
Semester 1		
SAHS 1111	Introduction to Social Work/Mental Health	3
SAHS 1115	Introductory Helping Skills	3
SAHS 1120	Service Delivery & Ethics in Human Serv/Social Work ...	2
SAHS 1130	Intervention Strategies	2
SAHS 1150	Pharmacology in Human Services	1
TOTAL CREDIT HOURS		11

Semester 2		
SAHS 2241	Advanced Helping Skills	2
SAHS 2861	Fundamentals Social & Human Services	4
SAHS 2931	Mental Health Practicum & Seminar I	3.5
TOTAL CREDIT HOURS		9.5

Semester 3		
SAHS 2862	Treatment Approaches in Social & Human Services	4
SAHS 2932	Mental Health Practicum & Seminar II	3.5
TOTAL CREDIT HOURS		7.5
TOTAL CERTIFICATE CREDIT HOURS		28

*An associate degree in a related field, a bachelor's or master's degree in any field of study is required.

Advanced Addiction Studies Certificate*

COURSE		CR
Semester 1		
SAHS 1114	Introduction to Addiction Studies	3
SAHS 1115	Introductory Helping Skills	3
SAHS 1120	Service Delivery & Ethics in Human Serv/Social Work ...	2
SAHS 1130	Intervention Strategies	2
SAHS 1150	Pharmacology in Human Services	1
TOTAL CREDIT HOURS		11

Semester 2		
SAHS 2241	Advanced Helping Skills	2
SAHS 2861	Fundamentals Social and Human Serv	4
SAHS 2941	Addiction Studies Practicum & Seminar I	3.5
TOTAL CREDIT HOURS		9.5

Semester 3		
SAHS 1140	Family & Aging Services	2
SAHS 2261	Advanced Additions Treatment	2
SAHS 2942	Addiction Studies Practicum & Seminar II	3.5
TOTAL CREDIT HOURS		7.5
TOTAL CERTIFICATE CREDIT HOURS		28

*An associate degree in a related field or a bachelor's or master's degree in any field is required.

Advanced Developmental Disabilities Certificate*

COURSE		CR
Semester 1		
SAHS 1112	Introduction to Developmental Disabilities	3
SAHS 1115	Introductory Helping Skills	3
SAHS 1120	Service Delivery & Ethics in Human Serv/Social Work ...	2
SAHS 1130	Intervention Strategies	2
SAHS 1150	Pharmacology in Human Services	1
TOTAL CREDIT HOURS		11

Semester 2		
SAHS 2241	Advanced Helping Skills	2
SAHS 2861	Fundamentals Social and Human Serv	4
SAHS 2951	Developmental Disabilities Practicum & Seminar 1	3.5
TOTAL CREDIT HOURS		9.5

Semester 3		
SAHS 2862	Treatment Approaches in Social and Human Services	4
SAHS 2952	Developmental Disabilities Practicum & Seminar II	3.5
TOTAL CREDIT HOURS		7.5
TOTAL CERTIFICATE CREDIT HOURS		28

*An associate degree in a related field or a bachelor's or master's degree in any field of study is required.

Chemical Dependency Counselor Assistant (CDCA) Certificate

COURSE		CR
Semester 1		
SAHS 1114	Introduction to Addiction Studies	3
TOTAL CREDIT HOURS		3

Semester 2		
SAHS 2114	CDCA Phase II	2
TOTAL CREDIT HOURS		2
TOTAL CERTIFICATE CREDIT HOURS		5

Community/Habilitation Assistant Certificate

COURSE		CR
Summer Semester		
COLS 1100	First Year Experience Seminar	1
SAHS 1120	Service Delivery & Ethics in Human Serv/Social Work ...	2
TOTAL CREDIT HOURS		3

Semester 1		
SAHS 1112	Introduction to Developmental Disabilities	3
SAHS 2901	Practicum/Seminar I in Social & Human Services	4
TOTAL CREDIT HOURS		7.7

Semester 2		
SAHS 1130	Intervention Strategies	2
SAHS 2905	Intervention Strategies Practicum & Seminar	4
TOTAL CREDIT HOURS		6
TOTAL CERTIFICATE CREDIT HOURS		16

* Optional additional practicum is contingent upon individualized student learning plan

Prevention Certificate

COURSE		CR
Semester 1		
SAHS 1120	Serv. Del. & Ethics in Human Serv/Social Work	2
PSY 1100	Introduction to Psychology	3
ENGL 1100	Composition I	3
TOTAL CREDIT HOURS		8

Semester 2		
SAHS 2236	Prevention Services	3
SAHS 2936	Practicum in Prevention Services	3.5
TOTAL CREDIT HOURS		6.5
TOTAL CERTIFICATE CREDIT HOURS		14.5

Certificate programs may be offered with varying course sequencing and class locations

Sport and Exercise Studies

Associate Degree – Exercise Science Major

Athletic Performance Track

Associate Degree – Physical Education Major

Coaching Track

Associate Degree – Recreation & Leisure Studies Major

Associate Degree – Sport Management Major

Associate Degree – Wellness & Health Promotion Major

Exercise Specialist Certificate

Youth Coaching Certificate

The Sport and Exercise Studies program prepares students to work in sport, recreation, health and/or fitness centers. From private clubs to public facilities, trained managers, instructors, and programmers are needed to develop, train, staff, and implement programming to address the wellness 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, 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 a managerial or technical position within the sport and fitness field. The Sport and Exercise Studies program offers five majors from which to choose: Exercise Science, Physical Education and Sport Management.

Upon completion of the Associate Degree in a Sport and Exercise Studies program, the graduate will be able to:

- Determine a target market for sport and exercise programs using needs-based evidence
- Use evaluation as a means for continuous improvement of sport and exercise programming
- Actively pursue professional development opportunities
- Model a lifestyle of physical activity.

The Exercise Science Major graduate will be able to:

- Accurately interpret health assessment and risk stratification data
- Perform industry-standard measures of physical fitness assessments
- Use assessment-based data, in consultation with client needs and interests, to develop exercise prescriptions
- Monitor client physiological responses to exercise prescription, redefining appropriate goals as needed
- Educate clients and community about the benefits of increased physical activity across the life span.

The Physical Education Major graduate will be able to:

- Coordinate comprehensive sport programming to meet stated institutional goals and objectives
- Select and evaluate coaching staff and related personnel in a sport setting
- Secure supplemental funding sources for private and/or public sport programming

- Demonstrate applicable research skills and technology assisting sport
- Choose appropriate pedagogical methods for each sport
- Design and manage physical facilities and equipment to provide a safe, appropriate and cost-neutral facility.

The Recreation & Leisure Management Major graduate will be able to:

- Demonstrate skill in teaching, leadership, and supervisory activities in the sport and leisure industry.
- Demonstrate the effect of cultural and socio-economic affect sport and leisure has on communities.
- Demonstrate the skills necessary to successfully operate an organization in both the public and private sectors relying on both profit and non-profit constraints.

The Sport Management Major graduate will be able to:

- Demonstrate skill in planning and administering effective recreational, fitness, wellness and sport activities in the community
- Assess the potential for behavioral change in each client, creating maximal opportunity for success
- 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.

The Wellness & Health Promotion Major graduate will be able 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.
- Design practical approaches for meeting the challenges of the new healthcare, fitness, and wellness marketplace.

Traditional Classes and Online/Distance Learning Choices

The Sport and Exercise Studies program is proud to offer traditional and online/distance learning options for our students. The traditional classroom experience continues to provide students with high quality instruction in a small classroom setting on our campuses and at our regional learning center locations. The Sports and Exercise Studies program also offers distance learning (DL)

courses that provide the same high quality learning as traditional instruction, yet with the flexibility of being able to complete course work online.

The online/distance learning option for the Sport Management Major requires a student to apply for admittance to the program. Some courses may require face-to-face learning or transfer credits from previous learning. Applicants should contact the Sport and Exercise Studies program coordinator for details on admission.

Students graduating from Columbus State’s Sport and Exercise Studies program can transfer into the following programs to complete bachelor’s degrees via online/distance learning:

- Wellness and Fitness major at the California University of Pennsylvania
- Sport Management or Sport Coaching at the United States Sports Academy.
- Students can inquire about traditional learning program transfers into baccalaureate degree programs as well.

Specific Program Admissions Information

Listed below are additional requirements for admission to Sport and Exercise Studies:

- High school graduate or GED equivalency
- Placement into ENGL 1100 Composition I
- Placement into MATH 1010 Math for Business Applications.

Exercise Science Major

COURSE	CR
Semester 1	
ENGL 1100	Composition I.....3
MATH 1148	College Algebra .....4
SES 1100	Personal Fitness Concepts.....3
CHEM 1111	Elementary Chemistry I.....4
COLS 1100	First Year Experience Seminar.....1
TOTAL CREDIT HOURS	.....15
Semester 2	
BIO 2300	Human Anatomy .....4
HNTR 1153	Nutrition for a Healthy Lifestyle.....3
SES 1101	Introduction to Sport & Exercise Studies .....3
PSY 1100	Introduction to Psychology .....3
SES XXXX	Physical Education Requirement: (Select one) 1104, 1105, 1106, 1108, 1109, 1110, or 1112 .....1
TOTAL CREDIT HOURS	.....14
Summer Semester	
BIO 2232	Human Physiology .....4
SES 2437	Health Promotion .....3
SES 2415	Advanced Strength & Resistance Training Concepts .....4
SES 2440	Exercise Physiology .....4
TOTAL CREDIT HOURS	.....15

Semester 3	
SBS XXXX	Refer to approved GE - SBS list .....3
SES 2535	Sport Law.....3
SES 2426	Athletic Injury Control & First Aid .....3
SES 2438	Fitness Concepts across the Lifespan .....3
ENGL 2XX7	2367 or 2567 or 2667 or 2767 Composition II .....3
TOTAL CREDIT HOURS	.....15

Semester 4	
SES 2441	Kinesiology .....4
SES 2442	Exercise Prescription & Quantitative Analysis.....3
HUM XXXX	Refer to approved GE - HUM list.....3
SES 2950	SES Practicum/Seminar .....2
TOTAL CREDIT HOURS	.....12
TOTAL DEGREE CREDIT HOURS	.....71
Students should request a plan of study from their faculty advisor.	

Exercise Science Major – Athletic Performance Track

COURSE	CR
Semester 1	
ENGL 1100	Composition I.....3
MATH 1148	College Algebra .....4
SES 1101	Introduction to Sport & Exercise Studies .....3
CHEM 1111	Elementary Chemistry I.....4
COLS 1100	First Year Experience Seminar.....1
TOTAL CREDIT HOURS	.....15
Semester 2	
BIO 2300	Human Anatomy .....4
HNTR 1153	Nutrition for a Healthy Lifestyle.....3
SES 2410	Conditioning & Training the Youth Athlete.....3
SES 2625	Concepts of Coaching.....3
SES XXXX	Physical Education Requirement: (Select one) 1104, 1105, 1106, 1108, 1109, 1110, or 1112 .....1
TOTAL CREDIT HOURS	.....14

Summer Semester	
BIO 2232	Human Physiology .....4
SES 2415	Advanced Strength & Resistance Training Concepts .....4
SES 2440	Exercise Physiology .....4
TOTAL CREDIT HOURS	.....12

Semester 3	
SBS XXXX	Refer to approved GE - SBS list .....3
SES 2443	Advanced Athletic Assessment.....3
SES 2660	Ethics in Sport.....3
ENGL 2XX7	2367 or 2567 or 2667 or 2767 Composition II .....3
TOTAL CREDIT HOURS	.....12

Semester 4	
SES 2441	Kinesiology .....4
SES 2444	Advanced Athletic Conditioning.....3
HUM XXXX	Refer to approved GE - HUM list.....3
SES 2950	SES Practicum/Seminar .....2
TOTAL CREDIT HOURS	.....12
TOTAL DEGREE CREDIT HOURS	.....65
Students should request a plan of study from their faculty advisor.	

Physical Education Major

COURSE	CR
Semester 1	
ENGL 1100 Composition I.....	3
MATH 1148 College Algebra	4
SES 1100 Personal Fitness Concepts.....	3
SBS XXXX Refer to approved GE - SBS list.....	3
SES 1327 Individual Sport & Activities.....	2
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS	16
Semester 2	
BIO 2300 Human Anatomy	4
SES 1101 Introduction to Sport & Exercise Studies	3
SES 1328 Team Sport & Activities.....	2
SES XXXX Physical Education Requirement: (Select one) 1104, 1105, 1106, 1108, 1109, 1110, or 1112	1
PSY 1100 Introduction to Psychology	3
TOTAL CREDIT HOURS	13
Summer Semester	
BIO 2232 Human Physiology	4
SES 2680 History of Physical Education/Sport.....	3

SES 2524 Sport Management Foundations	3
SES 2625 Concepts of Coaching	3
TOTAL CREDIT HOURS	13

Semester 3	
SES 2535 Sport Law.....	3
SES 2440 Exercise Physiology.....	4
HUM XXXX Refer to approved GE - HUM list.....	3
PSY 2200 Educational Psychology.....	3
SES 2950 SES Practicum/Seminar	2
TOTAL CREDIT HOURS	15

Semester 4	
HNTR1153 Nutrition for a Healthy Lifestyle.....	3
SES 2544 Recreational Administration & Programming in Sports.....	3
SES 2426 Athletic Injury Control & First Aid	3
ENGL 2XX7 2367 or 2567 or 2667 or 2767 Composition II	3
SES 2441 Kinesiology	4
TOTAL CREDIT HOURS	16
TOTAL DEGREE CREDIT HOURS	73

Students should request a plan of study from their faculty advisor.

Physical Education Major – Coaching Track

COURSE	CR
Semester 1	
ENGL 1100 Composition I.....	3
MATH 1010 Mathematics for Business Applications.....	4
SES 1100 Personal Fitness Concepts.....	3
SBS XXXX Refer to approved GE - SBS list.....	3
COLS 1100 First Year Experience Seminar.....	1
TOTAL CREDIT HOURS	14
Semester 2	
BIO 1121 Anatomy & Physiology I or BIO 2300 Human Anatomy	4
SES 1101 Introduction to Sport & Exercise Studies	3
SES 1327 Individual Sport & Activities or SES 1328 Team Sport & Activities.....	2
SES 2625 Concepts of Coaching	3
TOTAL CREDIT HOURS	12
Summer Semester	
BIO 1122 Anatomy & Physiology II or BIO 2232 Human Physiology	4

SES 2524 Sport Management Foundations	3
SES 2660 Ethics in Sport.....	3
SES 2950 SES Practicum/Seminar	2
TOTAL CREDIT HOURS	12

Semester 3	
SES 2410 Conditioning & Training the Youth Athlete.....	3
SES 2626 Coaching the Young Athlete	3
SES 2670 Sport Psychology	3
HUM XXXX Refer to approved GE - HUM list.....	3
TOTAL CREDIT HOURS	12

Semester 4	
HNTR 1153 Nutrition for a Healthy Lifestyle.....	3
SES 2535 Sport Law.....	3
SES 2426 Athletic Injury Control & First Aid	3
ENGL 2XX7 2367 or 2567 or 2667 or 2767 Composition II	3
TOTAL CREDIT HOURS	12
TOTAL DEGREE CREDIT HOURS	62

Students should request a plan of study from their faculty advisor.

Recreation & Leisure Studies Major

COURSE	CR
Semester 1	
SES 1100 Personal Fitness Concepts.....	3
ANTH 2202 Introduction to Cultural Anthropology	3
COLS 1100 First Year Experience Seminar.....	1
ENGL 1100 Composition I.....	3
MATH 1010 Mathematics for Business Applications.....	4
TOTAL CREDIT HOURS	14
Semester 2	
SES 1101 Introduction to Sport & Exercise Studies	3
SES 1102 Recreation & Leisure Operations.....	3
GEOL 1101 Introduction to Earth Science.....	4
HOSP 2273 Casino & Gaming Operations.....	2
PSY 1100 Introduction to Psychology	3
TOTAL CREDIT HOURS	15

Summer Semester	
SES 2524 Sport Management Foundations	3
SES 2535 Sport Law.....	3
SES 2700 Sport Tourism.....	3
BMGT 2216 Business Ethics	3
SES XXXX Technical Elective.....	3
TOTAL CREDIT HOURS	15

Semester 3	
SES 2710 Sport Finance	3
SES 2720 Facilities Management.....	3
SES 2730 Security Management Sport & Special Events.....	3
SES 2950 SES Practicum/Seminar I.....	2
ENGL 2XX7 2367 or 2567 or 2667 or 2767 Composition II	3
TOTAL CREDIT HOURS	14

Semester 4		
SES 2529	Sport and Event Management.....	3
SES 2534	Sport Marketing.....	3
HIST XXXX	HIST 1111, 1112, 1151, 1152 or 2223.....	3
HOSP 2226	Event Menu Planning.....	2
SES XXXX	Technical Elective.....	3
TOTAL CREDIT HOURS		14
TOTAL DEGREE CREDIT HOURS		72

Students should request a plan of study from their faculty advisor.

Technical Electives

The following courses are approved for technical elective requirements:

SES 2528	Casino Culture	3
SES 2694	SPT: Sport Promotion and Public Relations.....	3
SES 2711	Financial Controls & Regulations.....	3

Sport Management Major

COURSE		CR
Semester 1		
ENGL 1100	Composition I.....	3
MATH 1010	Mathematics for Business Applications.....	4
SES 1100	Personal Fitness Concepts.....	3
SBS XXXX	Refer to approved GE - SBS list.....	3
COLS 1100	First Year Experience Seminar.....	1
TOTAL CREDIT HOURS		14

Semester 2		
BIO 1121	Anatomy and Physiology I or	
BIO 2300	Human Anatomy.....	4
SES 1101	Introduction to Sport & Exercise Studies.....	3
HNTR 1153	Nutrition for a Healthy Lifestyle.....	3
SES XXXX	Physical Education Requirement: (Select one) 1104, 1105, 1106, 1108, 1109, 1110, or 1112.....	1
PSY 1100	Introduction to Psychology.....	3
TOTAL CREDIT HOURS		14

Summer Semester

BIO 1122	Anatomy and Physiology II or	
BIO 2232	Human Physiology.....	4

SES 2535	Sport Law.....	3
SES XXXX	Technical Elective.....	2 - 3
SES 2524	Sport Management Foundations.....	3
TOTAL CREDIT HOURS		12-13

Semester 3

SES 2950	SES Practicum/Seminar.....	2
SES 2440	Exercise Physiology.....	4
SES 2544	Recreational Administration & Programming in Sports.....	3
ENGL 2XXX7	2367 or 2567 or 2667 or 2767 Composition II.....	3
SES 2710	Sport Finance.....	3
TOTAL CREDIT HOURS		15

Semester 4

SES XXXX	Technical Elective.....	2 - 3
HUM XXXX	Refer to approved GE - HUM list.....	3
SES 2426	Athletic Injury Control & First Aid.....	3
SES 2534	Sport Marketing.....	3
BMGT 1102	Interpersonal Skills or.....	
HOSP 2273	Gaming Operations.....	2
TOTAL CREDIT HOURS		13-14
TOTAL DEGREE CREDIT HOURS		67-70

Students should request a plan of study from their faculty advisor.

Wellness & Health Promotion Major

Semester 1		
SES 1100	Personal Fitness Concepts.....	3
CHEM 1111	Elementary Chemistry I.....	4
COLS 1100	First Year Experience Seminar.....	1
ENGL 1100	Composition I.....	3
MATH 1148	College Algebra.....	4
TOTAL CREDIT HOURS		15

Semester 2		
SES 1101	Introduction to Sport & Exercise Studies.....	3
BIO 2300	Human Anatomy.....	4
HNTR 1153	Nutrition for a Healthy Lifestyle.....	3
PSY 1100	Introduction to Psychology.....	3
TOTAL CREDIT HOURS		13

Summer Semester

SES 2437	Health Promotion.....	3
SES 2440	Exercise Physiology.....	4
SES 2740	Dimensions of Wellness.....	3
BIO 2232	Human Physiology.....	4
TOTAL CREDIT HOURS		14

Semester 3		
SES 2438	Fitness Concepts Across the Lifespan.....	3
SES 2535	Sport Law.....	3
SES 2750	Chronological & Physiological Wellness in Humans.....	3
ANTH 2202	Introduction to Cultural Anthropology.....	3
ENGL 2XXX7	2367 or 2567 or 2667 or 2767 Composition II.....	3
TOTAL CREDIT HOURS		15

Semester 4

SES XXXX	Physical Education Requirement: (Select one) 1104, 1105, 1106, 1108, 1109, 1110, or 1112.....	1
SES 2760	Clinical and Corporate Wellness.....	3
SES 2770	Society and Wellness.....	3
SES 2950	SES Practicum/Seminar.....	2
HIST XXXX	HIST 1111, 1112, 1151, 1152 or 2223.....	3
TOTAL CREDIT HOURS		12
TOTAL DEGREE CREDIT HOURS		69

Students should request a plan of study from their faculty advisor.

Technical Electives

SES 1327	Individual Sport & Activity.....	2
SES 1328	Team Sport & Activity.....	2
SES 2213	Aquatics Management.....	2
SES 2214	Aerobic & Group Fitness.....	2
SES 2216	Basics of Golf.....	2
SES 2217	Tae Kwon Do.....	2
SES 2222	Tennis.....	2
SES 2223	Racquetball.....	2
SES 2233	Outdoor Community Recreation.....	2
SES 2415	Advanced Strength & Resistance Training.....	4
SES 2437	Health Promotion.....	3
SES 2438	Fitness Concepts Lifespan.....	3
SES 2441	Kinesiology.....	3
SES 2442	Exercise Prescription & Quantitative Analysis.....	4
SES 2529	Sport & Event Management.....	3
SES 2548	Adapted Physical Education Programming.....	3
SES 2625	Concepts of Coaching.....	3
SES 2680	History of Physical Education/Sport.....	3
SES 2712	Promotion and Public Relations in Sport and Events.....	3

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT

(SELECT ONE)	CR
ANTH 2202 Introduction to Cultural Anthropology.....	3
ECON 2200 Principles of Microeconomics.....	3
GEOG 2400 Economic and Social Geography.....	3
POLS 1100 American Government.....	3
SOC 1101 Introduction to Sociology.....	3

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE)	CR
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/Non-Amer to 1500.....	3
HIST 1182 World Civ. II: Non-Western/Non-Amer since 1500.....	3
HIST 2223 African-American History I: 1451-1876.....	3
HIST 2224 African-American History II: 1877-Present.....	3
HUM 1100 Introduction to Humanities.....	3
HUM 1270 Comparative Religions.....	3
MUS 1251 Survey of Music History.....	3
PHIL 1101 Introduction to Philosophy.....	3
PHIL 1130 Ethics.....	3

Exercise Specialist Certificate

Specific Program Admissions Information

BIO 1101 or permission of chairperson

COURSE	CR
Semester 1	
SES 1100 Personal Fitness Concepts.....	3
SES 2440 Exercise Physiology.....	4
SES 2438 Fitness Concepts across the Lifespan.....	3
TOTAL CREDIT HOURS	10
Semester 2	
SES 1101 Introduction Sport & Exercise Studies.....	3
SES 2441 Kinesiology.....	4
SES 2415 Advanced Strength & Resistance Training Concepts.....	4
TOTAL CREDIT HOURS	11
Semester 3	
SES 2950 SES Practicum/Seminar.....	2
SES 2442 Exercise Prescription & Quantitative Analysis.....	3
MULT 1130 Responding to Emergencies.....	2
TOTAL CREDIT HOURS	7
TOTAL CERTIFICATE CREDIT HOURS	28

Youth Coaching Certificate

COURSE	CR
Semester 1	
SES 1105 Introduction to Strength & Resistance.....	1
SES 1101 Introduction to Sport & Exercise Studies.....	3
SES 1327 Individual Sport & Activities.....	2
SES 2535 Sport Law.....	3
TOTAL CREDIT HOURS	9
Semester 2	
SES 1328 Team Sport & Activity.....	2
SES 2625 Concepts of Coaching.....	3
SES 2410 Conditioning & Training the Youth Athlete.....	3
TOTAL CREDIT HOURS	8
Summer Semester	
SES 2426 Athletic Injury Control & First Aid.....	3
SES 2626 Coaching the Young Athlete.....	3
SES 2950 SES Practicum & Seminar	2
TOTAL CREDIT HOURS	8
TOTAL DEGREE CREDIT HOURS	25

Students should request a plan of study from their faculty advisor.

Sterile Processing Technology

Sterile Processing Technology Associate of Technical Studies Degree Sterile Processing Technology Certificate (Also see Surgical Technology)

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 **concurrent** with a five semester academic/laboratory/clinical Associate of Technical Studies Degree 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.

Upon completion of the Sterile Processing Technology Certificate, the student will be able to:

- Apply the principles and techniques of cleaning, assembly, testing, and identification of patient care equipment
- Demonstrate the general cleaning of instrumentation and specialty items and the operations of mechanical washers
- Demonstrate packaging techniques for re-usable and disposable supplies and equipment
- Demonstrate the assembly, inspection, identification and use of instruments/procedure trays
- Develop entry level proficiency for selected sterilization techniques
- Demonstrate inventory control for re-usable and disposable supplies and equipment
- Demonstrate assembly and distribution of department specific case carts
- Incorporate quality assurance processes and blood borne pathogen protocols
- Identify and explain standards, regulations, and policies and procedures related to activities of the sterile processing department
- Develop professional behaviors required for the successful completion of the Sterile Processing Certificate.

Specific Program Admission Information

Listed below are additional requirements for admission to the Sterile Processing program.

Prospective students are required to attend a mandatory information session to learn detailed program requirements and career opportunities. These sessions are held several times each semester and are very helpful in answering student questions. Information session dates are available on our website: <http://www.csc.edu/academics/departments/surgical-technology/> or by contacting the Surgical Technology department at (614)-287-5215. The yearly deadline for applications to be submitted to the Sterile Processing Technology program is March 1 (for classes beginning the following autumn semester). Applications are available only by attending one of the MANDATORY Information Sessions.

College Placement Testing

- Placement testing into MATH 1030 or completion of MATH 1020. A student who has college algebra transfer credit (grade of “C” or better) is not required to take the placement test.
- Placement testing into ENGL 1100 or completion of ENGL 0190. Student who has college transfer credit for ENGL 1100 is not required to take the placement test.
- Course completion of the following:
 1. High school graduate or GED equivalency
 2. High school biology (grade of “C” or better) within the past five years or BIO 0100 or BIO 1101 OR BIO 1111 (with a grade of “C” or better)
 3. High school CHEM grade of ‘C’ or better within the last 3 years or CHEM 0100
 4. Placement into Grade Point Average of 2.0 or better in courses related to the Sterile Processing Technology plan of study
- For Sterile Processing students planning to advance into the Surgical Technology program, completion of the HESI A2 Exam is required for admission. Applicants have two attempts to complete the HESI A2 per application year. The HESI A2 is a computerized test. To register to take the HESI A2, contact the Community & Professional Testing Center (614) 287-5750. The HESI A2 will cost approximately \$55.00 payable at the Cashier’s Office in Rhodes Hall. On the day of the test, bring a picture ID and your paid receipt with you to the Community & Professional Testing Center. See campus map on-line at the CSCC web site for location. You must inform the Community & Professional Testing Center that you are a Surgical Technology Student applicant. The staff in the Community & Professional Testing Center will NOT advise you or discuss your results with you. The results of your HESI A2 will be presented to you when you leave. You

MUST complete the HESI A2 no later than January 22nd. Applicants are strongly encouraged to schedule the HESI A2 as soon as possible as scheduled testing times fill very quickly.

The Sterile Processing Technology Program is a rigorous competency-based program of study. For assistance with creating a path to the Sterile Processing Technology program, contact a Health and Human Services advisor at 614-287-2779. They can also be reached at HHSadvising@csc.edu. The office is located in Union Hall, Room 427.

Upon acceptance into the Sterile Processing Technology degree program, the following additional items are required to be completed by the student *before* registration for autumn semester will be allowed:

- MULT 1120 Cardiopulmonary Resuscitation
- Completed Health Record on file at the Health Records Office, including drug testing and background check.

Acceptance is conditional on submission and clearance of student background history by the Columbus State Community College Public Safety Department, and drug screening clearance by the Columbus State Community College Health Records Office. Prospective students can obtain additional information at program

information sessions or by contacting the Surgical Technology Office at (614) 287-3655. Interested persons also can visit the Sterile Processing Technology website at [www.csc.edu/Sterile Processing](http://www.csc.edu/SterileProcessing).

Statement Regarding Infectious Diseases

Students in this program perform 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 we work come from all walks of life, thus students may 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, measles, German measles, and mumps.

All students are required to have appropriate immunizations after they are admitted to the program (information is given 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 program must be aware of this slight, but real, potential. All students are encouraged to have personal health insurance in effect by the first day of class.

Sterile Processing Technology Associate of Technical Studies

COURSE	CR
Autumn Semester	
COLS 1100 First Year Experience Seminar.....	1
ENGL 1100 Composition I.....	3
BIO 2215 Introduction to Microbiology.....	4
SPT 1861 Sterile Processing Tech I*.....	9
HIMT 1121 Advanced Medical Terminology.....	2
TOTAL CREDIT HOURS	19
Spring Semester	
SBS XXX Refer to approved GE - SBS list.....	3
BIO 2300 Human Anatomy*.....	4
SPT 1862 Sterile Processing Tech II*.....	9
TOTAL CREDIT HOURS	16
Autumn Semester	
HUM XXX Refer to approved GE - HUM list.....	3
BIO 2232 Human Physiology*.....	4
SURG 1861 Surgery Tech I*.....	6
MATH 1000 Math Skills for Health Professionals.....	1
TOTAL CREDIT HOURS	14

Spring Semester	
SURG 1862 Surgery Tech II*.....	6
MATH 1030 Beginning Algebra II.....	3
TOTAL CREDIT HOURS	9
Summer Semester	
HIMT 1141 Pharmacology*.....	2
SURG 1863 Surgery Tech III*8	
TOTAL CREDIT HOURS	10
TOTAL DEGREE CREDIT HOURS	68
*A minimum grade of "C" or higher is required	

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE)		CR
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/Non-Amer to 1500.....	3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500.....	3
HIST 2223	African-American History I: 1451-1876.....	3
HIST 2224	African-American History II: 1877-Present.....	3
HUM 1100	Introduction to Humanities.....	3
HUM 1270	Comparative Religions.....	3
MUS 1251	Survey of Music History.....	3
PHIL 1101	Introduction to Philosophy.....	3
PHIL 1130	Ethics.....	3

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT

(SELECT ONE)		CR
ANTH 2202	Introduction to Cultural Anthropology.....	3
ECON 2200	Principles of Microeconomics.....	3
GEOG 2400	Economic and Social Geography.....	3
POLS 1100	American Government.....	3
SOC 1101	Introduction to Sociology.....	3
PSY 1100	Introduction to Psychology.....	3

Sterile Processing Technology Certificate

COURSE	CR
Autumn Semester	
ENGL 1100 Composition I.....	3
BIO 2215 Introduction to Microbiology*.....	4
SPT 1861 Sterile Processing Technology I*.....	9
HIMT 1121 Advance Medical Terminology.....	2
TOTAL CREDIT HOURS	18

Spring Semester 2

SBS XXXX Refer to approved GE - SBS list.....	3
BIO 2300 Human Anatomy*.....	4
SPT 1862 Sterile Processing Technology II*.....	9
TOTAL CREDIT HOURS	16
TOTAL CERTIFICATE CREDIT HOURS	34

*A minimum grade of "C" or higher is required

Supply Chain Management

**Supply Chain Management Associate Degree
International Commerce Major
Strategic Procurement Major
International Commerce Certificate
LINCS Supply Chain Management Certificates
Strategic Procurement Certificate
Supply Chain Management Certificate**

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.

Upon completion of the Associate of Applied Science Degree in Supply Chain Management, the graduate will be able to:

- Describe the various functions that comprise supply chain management and describe the interrelationship between them and other functional areas within a company.
- Be able to make channel-related decisions to satisfy industrial and consumer wants in both domestic and international markets.
- Demonstrate knowledge of supply chain management terminologies including inventory techniques, bar-coding systems, picking and delivery processes, and storage and sorting systems.
- Demonstrate knowledge of the function and operation of

warehouses and distribution facilities relating to inventory control and management.

- Describe the traffic management function and its role in carrier selection, rate determination and rate negotiation.
- Demonstrate knowledge of state and federal laws that impact the distribution function.
- Participate in the development of an integrated plan of action consistent with established supply chain management goals.
- Recognize the analytical tools useful in supply chain management particularly as they relate to measuring and analyzing productivity.
- Possess a basic understanding of industrial safety issues particularly as they relate to the development of a basic safety program.
- Identify the principles of interactive management and how they apply to managing worker performance, retention/hiring procedures, and developing collaborative action plans.
- Possess fundamental supervisory skills including setting performance objectives, coaching and feedback, and conducting formal performance reviews.

International Commerce Major

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. A travel-abroad component is part of the program.

In addition to mastering the Supply Chain Management competencies, an International Commerce Major graduate will be able to:

- Describe, discuss and comprehend the nature of current globalization.
- Recognize the exponential growth of international trade and the economic impact of international supply chain logistics activities.
- Discuss how Incoterms are used to share responsibilities between exporters and importers.
- 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.
- Identify and understand the purpose/function of various required documents common to international trade.
- Explain cultural, social, economic, and political factors that impact organizations.
- Identify the types of air/ocean transportation services and aircraft/vessel sizes.
- Identify and understand the characteristics of intermodal transportation and the functions of international transportation forwarders and brokers.
- Converse at a basic business level in Spanish or Chinese.

Strategic Procurement Major

The Strategic Procurement major is designed to provide focused skills in purchasing and negotiation to students interested in this field. This major is built upon a solid foundation in current supply chain management theory and practice included in the Institute for Supply Management certification examination.

In addition to the Supply Chain Management competencies, a graduate in the Strategic Procurement major will be able to:

- Explain how policies and procedures are utilized to affect purchasing objectives and plans.
- Explain how use of specifications, descriptions and standards are utilized to help determine right quality.
- Explain how industrial and not-for-profit purchasing function operates.
- Explain how and why “make vs. buy” and outsourcing decisions are made.
- Develop a supplier management plan that provides development, evaluation, and selection of the right supplier.
- Explain the different types of contracts and under what conditions and situations each works best.
- Develop and present a purchasing strategic and tactical purchasing plan.
- Develop and present a buying plan and inventory management plan that ensures right quantity/right time.
- Describe and explain the what, why, and how of negotiation that develop negotiation objectives, strategies, and tactics.
- Explain the ethical and legal issues that affect purchasing.

Supply Chain Management Certificates

Supply Chain Management certificates can be earned in International Business, International Commerce, Strategic Procurement, and Supply Chain Management. Each certificate can be completed totally in a distance learning format. 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.

Supply Chain Management Associate Degree

COURSE	CR
Semester 1	
SCM 1100 Supply Chain Management 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
TOTAL CREDIT HOURS	13
Semester 2	
SCM 1101 Transportation & Traffic Management	3
SCM 1501 Information Technology in Logistics	3
SCM 1510 Strategic Procurement	4
MKTG 1110 Marketing Principles	3
MKTG 1230 Customer Service & Sales	3
TOTAL CREDIT HOURS	16
Summer Semester	
HUM XXXX Refer to approved GE - HUM list	3
STAT 1350 Elementary Statistics	3
TOTAL CREDIT HOURS	6

Semester 3	
SCM 1190 International Business	3
SCM 2110 Warehouse Management	4
SCM 2111 Inventory Management	3
SCM 2290 Intro to Import/Export Regulations & Compliance	4
ACCT 1212 Managerial Accounting	3
TOTAL CREDIT HOURS	17
Semester 4	
SCM 2601 Performance Management for SCM Managers	3
SCM 2802 Supply Chain Management Seminar	1
SCM 2902 Supply Chain Management Practicum	1
CSCI 2330 Project Management Fund & Case Studies	4
NAT XXXX Refer to approved GE - NAT list	3
TOTAL CREDIT HOURS	12
TOTAL DEGREE CREDIT HOURS	64

International Commerce Major

COURSE	CR
Semester 1	
SCM 1100 Supply Chain Management 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 1350 Elementary Statistics	3
TOTAL CREDIT HOURS	16
Semester 2	
SCM 1190 International Business	3
SCM 1501 Information Technology in Logistics	3
MKTG 1110 Marketing Principles	3
NAT XXXX Refer to approved GE - NAT list	3
SPAN 1101 Beginning Spanish I or	3
CHIN 1101 Beginning Chinese I	4
TOTAL CREDIT HOURS	16
Summer Semester	
SPAN 1102 Beginning Spanish II or	4
CHIN 1102 Beginning Chinese II	4
HUM XXXX Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS	7

Semester 3	
SCM 2111 Inventory Management	3
SCM 2250 International Shipping	3
SCM 2290 Intro to Import/Export Regulations & Compliance	4
SCM 2450 Transportation Rates & Claims	3
SPAN 1103 Intermediate Spanish or	3
CHIN 1103 Intermediate Chinese	4
TOTAL CREDIT HOURS	17

Semester 4	
SCM 2601 Performance Management for SCM Managers	3
SCM 2902 Supply Chain Management Practicum	1
SCM 2802 Supply Chain Management Seminar	1
MKTG 2750 Global Marketing	3
TOTAL CREDIT HOURS	8
TOTAL DEGREE CREDIT HOURS	64

Strategic Procurement Major

COURSE	CR
Semester 1	
SCM 1100 Supply Chain Management Principles	3
COLS 1100 First Year Experience Seminar	1
ECON 2200 Principles of Microeconomics	3
ENGL 1100 Composition I	3
SOC 1101 Introduction to Sociology	3
STAT 1350 Elementary Statistics	3
TOTAL CREDIT HOURS	16
Semester 2	
SCM 1101 Transportation & Traffic Management	3
SCM 1510 Strategic Procurement	4
MKTG 1110 Marketing Principles	3
MKTG 1230 Customer Service & Sales	3
TOTAL CREDIT HOURS	13
Summer Semester	
FMGT 2201 Corporate Finance	3
HUM XXXX Refer to approved GE - HUM list	3
NAT XXXX Refer to approved GE - NAT list	3
TOTAL CREDIT HOURS	9

Semester 3	
SCM 2110 Warehouse Management	4
SCM 2111 Inventory Management	3
SCM 2450 Transportation Rates & Claims	3
SCM 2460 Procurement Planning & Negotiation	3
ACCT 1211 Financial Accounting	3
TOTAL CREDIT HOURS	16

Semester 4	
SCM 2160 Perishable Supply Chain & Logistics	3
SCM 2601 Performance Management for SCM Managers	3
SCM 2802 Supply Chain Management Seminar	1
SCM 2902 Supply Chain Management Practicum	1
ACCT 1212 Managerial Accounting	3
TOTAL CREDIT HOURS	11
TOTAL DEGREE CREDIT HOURS	65

International Commerce Certificate

COURSE	CR
Semester 1	
SCM 1190 International Business	3
SCM 1501 Information Technology in Logistics	3
SCM 2250 International Shipping	3
TOTAL CREDIT HOURS	9
Semester 2	
SCM 2290 Intro to Import/Export Regulations & Compliance	4
MKTG 2750 Global Marketing	3
TOTAL CREDIT HOURS	7
TOTAL CERTIFICATE CREDIT HOURS	16

Strategic Procurement Certificate

COURSE	CR
Semester 1	
SCM 1501 Information Technology in Logistics	3
SCM 1510 Strategic Procurement	4
SCM 2110 Warehouse Management	4
TOTAL CREDIT HOURS	11
Semester 2	
SCM 2111 Inventory Management	3
SCM 2450 Transportation Rates & Claims	3
SCM 2460 Procurement Planning & Negotiation	3
TOTAL CREDIT HOURS	9
TOTAL CERTIFICATE CREDIT HOURS	20

Supply Chain Management Certificate

COURSE	CR
Semester 1	
SCM 1101 Transportation & Traffic Management	3
SCM 1510 Strategic Procurement.....	4
SCM 2110 Warehouse Management.....	4
TOTAL CREDIT HOURS	11
Semester 2	
SCM 2111 Inventory Management	3
SCM 2250 International Shipping.....	3
SCM 2290 Intro to Import/Export Regulations & Compliance	4
TOTAL CREDIT HOURS	10
TOTAL CERTIFICATE CREDIT HOURS	21

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE)

		CR
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/Non-Amer to 1500.....	3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223	African-American History I: 1451-1876	3
HIST 2224	African-American History II: 1877-Present	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions.....	3
MUS 1251	Survey of Music History.....	3
PHIL 1101	Introduction to Philosophy.....	3
PHIL 1130	Ethics.....	3

NAT

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT

(SELECT ONE)

		CR
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	Introduction to Biology.....	4
BIO 1112	Human Biology.....	4
BIO 1113	Biological Sciences I.....	4
BIO 1114	Biological Sciences II	4
BIO 1125	Plant Biology	4
BIO 1127	Environmental Science I	4
BIO 2215	Introduction to Microbiology.....	4
BIO 2232	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 Physics II.....	5

Surgical Technology

Surgical Technology Associate Degree Surgical Technology Certificate

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).

Upon completion of the Associate Degree in Surgical Technology, the graduate will be able to:

- Demonstrate all competencies required for the certified Surgical Technologist (CST)
- Demonstrate advanced knowledge and practice of patient care techniques
- Demonstrate advanced knowledge of sterile and surgical techniques
- Demonstrate advanced knowledge and practice in the role of the first scrub (STSR) and second scrub (STSR2)
- Demonstrate knowledge and practice of circulating skills and tasks (STAC)
- Demonstrate knowledge relating to operating room emergency situations
- Demonstrate advanced organizational skills
- Demonstrate advanced knowledge in one or two surgical specialty areas
- Demonstrate a professional attitude.

Upon completion of the Surgical Technology Certificate, the student will be able to:

- Demonstrate knowledge and practice of basic patient care concepts
- Demonstrate the application of the principles of asepsis in a knowledgeable manner that provides for optimal patient care in the operating room
- Demonstrate basic surgical case preparation skills in the sterile processing role (STSP) and transportation/communication role (STTC)
- Demonstrate the ability to perform the role of first scrub

- (STSR) and second scrub (STSR2) on basic surgical cases
- Demonstrate responsible behavior as a health care professional.

Specific Program Admission Information

Listed below are additional requirements for admission to the Surgical Technology program:

Prospective students are required to attend a mandatory information session to learn detailed program requirements and career opportunities. These sessions are held several times each semester and are very helpful in answering student questions. Information session dates are available on our website: <http://www.csc.edu/academics/departments/surgical-technology/> or by contacting the Surgical Technology department at (614)-287-5215. The yearly deadline for applications to be submitted to the Surgical Technology program is March 1 (for classes beginning the following autumn semester). Applications are available only by attending one of the MANDATORY Information Sessions.

- College Placement Testing
- Placement testing into MATH 1030 or completion of MATH 1020. A student who has college algebra transfer credit (grade of "C" or better) is not required to take the placement test.
- Placement testing into ENGL 1100 or completion of ENGL 0190. Student who has college transfer credit for ENGL 1100 is not required to take the placement test.
- Course completion of the following:
 1. High school graduate or GED equivalency
 2. High school biology (grade of "C" or better) within the past five years or BIO 0100 or BIO 1101 OR BIO 1111 (with a grade of "C" or better).
 3. High school CHEM grade of 'C' or better within the last 3 years or CHEM 0100

Grade Point Average of 2.0 or better in courses related to the Sterile Processing Technology plan of study.

Completion of the HESI A2 Exam is required for admission to Surgical Technology program. Applicants have two attempts to complete the HESI A2 per application year. The HESI A2 is a computerized test. To register to take the HESI A2, contact the Community & Professional Testing Center (614) 287-5750. The HESI A2 will cost approximately \$55.00 payable at the Cashier's Office in Rhodes Hall. On the day of the test, bring a picture ID and your paid receipt with you to the Community & Professional Testing Center. See campus map on-line at the CSCC web site for location. You must inform the Community & Professional Testing Center that you are a Surgical Technology Student applicant. The staff in the Community & Professional Testing Center will NOT

advise you or discuss your results with you. The results of your HESI A2 will be presented to you when you leave. You MUST complete the HESI A2 no later than January 22nd. Applicants are strongly encouraged to schedule the HESI A2 as soon as possible as scheduled testing times fill very quickly.

The Surgical Technology Program is a rigorous competency-based program of study. For assistance with creating a path to the Surgical Technology program, contact a Health and Human Services advisor at 614-287-2779. They can also be reached at HHSadvising@csc.edu. The office is located in Union Hall, Room 427.

Upon acceptance into the Surgical Technology program, the following additional items are required to be completed by the student *before* registration for Autumn Semester will be allowed:

- MULT 1120 Cardiopulmonary Resuscitation
- Completed Health Record on file at the Health Records Office, including drug testing and background check.

Acceptance is conditional on submission and clearance of student background history by the Columbus State Community College Public Safety Department, and drug screening clearance by the Columbus State Community College Health Records Office.

Prospective students can obtain additional information at program information sessions or by contacting The Surgical Technology Office at (614) 287-3655. Interested persons also can visit the Surgical Technology website, www.csc.edu/SurgTech

Statement Regarding Infectious Diseases

Students in this program perform 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 we work come from all walks of life, thus students may 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, measles, German measles, and mumps. All students are required to have appropriate immunizations after they are admitted to the program. (Information is given 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 to an infectious disease. All students entering the program must be aware of this slight, but real, potential risk. All students are encouraged to have personal health insurance in effect by the first day of class.

Surgical Technology Associate Degree

COURSE	CR
Autumn Semester	
COLS 1100 First Year Experience Seminar.....	1
MATH 1000 Math Skills for Health Professionals	1
ENGL 1100 Composition I.....	3
BIO 2300 Human Anatomy	4
SURG 1861 Surgical Technology I	6
HIMT 1121 Adv Medical Terminology	2
TOTAL CREDIT HOURS	17
Spring Semester	
SBS XXX Refer to approved GE - SBS list.....	3
BIO 2232 Human Physiology.....	4
SURG 1862 Surgical Technology II.....	6
TOTAL CREDIT HOURS	13

Summer Semester	
HIMT 1141 Pharmacology	2
SURG 1863 Surgical Technology III.....	8
TOTAL CREDIT HOURS	10
Autumn Semester	
HUM XXX Refer to approved GE - HUM list.....	3
BIO 2215 Introduction to Microbiology.....	4
SURG 2864 Surgical Technology IV	6
TOTAL CREDIT HOURS	13
Spring Semester	
MATH 1030 Beginning Algebra II.....	3
SURG 2865 Surgical Technology V.....	9
TOTAL CREDIT HOURS	12
TOTAL DEGREE CREDIT HOURS	65

Approved General Education (GE) List

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT

(SELECT ONE) CR

ANTH 2202	Introduction to Cultural Anthropology.....	3
ECON 2200	Principles of Microeconomics.....	3
GEOG 2400	Economic and Social Geography.....	3
POLS 1100	American Government.....	3
SOC 1101	Introduction to Sociology.....	3
PSY 1100	Introduction to Psychology.....	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/Non-Amer to 1500.....	3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500.....	3
HIST 2223	African-American History I: 1451-1876.....	3
HIST 2224	African-American History II: 1877-Present.....	3
HUM 1100	Introduction to Humanities.....	3
HUM 1270	Comparative Religions.....	3
MUS 1251	Survey of Music History.....	3
PHIL 1101	Introduction to Philosophy.....	3
PHIL 1130	Ethics.....	3

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE) CR

HART 1201	History of Art I.....	3
HART 1202	History of Art II.....	3
HIST 1111	European History to 1648.....	3

Surgical Technology Certificate

COURSE CR

Autumn Semester

MATH 1000	Math Skills for Health Professionals.....	1
ENGL 1100	Composition I.....	3
BIO 2300	Human Anatomy.....	4
SURG 1861	Surgical Technology I.....	6
HIMT 1121	Adv Medical Terminology.....	2
TOTAL CREDIT HOURS		16

Spring Semester

SBS XXX	Refer to approved GE - SBS list.....	3
BIO 2232	Human Physiology.....	4
SURG 1862	Surgical Technology II.....	6
TOTAL CREDIT HOURS		13

Summer Semester

HIMT 1141	Pharmacology.....	2
SURG 1863	Surgical Technology III.....	8
TOTAL CREDIT HOURS		10
TOTAL CERTIFICATE CREDIT HOURS		39

Veterinary Technology

Veterinary Technology Associate 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 have the opportunity to intern at The Ohio State University Veterinary Medical Center. 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 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.

NOTE: Periodically there may be changes to the Veterinary Technology program admission requirements and curriculum. Any admission criteria or curriculum changes will be updated at the Veterinary Technology Mandatory Information Sessions.

Upon completion of the Associate of Applied Science Degree in Veterinary Technology, and under the supervision of a licensed veterinarian, the graduate will be able to:

- Perform patient assessment techniques, obtain thorough patient history, and maintain medical records for patient animals in a veterinary health care setting.
- Effectively communicate preventative medicine, treatment protocols, dental health, and medical and surgical procedures to veterinary clients.
- Prepare and dispense medications according to a prescription, perform drug dosage calculations, and maintain controlled drug records.
- Administer and understand the effects of treatments and/or medications delivered either orally or parenterally.
- Apply and manage wound dressings, bandages, and splints.
- Properly collect, prepare and handle diagnostic specimens for laboratory analysis.
- Perform clinical laboratory procedures, including complete blood counts, serum chemistries, microbiology, immunologic testing, urinalysis, and cytology.
- Identify internal, external, and blood parasites of domestic animal species.
- Safely handle and perform routine procedures on common laboratory animals used in research settings.
- Prepare equipment, instruments, animals, and medications for surgical, diagnostic, and anesthetic procedures.
- Administer and effectively monitor anesthesia, including anesthetic induction, maintenance, and recovery by inhalation and/or parenteral routes.
- Assist in diagnostic, medical, and surgical procedures, including post-operative management, pain control, and skin closure.
- Perform complete routine dental prophylaxis.
- Administer and monitor basic and/or intensive nursing care, including fluid therapy and nutritional management.
- Perform diagnostic imaging procedures using appropriate safety measures.
- Comprehend the approach to providing safe and effective care for avian, exotic and small mammal species.

Graduates register with the Ohio Veterinary Medical Licensing Board (OVMLB) to become Registered Veterinary Technicians in the state of Ohio. Graduates are eligible to take the Veterinary Technician National Exam (VTNE) that is recognized in more than 40 states to certify veterinary technicians. Students must successfully pass the VTNE to be eligible for licensure in the

state of Ohio. In Ohio, licensure from the OVMLB is needed for employment as a Registered Veterinary Technician.

Specific Program Admissions Information

Prospective students are required to attend an information session where they will receive the separate admission application for the Veterinary Technology program. Detailed admission criteria, plans of study, and career opportunities are also discussed. These sessions, held periodically throughout the year, are very helpful in answering the prospective students' questions. General information packets and information session dates and times may be obtained by contacting the office associate at (614) 287-5511 or by sending an email request to: vettechprograms@csc.edu.

The yearly deadline for application and completion of admission requirements is Jan 23 for admission beginning the following Autumn Semester (evening plan of study) or the following Autumn Semester (day plans of study), based on space availability. **Students must meet all admission requirements before being considered for admission into the Veterinary Technology degree.**

Listed below are additional requirements for admission to the Veterinary Technology degree:

- High school graduate or GED equivalency
- Required high school (or equivalent) courses in Biology (grade of "C" or better within the past five years) or BIO 0100 or 1101 (grade of "C" or better) and Chemistry (grade of "C" or better within the past three years) or CHEM 0100 (grade of "C" or better)
- Placement into ENGL 1100
- Placement into "No Reading Required" (students with college transfer credit for ENGL1100 are not required to take the placement test)
- Completion of MATH 1020 with grade of "C" or better

- Completion of the Health Occupations Basic Entrance Test (HOBET)
- Attendance at a Veterinary Technology Mandatory Information Session. Applicants will receive a separate admission application for the Veterinary Technology program at these sessions. Applicants will not be considered for admission until they have attended an information session.
- Grade point average of 2.5 or better (most recently completed coursework).

Upon acceptance into the Veterinary Technology degree, the student will be required to complete the following Health Related Technology Requirements:

- Complete a Health Statement declaring all allergies, medications, and physical limitations or restrictions
- Tuberculin Testing (Mantoux) within the past year
- Tetanus Booster (Td) within the past eight years
- The student must obtain health insurance coverage and keep the coverage on a continual basis while attending CSCC as a Veterinary Technology student.
- Rabies vaccination or signed waiver
- Drug test
- Background check.

Acceptance is conditional on the submission and clearance of student background history and drug screening clearance by the Columbus State Community College's contracted representative. You can obtain additional information at the program information sessions or by contacting the program at (614) 287-5511.

All students will be required to participate in the Patient Animal Care Teams (P.A.C.T) program during their enrollment in the Veterinary Technology. Students will be responsible for additional animal exercise, training, patient care and other related skills outside of scheduled class time. Detailed information is available at the Veterinary Technology Mandatory Information Sessions.

Veterinary Technology Associate Degree

COURSE		CR
Semester 1		
BIO 1121	Anatomy & Physiology I	4
BIO 1122	Anatomy & Physiology II	4
MATH 1030	Beginning Algebra II	3
COLS 1100	First Year Experience Seminar	1
VET 1103	Introduction to Small Animal Medicine	2
VET 1105	Veterinary Parasitology	2
TOTAL CREDIT HOURS		16
Semester 2		
HIMT 1121	Advanced Medical Terminology	2
BMGT 1102	Interpersonal Skills	2
VET 1324	Principles of Veterinary Radiography	1
VET 1331	Veterinary Anatomy & Physiology	2
VET 1426	Principles of Veterinary Anesthesia	3
VET 1335	Clinical Pathology I	4
VET 1338	Veterinary Surgical Techniques	2
TOTAL CREDIT HOURS		16
Summer Semester		
PHIL 1130	Ethics	3
ENGL 1100	Composition I	3

CHEM 1113	Elem Organic & Biochemistry	4
VET 1501	Veterinary Nutrition	2
VET 1502	Laboratory & Exotic Animal Medicine	1
VET 1533	Clinical Applications I	2
VET 1536	Small Animal Health & Disease	2
TOTAL CREDIT HOURS		17

Semester 3		
VET 2563	Clinical Applications II	2
VET 2599	Clinical Applications III	2
VET 2535	Clinical Pathology II	4
VET 2562	Veterinary Pharmacology	2
VET 2566	Large Animal Health & Disease	2
TOTAL CREDIT HOURS		12

Semester 4		
HUM XXXX	Refer to approved GE - HUM list	3
SBS XXXX	Refer to approved GE - SBS list	3
VET 2800	Veterinary Seminar I	1
VET 2900	Veterinary Practicum I	2
VET 2850	Veterinary Seminar II	1
VET 2950	Veterinary Practicum II	2
TOTAL CREDIT HOURS		12
TOTAL DEGREE CREDIT HOURS		73

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT

(SELECT ONE)

CR

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/Non-Amer to 1500	3
HIST 1182	World Civ. II: Non-Western/Non-Amer since 1500	3
HIST 2223	African-American History I: 1451-1876	3
HIST 2224	African-American History II: 1877-Present	3
HUM 1100	Introduction to Humanities	3
HUM 1270	Comparative Religions	3
MUS 1251	Survey of Music History	3
PHIL 1101	Introduction to Philosophy	3

SBS

GE-SOCIAL BEHAVIORAL SCIENCE REQUIREMENT

(SELECT ONE)

CR

ANTH 2202	Introduction to Cultural Anthropology	3
ECON 2200	Principles of Microeconomics	3
GEOG 2400	Economic and Social Geography	3
POLS 1100	American Government	3
SOC 1101	Introduction to Sociology	3
PSY 1100	Introduction to Psychology	3

Course Descriptions

Explanation of Course Description Codes Example Listing

Department | Specific Course | Semesters Offered | Credits

CHEM 2255 Organic Chemistry Lab. II (A, SP, SU) | 3 credits

This is 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

Lecture: 1 hour | Lab: 5 hours

Prerequisite: CHEM 2254

Corequisite: CHEM 2252

Lab fee: \$40.00

Lecture hours

Lab hours

Course Number – The three- or four-letter alpha identifier indicates the department; the four numbers that follow identify the specific course. Three or four letters followed by XXXX indicate an elective requirement for which only the department is specified; here the student may choose the specific course, subject to approval of his/her advisor. Where no alphabetical or numerical characters appear, the elective may come from more than one department

Semester Offered – Indicates which semester(s) the course is offered: A(Autumn), SP(Spring), SU(Summer).

Credits – The number of credits to be awarded to students who successfully complete the course.

Prerequisite – Any coursework that must be completed before the student is eligible to enroll for the course. For example, if ENGL 1100 were listed as a prerequisite for a course, then only students who have completed ENGL 1100 would be eligible to register.

Corequisite – Any coursework that must be completed during the same semester as the course in which student is enrolling. For example, if course CHEM 2252 is a corequisite with CHEM 2255, both courses must be taken during the same semester.

Lecture Hours – The number of hours per week a particular course meets in a lecture classroom.

Lab Hours – The number of hours per week a particular class meets in a laboratory situation. This is usually in addition to lecture hours.

Lab Fee – Fee required of students registering in certain courses that is used to offset the cost of consumable materials, technology, and printing in classrooms or laboratory situations. A course taken online/distance learning format may be subject to a different lab fee.

Modular Course – A stand-alone part of a main course. Modular topics are related, and, when combined with all the parts, become the entire course. Modular courses usually do not exist without the main course. Modules may have various methods of instructional delivery (lectures, Web, self-paced, etc.), and they may run on a term basis or be flexibly scheduled. Modules are designated as having an alpha letter after the course number, e.g., MHAD 1135A, MHAD 1135B, which are two modules of the whole main course MHAD 1135.

(See the online schedule for a more detailed course listing legend.)

The College's Course Numbering System

No two courses at Columbus State have the same course number. The three- or four-letter alpha identifier at the beginning of each course listing indicates the program, department, or subject involved, and the four numbers that follow specify the individual course. Listed below are the alpha identifiers for various programs/departments/subjects offered at Columbus State.

Accounting.....ACCT	History of Art.....HART
Anthropology.....ANTH	Horticulture.....HORT
Appraisal.....APPR	Hospitality Management.....HOSP
Arabic.....ARAB	Human Resources Mgmt. ....HRM
Architecture.....ARCH	Humanities.....HUM
Art.....ART	Info. Tech. Supt. Technician ....ITST
Arts and Sciences.....ASC	Interactive Media .....IMM
Astronomy.....ASTR	Interpreter Education Program ...IEP
Automotive Technology.....AUTO	Italian .....ITAL
Aviation Maintenance Tech. ....AMT	Japanese .....JAPN
Biology.....BIO	Landscape Design & Mgmt. .LAND
Bioscience Technology .....BISI	Latin .....LATN
Business Management .....BMGT	Marketing.....MKTG
Business Office Administration BOA	Massage Therapy .....MASS
Chemistry.....CHEM	Mathematics.....MATH
Chinese.....CHIN	Mech. Engineering Tech. ....MECH
Civil Engineering Tech. ....CIVL	Medical Assisting .....MAT
Classics .....CLAS	Med. Laboratory Tech. ....MLT
Clinical Laboratory Assisting. ..CLA	Ment. Hlth/Add. Studies/Dev.
College Success .....COLS	Disabilities .....MHAD
Communication .....COMM	Multi-Competency Health .....MULT
Computer Science .....CSCI	Music.....MUS
Construction Management.....CMGT	Nursing.....NURS
Criminal Justice .....CRJ	Nursing Certificate Progrms. ..NURC
Dance .....DANC	Nutrition.....NUTR
Dental Hygiene .....DHY	Paralegal Studies.....LEGL
Developmental Education.....DEV	Philosophy.....PHIL
Dietetic Technician .....DIET	Physics .....PHYS
(See Hospitality Management)	Political Science.....POLS
Digital Design and Graphics.....DDG	Practical Nursing.....PNUR
Digital Photography.....FOTO	Psychology.....PSY
Early Childhood Dev. & Ed. ..ECDE	Quality Assurance Tech. ....QUAL
Economics.....ECON	Radiography.....RAD
Education.....EDUC	Real Estate .....REAL
Elec. Mech. Eng. Tech. ....EMEC	Respiratory Care .....RESP
Electronic Eng. Technology.....EET	Skilled Trades.....SKTR
Emerg. Med. Services Tech. ....EMS	Social Sciences.....SSCI
Engineering.....ENGR	Sociology .....SOC
Engineering Technologies.....ENGT	Spanish.....SPAN
English .....ENGL	Speech and Hearing Science.....SHS
English as a Second Language...ESL	Sport and Exercise Studies.....SES
Envir. Sci, Safety & Health.....ESSH	Statistics .....STAT
Finance.....FMGT	Sterile Processing Technology ...SPT
Fire Science.....FIRE	Supply Chain Management.....SCM
Ford ASSET.....FORD	Surgical Technology.....SURG
French .....FREN	Surveying .....SURV
Geographic Info. Systems.....GIS	Theatre .....THEA
Geography.....GEOG	Veterinary Technology .....VET
Geology.....GEO	
German.....GERM	
Health Info. Mgmt. Tech. ....HIMT	
Heating/Vent./AC Tech. ....HVAC	
History.....HIST	

Accounting (ACCT)

ACCT 1211 Financial Accounting (A, SP, SU) 3 credits

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. Recommended: Students complete MATH 1020 with grade of "C" or better.

Lecture: 2 hours – Lab: 2 hours Lab fee: \$2.00

ACCT 1212 Managerial Accounting (A, SP, SU) 3 credits

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. Recommended: Students complete MATH 1020 with grade of "C" or better. To be successful in this course, it is recommended that students have a "C" or better in ACCT 1211.

Lecture: 3 hours Lab fee: \$2.00

ACCT 1400 Accounting Systems (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: ACCT 1211 Lab fee: \$5.00

ACCT 1500 Accounting Documentation (A, SP, SU) 1 credit

ACCT 1500 is a one-credit hour course designed to give students practical experience in the construction of financial statements, accounting support schedules and budgets with emphasis on formatting and presentation.

Lecture: 1 hour

Prerequisite: ACCT 1211 ACCT 1212 Lab fee: \$2.00

ACCT 2211 Cost Accounting (A, SP, SU) 3 credits

ACCT 2211 offers a study in the cost analysis of acquiring and using resources in an organization's planning and decision making.

Lecture: 3 hours

Prerequisite: ACCT 1212 Lab fee: \$2.00

ACCT 2231 State & Local Taxation (A, SP) 3 credits

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.

Lecture: 3 hours

Prerequisite: ACCT 1211 Lab fee: \$5.00

ACCT 2232 Federal Taxation I (A, SP) 3 credits

ACCT 2232 covers individual income taxes, forms and returns, exemptions, deductions, gains and losses, rates, adjustments, and credits. Course also explores issues of proprietorship, retirement, inventories, depreciation accounting, installment and deferred sales treatment. Students will learn about filing requirements, payments, refunds, claims, and tax planning techniques, along with corporate and partnership taxation.

Lecture: 3 hours

Prerequisite: ACCT 1211 Lab fee: \$5.00

ACCT 2236 Federal Taxation II (SP) 3 credits

A continuation of ACCT 2232, this course deals primarily with the taxation of corporate entities, partnerships, and Sub-chapter S corporations. Specific topics include non-liquidating 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.

Lecture: 3 hours

Prerequisite: ACCT 2232 Lab fee: \$5.00

ACCT 2239 Advanced Taxation (A) 3 credits

This course is a continuation of ACCT 2236 and covers federal transfer taxes, wealth planning, and taxation of fiduciary and exemption entities. Topics include valuation of trusts, estates, and gifts; computation of taxable transfers; exclusions; unified credit; generation-skipping tax; public charities and private foundations; reporting requirements and special situations.

Lecture: 3 hours

Prerequisite: ACCT 2236 Lab fee: \$5.00

ACCT 2240 Tax Practice (SP) 3 credits

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.

Lecture: 3 hours

Prerequisite: ACCT 2236 Lab fee: \$5.00

ACCT 2241 Auditing (A, SP) 4 credits

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.

Lecture: 4 hours

Prerequisite: ACCT 2250 Lab fee: \$2.00

ACCT 2250 Intermediate Accounting I (A, SP) 4 credits

This course is a continuation of ACCT 1211 and ACCT 1212. It reinforces the mechanical phase of theoretical concepts enabling 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. Recommended: Students complete MATH 1030 with grade of "C" or better. To be successful in this course it is recommended that students have a "C" or better in ACCT 1212.

Lecture: 4 hours

Prerequisite: ACCT 1211 & ACCT 1212 Lab fee: \$1.00

ACCT 2252 Intermediate Accounting II (A, SP) 4 credits

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. Recommended: Students complete MATH 1030 with grade of "C" or better. To be successful in this course it is recommended that students have a "C" or

better in ACCT 2250.

Lecture: 4 hours

Prerequisite: ACCT 2250 Lab fee: \$1.00

ACCT 2258 Advanced Accounting (A, SP, SU) 3 credits

This course is the study of financial accounting theory and practice relating to accounting for business combinations, consolidated financial statements, partnerships, and foreign operations.

Lecture: 3 hours

Prerequisite: ACCT 2252 Lab fee: \$1.00

ACCT 2266 Public Administration/Fund Accounting (A, SP, SU)

3 credits

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.

Lecture: 3 hours

Prerequisite: ACCT 2250 Lab fee: \$1.00

ACCT 2275 Fraud Examination (A) 3 credits

This course is designed to introduce students to the concepts of fraud. Topics include understanding who commits fraud and the various fraud schemes involving asset misappropriation. Symptoms of fraud and the reasons fraud may be committed will be discussed as well as the control systems used to prevent and detect fraud. This course will also introduce detection and investigative techniques employed by fraud examiners, as well as best practices of fraud prevention.

Lecture: 3 hours Lab fee: \$2.00

ACCT 2281 Sarbanes Oxley (A) 3 credits

In the first half of the Sarbanes-Oxley course, we discuss the background of the Sarbanes-Oxley Act of 2002. The Act's various sections will be analyzed with an emphasis on how they affect the accounting and audit profession. Later in the course we focus more on one of the key issues addressed in the Act: corporate governance. This course includes several areas of importance such as how corporations police themselves, how they may get into ethical dilemmas while trying to be successful, and what external forces influence a corporation's actions.

Lecture: 3 hours Lab fee: \$2.00

ACCT 2291 Internal Auditing (SP) 3 credits

Internal Auditing introduces concept, standards and processes involved in the internal audit of an entity. Students will be introduced to internal auditing concepts and theories as well as the steps required in the planning, execution, and completion of an audit. The professional nature of the auditing function including codes of conduct and standards will also be discussed. Other concepts include various internal audit documentation and work papers as well as an understanding of the consulting engagement.

Lecture: 3 hours Lab fee: \$2.00

ACCT 2293 Operational Auditing & Special Topics (SP) 3 credits

The first half of this course focuses on the basic objectives of operational auditing. Operational auditing is concerned with enabling an organization to work more effectively, efficiently and economically. Topics introduced in the course include operational auditing concepts and theories, the steps required in the planning, execution, and completion of an operational review, and the benefits of a well executed operational audit. The second half of the course will incorporate all of the areas covered in the previous certificate courses, focusing on corporate ethics and responsibilities through material that investigates the causes of famous corporate fraud cases.

Lecture: 3 hours Lab fee: \$2.00

ACCT 2299 Accounting Capstone (A, SP, SU) 3 credits

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.

Lecture: 2 hours – Lab: 2 hours

Prerequisites: ACCT 1400, ACCT 2250 Lab fee: \$2.00

ACCT 2901 Accounting Practicum & Seminar (A, SP, SU)

3 credits

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.

Seminar: 1 hour – Practicum: 14 hours

Anthropology (ANTH)

Students who enroll in Anthropology courses must have placed in ENGL 1100 and are encouraged either to have completed ENGL 1100 or to be enrolled in that course when scheduling an Anthropology course.

Online/Distance Learning (DL) versions of several ANTH courses are available. Students taking the Web-based version of these courses must be familiar with computers, have an email address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for online/distance learning courses are administered at the Testing Center.

ANTH 1194 Special Topics: Anthropology (On Demand) 1-3 credits

ANTH 1194 offers a detailed examination of selected topics of interest in anthropology.

Lecture: 1-3 hours Lab fee: \$3.00

ANTH 2193 Independent Study in Anthropology (On Demand)

1-3 credits

This is 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.

Lecture: 1-3 hours

Prerequisite: Instructor permission required Lab fee: \$3.00

ANTH 2200 Introduction to Biological Anthropology (A, SP, SU)

3 credits

This course introduces students to the basic concepts of biological anthropology. It discusses anthropology's relationship with other biological and social sciences, surveys nonhuman primates, covers topics in current human biological diversity, and looks at human evolutionary history.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$3.00

ANTH 2201 World Prehistory (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$3.00

ANTH 2202 Peoples & Culture: An Introduction to Cultural Anthropology (A, SP, SU) 3 credits

This course focuses on understanding cultural diversity, using research techniques such as participant observation to explore the life ways 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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$3.00

ANTH 2235 Introduction to Forensic Anthropology (SP) 3 credits

This course introduces students to the field of forensic anthropology. Students examine the development, 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.

Lecture: 3 hours

Prerequisites: Placement into ENGL 1100; completion of ANTH 2200 or BIO 2300 or CRJ 2001 Lab fee: \$3.00

Appraisal (APPR) **(See also Real Estate)**

APPR 1101 Principles of Appraisal (A, SP, SU) 2 credits

This introductory course to appraisal establishes a firm, comprehensive foundation of principles, concepts, and procedures for implementation of the valuation process. Coverage includes attributes and skills necessary for the professional appraisal, the nature of value, Federal Reserve System, money and capital markets, real estate markets, valuation process, data collection and analysis, neighborhood description, site and improvement description, requirements for Ohio appraiser licensing or certification, and professional appraisal designations.

Lecture: 2 hours Lab fee: \$2.00

APPR 1102 Procedures of Appraisal (A, SP, SU) 2 credits

This course covers the entire spectrum of the valuation process, centering on detailed implementation of the three approaches to valuation and correlating to a final conclusion of value. Coverage includes review of valuation process, appraisal mathematics and use of financial calculator, methods of site valuation, cost approach, sales comparison approach, income approach, reconciliation, and final conclusion of value.

Lecture: 2 hours Lab fee: \$2.00

Prerequisite: APPR 1101

APPR 1103 USPAP & Fair Housing (A, SP) 1.5 credits

Students will learn to apply the standards of the industry to the instruments of the appraisal process. This course covers the requirements for ethical and competent appraiser performance as set out by the Appraisal Foundation, including history and functions of the Appraisal Foundation and the rules and standards of USPAP. This course also covers federal, state and municipal Fair Housing requirements.

Lecture: 1.5 hours Lab fee: \$2.00

Arabic (ARAB)

ARAB 1101 Beginning Arabic I (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$10.00

ARAB 1102 Beginning Arabic II (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: ARAB 1101; minimum grade of “C” Lab fee: \$10.00

Architecture (ARCH)

ARCH 1110 Basic Manual Drafting (A, SP, SU) 1 credit

This course presents basic concepts and fundamentals of drafting especially for the building construction industry and covers the use of drawing instruments, lettering practices, basic line work, dimension procedures and an introduction to orthographic projection.

Lecture: 0.5 hour – Lab: 1.5 hours Lab fee: \$15.00

ARCH 1111 Manual Drafting (A, SP) 4 credits

This course is intended to develop the skills of drafting 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.

Lecture: 1 hour – Lab: 6 hours

Prerequisite: ARCH 1110 or permission of instructor

Lab fee: \$18.00

ARCH 1112 Basic CAD Drafting (A, SP, SU) 1 credit

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.

Lecture: 0.5 hour – Lab: 1.5 hours

Prerequisite: ARCH 1110 or permission of instructor

Lab fee: \$25.00

ARCH 1114 AutoCAD 2D (A, SP) 4 credits

This course introduces students to the advanced features of AutoCAD and builds upon the basics learned in ARCH 1112. 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 the current release of AutoCAD.

Lecture: 1 hour – Lab: 6 hours

Prerequisite: ARCH 1112 or permission of instructor

Lab fee: \$50.00

ARCH 1115 MicroStation 2D (A, SP) 2 credits

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.

Lecture: 1 hour – Lab: 3 hours

Prerequisite: ARCH 1110 or permission of instructor

Lab fee: \$33.00

ARCH 1214 Electricity & Lighting (SP, SU) 2 credits

This course studies the electrical code, electrical systems, standards, conventional symbols, nomenclature, layouts and fixture and equipment schedules. Coordination of electrical 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.

Lecture: 1 hour – Lab: 3 hours

Prerequisite: CMGT 1121 Lab fee: \$30.00

ARCH 1232 Building Codes (SP, SU) 2 credits

This course focuses primarily on building and zoning codes. Emphasis is placed on the OBBC (Ohio Basic Building Code) and the Columbus, Ohio zoning code. Other areas of study include the influence of professional associations, manufacturers, and testing laboratories in design and construction documents; CSI specifications, their organization, content and relationship to other contract documents; and professional practice in architecture.

Lecture: 1 hour – Lab: 3 hours

Prerequisite: CMGT 1121 Lab fee: \$15.00

ARCH 1250 Enclosure Materials (SP, SU) 2 credits

This course is designed to expand on the knowledge gained in CIVL 1120, with the study of how such materials and others 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.

Lecture: 1 hour – Lab: 3 hours

Prerequisite: CIVL 1120 Lab fee: \$15.00

ARCH 1274 Revit Architecture I (A, SP, SU) 2 credits

Revit Architecture focuses on the first fully parametric architectural design software, which allows buildings to be designed and drawn “virtually,” instead of being developed with conventional 2D drawings. Users examine their designs from any direction in order to better visualize them. Once created, the Building Information Model (BIM) can be tested, analyzed, and quantified. Basic concepts of REVIT Architecture will be explored in this course to design, change, and document a building using this revolutionary new parametric building modeler software.

Lecture: 1 hour – Lab: 3 hours

Prerequisites: ARCH 1111, ARCH 1114 Lab fee: \$20.00

ARCH 1276 SketchUp (A, SP, SU) 2 credits

This course introduces the student to SketchUp, 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.

Lecture: 1 hour – Lab: 3 hours

Lab fee: \$31.00

ARCH 2100 History of Architecture (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: ENGL 1100 Lab fee: \$9.00

ARCH 2221 Design Studio I (A) 4 credits

This course is built around the design process and design logic and will also include an emphasis on working alone and 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 for the course, lectures and research assignments will include lessons on solar energy, conservation practices, building materials, and other aspects of sustainability.

Lecture: 1 hour – Lab: 6 hours

Prerequisites: ARCH 1111, ARCH 1114 Lab fee: \$38.00

ARCH 2223 Design Studio II (SP) 4 credits

This course is built on the foundations laid by ARCH 2221 and includes discussions of design principles. Students will develop and work on various design projects including a small and a complex architectural project.

Lecture: 1 hour – Lab: 6 hours

Prerequisite: ARCH 2221 Lab fee: \$38.00

ARCH 2237 Structures (SP) 3 credits

This course presents basic conceptual and practical structural design concepts. 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, and concrete and masonry wall design. Drafting projects require the use of CAD and will focus on structural elements.

Lecture: 2 hours – Lab: 3 hours

Prerequisite: CIVL 1320 Lab fee: \$23.00

ARCH 2240 AutoCAD 3D (SP, SU) 2 credits

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.

Lecture: 1 hour – Lab: 3 hours

Prerequisite: ARCH 1114 Lab fee: \$25.00

ARCH 2242 3D Visualization I (A) 3 credits

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.

Lecture: 1 hour – Lab: 5 hours Lab fee: \$30.00

ARCH 2243 3D Visualization II (SP) 3 credits

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.

Lecture: 1 hour – Lab: 5 hours Lab fee: \$30.00

ARCH 2266 Working Drawings (A) 4 credits

This course introduces the student to the practice of working drawings. 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.

Lecture: 2 hours – Lab: 6 hours

Prerequisites: ARCH 1114, ARCH 1232, ARCH 1250

Lab fee: \$30.00

ARCH 2270 Professional Practice (SP) 3 credits

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.

Lecture: 2 hours – Lab: 3 hours

Prerequisite: ARCH 1232 or permission of instructor

Lab fee: \$23.00

ARCH 2275 Revit Architecture II (SP, SU) 2 credits

Advanced concepts of REVIT Architecture will be explored in this course to design, change, and document a building using this revolutionary new parametric building modeler software.

Lecture: 1 hour – Lab: 3 hours

Prerequisite: ARCH 1274

ARCH 2282 Sustainable Design (A) 2 credits

ARCH 2282 will introduce the student to the issues and concepts related to sustainable design. The impact of the building's site, energy efficiency, and the use of renewable forms of energy, including solar energy, will be studied as they relate to building design. Projects will be assigned on a regular basis and will be adaptable to the varied backgrounds of students.

Lecture: 1 hour – Lab: 3 hours Lab fee: \$16.00

ARCH 2283 Sustainable Energy (SP) 2 credits

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.

Lecture: 1 hour – Lab: 3 hours Lab fee: \$15.00

ARCH 2291 ARCH Field Experience (SU) 1-3 credits

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. Nontraditional credit ("N") will not be allowed for this course.

Field Experience: 12 hours

Instructor permission required Lab fee: \$15.00

ARCH 2294 Special Topics: ARCH (A, SP, SU) 1-4 credits

ARCH 2294 provides an opportunity for detailed examination of selected topics in Architecture.

Lecture: Hours vary

Art (ART)

ART 1205 Beginning Drawing (A, SP, SU) 3 credits

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.

Studio: 6 hours Lab fee: \$5.00

ART 1206 2-Dimensional Design (A, SP, SU) 3 credits

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.

Studio: 6 hours Lab fee: \$5.00

ART 1207 3-Dimensional Design (SP) 3 credits

ART 1207 is aimed at developing the student's basic understanding of 3D 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.

Studio: 6 hours

Prerequisite: ART 1206 Lab fee: \$2.00

ART 2221 Life Drawing (SP) 3 credits

ART 2221 emphasizes figure drawing with a foundation in anatomical study. The student will concentrate on proportion and design to further his/her 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.

Lecture: 1 hour - Studio: 4 hours

Prerequisite: ART 1205 Lab fee: \$20.00

ART 2230 Color Composition (SP) 3 credits

ART 2230 examines the theory and artistic application of basic color principles through student projects and lecture. Topics such as color mixing, interaction and organization are presented.

Studio: 6 hours

Prerequisite: ART 1206 Lab fee: \$2.00

ART 2275 Beginning Painting (SP) 3 credits

ART 2275 introduces Studio painting fundamentals utilizing varied subject matter and media.

Studio: 6 hours

Prerequisites: ART 1205 and either ART 2230 or ART 1206

Lab fee: \$7.00

ART 2294 Special Topics: Art (On Demand) 1-3 credits

Student explores a detailed examination of selected topics in art.

Lecture: 1-3 hours

Arts and Sciences (ASC)

ASC 1190 Critical Thinking in A&S (A, SP, SU) 1 credit

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.

Lecture: 1 hour

Prerequisite: ENGL 1100 Lab fee: \$3.00

Astronomy (ASTR)

ASTR 1141 Life in the Universe (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$1.00

ASTR 1161 The Solar System (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: MATH 1075 or higher and placement into ENGL 1100
Lab fee: \$7.00

ASTR 1162 Stars and Galaxies (A, SP, SU) 3 credits

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; and the structure, history and future of the universe. This course may require additional time outside of scheduled class hours.

Lecture: 3 hours

Prerequisite: MATH 1075 or higher and placement into ENGL 1100
Lab fee: \$7.00

ASTR 1400 Astronomy Laboratory (A, SP, SU) 1 credit

ASTR 1400 presents laboratory investigations of light and matter, the Earth's astronomical environment, and an analysis of astronomical data.

Lab: 2 hours

Prerequisite: MATH 1075 or higher; ASTR 1161 or ASTR 1162 (or concurrently) Lab fee: \$6.00

Automotive Technology (AUTO)

AUTO 1001 Auto Care (A, SP, SU) 2 credits

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.

Lecture: 1.5 hours – Lab: 1.5 hours

Lab fee: \$15.00

AUTO 1101 Basic Auto Systems (A, SP, SU) 2 credits

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 AUTO 1106 the same semester. See plan of study or an Automotive Advisor for recommended course sequence.

Lecture: 1.5 hours – Lab: 1.5 hours

Prerequisites: placement into DEV 0114 or MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher.

Corequisite: AUTO 1106, AUTO 1160 Lab fee: \$10.00

AUTO 1106 Auto Shop Orientation & Service (A, SP, SU) 2 credits

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. Must have credit for or be concurrently enrolled in AUTO 1101. See plan of study or an Automotive Advisor for recommended course sequence

Lecture: 1 hour – Lab: 2 hours

Prerequisites: placement into DEV 0114 or MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher.

Corequisites: AUTO 1101, AUTO 1160 Lab fee: \$30.00

AUTO 1110 Engines: Theory & Operations (A, SP, SU) 2 credits

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.

Lecture: 1.5 hours – Lab: 1.5 hours

Prerequisites: AUTO 1101, AUTO 1106, DEV 0114 or placement into MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher. Lab fee: \$25.00

AUTO 1140 Suspension & Steering: Theory & Operation (A, SP, SU) 2 credits

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.

Lecture: 1.5 hours – Lab: 1.5 hours

Prerequisites: AUTO 1101, AUTO 1106, DEV 0114 or placement into MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher Lab fee: \$40.00

AUTO 1150 Brake Systems: Theory & Operations (A, SP, SU) 2 credits

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.

Lecture: 1.5 hours – Lab: 1.5 hours

Prerequisites: AUTO 1101, AUTO 1106, DEV 0114 or placement into MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher Lab fee: \$35.00

AUTO 1160 Electrical Systems: Theory & Operation I (A, SP, SU) 2 credits

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.

Lecture: 1.5 hours – Lab: 1.5 hours

Prerequisites: DEV 0114 or placement into MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher

Corequisites: AUTO 1101 and AUTO 1106 Lab fee: \$25.00

AUTO 1170 Heating & Air Conditioning: Theory & Operations (A, SP, SU) 2 credits

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.

Lecture: 1.5 hours – Lab: 1.5 hours

Prerequisites: AUTO 1101, AUTO 1106, DEV 0114 or placement into MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher Lab fee: \$40.00

AUTO 1180 Engine Performance: Theory & Operation I (A, SP) 2 credits

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.

Lecture: 1.5 hours – Lab: 1.5 hours

Prerequisites: AUTO 1101, AUTO 1106, AUTO 1160 Lab fee: \$25.00

AUTO 1210 Powertrain System Service (A, SP, SU) 2 credits

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. Lecture: 1 hour – Lab: 2 hours

Prerequisites: AUTO 1101, AUTO 1106, DEV 0114 or placement into MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher Lab fee: \$40.00

AUTO 1240 Suspension & Steering: Diagnosis & Repair (A, SP) 2 credits

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.

Lecture: 1 hour – Lab: 2 hours

Prerequisite: AUTO 1101, AUTO 1106, AUTO 1140

Corequisite: AUTO 1160 Lab fee: \$45.00

AUTO 1250 Brake Systems: Diagnosis & Repair (A, SP) 2 credits

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.

Lecture: 1 hour – Lab: 2 hours

Prerequisites: AUTO 1101, AUTO 1106, AUTO 1150, AUTO 1160

Lab fee: \$40.00

AUTO 1260 Electrical Systems: Theory & Operation II (A, SP) 2 credits

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.

Lecture: 1.5 hours – Lab: 1.5 hours

Prerequisites: AUTO 1101, AUTO 1106, AUTO 1160

Lab fee: \$30.00

AUTO 2101 Auto Business Management (A, SP, SU) 2 credits

This course is an introduction to automotive management principles and practices. Topics covered include a systems approach to management, management styles, financial measures, management by objective and quality, time management, customer and employee relations, marketing and the legal environment.

Lecture: 1.5 hours – Lab: 1 hour

Prerequisite: AUTO 1101 Lab fee: \$2.00

AUTO 2120 Automatic Transmissions: Theory & Operations (A) 2 credits

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. Lecture:

1.5 hours – Lab: 1.5 hours

Prerequisites: AUTO 1101, AUTO 1106, AUTO 1160

Lab fee: \$25.00

AUTO 2130 Manual Transmissions: Theory & Operation (SP) 2 credits

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.

Lecture: 1.5 hours – Lab: 1.5 hours

Prerequisites: AUTO 1101, AUTO 1106, placement into MATH 1000 or higher, placement into ENGL 0190 or higher

Lab fee: \$25.00

AUTO 2190 Hybrid Vehicle: Theory & Operations (On Demand) 2 credits

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. Lecture: 1.5 hours – Lab: 1 hour

Prerequisites: AUTO 1101, AUTO 1106

Lab fee: \$10.00

AUTO 2193 Independent Study: Automotive Technology (On Demand) 1 credit

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.

Lecture: 1 hour

Instructor permission required

Prerequisites: AUTO 1101, AUTO 1106

Lab fee: \$2.00

AUTO 2194 SPT: Automotive Tech (On Demand) 1 credit

This is an advanced level course elective that will address current issues in the automotive industry

Lecture: 1 hour

Prerequisites: AUTO 1101, AUTO 1106

Lab fee: \$15.00

AUTO 2201 Service Advising (A) 2 credits

This course covers the primary responsibilities of a service advisor. This includes writing a proper repair order, scheduling, selling maintenance and customer relations. Estimating, repair order tracking and time management are also presented. Student must have credit for AUTO 2101.

Lecture: 1.5 hours – Lab: 1 hour

Prerequisite: AUTO 2101

Lab fee: \$2.00

AUTO 2220 Automatic Transmission: Diagnosis & Repair (A) 2 credits

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.

Lecture: 1 hour – Lab: 2 hours

Prerequisites: AUTO 1101, AUTO 1106, AUTO 2120

Lab fee: \$25.00

AUTO 2230 Manual Transmission: Diagnosis & In-Car Repair (SP) 2 credits

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.

Lecture: 1 hour – Lab: 2 hours
Prerequisites: AUTO 1101, AUTO 1106, AUTO 2130
Lab fee: \$35.00

AUTO 2270 Heating & Air Conditioning: Diagnosis and Repair (A, SP) 2 credits

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. Lecture: 1 hour – Lab: 2 hours
Prerequisite: AUTO 1101, AUTO 1106, AUTO 1160, AUTO 1170
Lab fee: \$45.00

AUTO 2280 Engine Performance: Theory & Operation II (A, SP) 2 credits

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. Lecture: 1.5 hours – Lab: 1.5 hours
Prerequisite: AUTO 1180 Lab fee: \$30.00

AUTO 2293 Independent Study: Auto Technology (On Demand) 2 credits

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 permission required
Independent Studies: 2 hours
Prerequisites: AUTO 1101, AUTO 1106 Lab fee: \$2.00

AUTO 2294 Special Topics: Auto Technology (On Demand) 2 credits

This is an advanced level course elective that will address current issues in the automotive industry.
Lecture: 2 hours
Prerequisites: AUTO 1101, AUTO 1106 Lab fee: \$15.00

AUTO 2301 Auto Service Management (SP) 2 credits

This course covers the variety of duties of the service manager. Principals presented in AUTO 2101 are further developed along with practical implementation strategies. Facilities and equipment planning, management and financial management and analysis are covered. Student must have credit for AUTO 2101. Lecture: 1.5 hours – Lab: 1 hour
Prerequisite: AUTO 2101 Lab fee: \$2.00

AUTO 2310 Engines: Diagnosis & In-Car Repair (On Demand) 2 credits

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.
Lecture: 1 hour – Lab: 2 hours
Prerequisites: AUTO 1110, DEV 0114 or placement into MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher Lab fee: \$40.00

AUTO 2360 Advanced Electrical System: Diagnosis & Repair (On Demand) 3 credits

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.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: AUTO 1260 or FORD 1260 Lab fee: \$25.00

AUTO 2380 Advanced Engine Performance: Diagnosis & Repair (On Demand) 3 credits

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.

Lecture: 2 hours – Lab: 3 hours
Prerequisite: AUTO 2280 Lab fee: \$25.00

AUTO 2393 Independent Study: Auto Technology (On Demand) 3 credits

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.

Independent Studies: 3 hours
Instructor permission required
Prerequisites: AUTO 1101, AUTO 1106 Lab fee: \$2.00

AUTO 2394 Special Topics: Auto Technology (On Demand) 3 credits

This is an advanced level course elective that will address current issues in the automotive industry.

Lecture: 3 hours
Prerequisites: AUTO 1101, AUTO 1106 Lab fee: \$15.00

AUTO 2399 Maintenance and Light Repair Shop Experience (A, SP) 2 credits

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.

Lecture: 1 hour – Lab: 3 hours
Prerequisites: AUTO 1101, AUTO 1106, AUTO 1140, AUTO 1150, AUTO 1160, AUTO 1170, and FORD 1240 or AUTO 1240, FORD 1250 or AUTO 1250, FORD 1260 or AUTO 1260
Lab fee: \$35.00

AUTO 2401 Auto Parts: Management (SU) 2 credits

This course addresses the management duties of a parts department manager. Pricing, inventory control, merchandising, forecasting and purchasing are discussed.

Lecture: 1.5 hours – Lab: 1 hour
Prerequisite: AUTO 2101 Lab fee: \$2.00

AUTO 2460 Electronic Systems: Systems Service (On Demand) 2 credits

This course reflects the most recent technological advances and changes in the electrical and electronic systems by the automotive industry. Changes in diagnostic and repair techniques and tools will also be covered. Student must have credit for AUTO 2360.

Lecture: 1.5 hours – Lab: 1.5 hours
Prerequisite: AUTO 2360 Lab fee: \$10.00

AUTO 2480 Engine Performance: Systems Service (On Demand) 2 credits

This course reflects the most recent technological advances and changes in the engine/powertrain control systems by the automotive industry. Changes in diagnostic and repair techniques and tools will also be covered. Student must have credit for AUTO 2380.

Lecture: 1.5 hours – Lab: 1.5 hours
Prerequisite: AUTO 2380 Lab fee: \$10.00

Aviation Maintenance Technology (AMT)

AMT 1101 Introduction to Aviation (A, SP) 2 credits

In this course, students receive an introduction to the 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.

Lecture: 1 hour - Lab: 2 hours

Prerequisites: Placement into ENGL 1100 and MATH 1020

Lab fee: \$20.00

AMT 1102 Aircraft Weight & Balance (A, SP) 2 credits

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.

Lecture: 1 hour - Lab: 2 hours

Prerequisites: Placement into ENGL 1100 and MATH 1020

Lab fee: \$20.00

AMT 1103 Aircraft Materials (A, SP) 4 credits

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.

Lecture: 2 hours - Lab: 5 hours

Prerequisites: Placement into ENGL 1100 and MATH 1020

Lab fee: \$30.00

AMT 1104 AMT Regulations & Inspection (A, SU) 3 credits

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 the 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.

Lecture: 2 hours - Lab: 4 hours

Prerequisites: Placement into ENGL 1100 and MATH 1020

Lab fee: \$20.00

AMT 1105 Ground Operations & Servicing (A, SU) 2 credits

In this class, students will study and engage in practices involving aircraft ground handling. Emphasis will be placed on accomplishment of tasks while preserving a safe environment for personnel and equipment. Students will become proficient at performing various aircraft maintenance responsibilities that involve shop safety, tie-down procedures, aircraft jacking and hoisting, and aircraft cleaning.

Lecture: 1 hour - Lab: 2 hours

Prerequisites: Placement into ENGL 1100 and MATH 1020

Lab fee: \$30.00

AMT 1106 Basic Electricity AMT (SP, SU) 6 credits

With the sophisticated aircraft manufactured today, an understanding of basic electrical concepts is essential for the modern aircraft maintenance technician. In this course, students will develop a

fundamental understanding of basic electrical circuits with an emphasis on airborne installations. Electrical theory and practical application will be accomplished and proven through extensive experimentation and practice. Aircraft maintenance practices as they relate to batteries and power calculations, as well as the relationship of voltage, current, and resistance, will be examined, and precision measurement of these values will be made on operational circuits.

Lecture: 3 hours - Lab: 6 hours Lab fee: \$20.00

AMT 2101 Aircraft Metallic Structures (A, SP) 6 credits

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.

Lecture: 3 hours - Lab: 6 hours

Prerequisite: AMT 1103 Lab fee: \$25.00

AMT 2102 Aircraft Electrical Systems (A, SP) 6 credits

In this course, students will develop a fundamental understanding of basic AC/DC electrical circuits with an emphasis on airborne installations. Electrical theory and practical application will be accomplished and proven through extensive experimentation and practice. 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.

Lecture: 3 hours - Lab: 6 hours

Prerequisite: AMT 1106 Lab fee: \$25.00

AMT 2103 Aircraft Instruments & Fire Protection (A, SU) 4 credits

In this course, students will study instrument systems for monitoring flight envelope, environment, and engine parameters. Analog and electronic display systems are covered. Practical application of troubleshooting procedures and maintenance practices associated with these devices will be accomplished with a high level of achievement expected.

Lecture: 2 hours - Lab: 4 hours

Prerequisite: AMT 1106 Lab fee: \$25.00

AMT 2104 Aircraft Fuel Systems (A, SU) 2 credits

In this course, students will develop an understanding of the fuels systems for aircraft, engine, and helicopters. The course will cover the inspection, installation techniques, and maintenance of the aircraft fuel systems including integral tanks, bladder tanks, plumbing, and associated systems.

Lecture: 1 hour - Lab: 2 hours

Prerequisite: AMT 1105 Lab fee: \$30.00

AMT 2105 Aircraft Non-Metallic Structures (SP, SU) 5 credits

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.

Lecture: 3 hours - Lab: 5 hours

Prerequisite: AMT 1103 Lab fee: \$30.00

AMT 2106 Communications & Navigation Systems (A, SP) 2 credits

This course will examine these systems and allow students to gain practical experience in the testing, troubleshooting, and required inspections

associated with them.

Lecture: 1 hour - Lab: 3 hours

Prerequisite: AMT 1106 Lab fee: \$30.00

AMT 2107 Aircraft Environmental Controls (A, SP) 2 credits

In this class, students discover how pilots and passengers remain comfortable through heating, air conditioning, pressurization, and supplemental oxygen systems and how the technician maintains them. Maintenance practices of on-board smoke, carbon monoxide, and fire detection and suppression systems are also covered.

Lecture: 1 hour - Lab: 3 hours Lab fee: \$30.00

AMT 2108 Aircraft Landing Gear & Fluid Power (A, SP) 4 credits

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.

Lecture: 2 hours - Lab: 5 hours

Prerequisite: AMT 1103 Lab fee: \$30.00

AMT 2109 Airframe Inspection (A, SU) 6 credits

This is an 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.

Lecture: 3 hours - Lab: 6 hours

Prerequisites: AMT 2101, AMT 2102, AMT 2103, AMT 2104, AMT 2105 Lab fee: \$30.00

AMT 2201 Turbine Engine Maintenance I (SP, SU) 5 credits

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.

Lecture: 3 hours - Lab: 5 hours

Prerequisite: AMT 1103 Lab fee: \$30.00

AMT 2202 Turbine Engine Maintenance II (A, SP, SU) 5 credits

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.

Lecture: 3 hours - Lab: 5 hours

Prerequisite: AMT 1103 Lab fee: \$30.00

AMT 2203 Reciprocating Engine Maintenance I (A, SP) 5 credits

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.

Lecture: 3 hours - Lab: 5 hours

Prerequisite: AMT 1103 Lab fee: \$30.00

AMT 2204 Reciprocate Engine Maintenance II (A, SU) 5 credits

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.

Lecture: 3 hours - Lab: 5 hours

Prerequisite: AMT 1103 Lab fee: \$30.00

AMT 2205 Propellers (A, SP, SU) 2 credits

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.

Lecture: 1 hour - Lab: 2 hours Lab fee: \$30.00

AMT 2206 Powerplant Inspection (A, SP, SU) 4 credits

This is a 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.

Lecture: 2 hours - Lab: 4 hours

Prerequisites: AMT 2201, AMT 2202, AMT 2203

Lab fee: \$30.00

Biology (BIO)

A mandatory safety lesson (normally given in the laboratory) must be completed before the student is admitted to certain biology laboratory sessions. Approved safety glasses are required for some laboratory sessions and may be purchased through the Columbus State Bookstore. Attendance during the first week of class is mandatory and may affect a student's continuation in these classes. Students must complete a minimum of 60% of the laboratories in a course to receive credit (see course syllabus for specific requirements). Courses in this area may require additional hours outside of the scheduled class times. The prerequisite for all biology courses above BIO 0100 is high school biology completed within the last 5 years or completion of BIO 0100, BIO 1111, or previous college credit in biology within the last 5 years. Students enrolled in distance versions of these courses may be required to come to campus for an orientation meeting, completion of certain exams, and laboratories (see course syllabus for specific requirements). Courses taught at a distance (DL) have higher student costs. Web sections of BIO 1111 and BIO 1112 require the purchase of a home lab kit. Cost is approximately \$190.

BIO 0100 Foundations of Biology (A, SP, SU) 3 credits

This is a general biology course where basic principles such as the characteristics of life, basic biochemistry, cell structure and function, mitosis, meiosis, Mendelian genetics and ecology are explored.

Lecture: 3 hours

Prerequisite: Placement into ENGL 0190 Lab fee: \$4.00

BIO 1101 Fundamentals of Human Anatomy & Physiology (A, SP, SU) 3 credits

BIO 1101 covers 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 online review of basic cell biology and biological chemistry. Case studies relate normal anatomy and physiology to specific disorders. Blended and Web students are required to take exams at a proctored testing facility.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$4.00

BIO 1111 Introduction to Biology (A, SP, SU) 4 credits

This is an introductory course in general biology for the nonmajor. Topics include cell structure and function, bioenergetics, DNA structure and function, biodiversity, ecology and evolution. Sections of this course are H-designated Honors classes.

Lecture: 3 hours – Lab: 2 hours

Prerequisites: High school biology or BIO 0100, or passing the departmental BIO 0100 proficiency test, and placement into ENGL 1100
Lab fee: \$20.00

BIO 1112 Human Biology (A, SP, SU) 4 credits

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.

Lecture: 3 hours – Lab: 2 hours

Prerequisites: High school biology or BIO 0100, or passing the departmental BIO 0100 proficiency test and placement into ENGL 1100
Lab fee: \$20.00

BIO 1113 Biological Sciences I (A, SP, SU) 4 credits

This is 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 mechanisms of the body. Sections of this course are H-designated Honors classes.

Lecture: 3 hours – Lab: 3 hours

Prerequisites: High school biology or passing the departmental BIO 0100 proficiency test, or BIO 0100 or BIO 1111
Corequisite: CHEM 1171 Lab fee: \$27.00

BIO 1114 Biological Sciences II (A, SP, SU) 4 credits

This course is the second 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.

Lecture: 3 hours – Lab: 3 hours

Prerequisite: BIO 1113 or equivalent Lab fee: \$26.00

BIO 1121 Anatomy & Physiology I (A, SP, SU) 4 credits

This course offers an integrated organ-systems approach to normal anatomy and physiology with medical applications of disease. An online review of cell biology and biological chemistry is included in this course. Topics include terminology, homeostasis, membrane transport, tissues, and the integumentary, skeletal, muscular, nervous, and endocrine systems. Study of prosected cadavers, animal organ dissection, and collecting physiological data from human subjects are required in laboratory. Students enrolled in Blended sections are required to take exams at a proctored testing facility.

Lecture: 3 hours – Lab: 2 hours

Prerequisites: High school biology or passing the departmental BIO 0100 proficiency test, or BIO 0100 or BIO 1101; Placement into ENGL 1100
Lab fee: \$31.00

BIO 1122 Anatomy & Physiology II (A, SP, SU) 4 credits

This course is a continuation of BIO 1121 using an integrated organ-systems approach to normal anatomy and physiology with medical applications of diseases, including an online review of objectives from the previous semester. Topics include glucose and electrolyte homeostasis, blood, lymphatic, cardiovascular, respiratory, and urinary systems, acid-base balance, digestive system, metabolism, thermoregulation, reproductive systems, genetics, human development, and life span physiology. Study of prosected cadavers, animal organ dissection, and collecting physiological data from human subjects are required in laboratory. Students enrolled in Blended sections are required to take exams at a proctored testing facility.

Lecture: 3 hours - Lab: 2 hours

Prerequisite: BIO 1121 Lab fee: \$31.00

BIO 1125 Plant Biology (A, SP, SU) 4 credits

This course covers the biology of major plant groups. Topics include diversity, physiology, reproduction, anatomy, ecology and the economic significance of plants.

Lecture: 3 hours – Lab: 2 hours

Prerequisite: BIO 0100 or high school biology or passing the departmental BIO 0100 proficiency test; Placement into ENGL 1100
Lab fee: \$19.00

BIO 1127 Environmental Science I (A, SP, SU) 4 credits

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.

Lecture: 3 hours – Lab: 2 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$20.00

BIO 2215 Introduction to Microbiology (A, SP, SU) 4 credits

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.

Lecture: 3 hours – Lab: 3 hours

Prerequisite: High school biology or BIO 0100 and high school chemistry or CHEM 0100 or passing the departmental proficiency test for both BIO 0100 and CHEM 0100; Placement into ENGL 1100
Lab fee: \$27.00

BIO 2232 Human Physiology (A, SP, SU) 4 credits

This is an introductory course in human physiology designed to cover the normal physiology of all organ systems.

Lecture: 3 hours – Lab: 2 hours

Prerequisites: BIO 2300 and placement into ENGL 1100
Lab fee: \$14.00

BIO 2263 Human Pathophysiology (A, SP, SU) 3 credits

This course studies 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. BIO 2263 includes online 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.

Lecture: 3 hours

Prerequisites: Take one group: (1) BIO 2300 and BIO 2232 and CHEM

1112 or CHEM 1113 or CHEM 1200; or
(2) BIO 1121 and BIO 1122 and CHEM 1112 or CHEM 1113 or
CHEM 1200 or
(3) BIO 1113 and BIO 1114 and CHEM 1112 or CHEM 1113 or CHEM
1200
Lab fee: \$4.00

BIO 2293 Independent Study in Biology (On Demand) 1-3 credits

This independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program.

Lecture: 1-3 hours

Instructor permission required Lab fee: \$1.00

BIO 2294 Special Topics in Biology (On Demand) 1-3 credits

This course provides an opportunity for a detailed examination of selected topics of interest in biology.

Lecture: 1-3 hours

Instructor permission required Lab fee: \$1.00

BIO 2300 Human Anatomy (A, SP, SU) 4 credits

In this course, 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.

Lecture: 2 hours – Lab: 4 hours

Prerequisites: High school biology or passing the departmental BIO 0100 proficiency test or BIO 0100 or BIO 1101; and Placement into ENGL 1100 Lab fee: \$27.00

BIO 2500 General Genetics (A, SP, SU) 3 credits

This course explores 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.

Lecture: 3 hours

Prerequisites: BIO 1113 and 3 additional semester credit hours in biological sciences Lab fee: \$6.00

Bioscience Technology (BISI) (See also Quality Assurance Technology)

BISI 1101 Bioscience Tech I (A) 4 credits

This applied course covers learning objectives found in the Bio Science industry and includes the following topics: pressure, flow, level, temperature, introduction to FDA regulations, and related units. Additional topics include temperature and pH.

Lecture: 3 hours – Lab: 3 hours Lab fee: \$36.00

BISI 1103 Bioscience Tech II (SP) 4 credits

This second course in the sequence covers compounding, sterile filling, pH, Pilot Plant System, aseptic practices/technologies, FDA Regulations, and operating in a regulatory, biomanufacturing environment. Competency in key knowledge and skill areas for bioprocess control and GMP are evaluated as part of a capstone project.

Lecture: 3 hours – Lab: 3 hours

Prerequisite: BISI 1101 Lab fee: \$42.00

Business Management (BMGT)

BMGT 1008 21st Century Workplace Skills (On Demand) 2 credits

In this fundamental course, students learn basic skills needed to gain entry to and thrive in a rapidly changing workplace environment. This course is not recommended for business majors.

Lecture: 2 hours

Prerequisite: Instructor consent is required

BMGT 1101 Principles of Business (A, SP, SU) 3 credits

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 the student complete COLS 1100 before enrolling in this course.

Lecture: 3 hours

Prerequisite: Placement into ENGL 0190 Lab fee: \$2.00

BMGT 1102 Interpersonal Skills (A, SP, SU) 2 credits

This course introduces the student to management themes and the five primary skill sets required to be a successful manager. This course provides opportunities for students to begin to learn, develop, and apply managerial skills through personal assessments and the study of temperament and personality type. It also offers an introduction to various skill concepts and behavior models. Recommended: Student should complete COLS 1100 before enrolling in this course.

Lecture: 1 hours – Lab: 2 hours

Prerequisite: Placement into ENGL 0190 Lab fee: \$2.00

BMGT 1111 Management (A, SP, SU) 3 credits

The basic management functions of planning, organizing, leading, controlling and staffing business organizations are covered. This course also provides an introduction to fundamental concepts and applications of individual, group, and organizational behavior in the workplace. The organization is viewed as a system of interdependent parts which interacts with the outside environment. Topics include management theory, global business trends, leadership, motivation, communication and problem solving, foundations of organizational behavior, perception and individual decision-making, values, attitudes, and the foundations of group behavior. It is recommended that the student complete COLS 1100 before enrolling in this course.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

BMGT 1798 Study Abroad Global Business Management (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100

BMGT 2211 Organizational Behavior (A, SP, SU) 3 credits

This course provides an introduction to fundamental concepts and applications of individual, group, and organizational behavior in the workplace. Topics include foundations of organizational behavior, perception and individual decision making, values, attitudes, the foundations of group behavior, understanding work teams, and

organizational dynamics.

Lecture: 3 hours

Prerequisite: ENGL 1100

BMGT 2216 Business Ethics (A, SP, SU) 3 credits

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. Recommended: Student should complete COLS 1100 before enrolling in this course.

Lecture: 3 hours

Prerequisite: ENGL 1100 Lab fee: \$2.00

BMGT 2231 Fundamentals of Entrepreneurship (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

BMGT 2232 Entrepreneurship: Business Plan Development (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 and BMGT 2231

Lab fee: \$2.00

BMGT 2245 Introduction to Non-Profit Management (A, SP, SU) 3 credits

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. Recommended: Student complete COLS 1100 before enrolling in this course.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100

BMGT 2246 Operational Management of Nonprofit Organizations (A, SP, SU) 3 credits

This course focuses on the 'tactics' of strategy implementation in a nonprofit organization. It answers the question: "Now that we have determined our mission and strategic goals, what do we have to do to get there?" The course explores human resource development and supervision, program planning, managing volunteers, outcome assessment and measurement, board and committee development, and risk management. Recommended: Student should complete COLS 1100 before enrolling in this course.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100

BMGT 2247 Legal & Financial Nonprofit Management (A, SP) 3 credits

This course introduces the legal and financial issues relevant to managing a 501(c)(3) nonprofit organization. Issues to be addressed include organizing

the entity, qualifying for and maintaining nonprofit status, principles of fundraising, and strategic marketing. Financial areas covered include the principles of fiscal responsibility for nonprofits, as well as cost accounting, budgeting, the presentation of financial statements, proposed development, and in-kind resources. Recommended: Student should complete COLS 1100 before enrolling in this course.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100

BMGT 2250 Project Management Principles (A, SP, SU) 3 credits

This course introduces students to the basic concepts of project management. Students learn to define the scope of a project; minimize change of scope; establish goals; define dependency networks; communicate the project plan; use Program Evaluation and Review Techniques (PERT) charts and Critical Path Management; schedule projects; establish tasks, sub tasks, and milestones; and assign resources. Recommended: Student should complete COLS 1100 before enrolling in this course.

Lecture: 2 hours – Lab: 2 hours Lab fee: \$2.00

BMGT 2251 Project Management Techniques (A SP) 3 credits

Students will learn to use a variety of Project Management tools, such as breakdown structures, resource and time estimating, resources allocation, GANTT charts, earned value, PERT charts, and critical path analysis. Recommended: Student should complete COLS 1100 before enrolling in this course.

Lecture: 3 hours

Prerequisite: BMGT 2250 Lab fee: \$2.00

BMGT 2253 Conflict Management (A, SP, SU) 3 credits

This course provides students with a basis and a context for effectively managing conflict. The course covers advanced concepts of emotional intelligence and emotional intelligence competencies, a critical thinking model, various models of conflict management, dealing with disruptive and antagonistic behaviors, and the nine elements of effective conflict management. The course focuses on theory and practical application and is designed to equip managers with both the basic theoretical knowledge and initial practical experience needed to manage conflict effectively

Lecture: 3 hours

Prerequisites: ENGL 1100 Lab fee: \$2.00

BMGT 2254 Negotiation (A, SP) 3 credits

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, and methodologies that enhance strategies best suited for each situation.

Lecture: 3 hours

Prerequisites: ENGL 1100 Lab fee: \$3.00

BMGT 2258 Enterprise Planning & Analysis (A, SP, SU) 3 credits

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.

Lecture: 2 hours – Lab: 2 hours

Prerequisites: MATH 1030 or MATH 1050 or STAT 1350 and placement into ENGL 1100 Lab fee: \$2.00

BMGT 2280 Professional Development (A, SP) 1 credit

In this course, each student will examine his/her 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

Lab: 2 hours

Prerequisites: Completion of 24 credit hours or permission of instructor
Lab fee: \$8.00

BMGT 2299 Case Studies in Strategic Management (A, SP, SU) 3 credits

This course is a capstone course for graduating Business Management, and Entrepreneurship students and provides students an in-depth examination of corporate strategic planning. The course focuses on the application and reinforcement of the various functional disciplines and concepts of preceding business coursework. A framework for competitive company and industry analysis is provided. Students will apply decision-making, problem-solving, and accounting and financial analysis in reviewing contemporary businesses and industries, thereby strengthening business acumen. Instructor permission required.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: Instructor permission required Lab fee: \$16.00

BMGT 2599 Project Management Capstone (A, SP) 3 credits

In this capstone course for the Project Management Certification program, students use the knowledge they gained from BMGT 2250 and BMGT 2251 to manage a comprehensive project. The project may be real or a case study.

Lecture: 3 hours

Prerequisites: BMGT 2250, BMGT 2251

BMGT 2901 BMGT Seminar/Practicum (A, SP) 3 credits

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.

Seminar: 1 hour, Practicum: 14 hours

Instructor permission required

Prerequisite: ACCT 1212

BMGT 2902 Entrepreneurship Seminar/Practicum (A, SP) 3 credits

The practicum provides a supervised, cooperative work experience with on-the-job application of knowledge and skills acquired in the classroom. The seminar allows students to report on management knowledge gained in specific areas of the practicum.

Seminar: 1 hour - Practicum: 14 hours

Instructor permission required

Prerequisite: BMGT 2232

Business Office Administration (BOA)

BOA 1101 Word I (A, SP, SU) 2 credits

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.

Lecture: 1.5 hours - Lab: 1.5 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

BOA 1102 Excel I (A, SP, SU) 2 credits

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.

Lecture: 1.5 hour - Lab: 1.5 hours

Prerequisites: Placement into ENGL 1100 and placement into MATH 1010 or higher Lab fee: \$2.00

BOA 1103 PowerPoint (A, SP, SU) 2 credits

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.

Lecture: 1.5 hours- Lab: 1.5 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$60.00

BOA 1104 Access (A, SP, SU) 2 credits

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.

Lecture: 1.5 hours - Lab: 1.5 hours

Prerequisites: Placement into ENGL 1100 and placement into MATH 1010 or higher

Lab fee: \$2.00

BOA 1111 Bookkeeping (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into MATH 1010 or higher and BOA 1102

Lab fee: \$3.00

BOA 1117 Payroll (AU, SP, SU) 1 credit

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.

Lecture: 1 hour

Prerequisite: BOA 1111 or ACCT 1211 Lab fee: \$3.00

BOA 1122 QuickBooks™ (A, SP, SU) 2 credits

This course covers how to set up a company in Quickbooks, how to perform all bookkeeping and accounting functions of the software, and how to manage business functions such as inventory and budgeting.

Integrating Quickbooks with other programs and customizing Quickbooks to a company's specific needs are also covered. Lecture: 1 hour - Lab 2 hours

Prerequisite: BOA 1111 or ACCT 1211 or ACCT 1212 Lab fee: \$58.00

BOA 1131 Keyboarding & Document Formatting (A, SP, SU) 2 credits

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.

Lecture: 1 hour - Lab: 2 hours

Prerequisites: Placement into ENGL 1100 and placement into MATH 1010 or higher

Lab fee: \$3.00

BOA 1132 Advanced Document Formatting (A, SP, SU) 2 credits
Students will develop a mastery of formatting skills and intermediate word processing functions required to complete sophisticated business correspondence. Along with these skills, students will continue to build keyboarding speed and accuracy rates.
Lecture: 1 hour - Lab: 2 hours
Prerequisite: BOA 1131 Lab fee: \$3.00

BOA 1150 Office Procedures I (A, SP, SU) 2 credits
This course introduces the student to the skills needed for success as an administrative professional. The main responsibilities, the soft skills and knowledge, and the required technical skills necessary for success in the 21st century office are emphasized. Students will begin developing an electronic portfolio that is used throughout the program. There are on-campus attendance requirements for this course.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisites: Placement into ENGL 1100 and placement into MATH 1010 or higher
Lab fee: \$5.00

BOA 1151 Office Procedures II (A, SP, SU) 3 credits
As a continuation of BOA 1150 Office Procedures I, this course covers additional topics essential to the success of an office professional and continues to provide continuity and integration with all BOA courses and curriculum. Topics include preparing and delivering presentations, teamwork in the workplace, planning and advancing your career, and professional development. There are on-campus attendance requirements for this course.
Lecture: 2 hours - Lab: 2 hours
Prerequisite: BOA 1150 Lab fee: \$5.00

BOA 1172 Excel II (A, SP, SU) 2 credits
This course 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.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisite: BOA 1102 Lab fee: \$60.00

BOA 1191 Word II (A, SP, SU) 2 credits
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.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisite: BOA 1101 Lab fee: \$60.00

BOA 1200 Business Language (A, SP, SU) 2 credits
This course is the study of the business grammar and language fundamentals needed to communicate effectively in today's business environment. Topics include grammar, punctuation, capitalization, number styles, vocabulary, and spelling.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisites: Placement into ENGL 1100 Lab fee: \$3.00

BOA 1300 Business Applications (A, SP, SU) 2 credits
This course prepares students to solve business problems using computer software as a tool. Covers intermediate business applications pertaining to all communication methods used in a business environment.
Lecture: 1 hour - Lab: 2 hours
Prerequisites: CSCI 1101 or BOA 1101, BOA 1102, and BOA 1103
Lab fee: \$3.00

BOA 2167 Desktop Publishing (SP) 2 credits
This course utilizes a desktop publishing software program to design professional publications. It begins with basic concepts and builds upon this knowledge to demonstrate how to fully utilize the publishing software.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisite: BOA 1191 Lab fee: \$3.00

BOA 2950 BOA Practicum & Seminar (A, SP, SU) 3 credits
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.
Seminar: 1 hour - Practicum: 14 hours
Prerequisites: BOA 1132, BOA 1151 Lab fee: \$3.00

BOA 2999 BOA Capstone (A, SP) 3 credits
This BOA capstone course provides a hands-on application environment where students work in teams to plan, develop, implement, and present automated business office applications. Students will also complete an electronic portfolio and participate in a community service project related to the program of study. There are on-campus attendance requirements for this course.
Lecture: 2 hours - Lab: 2 hours
Prerequisites: BOA 1132, BOA 1151 Lab fee: \$5.00

Chemistry (CHEM)

A mandatory safety lesson must be completed before the student is admitted to any chemistry laboratory sessions. Approved Chemical Splash Resistant goggles are required and may be purchased through the Columbus State Bookstore. Certain clothing restrictions exist and will be explained by the instructor. Attendance during the first week of class is mandatory and may affect a student's continued enrollment in these classes. Students must earn at least 60% of the total laboratory points in a course to receive a passing grade for the course. Courses in this area may require additional hours outside of scheduled class times. High school chemistry must have been completed within the last 3 years, or the student must have completed CHEM 0100 or CHEM 1111 in order to meet the prerequisite requirement.

CHEM 0100 Introduction to Chemistry (A, SP, SU) 4 credits
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.
Lecture: 3 hours - Lab: 2 hours
Prerequisites: MATH 1020 or higher, and placement into ENGL 0190 or higher Lab fee: \$14.00

CHEM 1100 Chemistry and Society (A, SP, SU) 5 credits
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.

Lecture: 5 hours

Prerequisites: MATH 1020 or higher, and placement into ENGL 1100

Lab fee: \$20.00

CHEM 1111 Elementary Chemistry I (A, SP, SU) 4 credits

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. 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.

Lecture: 3 hours – Lab: 2 hours

Prerequisites: MATH 1020 or higher, and placement into ENGL 1100

or higher Lab fee: \$20.00

CHEM 1112 Elementary Chemistry II (A, SP, SU) 4 credits

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. 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 laboratory.

Lecture: 3 hours – Lab: 2 hours

Prerequisite: CHEM 1111 or CHEM 1171 Lab fee: \$20.00

CHEM 1113 Elements Organic/Biochemistry (A, SP, SU) 4 credits

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. Safety training and goggles are required for the laboratory session. 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 laboratory.

Lecture: 3 hours – Lab: 2 hours

Prerequisites: High school chemistry completed within the last three years or CHEM 0100 or CHEM 1111 or higher or successful completion of the placement exam; MATH 1020 or higher; placement into ENGL 1100 or higher Lab fee: \$20.00

CHEM 1171 General Chemistry I (A, SP, SU) 5 credits

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.

Lecture: 4 hours – Lab: 3 hours

Prerequisites: High school chemistry completed within the last 3 years or CHEM 0100 or CHEM 1111 or CHEM 1200 or successful completion of placement exam; MATH 1148 or higher; Placement into ENGL 1100 Lab fee: \$29.50

CHEM 1172 General Chemistry II (A, SP, SU) 5 credits

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.

Lecture: 4 – Lab: 3 hours

Prerequisite: CHEM 1171 Lab fee: \$29.50

CHEM 1200 Introduction to General and Organic Chemistry (A, SP, SU) 5 credits

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, and enzymes. 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.

Lecture: 4 hours - Lab: 3 hours

Prerequisites: MATH 1020 or higher; placement in ENGL 1100 or higher; High school chemistry or CHEM 0100 completed within the last 5 years Lab fee: \$20.00

CHEM 2251 Organic Chemistry I (A, SP, SU) 5 credits

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.

Lecture: 5 hours

Prerequisite: CHEM 1172 Lab fee: \$10.00

CHEM 2252 Organic Chemistry II (A, SP, SU) 5 credits

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.

Lecture: 5 hours

Prerequisite: CHEM 2251 Lab fee: \$10.00

CHEM 2254 Organic Chemistry Laboratory I (A, SP, SU)

3 credits

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.

Lecture: 1 hour – Lab: 5 hours

Corequisite: CHEM 2251 Lab fee: \$40.00

CHEM 2255 Organic Chemistry Laboratory II (A, SP, SU)

3 credits

This is 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.

Lecture: 1 hour – Lab: 5 hours

Prerequisite: CHEM 2254

Corequisite: CHEM 2252 Lab fee: \$40.00

CHEM 2261 General Biochemistry (A, SP, SU) 4 credits

This is an introductory course in biochemistry dealing with the molecular

basis of structure and metabolism of plants, animals and microorganisms.

Lecture: 4 hours

Prerequisites: CHEM 2252 and BIO 1101 or higher

Lab fee: \$7.00

CHEM 2293 Independent Study: Chemistry (On Demand)

1-3 credits

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.

Instructor permission required

Lecture: Hours vary – Lab: Hours vary Lab fee: \$1.00

CHEM 2294 Special Topics: Chemistry (On Demand) 1-3 credits

This course provides an opportunity to explore selected topics of interest in chemistry.

Instructor permission required

Lecture: Hours vary – Lab: Hours vary Lab fee: \$1.00

Chinese (CHIN)

CHIN 1101 Beginning Chinese I (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$10.00

CHIN 1102 Beginning Chinese II (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: CHIN 1101; minimum grade of “C” Lab fee: \$10.00

CHIN 1103 Beginning Chinese III (SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: CHIN 1102; minimum grade of “C” Lab fee: \$10.00

CHIN 1193 Independent Study in Chinese (On Demand) 1-3 credits

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.

Lecture: 1-3 hours

Prerequisite: CHIN 1103 or Instructor Permission Lab fee: \$2.00

CHIN 1194 Special Topics in Chinese (On Demand) 1-3 credits

CHIN 1194 provides group study opportunities for special topics in Chinese. Special topic courses are offered to meet the special needs or interests of a group of students and to pilot new courses.

Lecture: 1-3 hours

Prerequisite: CHIN 1103 or Instructor Permission Lab fee: \$2.00

Civil Engineering Technology (CIVL)

CIVL 1120 Construction Material Science (A, SP, SU) 3 credits

This course offers 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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: MATH 1075 or higher Lab fee: \$30.00

CIVL 1230 Heavy Construction Estimating (SP) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: MATH 1075 or higher Lab fee: \$23.00

CIVL 1320 Statics & Strength of Materials (A, SP) 3 credits

CIVL 1320 introduces the study of static forces and equilibrium and the resultant stress, strain, deformation, failure and strength analysis of structures under loads. Course also covers the concepts of torsion, modulus of elasticity, shear, bending, centroids and moments of inertia.

Lecture: 2 hours - Lab: 3 hours

Prerequisites: MATH 1075 or higher, CIVL 1120

Lab fee: \$30.00

CIVL 2210 Principles of Hydraulics (A) 2 credits

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.

Lecture: 2 hours

Prerequisite: MATH 1075 or higher Lab fee: \$23.00

CIVL 2230 Public Utility Systems (A, SP) 2 credits

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.

Lecture: 2 hours

Prerequisite: CIVL 2210 Lab fee: \$30.00

CIVL 2430 Roadway Location & Design (SP) 3 credits

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

COLS 1100 First Year Experience Seminar (A, SP, SU) 1 credit

The First Year Experience 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.

Lecture: 1 hour

Prerequisite: Required course within the first 15 hours at CSCC

Lab fee: \$2.00

COLS 1101 College Success Skills (A, SP, SU) 1 credit

College Success Skills' students will develop the skills and resources necessary to be successful in personal, academic and career-related pursuits. The course expands upon the orientation to college resources, policies, and processes. Any student who places into two or more DEV courses must take this course instead of COLS 1100. Students are to take this course within the first 15 hours at CSCC.

Lecture: .5 hours – Lab: 1.5 hours

Prerequisite: Placement into two or more DEV courses

Lab fee: \$3.00

Communication (COMM)

(Also see Theatre)

Note: Courses taught online through distance learning (DL) may have a higher lab fee than traditionally taught courses.

COMM 1105 Oral Communication (A, SP, SU) 3 credits

This course studies nonverbal and verbal communication in public contexts.

Lecture: 3 hours

Prerequisite: ENGL 1100 Lab fee: \$2.50

COMM 1110 Small Group Communication (A, SP, SU) 3 credits

COMM 1110 looks at the principles and practice of group communication and dynamics.

Lecture: 3 hours

Prerequisite: ENGL 1100 Lab fee: \$2.50

COMM 1115 Oral Interpretation (A, SP) 3 credits

In COMM 1115, Oral Interpretation, students will learn to analyze literary works, in part by recognizing their emotional and dramatic values and then projecting those qualities through oral presentations.

Lecture: 3 hours – Lab: 0 hours

Prerequisite: ENGL 1100 Lab fee: \$2.50

COMM 1150 Video Art Production (On Demand) 3 credits

COMM 1150 presents an introduction to the art of independent film and video through analysis of short films and production of digital video shorts.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: ENGL 1100 Lab fee: \$25.00

COMM 2200 Business Communication (A, SP, SU) 3 credits

In this course, students will learn the basic principles and practices employed for effective written and oral business communications. Students will plan, edit, and revise documents using appropriate formats for internal, external, and job search communications. They also will develop a problem-solving report based on primary and secondary research. The course culminates in students developing and delivering an

oral presentation. Student is to complete 10 credit hours before enrolling in this course.

Lecture: 3 hours

Prerequisites: ENGL 1100 Lab fee: \$2.00

COMM 2201 Introduction to Communication Theory (A, SP, SU) 3 credits

COMM 2201 presents an overview of major theories, perspectives, and approaches guiding the understanding of communication in various contexts.

Lecture: 3 hours

Prerequisite: ENGL 1100 Lab fee: \$2.50

COMM 2204 Technical Writing (A, SP, SU) 3 credits

In this class, students will explore the principles and practices used in preparing common technical communications such as scientific reports, detailed instructions, and product/process descriptions. Students will create and deliver an oral presentation and prepare job search documents.

Lecture: 3 hours

Prerequisite: ENGL 1100 Lab fee: \$2.00

COMM 2207 Writing for the Web (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: ENGL 1100

COMM 2208 Communication for the Mass Media (A, SP) 3 credits

This 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.

Lecture: 3 hours

Prerequisite: ENGL 1100 Lab fee: \$2.00

COMM 2220 Introduction to Mass Communication (A, SP, SU) 3 credits

This course offers a study and discussion of the history, roles, and impact of mass media in American society.

Lecture: 3 hours

Prerequisite: ENGL 1100 Lab fee: \$2.50

COMM 2221 Public Relations Writing & Media Technology (A, SP) 3 credits

This course explains and develops the professional-level writing techniques expected of public relations practitioners. It covers the 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.

Lecture: 3 hours

Prerequisite: ENGL 1100 Lab fee: \$2.50

COMM 2232 Interpersonal Communication (A, SP, SU) 3 credits

COMM 2232 explores the communication that takes place in formal and informal face-to-face settings.

Lecture: 3 hours Lab fee: \$2.50

COMM 2241 News Writing & Editing (A, SP) 3 credits

COMM 2241 prepares students to write and edit news articles that conform to established and emerging ethical guidelines and emerging publication styles. It also introduces the history of journalism in the United States.

Lecture: 3 hours

Prerequisite: ENGL 1100 Lab fee: \$2.50

COMM 2245 Introduction to Film (A, SP, SU) 3 credits

COMM2245 offers an introduction to film by analyzing elements of film technique: literature, story, drama, editing, movement, acting, sound, photography, staging and theory.

Lecture: 3 hours

Prerequisite: ENGL 1100 Lab fee: \$4.50

COMM 2268 Intercultural Communication (A, SP) 3 credits

This class explores the role of communication in understanding, appreciating and interacting with individuals across diverse cultures.

Lecture: 3 hours

Prerequisite: ENGL 1100 Lab fee: \$2.50

Computer Science (CSCI)

CSCI 1001 Computer Fundamentals (A, SP, SU) 2 credits

CSCI 1001 introduces the inexperienced computer user to the 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.

Lecture: 1 hour - Lab: 2 hours Lab fee: \$6.00

CSCI 1100 Essential Computer Topics (SP) 1 credit

For students without an IT background, this course 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: 2 hours Lab fee: \$1.00

CSCI 1101 Computer Concepts & Applications (A, SP, SU) 3 credits

CSCI 1101 is designed to provide students with a working knowledge of computer concepts and the 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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: ENGL 0190 or placement into ENGL 1100

Lab fee: \$6.00

CSCI 1102 Intermediate Excel & Access (SP) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: CSCI 1101 Lab fee: \$2.00

CSCI 1103 Introduction to Programming Logic (A, SP, SU) 3 credits

CSCI 1103 introduces concepts of programming logic through algorithmic solutions applied to problem-domain scenarios. Examples of these scenarios are Computer Science disciplines such as programming languages, networking, operating systems, databases, and others.. The course covers the basic units of logic: sequence, selection, and loop. Students repair faulty algorithmic solutions. The course also uses basic UML (Unified Modeling Language) notation to model problem-domain objects, via classes.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: MATH 1030 or ITST 1101 and ITST 1102 Lab fee:

\$27.00

CSCI 1143 Introduction to HTML (A, SP) 1 credit

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. 8wk term course.

Lab: 2 hours Lab fee: \$2.00

CSCI 1145 HTML (A, SP) 3 credits

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 HTML and CSS on a live server environment. Students will learn other important topics such as FTP, TCP/IP, and HTTP.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 1103 Lab fee: \$4.00

CSCI 1150 Networking Terminology (SP) 1 credit

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: 2 hours Lab fee: \$1.00

CSCI 1151 Operating Systems (A, SP) 2 credits

CSCI 1151 introduces relevant concepts related to PC Operating Systems such as Windows, MAC OS, and Linux. Students investigate operating systems used in portable devices. The course also uses desktop virtualization to run different operating systems on a single PC. The course uses a hands-on approach to exercise tasks such as the installation of operating systems, software installation, system troubleshooting, remote assistance, remote desktop, SOHO networking, and system security.

Lecture: 1 hour - Lab: 2 hours

Prerequisite: CSCI 1103 Lab fee: \$4.00

CSCI 1152 Networking Concepts (A, SP) 3 credits

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. This course prepares students for an industry standard certification.

Lecture: 2 hour - Lab: 3 hours Lab fee: \$3.00

CSCI 1275 Systems Analysis (A, SU) 3 credits

CSCI 1275 is an introduction to the fundamentals of traditional and object systems analysis, design, and project management. Emphasis will be placed on the Systems Development Life Cycle (SDLC), various flow diagrams, system requirements, project scheduling and managing analysis, and design activities. In addition, students will produce various flow diagrams, project schedules, and timetables. They will also explore object-oriented design and unified modeling language (UML) in this class. Students will work in teams to learn to prepare and present a systems proposal and how to implement and complete a software project.

Lecture: 2 hours - Lab: 3 hours

hands-on labs with commercial software and large databases provided by real-world corporations.

Lecture: 2 hours - Lab: 3 hours Instructor Permission required

Lab fee: \$10.00

CSCI 2385 Business Intelligence Reporting (SP) 3 credits

Business Intelligence (BI) Reporting focuses on the tools and techniques for the output of reports for Business Intelligence. The latest tools for producing visual reports is covered including SQL Reporting Services and PowerPivot. A review of BI data marts and database concepts is provided as it relates to the use of Microsoft SQL Server Reporting Services. Students write their own queries prior to learning to use the Query Wizard in Microsoft reporting services. Students use Microsoft's Report Designer in hands-on labs to create reports using actual databases in Microsoft Reporting Services. Microsoft PowerPivot is used in hands-on labs as students create their own reports using multiple tables with millions of rows. Students learn how to deploy their reports for Web access.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 2380 Lab fee: \$10.00

CSCI 2412 Web Database Development (SP) 4 credits

Databases are now an integral part of the Internet and many websites use databases in the background to control their content. This course shows how to design and use databases for the Web using MySQL and PHP. No previous knowledge of MySQL or PHP is required. The focal point of the class is a semester-long website development project. The student will design an e-commerce site from the ground up, focusing on not only the technical issues but the business aspects, as well.

Lecture: 2 hours - Lab: 4 hours

Prerequisite: CSCI 1145 Lab fee: \$4.00

CSCI 2447 JavaScript Fundamentals (A) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 1145 Lab fee: \$2.00

CSCI 2467 Java Programming I (A, SP) 3 credits

CSCI 2467 is an introduction to the art of computer programming in Java. Course content includes the features needed to construct Java Applets, Windows and Frames, and Dialog boxes. Students will learn to program in an object-oriented environment, using classes, objects, interfaces and listeners. This first course will concentrate on data manipulation, decision making, loops and arrays, and action and item events. Students will learn how to write, compile and debug programs in in-class (solo and group) and take-home labs.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 1103 Lab fee: \$2.00

CSCI 2469 Java Programming II (A, SP) 3 credits

CSCI 2469 is a continuation of Java Programming I. More advanced work in Java applets, applications, structures, methods, and arrays will be included. In addition, students will learn the Java Database Connectivity (JDBC) environment using MySQL and Access as the background database. They will also create servlets using Apache TomCat. Program debugging will continue to be emphasized.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 2467 Lab fee: \$2.00

CSCI 2479 Advanced Web Programming (SP) 3 credits

CSCI 2479 is an introduction to advanced programming techniques

for websites and website management. Students will explore scripting/compiled languages, as well as integrate popular pre-existing libraries and extensions into websites they create. Several projects will be given throughout the semester which will focus on combining local and Internet-based technologies to create a seamless, functional end product.

Lecture: 2 hours - Lab: 3 hours

Prerequisites: CSCI 1145, CSCI 2447 Lab fee: \$2.00

CSCI 2489 Mobile Software Development (SP) 3 credits

CSCI 2489 is an introduction to developing software for mobile platforms, such as smart phones and other mobile devices. Students will learn the basics of developing software for popular platforms through multiple in-class lab exercises. Topics include an overview of popular platforms, developing applications with graphical user interfaces and 2D/3D interactive graphics.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 2467 Lab fee: \$2.00

CSCI 2521 C++ Programming (A, SP) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 1103 Lab fee: \$4.00

CSCI 2541 Foundations of 2D Game Program (A) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 1511 Lab fee: \$4.00

CSCI 2546 2D Game Project (SP) 3 credits

CSCI 2546 will address the issue of developing a level for an existing 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 2541, will be continued in the design phase of this course. Students will develop their own assets, or will adopt assets from a library of public domain assets. The course will also discuss the process of porting games to mobile devices, Wii, iPhone, droid, Xbox, etc.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 2541 Lab fee: \$4.00

CSCI 2551 Graphics in 3D Game Engines (A) 4 credits

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.

Lecture: 2 hours - Lab: 4 hours

Prerequisite: CSCI 1551 Lab fee: \$4.00

CSCI 2556 3D Game Project (SP) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 2551 Lab fee: \$4.00

CSCI 2620 Visual Basic II (On Demand) 4 credits

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.

Lecture: 2 hours - Lab: 4 hours

Prerequisite: CSCI 1620 Lab fee: \$4.00

CSCI 2630 C# Programming II (SP) 3 credits

CSCI 2630 is a continuation of C# Programming I (CSCI 1630), and it offers an additional level of specialization in the Visual C# programming language. The course covers generics (generic methods), LINQ to SQL database access (retrieve, insert, update, and delete operations) in an n-tier application, Web applications with ASP .NET, and collections.

Lecture: 2 hours - Lab: 3 hours

Prerequisites: CSCI 1630, CSCI 2370 Lab fee: \$4.00

CSCI 2750 Introduction to CISCO Networks (A) 3 credits

CSCI 2750 introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. This is a 1st term course.

Lecture: 2 hours - Lab: 3 hours Lab fee: \$2.00

CSCI 2752 CISCO Routing and Switching Essentials P (SP) 3 credits

CSCI 2752 describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 2750 Lab fee: \$20.00

CSCI 2754 Scaling CISCO Networks (A) 3 credits

CSCI 2754 describes the architecture, components, and operations of routers and switches in a large and complex network. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement DHCP and DNS operations in a network. Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 2752 Lab fee: \$20.00

CSCI 2756 Connecting CISCO Networks (A) 3 credits

CSCI 2756 discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students also develop the knowledge and skills needed to implement IPsec and virtual private network (VPN) operations in a complex network. Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 2754 Lab fee: \$20.00

CSCI 2760 CCNA Voice (On Demand) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 2756 Lab fee: \$2.00

CSCI 2762 CCNA Security (On Demand) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 2756 Lab fee: \$2.00

CSCI 2770 Network Communication & TCP/IP (A) 3 credits

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 course thoroughly covers the concepts of TCP/IP such as TCP/IP history, security, protocols, IP addressing, bridging, and routing/DHCP, sub-netting, Windows domains and name services and Linux.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 1772 Lab fee: \$4.00

CSCI 2774 Networking II (A) 4 credits

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.

Lecture: 2 hours - Lab: 4 hours

Prerequisite: CSCI 2770 Lab fee: \$4.00

CSCI 2776 Network & Cybersecurity (A, SP) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 1151 or CSCI 2752 or ITST 1123

Lab fee: \$6.00

CSCI 2778 Wireless, Voice & Mobile Comm. (A, SP) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 2770, MATH 1151 Lab fee: \$20.00

CSCI 2780 Computer Forensics (A) 3 credits

CSCI 2780 is designed for students and systems administrators involved in responding to security incidents and applying computer forensics skills. This

course focuses on the latest technologies in computer forensics techniques in order to recognize and respond to security threats.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 2776 Lab fee: \$2.00

CSCI 2782 Information Security Audit (On Demand) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 2776 Lab fee: \$2.00

CSCI 2784 Business Continuity & Disaster (On Demand) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 2782 Lab fee: \$2.00

CSCI 2786 Security Practice & Management (SP, SU) 3 credits

CSCI 2786 is designed to introduce students to introduce 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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 2776 or CSCI 2756 Lab fee: \$2.00

CSCI 2790 Linux Administration (A, SU) 3 credits

CSCI 2790 is designed to provide students with the knowledge and skills required to build and manage 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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 1772 or CSCI 2752 Lab fee: \$1.00

CSCI 2792 Virtualization (SP, SU) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CSCI 2790 Lab fee: \$4.00

CSCI 2802 CSCI Seminar (On Demand) 1 credit

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.

Seminar: 1 hour

Instructor permission required

Corequisite: CSCI 2902 Lab fee: \$1.00

CSCI 2902 CSCI Practicum (On Demand) 3 credits

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.

Practicum: 21 hours

Instructor permission required

Corequisite: CSCI 2802 Lab fee: \$1.00

CSCI 2994 CSCI Current Topics (On Demand) 1-3 credits

CSCI 2994 offers a detailed examination of a selected current topic in Computer Science. This course can be repeated.

Lecture: 1 hour

CSCI 2999 CSCI Capstone (SP) 3 credits

CSCI majors will work in groups to create a computer-based integrated solution for a business organization. Students will apply and demonstrate technical expertise in the areas of software application programming, network administration and Web technologies. Students will formally present their project results to faculty and management. Student must be a Computer Science major who has completed 12 hours in the technology and has permission of the instructor.

Lecture: 2 hours - Lab: 3 hours

Instructor permission required Lab fee: \$4.00

Construction Management (CMGT)

CMGT 1105 Construction Documents (A, SP, SU) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours Lab fee: \$126.00

CMGT 1115 Construction Methods (A, SP, SU) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours Lab fee: \$21.00

CMGT 1121 Construction Drawings (A, SP, SU) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours Lab fee: \$30.00

CMGT 1131 Quantity Survey (A, SP, SU) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CMGT 1121 Lab fee: \$23.00

CMGT 1135 Safety & Loss Prevention (A, SP) 2 credits

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. Student will also learn how to utilize OSHA and Ohio BWC resources as well as to prepare a safety and loss prevention plan of action, 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.

Lecture: 1 hour - Lab: 3 hours Lab fee: \$14.00

CMGT 1141 Estimating (A, SP, SU) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CMGT 1131 Lab fee: \$21.00

CMGT 1153 Residential Construction Management (A, SU) 3 credits

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 an opportunity to design and construct various portions of a residential building. Lecture: 2 hours - Lab 3 hours Lab fee: \$30.00

CMGT 1171 Sustainability Management (A, SU) 3 credits

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.

Lecture: 3 hours Lab fee: \$5.00

CMGT 1173 Sustainability Applications (SP, SU) 3 credits

The course will instruct students on the methods and techniques of conducting auditing and commissioning relating to sustainable construction, BIM, and SmartGrid® 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.

Lecture: 3 hours

Prerequisite: CMGT 1171 Lab fee: \$10.00

CMGT 2215 Building Information Modeling (BIM) (A, SP) 3 credits

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.

Lecture: 2 hours - Lab 3 hours Lab fee: \$15.00

CMGT 2216 BIM Applications (SP, SU) 3 credits

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. Lecture: 2 hours - Lab 2 hours

Prerequisite: CMGT 2215 Lab fee: \$15.00

CMGT 2221 Management and Professional Development (SP, SU) 3 credits

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. . Lecture: 2 hours - Lab 3 hours Lab fee: \$21.00

CMGT 2231 Commercial Computer Estimating (SP, SU) 3 credits

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. Lecture: 2 hours - Lab: 3 hours

Prerequisite: CMGT 1131 Lab fee: \$30.00

CMGT 2241 Planning and Scheduling (A, SU) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisites: CMGT 1115, CMGT 1131 Lab fee: \$30.00

CMGT 2251 Cost Controls (SP, SU) 3 credits

Various methods and techniques used by construction professionals for predicting and analyzing cost performance are presented. The student will learn how to implement cost reduction strategies, monitor field performance, and develop cost databases for estimating future work. This format will provide the student exposure to various type schedules and projects, as well as assist in the understanding of the concepts and methods used for cost control and monitoring construction project progress. Information regarding Codes, Permits and Inspections will be integrated into the Cost Control process as it relates to the construction schedule and impacts the cost of each phase and overall project a little differently. Lecture: 2 hours - Lab: 3 hours

Prerequisite: CMGT 2241 Lab fee: \$21.00

CMGT 2281 Residential Computer Estimating (A, SP) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CMGT 1131 Lab fee: \$30.00

CMGT 2282 Sustainable Construction (SP, SU) 2 credits

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.

Lecture: 1 hour - Lab: 3 hours

Prerequisite: ESSH 2282 or permission of Instructor Lab fee: \$14.00

CMGT 2699 Project Management (A, SP) 3 credits

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

Lecture: 2 hours - Lab: 3 hours

Prerequisite: CMGT 2251 Lab fee: \$15.00

CMGT 2910 Construction Field Experience (A, SP, SU) 3 credits

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.

Field Experience: 36 hours

Instructor permission required

CMGT 2994 Special Topics: Construction Management (A, SP, SU) 1-4 credits

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.

Lecture: Varies

Lab Fee: To be determined by topic

Instructor permission required

Criminal Justice (CRJ)

CRJ 1101 Intro Criminal Justice (A, SP, SU) 3 credits

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.

Lecture: 3 hours

CRJ 1110 Policing (A, SP, SU) 3 credits

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.

Lecture: 3 hours

CRJ 1115 Criminal Procedure (A, SP, SU) 3 credits

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 to present in court.

Lecture: 3 hours

CRJ 1116 Government and the Law (A, SP, SU) 3 credits

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.

Lecture: 3 hours

CRJ 1135 Terrorism (A, SP, SU) 3 credits

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.

Lecture: 3 hours

CRJ 1140 Corrections (A, SP, SU) 3 credits

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.

Lecture: 3 hours

CRJ 1145 Juveniles and the Criminal Justice System (A, SP, SU) 3 credits

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.

Lecture: 3 hours

CRJ 1150 Introduction to Homeland Security (A) 3 credits

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 interrelated duties and relationships. We will examine historical events that impact Homeland Security. We will explore state, national, and international laws impacting Homeland Security. We will examine the most critical threats confronting Homeland Security.

Lecture: 3 hours

CRJ 1151 Intelligence Analysis Security Management (SP) 3 credits

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 regarding intelligence support of homeland security measures implemented by the United States and explore how the intelligence community operates.

Lecture: 3 hours

CRJ 1152 Transportation and Border Security (SU) 3 credits

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 of and understanding of the variety of challenges inherent in transportation and border security.

Lecture: 3 hours

CRJ 2001 Crime Scene Investigation I (A) 3 credits

This course serves as an introduction to criminalistics laboratory techniques, including the recognition, collection, and preservation of evidence and its preparation for court presentation. An introduction to fingerprint comparison also is presented.

Lecture: 2 hours – Lab: 3 hours Lab fee: \$75.00

CRJ 2002 Crime Scene Investigation II (SP) 3 credits

This course advances the study of crime scene techniques to include examination techniques for blood, hair and fiber, firearms identification, toolmark comparison, latent fingerprints, questioned document examination, and trace evidence.

Lecture: 2 hours – Lab: 3 hours

Prerequisites: CRJ 2001 Lab fee: \$75.00

CRJ 2003 Crime Scene Investigation III (SU) 3 credits

This course is an advanced course designed for students interested in pursuing jobs in the crime scene processing or latent print fields. Topical areas are expanded upon from the introductory and intermediate courses, and students are asked to put all of the information together during hands-on activities that simulate real world crime scene scenarios.

Lecture: 2 hours – Lab: 3 hours

Prerequisites: CRJ 2002 Lab fee: \$75.00

CRJ 2006 Ethics in Law Enforcement (A) 3 credits

Ethical considerations within a law enforcement context will be examined both from a theoretical perspective and a practical perspective. Case studies of ethical situations will be covered.

Instructor permission required

Lecture: 3 hours

CRJ 2007 Law Enforcement Promotion (SP) 3 credits

The promotion process within law enforcement will be examined in detail to include resume building, test taking, and panel interviewing.

Instructor permission required

Lecture: 3 hours

CRJ 2008 Applied Leadership CRJ Profession (SP) 3 credits

Theoretical leadership will be covered along with practical scenario based leadership analysis. The course is designed for current or aspiring law enforcement leaders.

Instructor permission required

Lecture: 3 hours

CRJ 2011 Crisis Intervention (A, SP, SU) 3 credits

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.

Lecture: 3 hours

CRJ 2020 Constitutional Law (A, SP, SU) 3 credits

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.

Lecture: 3 hours

CRJ 2021 Introduction to Cyberlaw (A, SP, SU) 3 credits

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.

Lecture: 3 hours Lab fee: \$20.00

CRJ 2024 Community Relations (A) 3 credits

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. Lecture: 3 hours

CRJ 2030 Criminal Investigation I (A, SP, SU) 3 credits

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.

Lecture: 3 hours

CRJ 2031 Interviewing Techniques (A, SP, SU) 3 credits

The basic tenets of interviewing witnesses, suspects, defendants, inmates and others in the Criminal Justice System will be covered. Counseling of inmates or probationers will also be covered. An introduction statement analysis will be provided.

Prerequisite: CRJ 2030

Lecture: 3 hours

CRJ 2041 Special Category Offender (A, SP, SU) 3 credits

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.

Lecture: 3 hours

CRJ 2042 Community Based Corrections (A, SP, SU) 3 credits

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.

Lecture: 3 hours

CRJ 2043 Institutional Corrections (A, SP, SU) 3 credits

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.

Lecture: 3 hours

CRJ 2044 Counseling: Probation and Parole (A, SP, SU) 3 credits

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 reports writing and sentencing structures.

Lecture: 3 hours

CRJ 2075 Peace Officer Academy I (A) 6 credits

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 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.
Instructor permission required
Lecture: 4 hours – Lab: 6 hours
Corequisite: CRJ 2076

CRJ 2076 Peace Officer Academy II (A) 6 credits
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.
Instructor permission required
Lecture: 4 hours – Lab: 6 hours
Corequisite: CRJ 2075

CRJ 2077 Peace Officer Academy III (SP) 6 credits
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 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.
Instructor permission required.
Lecture: 4 hours – Lab: 6 hours
Prerequisites: CRJ 2075, CRJ 2076
Corequisite: CRJ 2078 Lab fee: \$85.00

CRJ 2078 Peace Officer Academy IV (SP) 6 credits
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 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.
Instructor permission required.
Lecture: 3 hours – Lab: 6 hours
Prerequisites: CRJ 2075, CRJ 2076
Corequisite: CRJ 2077 Lab fee: \$30.00

CRJ 2901 Practicum/Seminar CRJ (A, SP, SU) 3 credits
This course offers an opportunity for on-the-job training as the student works in a Criminal Justice agency or other related functional area. Activities will vary widely depending on the type and function of the Criminal Justice or Criminal Justice related area.
Instructor permission required.
Seminar: 1 hour – Practicum: 14 hours

Dance (DANC)

All studio classes are held at BalletMet Columbus, 322 Mount Vernon Ave.

DANC 1110 Dance Appreciation (A, SP) 2 credits
This class explores dance as ritual, tradition, educational tool, popular entertainment and art form as a reflection of culture. It includes the teaching of proper body warm-up, flexibility and strength and movement.
Lecture: 1 hour - Studio: 2 hours

DANC 1131 Beginning Jazz I (A, SP) 1 credit
This class introduces jazz dance techniques at the fundamental level, combining classic Broadway theatre dance with contemporary styles.
Studio: 2 hours Lab fee: \$2.00

DANC 1132 Beginning Jazz II (SP) 1 credit

This course demonstrates additional jazz techniques including more complex movements and combinations.
Studio: 2 hours
Prerequisite: DANC 1131 Lab fee: \$2.00

DANC 1140 Modern Dance I (A, SP) 2 credits
This is a beginning course in the movement and vocabulary, both physical and linguistic, of modern dance.
Lecture: 1 hour - Studio: 2 hours Lab fee: \$2.00

DANC 1201 Classical Ballet I (A, SP) 2 credits
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.
Lecture: 1 hour - Studio: 2 hours Lab fee: \$2.00

DANC 1202 Classical Ballet II (SP) 2 credits
This course is a continuation of Classical Ballet I.
Lecture: 1 hour - Studio: 2 hours
Prerequisite: DANC 1201 Lab fee: \$2.00

DANC 1203 Beginning Tap I (A, SP) 1 credit
DANC 1203 offers an introduction to basic level tap dance techniques, emphasizing precession in sound, rhythm, movement, gesture and expression.
Studio: 2 hours Lab fee: \$2.00

DANC 1204 Beginning Tap II (On Demand) 1 credit
This course is a continuation of Beginning Tap I.
Studio: 2 hours
Prerequisite: DANC 1203 Lab fee: \$2.00

DANC 1294 Special Topics: Dance (On Demand) 1-3 credits
Students explore special topics in Dance designed to meet specific needs.
Lecture: Varies

Dental Hygiene (DHY)

DHY 1100 Introduction to Dental Hygiene (A) 3 credits
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.
Lecture: 2 hours - Lab: 3 hours
Prerequisites: BIO 2300, BIO 2232, CHEM 1113
Corequisites: DHY 1130, DHY 1140, DHY 1200, DHY 1210, DHY 1260
Lab fee: \$110.00

DHY 1130 Dental Radiography (A) 3 credits
This course introduces the student to radiographic theory and techniques, with an emphasis on its nature and properties, safety precautions, and the uses of the x-ray in dentistry. Laboratory experience provides opportunity for practice in film placement, tube angulation, exposure, processing, and mounting.
Lecture: 2 hours - Lab: 3 hours
Prerequisites: BIO 2300, BIO 2232, CHEM 1113
Corequisites: DHY 1100, DHY 1140, DHY 1200, DHY 1210, DHY 1260
Lab fee: \$100.00

DHY 1140 Dental Anatomy & Histology (A) 3 credits
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.
Lecture: 2 hours - Lab: 3 hours

Prerequisites: BIO 2300, BIO 2232, CHEM 1113
Corequisites: DHY 1100, DHY 1130, DHY 1200, DHY 1210, DHY 1260
Lab fee: \$100.00

DHY 1161 Techniques I (SP) 1 credit
This course introduces the theory of planning dental hygiene care based on individual needs. Other topics covered include the study of a tobacco cessation program, dental appliances, implants, and the special needs of the geriatric, pregnant, and child patient.
Lecture: 1 hour
Prerequisite: DHY 1100; minimum grade of "C"
Corequisites: DHY 1250, DHY 1261, DHY 1300, DHY 1861

DHY 1200 Dental Hygiene Pre-Clinic (A) 3 credits
This laboratory course is designed to prepare the student for the clinical practice of dental hygiene. The techniques and skills necessary to perform an oral prophylaxis and related procedures will be presented.
Lab: 9 hours
Prerequisites: BIO 2300, BIO 2232, CHEM 1113
Corequisites: DHY 1100, DHY 1130, DHY 1140, DHY 1210, DHY 1260
Lab fee: \$300.00

DHY 1210 Preventive Concepts (A) 1 credit
This didactic course is designed to prepare the student for the clinical practice of dental hygiene. The techniques and skills necessary to perform an oral prophylaxis and related procedures will be presented.
Lecture: 1 hour
Prerequisites: BIO 2300, BIO 2232, and CHEM 1113, all with a minimum grade of "C"
Corequisites: DHY 1100, DHY 1130, DHY 1140, DHY 1200, DHY 1260

DHY 1250 Oral Pathology (SP) 1 credit
This course provides the study of oral pathology with emphasis placed upon the recognition of normal and abnormal conditions.
Lecture: 1 hour
Prerequisite: DHY 1100; minimum grade of "C"
Corequisites: DHY 1161, DHY 1261, DHY 1300, DHY 1861

DHY 1260 Periodontology I (A) 1 credit
This course studies periodontal disease including current concepts pertaining to etiology, pathogenesis and assessments.
Lecture: 1 hour
Prerequisites: BIO 2300, BIO 2232, CHEM 1113
Corequisites: DHY 1100, DHY 1130, DHY 1140, DHY 1200, DHY 1210

DHY 1261 Periodontology II (SP) 1 credit
This course continues the study of periodontal diseases with emphasis on treatment and planning dental hygiene care for the periodontally involved patient.
Lecture: 1 hour
Prerequisites: DHY 1100; minimum grade of "C"
Corequisites: DHY 1161, DHY 1250, DHY 1300, DHY 1861

DHY 1300 Community Health Concepts (SP) 1 credit
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.
Lecture: 1 hour
Prerequisites: DHY 1100; minimum grade of "C"
Corequisites: DHY 1161,, DHY 1250, DHY 1261, DHY 1861

DHY 1861 Clinic I (SP) 3 credits
This clinical course continues the experience of care for the dental hygiene patient.

Clinical: 9 hours
Prerequisites: DHY 1100; minimum grade of "C"
Corequisites: DHY 1161, DHY 1250, DHY 1261, DHY 1300
Lab fee: \$355.00

DHY 2200 Pain Management (SU) 1.5 credits
This course provides the basic concepts of local anesthesia and pain control.
Lecture: .5 hour - Lab: 2 hours
Prerequisites: DHY 1161; minimum grade of "C"
Corequisites: DHY 2240, DHY 2262, DHY 2862
Lab fee: \$200.00

DHY 2240 Dental Materials (SU) 1 credit
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.
Lecture: 0.5 - Lab: 1.5 hours
Prerequisites: DHY 1161; minimum grade of "C"
Corequisites: DHY 2200, DHY 2262, DHY 2862
Lab fee: \$150.00

DHY 2262 Techniques II (SU) 1 credit
This course is designed to introduce the practical aspects of nutritional needs of the dental patient and nutritional counseling, techniques of intraoral photography, and clinical techniques of root planing.
Lecture: 1 hour
Prerequisites: DHY 1161; minimum grade of "C"
Corequisites: DHY 2200, DHY 2240, DHY 2862

DHY 2263 Techniques III (A) 1 credit
This course is designed to provide knowledge and understanding regarding the dental hygiene care and management for patients with special needs.
Lecture: 1 hour
Prerequisite: DHY 2262; minimum grade of "C"
Corequisites: DHY 2300, DHY 2400, DHY 2863

DHY 2264 Techniques IV (SP) 1 credit
This one-hour lecture course provides student with knowledge of professional issues and ethics, legal responsibilities, the role of organized dentistry, and securing employment. The student will create a Dental Hygiene Portfolio including preparing a resume.
Lecture: 1 hour
Prerequisite: DHY 2263; minimum grade of "C"
Corequisites: DHY 2275, DHY 2864

DHY 2275 Dental Hygiene Case & Concept Review (SP) 1 credit
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: 2 hours
Prerequisite: DHY 2263; minimum grade of "C"
Corequisites: DHY 2264, DHY 2864 Lab fee: \$100.00

DHY 2294 Special Topics: Dental Hygiene (On Demand) 1-4 credits
This course provides a variety of topics to meet the current needs of the community and the industry.
Lecture: Varies

DHY 2300 Community Health (A) 2 credits
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.

Lecture: 1 hour - Lab: 2 hours
Prerequisite: DHY 2262; minimum grade of "C"
Corequisites: DHY 2263, DHY 2863, DHY 2400
Lab fee: \$40.00

DHY 2400 Pharmacology for the Dental Hygienist (A) 1.5 credits

This course surveys the drugs commonly used in the dental office.

Lecture: 1.5 hours

Prerequisites: DHY 2262; minimum grade of "C"

Corequisites: DHY 2263, DHY 2863, DHY 2300

DHY 2862 Clinic II (SU) 3 credits

This clinical course continues the clinical experience of total patient care and radiographic techniques. This is an S-designated Service Learning course.

Clinical: 9 hours

Prerequisites: DHY 1161; minimum grade of "C"

Corequisites: DHY 2262, DHY 2240, DHY 2200

Lab fee: \$355.00

DHY 2863 Clinic III (A) 4 credits

This clinical course continues the clinical experience of total patient care and radiographic techniques. This is an S-designated Service Learning course.

Clinical: 12 hours

Prerequisite: DHY 2262; minimum grade of "C"

Corequisites: DHY 2263, DHY 2300, DHY 2400 Lab

fee: \$355.00

DHY 2864 Clinic IV (SP) 4 credits

This course is the final course in the dental hygiene clinical sequence. This is an S-designated Service Learning course.

Clinical: 12 hours

Prerequisite: DHY 2263; minimum grade of "C"

Corequisites: DHY 2264, DHY 2275 Lab fee: \$355.00

Developmental Education (DEV)

Learning Skills Centers – Developmental Education

Two Learning Skills Centers offer tutorial assistance from professional tutors in the Developmental Education Department on the Columbus Campus. Tutoring is provided for developmental mathematics and for reading and writing courses. Also, the Learning Skills Centers house computers for student use. Learners are encouraged to visit the centers to enhance their academic studies. Both centers are located in Aquinas Hall: Mathematics in Room 213 and Reading/Writing in Room 214. For more information, call (614) 287-5193.

DEV 0114 Basic Math and Pre-Algebra (A, SP, SU) 4 credits

This course begins with a review of arithmetic and introduces introductory algebraic concepts. Students will work with whole numbers, fractions, decimals, integers, and use this knowledge to calculate and simplify algebraic expressions and solve linear equations. Related applications and problem solving including ratio, proportion, and percent are also covered. Not open to students with MATH 10XX or higher.

Lecture: 4 hours

Prerequisites: By placement exam Lab fee: \$5.00

DEV 0135 Vocabulary Development (A, SP, SU) 2 credits

This course is designed to improve vocabulary and related spelling skills through memorization, word analysis, and the application of rules.

Lecture: 2 hours Lab fee: \$3.00

DEV 0140 Intermediate Reading (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: By placement exam Lab fee: \$5.00

DEV 0145 Advanced Reading (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: By placement exam or DEV 0140; minimum grade of "C"

Lab fee: \$5.00

DEV 0151 Basic Grammar (A, SP, SU) 1 credit

This course covers the identification of basic parts of speech, the identification and correction of verb errors (tense, form, and agreement), the identification and correction of sentence structure errors (fragments, run-ons, and comma splices), and the correct structure and punctuation of compound and complex sentences.

Lecture: 1 hour Lab fee: \$3.00

DEV 0152 Basic Punctuation (A, SP, SU) 1 credit

This course covers punctuation skills, including the correct use of commas, semicolons, quotation marks, apostrophes, end marks, and the conventions of capitalization.

Lecture: 1 hour Lab fee: \$3.00

DEV 0155 Basic Composition (A, SP, SU) 4 credits

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. Not open to students with credit for ENGL 0190 or higher.

Lecture: 3 hours – Lab: 2 hours

Prerequisite: By placement exam Lab fee: \$7.00

DEV 0194 SPT: Developmental Math (On Demand) 1-3 credits

This course offers special topics in Math at the pre-college level to meet special needs.

Lecture: 1 hour Lab fee: Varies

DEV 0195 SPT: Developmental English (On Demand) 1-3 credits

This course offers special topics in English at the pre-college level to meet special needs.

Lecture: 1 hour Lab fee: Varies

Digital Design and Graphics (DDG)

DDG 1100 Intro to Computer Design (A, SP, SU) 3 credits

DDG 1100 introduces the student to the computer software program most widely used in the digital design and 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.

Lecture: 1 hour - Lab: 4 hours Lab fee: \$18.00

DDG 1101 Survey of Digital Design (A, SP, SU) 3 credits

DDG 1101 provides an overview of the Digital Design and 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.

Lecture: 3 hours Lab fee: \$1.00

DDG 1200 Color Management/Business of Design (A, SP) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours Lab fee: \$2.00

DDG 1525 Storyboarding (A, SP) 3 credits

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 used to develop an original character and storyboard to provide a visual concept for the client. Verbal and written skills will also be developed for project presentations.

Lecture: 1 hour - Lab: 4 hours Lab fee: \$2.00

DDG 1535 Advertising Design I (A, SP) 3 credits

DDG 1535 provides students with an understanding of how graphic design, package design, advertising and marketing are used together to provide a client with effective visual communications to a specific target market. In the first half of the class, the elements of design, design philosophy, typography, marketing and color will be discussed in preparation for advertising campaign development. In the second half of the course, the student will learn the importance of the package design as an advertising element. Package structure and producing comprehensive package designs will be stressed. Verbal presentation skills will also be developed for project presentation.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: DDG 1100 Lab fee: \$18.00

DDG 1545 Effective Visual Communications (SP) 2 credits

DDG 1545 will focus on the importance, power and dynamics of visual design directed to a specific target audience. Visual communications takes on many forms in graphic design, advertising, poster design, interior and exterior environmental design, digital painting, logo development, brand identity, outdoor advertising, web page development and digital photography.

Lecture: 1 hour - Lab: 2 hours.

Prerequisite: DDG 1101 Lab fee: \$6.00

DDG 1555 Adobe Photoshop I/A (A, SP) 3 credits

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.

Lecture: 1 hour - Lab: 4 hours

Prerequisite: DDG 1100 Lab fee: \$23.00

DDG 1565 Interactive Adobe InDesign (SP, SU) 3 credits

DDG 1565 expands and introduces students to how Adobe InDesign is interactive. Emphasis will be placed on using master pages to add interactivity, object styles for interactive elements, creating hyperlink destinations, nesting master pages for centralized interactivity, working with imported video and creating navigation points for video, multi-state object animation, and adding artwork for built-in interactivity within the document. The student will learn these skills through project development.

Lecture: 1 hour - Lab: 4 hours

Prerequisite: DDG 1100 Lab fee: \$10.00

DDG 1860 2D Animation (SP) 3 credits

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.

Lecture: 1 hour - Lab: 4 hours

Prerequisite: DDG 1525 Lab fee: \$8.00

DDG 1870 Fundamentals of Design for Animation (SP) 3 credits

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.

Lecture: 1 hour - Lab: 4 hours

Prerequisite: DDG 1525 Lab fee: \$10.00

DDG 2550 Typography Ad & Design (A, SU) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: DDG 1535 Lab fee: \$9.00

DDG 2650 Digital Painting (A, SU) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours Lab fee: \$26.00

DDG 2750 Adobe Illustrator I/A (A, SP, SU) 3 credits

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.

Lecture: 1 hour - Lab: 4 hours

Prerequisite: DDG 1100 Lab fee: \$23.00

DDG 2802 Digital Design & Graphics Seminar (SP) 1 credit

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 and Graphics major who has completed 12 hours

in the technology and has permission of the instructor.

Seminar: 1 hour

Instructor permission required

Corequisite: DDG 2902 Lab fee: \$1.00

DDG 2902 Digital Design & Graphics Practicum (SP) 2 credits

DDG 2902 offers 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.

Practicum: 14 hours

Instructor permission required

Corequisite: DDG 2802 Lab fee: \$1.00

DDG 2975 Ad Agency/Portfolio Development (On Demand) 3 credits

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.

Lecture: 1 hour - Lab: 4 hours

Prerequisite: DDG 1535 Lab fee: \$19.00

DDG 2994 Current Topics in Ad & Design (On Demand) 1 credit

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.

Lecture: 1 hour

Digital Photography (FOTO)

FOTO 1100 Black & White Photography (A, SP, SU) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours Lab fee: \$10.00

FOTO 1120 Photoshop for Photographers (A, SP, SU) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours Lab fee: \$22.00

FOTO 1130 Corel Painter™ for Photographers (On Demand)

3 credits

FOTO 1130 is focused on the principles and applications of Corel Painter™ as it relates to digital photography. Students will learn Painter™ 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. Course will help to develop a student's technical ability and visual problem solving skills.

Lecture: 2 hours - Lab: 2 hours Lab fee: \$26.00

FOTO 1140 Intro Digital Photography (A, SP, SU) 3 credits

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).

Lecture: 2 hours - Lab: 3 hours Lab fee: \$1.00

FOTO 1150 Digital Photography & Design (SP, SU) 3 credits

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).

Lecture: 2 hours - Lab: 2 hours

Prerequisite: FOTO 1140

FOTO 1170 Digital Panoramic Photography (On Demand) 2 credits

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).

Lecture: 1 hour - Lab: 2 hours

Prerequisite: FOTO 1140

Lab fee: \$5.00

FOTO 1190 Digital Infrared Photography (SU) 2 credits

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).

Lecture: 1 hour - Lab: 2 hours

Prerequisite: FOTO 1140

Lab fee: \$7.00

FOTO 1200 Underwater Photography (On Demand) 3 credits

This course affords students a 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 (again depends on location of the course/time of year offered.)

Lecture: 2 hours - Lab: 2 hours

Prerequisite: FOTO 1140

Lab fee: \$10.00

FOTO 1210 HDR Photography (SU) 2 credits
FOTO 1210 affords students 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.
Lecture: 1 hour - Lab: 2 hours
Prerequisite: FOTO 1140
Lab fee: \$8.00

FOTO 1250 Night Photography (SP) 2 credits
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.
Lecture: 1 hour - Lab: 2 hours
Prerequisite: FOTO 1140

FOTO 1300 Macro & Close-Up Photography (On Demand) 2 credits
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.
Lecture: 1 hour - Lab: 2 hours
Prerequisite: FOTO 1140 Lab fee: \$2.00

FOTO 1500 Off-Camera Flash (A) 2 credits
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.).
Lecture: 1 hour – Lab: 2 hours

FOTO 1600 Advanced Off-Camera Flash (SP) 2 credits
FOTO 1600 introduces students to 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.).
Lecture: 1 hour – Lab: 2 hours
Prerequisite: FOTO 1500

FOTO 1780 Photo Lab (A, SP, SU) 1 credit

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: 2 hours
Prerequisite: FOTO 1100 Lab fee: \$5.00

FOTO 2100 Advanced Digital Photography (A, SP, SU) 3 credits
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.
Lecture: 2 hours - Lab: 2 hours
Prerequisites: FOTO 1120, FOTO 1150 Lab fee: \$5.00

FOTO 2120 Advanced Photoshop for Photographers (SP)3 credits
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.
Lecture: 2 hours - Lab: 2 hours
Prerequisite: FOTO 1120 Lab fee: \$8.00

FOTO 2130 Photoshop for Retouching (SU) 3 credits
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.
Lecture: 2 hours - Lab: 2 hours
Prerequisite: FOTO 1120 Lab fee: \$16.00

FOTO 2140 Photoshop for Compositing (On Demand) 3 credits
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.
Lecture: 2 hours – Lab: 2 hours

FOTO 2150 Photoshop for Video (On Demand) 2 credits
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..
Lecture: 1 hour – Lab: 2 hours

FOTO 2200 Studio Lighting (SP, SU) 3 credits
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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: FOTO 2100 Lab fee: \$3.00

FOTO 2500 View Camera (SP) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: FOTO 1100

Corequisite: FOTO 1780 Lab fee: \$10.00

FOTO 2600 Studio & Environmental Portraiture (SP, SU) 4 credits

The focus of 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).

Lecture: 3 hours - Lab: 2 hours

Prerequisite: FOTO 2100 Lab fee: \$7.00

FOTO 2650 Photojournalism (A) 3 credits

FOTO 2650 provides 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, magazines, websites, 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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: FOTO 2100 Lab fee: \$28.00

FOTO 2802 Digital Photography Seminar (On Demand) 1 credit

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.

Seminar: 1 hour

Instructor permission required

Prerequisite: FOTO 1140

Corequisite: FOTO 2902

FOTO 2902 Digital Photography Practicum (On Demand) 3 credits

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.

Practicum: 21 hours

Instructor permission required

Prerequisite: FOTO 2100

Corequisite: FOTO 2802

FOTO 2960 Business Photography (A, SP) 2 credits

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.

Lecture: 1 hour - Lab: 2 hours

Lab fee: \$2.00

FOTO 2970 FOTO Field Studies (On Demand) 1-4 credits

FOTO 2970 is a hands-on course which introduces students to a range of field trips. Students learn ways of visualizing and capturing outside subjects such as zoo animals. Course topics include studying equipment, portable digital storage devices, and other materials necessary to create the best digital photographs in a field environment. Students participate in 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.

Lecture: Varies

Prerequisite: FOTO 1140 Lab fee: \$7.00

FOTO 2975 Digital Portfolio Development (SP) 3 credits

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.

Lecture: 3 hours

Prerequisite: FOTO 2100 Lab fee: \$2.00

FOTO 2994 Current Topics in FOTO (SU) 1-3 credits

FOTO 2994 offers a detailed examination of a selected current topic in Digital Photography. This course can be repeated.

Lecture: Varies

Prerequisite: FOTO 1140

Early Childhood Development and Education (ECDE)

ECDE 1101 Early Childhood Guidance & Curriculum (A, SP, SU) 3 credits

This course 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, preventive strategies, and the importance of a holistic approach to understanding children's behavior. Students will be introduced to Ohio's Early Learning and Development Standards.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 and placement into

No Reading Required or college transcript with previous ENGL coursework Lab fee: \$22.00

ECDE 1102 Observing, Recording & Assessment (A, SP, SU) 2 credits

This course focuses on appropriate objective methods for recording children's behavior in groups, including performance assessments, portfolios, and other methods of reporting a child's performance. Strategies for observing while filling the role of teacher will be addressed. The role of technology in recording children's behavior will also be explored. Students will create a professional portfolio.

Lecture: 2 hours

Prerequisite: Placement into ENGL 1100 and placement into No Reading Required or college transcript with previous ENGL coursework

Lab fee: \$12.00

ECDE 1103 Guidance & Curriculum for Early Childhood Aide (A) 2 credits

This course, meant for the Early Childhood Aide 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, preventive strategies, and the importance of a holistic approach to understanding children's behavior.

Lecture: 2 hours

Prerequisite: SAHS 1120

Corequisite: ECDE 1106, ECDE 2840 Lab fee: \$14.00

ECDE 1104 Social Emotional Development for Early Childhood Aide (SP) 2 credits

This course, meant for future 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.

Lecture: 2 hours

Prerequisites: ECDE 1106

Corequisites: ECDE 2841 Lab fee: \$14.00

ECDE 1105 Social Emotional Development Curriculum (A, SP, SU) 3 credits

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 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. Students will use Ohio's Early Learning and Development Standards.

Lecture: 3 hours

Prerequisites: ECDE 1101, ECDE 1102 Lab fee: \$22.00

ECDE 1106 Language & Literacy Experience Early Childhood Aide (A) 1 credits

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.

Lecture: 1 hours

Prerequisites: SAHS 1120, ECDE 2294

Corequisites: ECDE 1103, ECDE 2840 Lab fee: \$9.00

ECDE 1108 Creative Curriculum (A, SP, SU) 3 credits

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. Students will develop and evaluate materials, objectives and activities in these areas.

Lecture: 3 hours

Prerequisites: ECDE 1101, ECDE 1102 Lab fee: \$28.00

ECDE 1109 Language & Literacy Experience (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisites: ECDE 1101, ECDE 1102 Lab fee: \$28.00

ECDE 2010 Infant Toddler Curriculum (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisites: ECDE 1108, ECDE 1109

Corequisites: ECDE 2810, ECDE 2910 Lab fee: \$15.00

ECDE 2012 Families, Communities & Schools (A, SP, SU) 3 credits

Throughout the course, students will gain an understanding of the ecology of the child through an exploration of the intersection of family, educational settings, communities, and the impact on child development. Students will be able to demonstrate an ability to plan experiences that involve families and communities and foster reciprocal relationships. Emphasis will be given to developing sensitivity regarding the uniqueness of family structures and social and cultural backgrounds, identities, and customs to create foundations for learning.

Lecture: 3 hours

Prerequisites: ECDE 1108, ECDE 1109 Lab fee: \$7.00

ECDE 2014 Cognitive Curriculum (A, SP, SU) 3 credits

This course explores the theoretical foundations behind a child's cognitive development. Techniques for promoting concept development as well as focus on science and math activities for young children are part of the 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 and cooking with children. Ohio's Early Learning and Development Standards are discussed.

Lecture: 3 hours

Prerequisite: ECDE 1108 Lab fee: \$22.00

ECDE 2018 Health, Safety & Nutrition (A, SP, SU) 3 credits

This course covers creating safe indoor and outdoor environments and basic nutrition in early childhood environments, including the nutritional needs

of infants, toddlers, preschoolers and children with special needs, meal planning, childhood obesity, the importance of physical activity, prevention of disease, health and safety policies and related Ohio Child Day Care laws. Lecture: 3 hours

Prerequisites: ECDE 1108, ECDE 1109

ECDE 2021 Admin & Staff Dynamics (A, SP, SU) 3 credits

This course is an in-depth study of the dynamics of staff interaction in a setting for young children. Focus includes personnel rights and responsibilities, ethical implications of teaching, and team functioning. Problem-solving, professional growth and development, evaluation processes, and the legal requirements and responsibilities of Ohio Child Day Care Licensing procedures will be explored.

Lecture: 3 hours

Prerequisites: ECDE 1109, ECDE 2014, ECDE 2012

Lab fee: \$6.00

ECDE 2099 ECDE Capstone (On Demand) 1 credit

In this capstone, students will assemble, edit, and present a professional portfolio. Professionalism, ethics, and current trends in Early Childhood will be discussed.

Lecture: 1 hour

Instructor permission required

Prerequisites: ECDE 2820, ECDE 2920

Corequisite: ECDE 2830, ECDE 2930 Lab fee: \$4.00

ECDE 2105 Best Practices in Inclusive Early Childhood Classrooms (On Demand) 1 credit

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.

Lecture: 1 hour

Prerequisites: ECDE 1108, ECDE 1109 Lab fee: \$6.00

ECDE 2107 Media Resources (A, SP, SU) 1 credit

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.

Lecture: 1 hour

Prerequisite: ECDE 1101 Lab fee: \$20.00

ECDE 2109 Phonics & the Structure Language (On Demand) 4 credits

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.

Lecture: 4 hours

Prerequisites: ECDE 1108, ECDE 1109 Lab fee: \$24.00

ECDE 2294 ECDE Contemporary Issues (On Demand) 1-5 credits

This course 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 Licensed teachers for renewal purposes.

Lecture: Hours will vary

ECDE 2810 Seminar I: Infants and Toddlers (A, SP, SU) 1 credit

This seminar offers group discussion of experiences related to practicum experience ECDE 2910 (taken concurrently) and an integration of theory and practice, with a focus on observing and recording children's play and interactions, basic principles of guidance, and application of knowledge. Students plan developmentally appropriate activities for infants and toddlers in a child care setting. Successful completion with grade of "C" or better is required as a prerequisite to the next seminar.

Seminar: 1 hour

Prerequisites: ECDE 1108, ECDE 1109,

Corequisites: ECDE 2010, -ECDE 2910 Lab fee: \$8.00

ECDE 2820 Seminar II: Preschool (A, SP, SU) 1 credit

This seminar offers group discussion of experiences related to practicum experience ECDE 2920 (taken concurrently) and an integration of theory and practice, with a focus on observing and recording children's play and interactions, basic principles of guidance, and application of knowledge. Students plan developmentally appropriate activities for preschool aged children, including children with special needs, in a child care setting. Successful completion with grade of "C" or better is required as a prerequisite to the next seminar.

Seminar: 1 hour

Prerequisite: ECDE 2810; minimum grade of "C"

Corequisite: ECDE 2920 Lab fee: \$6.00

ECDE 2830 Seminar III: Preschool (A, SP, SU) 1 credit

This seminar offers group discussion of experiences related to practicum experience ECDE 2930 (taken concurrently) and an integration of theory and practice, with a focus on observing and recording children's play and interactions, basic principles of guidance, and application of knowledge. Attention will also be given the administration of quality early child care centers. Successful completion with grade of "C" or better is required.

Seminar: 1 hour

Prerequisite: ECDE 2820; minimum grade of "C"

Corequisite: ECDE 2930 Lab fee: \$6.00

ECDE 2832 Seminar III: Administration (A, SP, SU) 1 credit

This seminar offers group discussion of experiences related to practicum experience ECDE 2932 (taken concurrently) and an integration of theory and practice regarding administration of quality early child care centers. Successful completion with grade of "C" or better is required.

Seminar: 1 hour

Prerequisite: ECDE 2820

Corequisite: ECDE 2932

ECDE 2833 Seminar III: Community Setting (A, SP, SU) 1 credit

This seminar offers group discussion of experiences related to practicum experience ECDE 2933 (Taken concurrently) and an integration of theory and practice as it relates to this community setting. Successful completion with a "C" or better is required.

Seminar: 1 hour

Prerequisite: ECDE 2820, ECDE 2920; minimum grade of "C"

Corequisite: ECDE 2933 Lab fee: \$6.00

ECDE 2840 Early Childhood Practicum & Seminar I (A) 4 credit

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.

Seminar: 2 hours Practicum: 14 hours

Prerequisite: SAHS 1120

Corequisite: ECDE 1103 ECDE 1106 Lab fee: \$31.00

ECDE 2841 Early Childhood Practicum & Seminar II (SP) 4 credit

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.

Seminar: 2 hours Practicum: 14 hours

Prerequisite: ECDE 2840

Corequisite: ECDE 1104 Lab fee: \$31.00

ECDE 2910 Practicum I Infants and Toddlers (A, SP, SU) 1 credit

This course is an integral part of the ECDE program. Students will implement activity plans developed in ECDE 2810 (taken concurrently) while observing and interacting with infants and toddlers in an assigned child care center. Students apply theory and best practices discussed in ECDE 2010 (taken concurrently) under the guidance of experienced infant and toddler professionals who will assist in the evaluation of student performance. Students are observed in the classroom setting three times during the semester by an assigned ECDE faculty member. Successful completion with grade of “C” or better is required as a prerequisite to the next practicum.

Practicum: 7 hours

Prerequisites: ECDE 1108, ECDE 1109

Corequisites: ECDE 2010, ECDE 2810 Lab fee: \$25.00

ECDE 2920 Practicum II: Preschool (A, SP, SU) 1 credit

This course is an integral part of the ECDE program. Students will implement activity plans developed in ECDE 2820 (taken concurrently) while observing and interacting with preschool aged children, including children with special needs, in an assigned child care center. Students apply theory and best practices under the guidance of experienced childcare professionals who will assist in the evaluation of student performance. Students are observed in the classroom setting three times during the semester by an assigned ECDE faculty member. Successful completion with grade of “C” or better is required as a prerequisite to the next practicum.

Practicum: 7 hours

Prerequisite: ECDE 2910; minimum grade of “C”

Corequisite: ECDE 2820 Lab fee: \$25.00

ECDE 2930 Practicum III: Preschool (A, SP, SU) 1 credit

In this practicum, students will spend time in a Pre-K classroom observing, interacting with children, and implementing activity plans created in ECDE 2830 (take concurrently). Students will also work with a community childcare administrator. Objectives related to administration of a childcare center, including budgeting, enrolling children, parent involvement, hiring and monitoring staff, and program development will direct student participation in this practicum experience. Students are observed in the classroom setting by an assigned ECDE faculty member. Successful completion with grade of “C” or better is required.

Practicum: 7 hours

Prerequisite: ECDE 2920; minimum grade of “C”

Corequisite: ECDE 2830 Lab fee: \$25.00

ECDE 2932 Practicum III: Administration (A, SP, SU) 1 credit

In this practicum, students will also work with a community childcare administrator. Objectives related to administration of a childcare center, including budgeting, enrolling children, parent involvement, hiring and monitoring staff, and program development will direct student participation in this practicum experience. Students will be evaluated by an ECDE faculty member three times in the semester. Successful completion with grade of “C” or better is required.

Practicum: 7 hours

Prerequisite: ECDE 2920

Corequisite: ECDE 2832

ECDE 2933 Practicum III: Community Setting (A, SP, SU) 1 credit

This practicum experience is taken concurrently with ECDE 2833 (seminar). Students will work with the community setting staff conducting preschool age tours, children’s parties, developing activities, and interacting with families at the community setting. These settings include the Columbus Museum of Art, COSI and Franklin Park Conservatory. Students will be observed three times by CSCC ECDE faculty and supervised by a community setting staff member.

Practicum: 7 hours

Prerequisite: ECDE 2820, ECDE 2920; minimum grade of “C”

Corequisite: ECDE 2833 Lab fee: \$6.00

Economics (ECON)

Students who enroll in Economics courses must have placed in to ENGL 1100 and are encouraged either to have completed ENGL 1100 or to be enrolled in that course when scheduling an Economics course.

Online/Distance Learning (DL) versions of several ECON courses are available. Students taking the Web-based version of these courses must be familiar with computers, have an email address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for online/distance learning courses are administered at the Testing Center.

ECON 1110 Introduction to Economics (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisites: MATH 1030 or 1050 with grade of “C” or better;

placement into ENGL 1100 Lab fee: \$3.00

ECON 1194 Special Topics: Economics (On Demand) 1-3 credits

ECON 1194 presents a detailed examination of selected topics of interest in economics.

Lecture: 1-3 hours Lab fee: \$3.00

ECON 2193 Independent Study in Economics (On Demand) 1-3 credits

This is 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.

Lecture: 1-3 hours

Prerequisite: Instructor permission required Lab fee: \$3.00

ECON 2200 Principles of Microeconomics (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisites: MATH 1030 or 1050 with grade of “C” or better;

placement into ENGL 1100 Lab fee: \$3.00

ECON 2201 Principles of Macroeconomics (A, SP, SU) 3 credits

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.

Lecture: 3 hours
Prerequisites: ECON 2200 with grade of “C” or better; Lab fee: \$3.00

Education (EDUC)

EDUC 2210 Introduction to Education (A, SP, SU) 3 credits

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, their students, and 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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab Fee: \$2.00

EDUC 2220 Educational Technology (A, SP, SU) 3 credits

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.

Lecture: 3 hours Lab Fee: \$2.00

Electro-Mechanical Engineering Technology (EMEC)

(See also Electronic Engineering Technology and Mechanical Engineering Technology.)

EMEC 1250 Motors & Control Logic (A, SP, SU) 4 credits

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.

Lecture: 3 hours - Lab: 3 hours Lab fee: \$36.00

EMEC 1251 Control Logic and PLCs (A, SP, SU) 4 credits

This course covers advanced control circuits, advanced design of ladder and wiring diagrams to meet a given set of criteria, and basic PLC programming of Allen Bradley PLCs using RS Logix and Control Logix software.

Lecture: 3 hours – Lab: 3 hours

Prerequisites: EMEC 1250 Lab fee: \$36.00

Electronic Engineering Technology (EET)

EET 1105 Basic DC Electronic Systems (A, SP, SU) 3 credits

Every electrical or electronic device operates using either Direct Current (DC) or Alternating Current (AC) or both. This course is an introduction to DC fundamentals, the systems that use them, and the basic sources of DC electricity.

Lecture: 2 hours - Lab: 2 hours

Prerequisites: ENGL 0190, minimum grade C and MATH 1030 or higher with a minimum grade of “C” Lab fee: \$12.00

EET 1115 Basic Digital Systems (A, SP, SU) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: EET 1105 Lab fee: \$35.00

EET 1125 Basic AC Electronic Systems (A, SP, SU) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: EET 1115 Lab fee: \$35.00

EET 1135 Electronic Switching & Amplifier Systems (A, SP, SU) 3 credits

This course introduces the basic concepts of operational amplifiers and practical applications of electronic switching systems including AC-to-DC rectification, DC-to-DC voltage conversion, AC-to-AC conversion and DC-to-AC inversion.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: EET 1125 Lab fee: \$30.00

EET 1145 Data Communications Systems (A, SP, SU) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: EET 1135 Lab fee: \$30.00

EET 2215 Advanced Digital (FPGA) Systems (A, SP, SU) 3 credits

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.

Lecture: 2 hours – Lab: 2 hours

Prerequisites: EET 1115 Lab fee: \$42.00

EET 2225 Embedded Microcontroller Systems (A, SP, SU) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: EET 2215, EET 1145 Lab fee: \$42.00

EET 2235 Data Acquisition Systems (A, SP, SU) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: EET 2225 or EMEC 1251 and EET 1125

Lab fee: \$42.00

EET 2599 EET Capstone (A, SP) 3 credits

Designed to be the final course in the degree program, EET 2599 will require students to 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.

Lecture: 1 hour - Lab: 6 hours

Prerequisites: COMM 1110, COMM 2204, ECON 2200, EET 2235,

PHIL 1130 Lab fee: \$20.00

EET 2994 SPT: Electronic Engineering Technology (On Demand)

1-5 credits

This course covers special topics in the Electronic Engineering Technology designed to meet specific industry needs.

Lecture: Varies

Emergency Medical Services (EMS)

EMS 1002 Paramedic Preparation Course (A, SP, SU) 4 credits

This is the course prerequisite for the paramedic certification program. Content will cover anatomy, physiology, and pathophysiology relevant to providing advanced level emergency care.

Lecture: 3 hours – Lab: 2 hours

Prerequisite: EMS 1860 Lab fee: \$25.00

EMS 1107 Search & Rescue-Wilderness EMT (A) 5 credits

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.

Lecture: 3.6 hours – Lab: 4.4 hours Lab fee: \$40.00

EMS 1108 WMD for Emergency Services (SU) 2 credits

The course includes basic safety issues for emergency responders and focuses on medical care of people exposed to weapons of mass destruction.

Content reflects Department of Homeland Security mandatory training for emergency personnel.

Lecture: 2 hours

Prerequisite: EMS 1860 Lab fee: \$30.00

EMS 1109 Emergency Psychiatric Intervention (SP) 2 credits

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.

Lecture: 2 hours

Prerequisite: EMS 1860 or equivalent Ohio EMT Certification

Lab fee: \$20.00

EMS 1860 Emergency Medical Technician (A, SP, SU) 7 credits

This course covers all the knowledge and skills required for the state certification examination for Emergency Medical Technician (EMT). Course includes a minimum of 24 clock hours of clinical experience.

Lecture: 4.7 hours – Lab: 6.7 hours – Clinical: 1.6 hours

Prerequisites: Placement into ENGL 0190, completed health record

PRIOR TO registration Lab fee: \$200.00

EMS 1861 Paramedic I (AU) 11 credits

This is part one of a three-part course sequence covering all the knowledge and skills required for the state certification examination for Paramedic. Course includes weekly clinical and field experiences.

Lecture: 6.4 hours – Lab: 2.7 hours – Clinical: 5 hours – DP: 8 hours

Prerequisites: Current State of Ohio EMT certification, EMS 1860, EMS 1002, successful completion of HESI A2 entrance exam and application process, completed health record Lab fee: \$350.00

EMS 1862 Paramedic II (SP) 11 credits

This is part two of a three-part course sequence covering all the knowledge and skills required for the state certification examination for Paramedic. Course includes weekly clinical and field experiences.

Lecture: 5.3 hours – Lab: 5.3 hours – Clinical: 5 hours – DP: 8 hours

Prerequisite: EMS 1861 Lab fee: \$300.00

EMS 1863 Paramedic III (SU) 8 credits

This is part three of a three-part course sequence covering all the knowledge and skills required for the state certification examination for Paramedic. Course includes weekly clinical and field experiences.

Lecture: 2.4 hours – Lab: 4.8 hours – Clinical: 3.3 hours – DP: 8 hours

Prerequisite: EMS 1862 Lab fee: \$350.00

EMS 2000 EMS Management (A) 3 credits

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.

Lecture: 3 hours

Prerequisite: EMS 1860 Lab fee: \$15.00

EMS 2001 Disaster Planning & ICS (A) 2 credits

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.

Lecture: 2 hours

Prerequisite: EMS 1860 Lab fee: \$15.00

EMS 2002 12 Lead EKG Interpretation and Advanced Cardiac Treatment (SP) 2 credits

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.

Lecture: 2 hours

Instructor permission required

Prerequisite: ACLS certification or equivalent Lab fee: \$75.00

EMS 2004 EMT Refresher (SU) 1 credit
This is the Ohio curriculum for an Emergency Medical Technician Refresher.
Lecture: .6 hour – Lab: 1.4 hours
Prerequisite: EMS 1860 or equivalent State of Ohio EMT certification
Lab fee: \$15.00

EMS 2005 Paramedic Refresher (A) 2 credits
This is the Ohio curriculum for a Paramedic Refresher.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: EMS 1863 or equivalent State of Ohio Paramedic certification Lab fee: \$25.00

EMS 2006 Pre-hospital Trauma Care (A,SP,SU) 1 credit
This course is lecture and hands on skills in caring for patients of all ages who have sustained life threatening traumatic injuries. Students will earn an International Trauma Life Support (ITLS) credential or equivalent upon successful completion of this training. Course is typically required for medical personnel including paramedics, nurses, and physicians
.Lecture: .8 hours - Lab: .6
Instructor permission required
Lab fee: \$9.00

EMS 2007 Pre-hospital Cardiac Care (A,SP,SU) 1 credits
This course is lecture and hands on skills in caring for patients of all ages who have sustained life threatening cardiac emergencies. Students will earn an American Heart Association; Advanced Cardiac Life Support credential or equivalent upon successful completion of this training. Course is typically required for medical personnel including paramedics, nurses, respiratory therapists, and physicians.
Lecture: .8 hours – Lab: .6
Instructor permission required
Lab fee: \$28.00

EMS 2101 Critical Care Transport (On Demand) 6 credits
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.
Lecture: 5 hours – Lab: 3 hours
Instructor permission required
Prerequisites: Paramedic or RN with two years of experience, current CPR, ACLS, ITLS/PHTLS, PALS/PEPP certifications
Lab fee: \$310.00 (includes fee to UMBC for certification exam)

EMS 2102 Public Safety Service Instructor (On Demand) 5 credits
This course is the Ohio curriculum required for current firefighters, EMS providers, and Registered Nurses who wish to teach in Fire/EMS programs. Requirements for registration into this class are five years of experience in one of the careers listed above and written and skills pretesting according to O.A.C.
Lecture: 5 hours
Instructor permission required
Prerequisites: Five years of experience in one of the careers listed above; written and skills pretesting according to O.A.C
Lab fee: \$30.00

Engineering (ENGR)

The following courses are intended for students in pathways to a 4-year Engineering or other related degree at another institution.

ENGR 1181 Fundamentals of Engineering I (A, SP, SU) 3 credits
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 1150 prior to enrollment in ENGR 1181 or to take it concurrently with ENGR 1181.
Lecture: 2 hours – Lab: 2 hours
Prerequisites: MATH 1150 (or concurrently) or higher
Lab fee: \$25.00

ENGR 1182 Fundamentals of Engineering II (A, SP, SU) 3 credits
This second course in the Fundamentals of Engineering Sequence provides 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 to take it concurrently with ENGR 1182.
Lecture: 2 hours – Lab: 2 hours
Prerequisites: MATH 1151 (or concurrently) or higher, ENGR 1181
Lab fee: \$25.00

ENGR 2030 Dynamics (A, SP, SU) 4 credits
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.
Lecture: 4 hours
Prerequisites: ENGR 2040
Lab fee: \$4.00

ENGR 2040 Statics & Intro to Mechanics of Materials (A, SP, SU) 4 credits
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.
Lecture: 4 hours
Prerequisites: ENGR 1181; PHYS 1250; MATH 1152 or MATH 1172
Lab fee: \$4.00

ENGR 2350 Engineering Thermal Sciences (A, SP, SU) 4 credits
This course will introduce fundamental concepts of energy and laws of thermodynamics, entropy, Carnot and gas power cycles, fundamental concepts of fluid statics, Bernoulli's Theorem, and fundamental concepts of heat transfer.
Lecture: 4 hours
Prerequisites: MATH 2174 or MATH 2255 or MATH 2415; PHYS 1250
Lab fee: \$4.00

Engineering Technologies (ENGT)

ENGT 1100 Intro to Eng. Technology (A, SP, SU) 2 credits

This course is designed to introduce the beginning student to the department and engineering technology in general. Career options, engineer interviews, and plant tours, as well as hands-on experiences in the different disciplines, are included in the course.

Lecture: 1 hour – Lab: 2 hours

ENGT 1115 Engineering Graphics (A, SP, SU) 3 credits

This course covers basic blueprint reading, sketching, drafting, and beginning AutoCAD. It is the prerequisite to MECH 1145 (2D CAD).

Lecture: 1 hour – Lab: 4 hours Lab fee: \$22.00

ENGT 2260 Basic Mechanisms & Drives (A, SP, SU) 4 credits

This course will cover the kinematic motion of machines and 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 and pneumatic actuators).

Lecture: 3 hours – Lab: 3 hours

Prerequisite: ENGT 1115 Lab fee: \$33.00

English (ENGL)

(See also Communication and Theatre)

Note: Courses taught online through distance learning (DL) may have a higher lab fee than traditionally taught courses.

ENGL 0190 Introduction to Composition (A, SP, SU) 3 credits

ENGL 0190 is a writing-intensive course that focuses on development and improvement of reading and writing skills in preparation for English 1100. Using a process writing method, students develop compositions for multiple purposes and with a multi-modal focus. Sections of this course are S-designated Service-Learning classes.

Lecture: 3 hours

Prerequisite: DEV 0155; minimum grade of “C” or COMPASS writing score of 31-54 Lab fee: \$5.00

ENGL 1100 Composition I (A, SP, SU) 3 credits

English 1100 is a beginning composition course which 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 purpose, audience, content, structure and style, while also introducing research and documentation methods. Course reading and writing assignments may be thematically organized. Sections of this course are S-designated Service-Learning classes. . Sections of this course are H-designated Honors classes.

Lecture: 3 hours

Prerequisite: ENGL 0190, minimum grade of “C” or COMPASS writing score of 69-99 Lab fee: \$5.00

ENGL 1101 Composition 1W: Composition Workshop (A, SP, SU)

3 credits

English 1101 is a beginning composition course, for students who can benefit from additional independent small-group or tutor/teacher-directed work, which 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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: COMPASS writing score of 55-68 Lab fee: \$5.00

ENGL 2201 British Literature I (A, SP, SU) 3 credits

This course is a survey of canonical British literary works written before 1789. Course activities include readings, class discussions and writing assignments.

Lecture: 3 hours

Prerequisite: ENGL 2367, ENGL 2567, ENGL-2667 or ENGL-2767; minimum grade of “C” Lab fee: \$5.00

ENGL 2202 British Literature II (A, SP, SU) 3 credits

Students will study selected master works of 19th and 20th century British Literature. Course activities include readings, discussion, and writing assignments.

Lecture: 3 hours

Prerequisite: ENGL 2367, ENGL 2567, ENGL-2667 or ENGL-2767; minimum grade of “C” Lab fee: \$5.00

ENGL 2210 Creative Writing (A, SP, SU) 2 credits

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.

Lecture: 2 hours

Prerequisite: ENGL 1100; minimum grade of “C” Lab fee: \$5.00

ENGL 2215 Magazine Publication I (A) 2 credits

Through hands-on practice with *Spring Street*, students learn the processes and techniques involved in the production of a literary magazine.

Lecture: 1 hour - Lab: 3 hours

Prerequisite: ENGL 1100; minimum grade of “C” Lab fee: \$5.00

ENGL 2216 Magazine Publication II (SP) 2 credits

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.

Lecture: 1 hour – Lab: 3 hours

Prerequisite: ENGL 2215, minimum grade of “C” or instructor permission Lab fee: \$5.00

ENGL 2217 Writing to Publish (SP, SU) 3 credits

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 manuscript.

Prerequisites: ENGL 2265, ENGL 2266, ENGL 2268, or THEA 2283; minimum grade of “C”

Lecture: 3 hours Lab fee: \$5.00

ENGL 2220 Introduction to Shakespeare (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: ENGL 2367, ENGL 2567, ENGL-2667 or ENGL-2767; minimum grade of “C” Lab fee: \$5.00

ENGL 2240 Introduction to Science Fiction (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: ENGL 2367, ENGL 2567, ENGL-2667 or ENGL-2767;
minimum grade of "C" Lab fee: \$5.00

ENGL 2260 Introduction to Poetry (A, SP, SU) 3 credits

This course will introduce students to the critical process of reading and responding to poetry from historical, cultural and gender-based perspectives. Emphasis will be upon traditional and nontraditional forms, as well as mainstream and marginalized writers. Students will become familiar with appropriate terminology; however, they also will learn to 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 upon a close reading of the text and an informed perspective concerning the historical and cultural circumstances of its origin.

Lecture: 3 hours

Prerequisite: ENGL 1100; minimum grade of "C" Lab fee: \$5.00

ENGL 2261 Introduction to Fiction (SP, SU) 3 credits

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. Students will learn to identify and analyze authors' particular uses of the traditional elements of fiction (structure, setting, point of view, etc.) to develop plot and character.

Lecture: 3 hours

Prerequisite: ENGL 2367, ENGL 2567, ENGL-2667 or ENGL-2767;
minimum grade of "C" Lab fee: \$5.00

ENGL 2265 Writing Fiction (A, SP, SU) 3 credits

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 participate in a public reading of their work at least once during the term. Course is repeatable to 6 credits.

Lecture: 3 hours

Prerequisite: ENGL 1100; minimum grade of "C"
Lab fee: \$5.00

ENGL 2266 Writing Poetry (A, SP, SU) 3 credits

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. Course is repeatable to 6 credits.

Lecture: 3 hours

Prerequisite: ENGL 2210; minimum grade of "C" or ENGL 2260;
minimum grade of "C" Lab fee: \$5.00

ENGL 2268 Writing Creative Nonfiction (A, SP, SU) 3 credits

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.

Course is repeatable to 6 credits.

Lecture: 3 hours

Prerequisite: ENGL 1100; minimum grade of "C" Lab fee: \$5.00

ENGL 2270 Introduction to Folklore (A, SP, SU) 3 credits

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, and costumes. Activities include fieldwork, reading and writing assignments, group work and a special project.

Lecture: 3 hours

Prerequisite: ENGL 2367, ENGL 2567, ENGL-2667 or ENGL-2767;
minimum grade of "C" Lab fee: \$5.00

ENGL 2274 Introduction to Non-Western Literature (SP, SU) 3 credits

This course introduces students to selected classic and modern literature of the non-Western world, including Asia, Africa, the Middle East and Latin America. Through several literary approaches, students will gain an understanding of the authors, the periods, and the cultures they represent and the various ways they have handled literary themes.

Lecture: 3 hours

Prerequisite: ENGL 2367, ENGL 2567, ENGL-2667 or ENGL-2767;
minimum grade of "C" Lab fee: \$5.00

ENGL 2276 Women in Literature (A, SP, SU) 3 credits

This course will explore the history and literature by and about women. The course uses a comparative approach to see how women have worked within the genres of fiction, nonfiction, poetry, and drama. Discussions will consider the literature from the perspectives of gender, history, politics, and culture. Writing assignments will include response journals, documented critical papers, and essay exams.

Lecture: 3 hours

Prerequisite: ENGL 2367, ENGL 2567, ENGL-2667 or ENGL-2767;
minimum grade of "C" Lab fee: \$5.00

ENGL 2280 The English Bible As Literature (A, SP, SU) 3 credits

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. This is not a course in religion. 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 had an enormous effect on our culture, art and civilization.

Lecture: 3 hours

Prerequisite: ENGL 2367, ENGL 2567, ENGL-2667 or ENGL-2767;
minimum grade of "C" Lab fee: \$5.00

ENGL 2281 African-American Literature (A, SP, SU) 3 credits

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. Activities may include reading and writing assignments, oral presentations, special performances, guest speakers and field trips.

Lecture: 3 hours.

Prerequisite: ENGL 2367, ENGL 2567, ENGL-2667 or ENGL-2767;
minimum grade of "C" Lab fee: \$5.00

ENGL 2290 U.S. Literature I (A, SP, SU) 3 credits

This course will examine the works of major writers in U.S. literature

from the pre-colonial period to 1865 with attention to revision of the canon. Genres include essays, short fiction, drama, poetry and the novel. This course will consider works from literary, social, historical, and philosophical perspectives. Course activities include reading, class discussion and writing assignments.

Lecture: 3 hours.

Prerequisite: ENGL 2367, ENGL 2567, ENGL-2667 or ENGL-2767; minimum grade of “C” Lab fee: \$5.00

ENGL 2291 U.S. Literature II (A, SP, SU) 3 credits

This course examines the works of major writers in U.S. literature from 1865, the end of the Civil War, to the present with attention to revision of the canon. Genres include essays, fiction, drama, poetry, and the novel. This course will consider works from literary, social, historical, and philosophical perspectives. Course activities include reading, class discussion and writing assignments.

Lecture: 3 hours

Prerequisite: ENGL 2367, ENGL 2567, ENGL-2667 or ENGL-2767; minimum grade of “C” Lab fee: \$5.00

ENGL 2367 Composition II (A, SP, SU) 3 credits

ENGL 2367 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 are organized around the diversity of those who comprise the identities. Sections of this course are S-designated Service-Learning classes. Sections of this course are H-designated Honors classes.

Lecture: 3 hours

Prerequisite: ENGL 1100; minimum grade of “C” Lab fee: \$5.00

ENGL 2567 Composition II: Writing about Gender and Identity (SP) 3 credits

ENGL 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, and working collaboratively. Course reading and writing assignments may be thematically organized. This course focuses on issues of gender and identity.

Lecture: 3 hours

Prerequisite: ENGL 1100; minimum grade of “C” Lab fee: \$5.00

ENGL 2667 Composition II: American Working Class Identity (A) 3 credits

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 course focuses on the American working-class identity.

Lecture: 3 hours

Prerequisite: ENGL 1100; minimum grade of “C” Lab fee: \$5.00

ENGL 2767 Composition II: Writing about Science and Technology (SU) 3 credits

ENGL 2767, Writing about Science and Technology, 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 will be thematically organized to focus on science and technology in American culture. Students learn the conventions of the professional and academic discourse in the science through the use of formatting and documentation guidelines from the Council of Science Editors (CSE). Through reading and writing, this course covers issues of race, class, and ethics in American society that influence and shape science and technology. Students will enhance their communication skills and content mastery with writing assignments and oral presentation that engage course material within the

STEM disciplines.

Lecture: 3 hours

Prerequisite: ENGL 1100; minimum grade of “C” Lab fee: \$5.00

ENGL 2994 SPT: English (On Demand) 3 credits

This course offers special topics in English language or literature designed to meet specific needs.

Lecture: 3 hours

English as a Second Language (ESL)

ESL 0159 Public Speaking: Non-Native Speakers (A, SP, SU) 3 credits

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, and conduct 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.

Lecture: 3 hours

Prerequisite: Placement into ESL 0190 or completion of ESL 0189; minimum grade of “C” Lab fee: \$11.00

ESL 0165 Navigating College in the US (A, SP, SU) 2 credits

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.

Lecture: 2 hours

Prerequisite: Placement into ESL 0188 or higher Lab fee: \$2.00

ESL 0168 Critical Reading Skills (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: Placement into ESL 0188 or higher Lab fee: \$11.00

ESL 0169 College Reading: Non Fiction (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: Placement into ESL 0189 or completion of ESL 0188; minimum grade of “C” Lab fee: \$11.00

ESL 0170 College Reading: Fiction (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: Placement into ESL 0190 or completion of ESL 0189; minimum grade of “C” Lab fee: \$11.00

ESL 0177 Spelling Skills (A, SP, SU) 2 credits

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.

Lecture: 2 hours
Prerequisite: Placement into ESL 0188 or higher Lab fee: \$7.00

ESL 0178 College Vocabulary I (A, SP, SU) 2 credits
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.
Lecture: 2 hours Lab fee: \$7.00

ESL 0179 College Vocabulary II (A, SP, SU) 2 credits
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.
Lecture: 2 hours Lab fee: \$7.00

ESL 0188 Academic Grammar and Writing I (A, SP, SU) 6 credits
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.
Lecture: 6 hours
Prerequisite: Placement into ESL 0188 Lab fee: \$13.00

ESL 0189 Academic Grammar and Writing 2 (A, SP, SU) 6 credits
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.
Lecture: 6 hours
Prerequisite: Placement into ESL 0189 or completion of ESL 0188; minimum grade of "C" Lab fee: \$13.00

ESL 0190 Introduction to College Composition (A, SP, SU) 4 credits
ESL 0190 is the last of academic English preparation classes. It focuses on essay writing.
Lecture: 4 hours
Prerequisite: Placement into ESL 0190 or completion of ESL 0189; minimum grade of "C" Lab fee: \$11.00

ESL 0193 Independent Study: ESL (On Demand) 1-4 credits
ESL 0193 provides individual study opportunities for special topics in English for non-native speakers.
Independent Studies: 1 - 4 hours Lab fee: \$2.00

ESL 0194 Special Topics: English as a Second Language (On Demand) 1-4 credits
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.
Lecture: 1 - 4 hours Lab fee: \$2.00

Environmental Science, Safety and Health (ESSH)

ESSH 1101 Introduction to Environmental Science, Safety and Health (A, SP, SU) 3 credits
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.

Lecture: 3 hours
Prerequisite: Placement into ENGL 1100

ESSH 1130 Environmental Laws & Regulations (A) 3 credits
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.
Lecture: 3 hours Lab fee: \$15.00

ESSH 1140 Industrial/Municipal Pollution (SP) 3 credits
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.
Lecture: 2 hour - Lab: 2 hours Lab fee: \$18.00

ESSH 1160 OSHA 10-Hour Construction Safety & Health (A, SP, SU) 1 credit
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. Course completion cards will be issued to individuals successfully completing the class.
Lecture: 1 hour Lab fee: \$15.00

ESSH 1170 OSHA 10-Hour General Industry Safety & Health (On Demand) 1 credit
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. Course completion cards will be issued to individuals successfully completing the class.
Lecture: 1 hour Lab fee: \$15.00

ESSH 1580 Environmental Site Assessment (SP, SU) 2 credits
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.
Lecture: 1 hour - Lab: 2 hours Lab fee: \$15.00

ESSH 1650 OSHA 30 Hour Construction Safety and Health (A, SP, SU) 2 credits
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. Course completion cards will be issued to individuals successfully completing the class.
Lecture: 1 hour - Lab: 2 hours Lab fee: \$15.00

ESSH 1700 OSHA 30-Hr General Industry Safety & Health (A) 2 credits
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. Course completion cards will be issued to individuals successfully completing the class.
Lecture: 1 hour - Lab: 2 hours Lab fee: \$15.00

ESSH 2111 Hazardous Materials Management (A, SP) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours Lab fee: \$38.00

ESSH 2120 Environmental Aspects of Soil (A, SP, SU) 3 credits

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 biology, soil contamination and soil remediation methods. Soil characteristics will be explored by means of laboratory examination and soil testing techniques.

Lecture: 2 hours - Lab: 2 hours Lab fee: \$18.00

ESSH 2220 Drinking Water Treatment (SU) 2 credits

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.

Lecture: 1 hour - Lab: 2 hours

Prerequisites: CHEM 0100 or high school chemistry, placement into MATH 1020 Lab fee: \$20.00

ESSH 2230 Wastewater Treatment Techniques (A) 2 credits

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.

Lecture: 1 hour - Lab: 2 hours

Prerequisites: CHEM 0100 or high school chemistry, placement into MATH 1020 Lab fee: \$20.00

ESSH 2240 Environmental Hydrology (A) 3 credits

This course addresses 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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: MATH 1020 Lab fee: \$23.00

ESSH 2282 Sustainable Building Strategies (A, SP, SU) 2 credits

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.

Lecture: 2 hours Lab fee: \$15.00

ESSH 2283 Ecological Residential Construction (On Demand) 2 credits

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.

Lecture: 1 hour - Lab: 2 hours Lab fee: \$15.00

ESSH 2400 Environmental Analytical Methods (SP) 2 credits

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.

Lecture: 1 hour - Lab: 3 hours

Prerequisites: CHEM 0100 or CHEM 1111, MATH 1020

Lab fee: \$30.00

ESSH 2440 Environmental Chemistry (On Demand) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: CHEM 1111 Lab fee: \$18.00

ESSH 2500 Environmental Sampling (A) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours Lab fee: \$20.00

ESSH 2520 Health and Safety Training for Hazardous Waste Operations (40-Hr HAZWOPER) (A, SP, SU) 2 credits

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 who 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.

Lecture: 1 hour - Lab: 3 hours Lab fee: \$100.00

ESSH 2530 Applied Environmental Engineering (SP) 2 credits

This course introduces engineered environmental systems and the 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.

Lecture: 1 hour - Lab: 2 hours Lab fee: \$20.00

ESSH 2540 Environmental Restoration (SP) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: ESSH 2500 Lab fee: \$20.00

ESSH 2550 Air Pollution and Monitoring (SP) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: CHEM 1111 Lab fee: \$35.00

ESSH 2560 Hazardous Materials Refresher Training (A, SP, SU) .5 credit

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

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.

Lecture: 2 hours Lab: 3 hours

Prerequisites: FIRE 1102

Lab fee: \$150.00

FIRE 1104 Fire and Emergency Services Safety and Survival (A, SP) 2 credits

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. Lecture: 2 hours
Prerequisites: FIRE 1121 and FIRE 1122 or documentation of certification or equivalency

FIRE 1105 Strategies and Tactics (A, SP) 3 credits

This course provides the principles of fire ground control through utilization of personnel, equipment, and extinguishing agent.

Lecture: 3 hours

Prerequisites: FIRE 1121 and FIRE 1122 or documentation of certification or equivalency

FIRE 1106 Fire Behavior and Combustion (A, SP) 2 credits

This course explores the theories and fundamentals of how and why fires start, spread, and are controlled.

Lecture: 2 hours

Prerequisites: FIRE 1121 and FIRE 1122 or documentation of certification or equivalency

FIRE 1107 Fire Protection Hydraulics/Water Supply (SU) 3 credits

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.

Lecture: 2 hours Lab: 2 hours

Prerequisites: FIRE 1121 and FIRE 1122 or documentation of certification or equivalency

Lab fee: \$20.00

FIRE 1108 Fire Prevention (A, SP) 3 credits

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.

Lecture: 3 hours

Prerequisites: FIRE 1121 and FIRE 1122 or documentation of certification or equivalency

FIRE 1109 Building Construction Fire Service Protection (SP) 3 credits

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, pre-planning fire operations, and operating at emergencies.

Lecture: 3 hours

Prerequisites: FIRE 1121 and FIRE 1122 or documentation of certification or equivalency

Lab fee: \$27.00

FIRE 1110 Fire Protection Systems (A, SP) 2 credits

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.

Lecture: 2 hours

Prerequisites: FIRE 1121 and FIRE 1122 or documentation of certification or equivalency

FIRE 1112 Customer Service for Emergency Services (A, SP) 3 credits

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.

Lecture: 3 hours

FIRE 1121 Firefighter I (A, SP, SU) 7 credits

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 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 and FIRE 1122 meets the eligibility requirements to take the State of Ohio certification exam for Firefighter I & II.

Corequisite: FIRE 1122

Lecture: 5 hours - Lab: 9 hours Lab fee: \$300.00

FIRE 1122 Firefighter II (A, SP) 5 credits

This course covers all of the basic performance and knowledge objectives in the current NFPA Standard 1001 for Firefighter II, and prepares individuals to assume and transfer command within an incident management system. Persons will learn how to perform assigned duties in conformance with applicable NFPA and other safety regulations and Authority Having Justification (AHJ) procedures. The role and responsibilities of the Career Firefighter I and II will be covered. Completion of a Health Record is required PRIOR TO registration. Registration for FIRE 1122 requires co-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 Firefighter I and II.

Corequisite: FIRE 1121

Lecture: 4 hours – Lab: 6 hours

FIRE 1201 Introduction to Rescue (A, SP, SU) 3 credits

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.

Lecture: 3 hours

FIRE 1202 Rope Rescue Technician (A, SP) 3 credits

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 Qualifications 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.

Lecture: 2 hours Lab: 3 hours

Prerequisites: FIRE 1201 Lab Fee: \$40.00

FIRE 1203 Surface and Ice Rescue Technician (SP) 2 credits

The student will understand the 3 NFPA training compliance guidelines and know the limitations of each. Incident Command System knowledge will be covered. Hypothermia care, 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 the Operations Level 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.

Lecture: 1 hours Lab: 2 hours

Prerequisites: FIRE 1201 and FIRE 1202

Lab Fee: \$100.00

FIRE 1204 Swift Water Rescue Technician (SP) 2 credits

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, Standard 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. 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.

Lecture: 2 hours Lab: 2 hours

Prerequisites: FIRE 1201 and FIRE 1202

Lab Fee: \$40.00

FIRE 1205 Confined Space Rescue Technician (SP) 2 credits

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.

Lecture: 1 hours Lab: 2 hours

Prerequisites: FIRE 1201 and FIRE 1202

Lab Fee: \$30.00

FIRE 1206 Trench Rescue Technician (SP) 2 credits

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.

Lecture: 1 hours Lab: 2 hours

Prerequisites: FIRE 1201 and FIRE 1202 Lab Fee: \$40.00

FIRE 1207 Structural Collapse Rescue Technician (A) 2 credits

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.

Lecture: 1 hours Lab: 3 hours

Prerequisites: FIRE 1201 and FIRE 1202

Lab Fee: \$30.00

FIRE 1208 Vehicle and Machinery Rescue Technician (A, SP) 2 credits

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.

Lecture: 1 hours Lab: 3 hours

Prerequisites: FIRE 1201 and FIRE 1202

Lab Fee: \$30.00

FIRE 1209 Farm Rescue Technician (A) 2 credits

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.

Lecture: 1 hours Lab: 3 hours

Prerequisites: FIRE 1202 and FIRE 1208

Lab Fee: \$30.00

FIRE 2001 Fire Service Company Officer (A) 3 credits

This course 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.

Lecture: 3 hours

Prerequisites: FIRE 1121 and FIRE 1122 or documentation of certification or equivalency

FIRE 2002 Fire Safety Inspector (SU) 3 credits

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.

Lecture: 3 hours

Prerequisites: FIRE 1121 and FIRE 1122 or documentation of certification or equivalency

Lab Fee: \$10.00

FIRE 2003 Fire Cause and Origin Investigation (A, SP) 3 credits

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.

Lecture: 3 hours

Prerequisites: FIRE 1121 and FIRE 1122 or documentation of certification or equivalency

FIRE 2005 Principles Fire Scene Command (A) 3 credits

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.

Lecture: 3 hours

Prerequisites: FIRE 1121 and FIRE 1122 or documentation of certification or equivalency

FIRE 2006 Legal Aspects of Emergency Services (A, SP) 3 credits

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.

Lecture: 3 hours

FIRE 2094 Special Topics in Emergencies Services (On Demand)

Variable: .5 - 7 credits

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.

Lecture: varies

FIRE 2105 Advanced Building Construction/Collapse (A, SP)

3 credits

This course provides an introduction to the present and past practices of building construction as it relates to firefighting. It discusses the various hazards involved in a building collapse and how to recognize warning signs of impending disaster. Course also looks at building construction from the Company Officer and Incident Commander's perspective.

Lecture: 3 hours

Prerequisites: FIRE 1121 and FIRE 1122 or documentation of certification or equivalency

Ford (FORD)
(See also Automotive)**FORD 1110 Engines: Diagnosis & Repair (On Demand) 3 credits**

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.

Lecture: 1 hour – Lab: 4 hours

Prerequisite: FORD 1360 Lab fee: \$35.00

FORD 1240 Steering & Suspension: Diagnosis & Rep (SP) 2 credits

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.

Lecture: 1 hour – Lab: 2 hour

Prerequisite: AUTO 1140

Corequisites: FORD 1250, FORD 1260 Lab fee: \$30.00

FORD 1250 Brake Systems: Diagnosis & Repair (SP) 2 credits

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.

Lecture: 1 hour - Lab: 2 hour

Prerequisite: AUTO 1150

Corequisites: FORD 1240, FORD 1260 Lab fee: \$25.00

FORD 1260 Electrical Systems: Diagnosis & Repair (SP) 2 credits

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.

Lecture: 1 hour – Lab: 2 hours

Prerequisite: AUTO 1160

Corequisites: FORD 1240, FORD 1250 Lab fee: \$30.00

FORD 1270 Heating & AC: Diagnosis & Repair (On Demand)

2 credits

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.

Lecture: 1 hour – Lab: 2 hour

Prerequisite: AUTO 1170

Corequisite: FORD 1360 Lab fee: \$35.00

FORD 1360 Electrical Systems: Diagnosis & Repair (On Demand)

3 credits

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.

Lecture: 1 hour – Lab: 6 hours

Prerequisite: FORD 1260

Corequisite: FORD 1270 Lab fee: \$30.00

FORD 2120 Auto Trans: Diagnosis & Repair (On Demand) 3 credits

This course presents the operation and diagnosis of Ford automatic transmissions 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.

Lecture: 1 hour – Lab: 6 hours

Prerequisite: FORD 1360 Lab Fee: \$25.00

FORD 2130 Manual Transmissions/Driveline (On Demand)

3 credits

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.

Lecture: 1 hour – Lab: 4 hours

Prerequisite: FORD 1360 Lab fee: \$25.00

FORD 2180 Engine Performance: Operations & Diagnosis (On Demand)

3 credits

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.

Lecture: 1 hour – Lab 6 hours

Prerequisite: FORD 1360 Lab fee: \$25.00

FORD 2280 Advanced Engine Performance: Diagnosis & Test (On Demand)

2 credits

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.

Lecture: 1 hour – Lab: 3 hours

Prerequisite: FORD 2180 Lab fee: \$25.00

FORD 2380 Diesel Engine: Diagnosis & Repair (On Demand)

2 credits

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.

Lecture: 1 hour – Lab: 3 hours

Prerequisite: FORD 1360 Lab fee: \$35.00

FORD 2951 Co-op Work Exp/Seminar I (On Demand) 2 credits

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.

Seminar: 0.5 hours – Field Experience: 15 hours

Prerequisite: FORD 1360

FORD 2952 Co-op Work Exp/Seminar II (On Demand) 2 credits

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.

Seminar: 0.5 hours – Field Experience: 15 hours

Prerequisite: FORD 1360

FORD 2953 Co-op Work Exp/Seminar III (On Demand) 2 credits

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.

Seminar: 0.5 hours – Field Experience: 15 hours

Prerequisite: FORD 1360

FORD 2954 Co-op Work Exp/Seminar IV (On Demand) 2 credits

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.

Lecture: 0.5 hour – Field Experience: 15 hours

Prerequisite: FORD 1360

French (FREN)

FREN 1101 Beginning French I (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$10.00

FREN 1102 Beginning French II (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: FREN 1101, minimum grade of “C” Lab fee: \$10.00

FREN 1103 Intermediate French (A, SP, SU) 4 credits
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.
Lecture: 4 hours
Prerequisites: FREN 1102 Lab fee: \$10.00

FREN 1193 Independent Study in French (On Demand)1-3 credits
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.
Lecture: 1-3 hours
Prerequisites: FREN 1103 or Instructor Consent Lab fee: \$2.00

FREN 1194 Special Topics in French (On Demand) 1-3 credits
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.
Lecture: 1-3 hours
Prerequisites: FREN 1103 or Instructor Consent Lab fee: \$2.00

Geographic Information Systems (GIS)

GIS 1100 Introduction to GIS (A, SP) 3 credits
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.
Lecture: 2 hours - Lab: 3 hours

GIS 1101 Acquiring GIS Data (A, SP, SU) 2 credits
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. In this course, students also develop skills for participating in distance learning classes and in submitting class projects using the Internet.
Lecture: 1 hour - Lab: 3 hours Lab fee: \$20.00

GIS 1102 Mapping for Everyone (A, SP, SU) 2 credits
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.
Lecture: 1 hour - Lab: 3 hours Lab fee: \$15.00

GIS 1200 GIS Software I (A, SP, SU) 2 credits
This course is the first in a two-part series of specific application software usage training using Esri's ArcGIS Desktop. The students will learn the basics of ArcMap and ArcCatalog and explore how these applications interrelate in a complete GIS software solution. This course covers the

fundamental GIS concepts as well as how to create, edit and work with spatial data. Students will manipulate, query, present data in maps and make decisions from the presented information.
Lecture: 1 hour - Lab: 3 hours
Prerequisite: GIS 1100 Lab fee: \$30.00

GIS 1201 GIS Software II (A, SP, SU) 2 credits
This course is second in a two-part series of specific application software usage training using Esri's ArcGIS Desktop. Students will learn the basics of ArcMap and ArcCatalog and explore how these applications interrelate in a complete GIS software solution. This course covers the advanced applications of the software and reinforces the important concepts and functionality for successfully working with ArcGIS Desktop. It recommended that the student complete GIS 1200 and GIS 1201 in the same semester.
Lecture: 1 hour - Lab: 3 hours
Prerequisite: GIS 1200 Lab fee: \$20.00

GIS 1202 Planning and Implementing GIS (SP) 2 credits
This course focuses on the methodology for planning and implementing a GIS. It examines the procedures and methods for designing a GIS, Project Management skills, evaluating system requirements and data sources, evaluating various methodologies, testing, hardware and software planning, cost benefit analysis/ROI, system implementation and project lifecycle.
Lecture: 1 hour - Lab: 3 hours Lab fee: \$20.00

GIS 2100 Introduction to GIS Databases (A) 3 credits
This course focuses on the design, use and maintenance of a GIS database. Students will be introduced to structured query language (SQL) and SQL server as they relate to GIS databases. The course covers ArcGIS personal geodatabases and includes concept of ArcSDE software. Student should have some familiarity with ArcGIS Desktop before taking this course. It recommended that the student enroll concurrently with GIS 1201.
Lecture: 1 hour - Lab: 4 hours
Prerequisite: GIS 1200
Corequisite: GIS 1201 Lab fee: \$30.00

GIS 2110 Introduction to Spatial Analysis (A) 3 credits
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.
Lecture: 1 hour - Lab: 4 hours
Prerequisite: GIS 1200
Corequisite: GIS 1201 Lab fee: \$30.00

GIS 2120 Intro to GIS Programming (A) 3 credits
This course introduces GIS programming techniques using Esri's ArcGIS Desktop. The students will learn basic and advanced customization, scripting, and automation strategies. This course covers the basic python scripting language as well as how it relates to the ArcGIS Desktop environment. Students will learn how to customize the ArcMap user interface, read and write GIS scripts, model geoprocessing work flows, and create Add-In commands. Lecture: 1 hour - Lab: 4 hours
Corequisite: GIS 1200 Lab fee: \$30.00

GIS 2130 Georeferencing & Editing (A) 2 credits
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.
Lecture: 1 hour - Lab: 3 hours
Prerequisite: GIS 1201 Lab fee: \$30.00

GIS 2200 Image Management & Analysis (SP) 4 credits

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.

Lecture: 2 hours - Lab: 4 hours

Prerequisite: GIS 1201 Lab fee: \$45.00

GIS 2299 Advanced GIS Applications (SP) 4 credits

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.

Lecture: 2 hours - Lab: 6 hours

Prerequisite: GIS 1201 Lab fee: \$30.00

GIS 2510 Advanced Spatial Analysis (SP) 2 credits

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 semester.

Lecture: 1 hour - Lab: 3 hours

Prerequisite: GIS 2110 Lab fee: \$20.00

GIS 2520 Advanced GIS Programming (SP) 2 credits

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.

Lecture: 1 hour - Lab: 3 hours

Prerequisite: GIS 2120 Lab fee: \$30.00

GIS 2530 Introduction to ArcGIS Server (SP) 2 credits

This course provides specific application software training for Esri's ArcGIS Server. Students will learn the components of ArcGIS Server, about the available libraries and APIs and server development guidelines, and the development of different types of Web applications. In the course, students will also learn how to install and configure ArcGIS Server. The course concludes with a project in which students will build a centrally managed GIS applications using ArcGIS Server.

Lecture: 1 hour - Lab: 3 hours

Prerequisite: GIS 1200

Corequisite: GIS 1201 Lab fee: \$20.00

GIS 2540 GIS in Business (SU) 2 credits

This course is designed for members of the business community. Students learn how to use ArcGIS tools to perform basic GIS tasks as they specifically relate to business. In the course, students will also learn the core GIS skills they need to support their organizations' missions using terminology, exercise scenarios, and data relevant to business.

Lecture: 1 hour - Lab: 3 hours Lab fee: \$20.00

GIS 2550 GIS in 3D (SU) 2 credits

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.

Lecture: 1 hour - Lab: 3 hours

Prerequisite: GIS 1201 Lab fee: \$20.00

GIS 2594 Current Topics: GIS (On Demand) 1-4 credits

This course will be offered for special topics in GIS that meet needs of the GIS community.

Lecture: Varies

GIS 2950 GIS Practicum & Seminar (A, SP, SU) 3 credits

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.

Seminar: 1 hour - Practicum: 14 hours

Geography (GEOG)

Students who enroll in Geography courses must have placed into ENGL 1100 and are encouraged either to have completed ENGL 1100 or be enrolled in that course when scheduling a Geography course.

Online/Distance Learning (DL) versions of several GEOG courses are available. Students taking the Web-based version of these courses must be familiar with computers, have an email address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for online/distance learning courses are administered at the Testing Center.

GEOG 1194 Special Topic: Geography (On Demand) 1-3 credits

GEOG 1194 provides a detailed examination of selected topics of interest in geography.

Lecture: 1-3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$3.00

GEOG 1900 Introduction to Weather and Climate (A, SP, SU) 4 credits

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. (Previously numbered as GEOG 1120)

Lecture: 3 hours - Lab: 2 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$21.00

GEOG 2193 Independent Study in Geography (On Demand)

1-3 credits

This is 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.

Lecture: 1-3 hours

Prerequisite: Instructor permission required Lab fee: \$3.00

GEOG 2300 Introduction to Physical Geography (A, SP) 3 credits

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. (Previously numbered as GEOG 2220)

Lecture: 3 hours
Prerequisite: Placement into ENGL 1100 Lab fee: \$3.00

GEOG 2400 Economic and Social Geography (A, SP, SU) 3 credits
This course serves as an introduction to the study of economic and social phenomena from a geographic perspective. Students will be introduced to basic concepts in geography, economics, and development, and will explore various elements associated with economic and social phenomena that illustrate the variability of development found throughout the world. (Previously numbered as GEOG 2240)
Lecture: 3 hours
Prerequisite: Placement into ENGL 1100 Lab fee: \$3.00

GEOG 2750 World Regional Geography (A, SP, SU) 3 credits
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. (Previously numbered as GEOG 2200)
Lecture: 3 hours
Prerequisite: Placement into ENGL 1100 Lab fee: \$3.00

GEOG 2900 Elements of Cartography (A, SP) 3 credits
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. (Previously numbered as GEOG 2280)
Lecture: 2 hours - Lab: 2 hours
Prerequisite: Placement into ENGL 1100 Lab fee: \$3.00

Geology (GEOL)

Students must complete 60% of the laboratories in a course to receive credit. Courses in this area may require additional hours outside of the scheduled class times.

GEOL 1101 Introduction to Earth Science (A, SP, SU) 4 credits
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.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: Placement into ENGL 1100 or higher
Lab fee: \$22.00

GEOL 1105 Geology and the National Parks (A, SP, SU) 3 credits
This course examines the geologic processes, materials, and history revealed in the geologic settings of the National Parks.
Lecture: 3 hours
Prerequisite: Placement into ENGL 1100 or higher
Lab fee: \$1.00

GEOL 1121 Physical Geology (A, SP, SU) 4 credits
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.
Lecture: 3 hours – Lab: 2 hours
Prerequisites: MATH 1030 or MATH 1050 or higher, placement into ENGL 1100 or higher Lab fee: \$21.00

GEOL 1122 Historical Geology (A, SP, SU) 4 credits
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.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: GEOL 1121 Lab fee: \$27.00

GEOL 1151 Natural Disasters (A, SP, SU) 3 credits
This course covers the occurrence and causes of earthquakes, volcanoes, and related hazards, and their impact on climate, society, and history.
Lecture: 3 hours
Prerequisite: Placement into ENGL 1100 or higher
Lab fee: \$1.00

GEOL 2293 Independent Study in Geology (On Demand) 1-3 credits
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.
Lecture: 0 or 1 to 3 hours – Lab: 0 or 2 to 9 hours
Instructor permission required
Lab fee: \$1.00

GEOL 2294 Special Topics: Geology (Demand) 1-3 credits
This course provides an opportunity to explore selected topics of interest in geology.
Lecture: 1 to 3 hours – Lab: 0 to 4 hours
Instructor permission required
Lab fee: \$1.00

German (GERM)

GERM 1101 Beginning German I (A, SP, SU) 4 credits
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.
Lecture: 4 hours
Prerequisite: Placement into ENGL 1100 Lab fee: \$10.00

GERM 1102 Beginning German II (A, SP, SU) 4 credits
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.
Lecture: 4 hours
Prerequisite: GERM 1101, minimum grade of "C" Lab fee: \$10.00

GERM 1103 Intermediate German (A, SP, SU) 4 credits
GERM 1103 focuses on the reading and discussion of German short stories, novels, plays, newspapers, and magazines, emphasizing literary appreciation and the development of Germanic culture. GERM 1103 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature.
Lecture: 4 hours
Prerequisite: GERM 1102 Lab fee: \$10.00

GERM 1105 German Conversation & Composition (A SP) 1 credit
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.

Lecture: 1 hour

Prerequisites: GERM 1103; minimum grade of "C" Lab fee: \$10.00

GERM 1193 Independent Study in German (On Demand)

1-4 credits

Designed to give the student an opportunity for a detailed study of topics of interest in German not otherwise offered.

Lecture: 1-4 hours Lab fee: \$2.00

GERM 1194 Special Topics in German (On Demand) 1-4 credits

Designed to give groups of students an opportunity for a detailed study of topics of interest in German not otherwise offered.

Lecture: 1-4 hours Lab fee: \$2.00

Health Information Management (HIMT)

HIMT 1111 Introduction to Health Information Management (A)

2 credits

Students are introduced to the roles of the health information management technician in a variety of health care settings. The educational and credentialing requirements for the HIM professional will be discussed along with an overview of the U.S. health care delivery system and the various reporting and accrediting requirements.

Lecture: 2 hours

HIMT 1121 Advanced Medical Terminology (A, SP, SU) 2 credits

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.

Lecture: 2 hours

HIMT 1133 Legal Aspects of Health Information (A) 2 credits

Students study the legal principles and regulations governing the management and disclosure of health information.

Lecture: 2 hours

HIMT 1135 Health Data Management (A) 3 credits

Students are introduced to categories of data collected and maintained by health care providers and the concept of data flow in the paper, hybrid, and electronic health record (EHR).

Lecture: 2 hours - Lab: 2 hours

Corequisite: HIMT 1111 Lab fee: \$62.00

HIMT 1141 Pharmacology (A, SP, SU) 2 credits

This course surveys the major drug classifications. Indications and contraindications for use of drugs are presented with emphasis placed on the correlation between drug therapy and disease.

Lecture: 2 hours

Prerequisite: HIMT 1121; minimum grade of "C"

HIMT 1245 ICD-10-CM/PCS Coding (A) 3 credits

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.

Lecture: 1 hour - Lab: 4 hours

Prerequisites: HIMT 1111, HIMT 1121, HIMT 1256, BIO 1101; minimum grade of "C" and acceptance into HIMT degree or Medical Coding Certificate program.

Corequisite: BIO 2300 Lab fee: \$41.00

HIMT 1255 CPT-4 Coding (A)

3 credits

Students are introduced to CPT-4 coding used to code outpatient procedures and services.

Lecture: 1 hour - Lab: 4 hours

Prerequisites: HIMT 1111, HIMT 1121, HIMT 1256; BIO 1101; minimum grade of "C" and acceptance into HIMT degree or Medical Coding Certificate program.

Corequisite: BIO 2300 Lab fee: \$41.00

HIMT 1256 Clinical Documentation & Disease (SP, SU) 2 credits

Students study clinical information used to support diagnoses and services provided to patients as it pertains to health care data management.

Lecture: 2 hours

Corequisite: HIMT 1121

HIMT 1265 Medical Reimbursement (A)

2 credits

Students are introduced to revenue cycles, payers, and reimbursement systems as they apply to the payment of health care services.

Lecture: 1 hour Lab: 2 hours

Prerequisite: HIMT 1111; minimum grade of "C"

Corequisites: HIMT 1245, HIMT 1255 Lab fee: \$62.00

HIMT 1274 Introduction to Medical Coding & Reimbursement (A, SP, SU)

2 credits

This course provides an overview of hospital- and physician-based medical coding and reimbursement principles.

Lecture: 2 hours Lab fee: \$41.00

HIMT 2257 Introduction to Health Statistics (SP)

2 credits

Students study the basics of statistical computation as it relates to health care. Procedures for collecting, organizing, displaying, and interpreting health care data are presented.

Lecture: 2 hours

Prerequisites: HIMT 1111, MATH 1030, CSCI 1101; minimum grade of "C" and acceptance into HIMT degree program.

HIMT 2259 Quality and Resource Management (SP)

3 credits

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.

Lecture: 3 hours

Prerequisites: HIMT 1111, HIMT 1135, CSCI 1101; minimum grade of "C"

HIMT 2267 Principles of Management (SP)

2 credits

Students study the functions related to planning, organizing, controlling, budgeting, and evaluating human resources.

Lecture: 2 hours

HIMT 2275 Intermediate Coding (SP)

2 credits

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.

Lecture: 1 hour Lab: 2 hours

Prerequisites: BIO 2300, HIMT 1111, HIMT 1121, HIMT 1135, HIMT 1245, HIMT 1255 and HIMT 1265, minimum grade of “C” and acceptance into HIMT degree or Medical Coding Certificate program.

Corequisite: HIMT 2930

HIMT 2276 Analyzing Healthcare Data (A) 2 credits

This course introduces students to data analysis, a description of the types of healthcare data, and tools used in data analysis.

Lecture: 2 hours

Prerequisite: Acceptance into the Health Data Analyst Post Associate’s Degree Certificate.

Corequisite: CSCI 2380

HIMT 2277 Health Data Analyst Exam Preparation (SP) 2 credits

This course is designed to help prepare students for the Certified Health Data Analyst (CHDA) certification examination. The course includes a review of the CHDA exam competencies.

Lecture: 2 hours

Prerequisite: HIMT 2276 with a grade of “C” or higher and acceptance into the Health Data Analyst Post Associate’s Degree Certificate.

Corequisite: CSCI 2385

HIMT 2294 Special Topics in Health Information Management (A, SP, SU) 1-3 credits

This course is designed to present pertinent topics and trends in the health information management field.

Lecture: 1 hour

Prerequisite: Varies with topic.

HIMT 2870 Professional Practice Experience HIM Applications (SP) 2 credits

Students are provided professional practice experience (PPE) in basic HIM functions (e.g., storage and retrieval, record completion, release of information) through software applications and possible visits to healthcare facilities. Students are assigned projects requiring the application of concepts studied throughout the HIMT curriculum including the creation of a database project, workflow redesign, EHR maintenance and installation.

Lecture: .5 hour - Lab: 3 hours

Prerequisites: HIMT 1111, HIMT 1133, HIMT 1135, minimum grade of “C” and acceptance into the HIMT degree program.

Corequisites: HIMT 1245, HIMT 1255, HIMT 1265, CSCI-2325 or CSCI-1320

Lab fee: \$62.00

HIMT 2930 Professional Practice Experience HIM Field Experience (SP) 1 credit

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. Student must complete all corequisite courses with a minimum of C grade.

Lecture: .5 hour – Field Experience: 6 hours

Prerequisites: HIMT 1111, HIMT 1133, HIMT 1135, HIMT 1245, HIMT 1255, HIMT 1256, HIMT 1265, and CSCI 2325 or CSCI 1320; minimum grade of “C” and acceptance into HIMT degree or Medical Coding Certificate program.

Corequisites: HIMT 2257, HIMT 2259, HIMT 2267 and HIMT 2294 or HIMT 2275

Lab fee: \$153.00

Heating, Ventilating and Air Conditioning Technology (HVAC)

HVAC 1120 Load Calculations I (SP) 3 credits

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.

Lecture: 2.5 hours – Lab: 1 hour Lab fee: \$12.00

HVAC 1140 Principles of Refrigeration (A, SP) 3 credits

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.

Lecture: 3 hours Lab fee: \$10.00

HVAC 1150 Instrument/Combustion Process (SP) 3 credits

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.

Lecture: 2.5 hours – Lab: 1 hour Lab fee: \$15.00

HVAC 1160 Hand Tools/Safety (A) 3 credits

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 sheet metal labs will be accomplished along with meter care and usage and proper refrigerant handling and usage. State and local codes will be discussed.

Lecture: 1 hour – Lab: 4 hours Lab fee: \$41.00

HVAC 1180 HVAC Wiring Circuits I (A) 2 credits

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.

Lecture: 1.5 hours – Lab: 1 hour Lab fee: \$32.00

HVAC 1280 HVAC Wiring Circuits II (SP) 3 credits

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.

Lecture: 1 hour – Lab: 4 hours

Prerequisite: HVAC 1180 or SKTR 1310 Lab fee: \$46.00

HVAC 2094 Special Topics in HVAC (On Demand) 1-5 credits

This is a course that will address current issues in the HVAC industry.

Lecture: Varies

HVAC 2110 Piping Systems (A) 2 credits

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.

Lecture: 1.5 hours – Lab: 1 hour

Prerequisite: HVAC 1140 Lab fee: \$12.00

HVAC 2140 Air Conditioning & Heat Pump (A, SP) 4 credits

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.

Lecture: 2 hours – Lab: 4 hours

Prerequisites: HVAC 1140, HVAC 1160, HVAC 1180

Lab fee: \$70.00

HVAC 2150 Heating Systems (A, SP) 3 credits

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.

Lecture: 1 hour – Lab: 4 hours

Prerequisites: HVAC 1150, HVAC 1160, HVAC 1180

Lab fee: \$20.00

HVAC 2160 Automatic Controls (A, SP) 3 credits

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.

Lecture: 2 hours – Lab: 2 hours

Prerequisites: HVAC 1150, HVAC 1140, HVAC 1180

Lab fee: \$43.00

HVAC 2170 Commercial Air Conditioning Systems (A) 3 credits

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.

Lecture: 1 hour – Lab: 4 hours

Prerequisites: HVAC 1140, HVAC 1160, HVAC 2110, HVAC 2160

Lab fee: \$10.00

HVAC 2180 Advanced Controls (A) 5 credits

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.

Lecture: 3 hours – Lab: 4 hours

Prerequisites: HVAC 1280, HVAC 2160 Lab fee: \$47.00

HVAC 2190 Boiler Systems (SP) 4 credits

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.

Lecture: 2 hours – Lab: 4 hours

Prerequisites: HVAC 2110, HVAC 1150 Lab fee: \$10.00

HVAC 2193 Advanced Problems in HVAC (On Demand) 3 credits

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: 6 hours

Instructor permission required Lab fee: \$8.00

HVAC 2220 Load Calculations II (A) 2 credits

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.

Lecture: 1.5 hours – Lab: 1 hour

Prerequisite: HVAC 1120 Lab fee: \$12.00

HVAC 2950 Field Experience HVAC (On Demand) 3 credits

This course offers an opportunity for an off-campus work experience in the heating, venting and air conditioning industry that augments formal education received in the technology with actual work conditions and job experience. Nontraditional Credit (“N”) will not be allowed for this course. Field Experience: 36 hours Lab fee: \$8.00

History (HIST)

HIST 1111 European History to 1648 (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

HIST 1112 European History since 1648 (A, SP, SU) 3 credits

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 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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

HIST 1151 American History to 1877 (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

HIST 1152 American History since 1877 (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

HIST 1181 World Civilization I: Non-Western to 1500 (A)

3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

HIST 1182 World Civilization II: Non-Western since 1500 (SP) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

HIST 2223 African-American History I before 1877 (A, SP, SU) 3 credits

The class is primarily a lecture/discussion course which includes the history of African Americans in the New World from the time of the slave trade to the end of Reconstruction.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee \$2.00

HIST 2224 African-American History II since 1877 (A, SP, SU) 3 credits

The class is primarily a lecture/discussion course which includes the history of African Americans from the end of Reconstruction to present times.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

HIST 2294 Special Topics: History (On Demand) 1-3 credits

Students explore special topics in History designed to meet specific needs. This course is on demand.

Lecture: 1-3 hours

History of Art (HART)

HART 1201 History of Art I (A, SP, SU) 3 credits

This course is a historically based introduction to the study of visual arts in the West. Through a critical examination of the fundamental formal concepts and the historical developments in the visual arts, this course examines the visual expression of culture from the Prehistoric Era to the early Renaissance.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100

HART 1202 History of Art II (A, SP, SU) 3 credits

This course is a historically based introduction to the study of visual arts in the West. Through a critical examination of the fundamental formal concepts and the historical developments in the visual arts, this course examines the visual expression of culture from the early Renaissance to the present.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100

HART 1260 World Cinema (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100

Horticulture (HORT)

(See also Landscape Design and Management)

HORT 1130 Plant Sciences (A, SP, SU) 3 credits

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.

Lecture: 2 hours – Lab: 3 hours Lab fee: \$30.00

HORT 1530 Spring Plants (SP) 3 credits

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 summer semester in odd numbered years.

Lecture: 1.5 hours – Lab: 4.5 hours

Prerequisite: HORT 1130 or permission of instructor

Lab fee: \$15.00

HORT 1535 Arboriculture (A) 2 credits

This course introduces the basic principles of tree biology and care. Arboricultural practices will be discussed and performed. This course will be offered in summer semester in even numbered years.

Lecture: 1 hour – Lab: 3 hours

Prerequisites: HORT 1130, HORT 2130, or permission of instructor

Lab fee: \$23.00

HORT 2130 Autumn Plants (A, SU) 3 credits

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.

Lecture: 1.5 hours – Lab: 4.5 hours

Prerequisite: HORT 1130 or permission of instructor

Lab fee: \$15.00

HORT 2530 Herbaceous Plants (A) 3 credits

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.

Lecture: 1.5 hours – Lab: 4.5 hours

Prerequisite: HORT 1130 or permission of instructor

Lab fee: \$15.00

Hospitality Management (HOSP)

Nutrition and Dietetics Major (HNTR)

HNTR 1153 Nutrition for a Healthy Lifestyle (A, SP, SU) 3 credits

This course offers 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. The science of bioenergetics and current recommendations specific to human performance are also reviewed in this course.

Lecture: 3 hours

Prerequisites: MATH 1010, Placement into ENGL 1100,

HNTR 1901 Dietetic Practicum I (A) 1.5 credits

This course presents an opportunity for 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.

Seminar: 1 hour - Practicum: 3.5 hours

Prerequisite: Placement into ENGL 1100, Placement above MATH 1030 or MATH 1050.

Admission to Nutrition and Dietetics program and instructor permission required Lab fee: \$60.00

HNTR 1902 Dietetic Practicum II (SP) 2 credits

This course offers additional opportunities for 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. Supervised learning situations are also provided to develop skills in procuring and storing food, supplies and equipment, maximizing fiscal outcomes, participating in quality improvement, and providing for the nutritional needs of the customer.

Seminar: 1 hour - Practicum: 7 hours

Prerequisite: HNTR 1901; minimum grade of "C"

Corequisites: HOSP 1107, HOSP 1109

Instructor permission required. Lab fee: \$20.00

HNTR 2265 Dietetic Current Issues (SP) 1 credit

This course is an in-depth study of current topics in the field of nutrition. Information about professional organizations and the legal and ethical practice of dietetics will be discussed. Current legislative issues and their impact on the profession are reviewed. This course requires that students achieve a minimum grade of C for completion of the program.

Lecture: 1 hour

Corequisite: HNTR 2905

Instructor permission required

HNTR 2275 Medical Nutrition Therapy I (A) 3 credits

This is 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.

Lecture: 2 hours - Lab: 2 hours

Prerequisites: HNTR 1153, BIO 2232, BIO 2300; minimum grade of "C" Lab fee: \$10.00

HNTR 2276 Medical Nutrition Therapy II (SP) 3 credits

This is 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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: HNTR 2275; minimum grade of "C"

Concurrent requisite: HNTR-2905 Lab fee: \$10.00

HNTR 2277 Dietetic Technician Registration Exam Review (SP) 1 credit

This course is designed to prepare dietetic technician majors for success in completing the Academy of Nutrition and Dietetics Registration Examination for Dietetic Technicians. This course requires that students achieve a minimum grade of C for completion of the program.

Lecture: 1 hour

Corequisite: HNTR 2905

HNTR 2903 Dietetic Practicum III A (A) 1 credit

Supervised learning situations in community based organizations will develop the student's skills in utilizing community services, in presenting nutrition information/education to groups and individuals, in interviewing skills and techniques used to obtain and evaluate nutrition data from individuals, and in communicating with both clients and other personnel.

Seminar: .5 hour - Practicum: 3.5 hours

Prerequisites: HNTR 1902; HNTR 1153, BIO 2232, BIO 2300, all with minimum grade of "C"

Corequisite: HNTR 2275 Lab fee: \$100.00

HNTR 2904 Dietetic Practicum III B (A) 1 credit

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

Seminar: .5 hour - Practicum: 3.5 hours

Prerequisite: HNTR 2903; minimum grade of "C"

. Instructor permission required.

HNTR 2905 Dietetic Practicum IV (SP) 2.5 credits

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.

Seminar: 1 hour - Practicum: 10.5 hours

Prerequisites: HNTR 2904, HNTR 2275; minimum grade of "C"

Corequisites: HNTR 2265, HNTR 2276, HNTR 2277

Instructor permission required. Lab fee: \$20.00

HOSP 1101 Research Hospitality & Tourism (A, SP, SU) 2 credits

This course offers a comprehensive look at the many fascinating, challenging, and related fields in the hospitality industry: travel and tourism, lodging, food service, meetings, conventions and expositions, leisure and recreation. Customer service is emphasized, while guest speakers, field trips, trade publications, and extensive research provide information on industry trends and career opportunities.

Lecture: 2 hours

HOSP 1107 Food Principles & Purchasing (A, SP) 4 credits

This is a course in basic food preparation, including the terminology and definitions used and the scientific principles involved in procuring, preparing and record keeping (utilizing manual methods and computer applications) of food, equipment and non-food supplies and products. Emphasis is given to a detailed study of the principles of preparation and selection criteria for all categories of foods served in foodservice operations including the writing of specifications, determining order quantities, evaluating product quality, and selecting suppliers. Field trips allow the student to see food processing operations and wholesale food markets.

consent is required.

Lecture: 1 hour - Lab: 2 hours

Prerequisites: ENGL 1100, HOSP 2216 Lab fee: \$110.00

HOSP 2216 Food Lab & Menu Management (SP) 4 credits

This is a laboratory course to follow HOSP 1109 Basic Food Production. Class covers proper roasting, grilling, poaching, sautéing and braising of meats, seafood and poultry with appropriate sauces. Also teaches classical techniques for the preparation consommé, bisque, and cream soups, as well as vegetables, starches and plated desserts. Principles of menu planning (including layout, design, pricing strategies) for a variety of foodservice operations are explored. Consideration is given to food selection, nutritional requirements, costs of food, labor, and other items, and equipment utilization. Students will research recipes and develop a menu in preparation for cooking and serving a four-course meal in the required amount of time.

Lecture: 3 hours - Lab: 3 hours

Prerequisites: HOSP 1107, HOSP 1109, HOSP 1122

Lab fee: \$145.00

HOSP 2217 Garde Manger (SP) 3 credits

This is a laboratory course which includes the 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. Ice carving is introduced. Students will acquire knowledge and develop competency skills in the preparation and artistic presentation of savory mousses, terrines, patés, galantines, and ballotines. The standards used in this regard are those specified in the Garde Manger section of the Training Log of the National Apprenticeship Training Log of the National Apprenticeship Training Program for Cooks, published by the American Culinary Federation. Buffet presentation, including platters, bowls and plates, and culinary show guidelines and practices are covered.

Lecture: 1 hour - Lab: 4 hours

Instructor permission required

Prerequisite: HOSP 1122 Lab fee: \$135.00

HOSP 2218 Baking Fundamentals (SU) 2 credits

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.

Lecture: 1 hour - Lab: 2 hours

Instructor permission required

Prerequisite: HOSP 1122 Lab fee: \$90.00

HOSP 2219 Food Production Menu Management (SP) 5 credits

This is a capstone laboratory course in which students will apply foodservice management skills in a simulated restaurant environment. Principles of menu planning for a variety of food service operations, which includes layout and design and pricing strategies, will be used. Consideration will be given to food selection, nutritional requirements, cost of food, labor, and other item, 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. A grade of "C" or higher is required for graduation.

Lecture: 3 hours - Lab: 6 hours

Instructor permission required Lab fee: \$110.00

HOSP 2224 Hospitality Supervision and Quality Management (A, SP) 3 credits

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.

Lecture: 3 hours

Instructor permission required

HOSP 2226 Event Menu Planning (A) 2 credits

This course explores the role of nutrition in promoting good health. The composition and functions of foods and a variety of nutrition concerns and restrictions are incorporated into the course. Principles of menu planning for a variety of events are reviewed. These include factors that impact menu item selection, merchandising techniques, layout and design, and pricing strategies. Consideration is given to nutritional requirements, food, labor and other factors in menu design.

Lecture: 2 hours

HOSP 2246 Hospitality Sales/Marketing (A, SP) 3 credits

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, which 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 acquire the basic knowledge and skills necessary to work within the marketing plan of a hospitality or tourism organization.

Lecture: 3 hours

HOSP 2271 Catering & Event Services (A, SP) 3 credits

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 explores the classification, history, and control of beer, wines and spirits. Students will examine Ohio liquor and legal regulations, inventory control, liquor dispensing systems, cash control, drink merchandising and alcohol responsibility as well as the art of mixology and wine and food affinity.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: HOSP 1122 Lab fee: \$25.00

HOSP 2273 Casino & Gaming Operations (SP, SU) 2 credits

HOSP 2273 covers the history of the gaming industry from its beginning to the present. Course content will familiarize students with gaming trends and emphasize the operation and management of the gaming and casino industry. Upon completion of this course, students will understand the intricate workings and connections of the many departments in a casino organization—gaming, marketing, accounting and finance, and customers relations.

Lecture: 2 hours

HOSP 2285 Baking Pastry Final Project (On Demand) 2 credits

Capstone course in Baking and Pastry Arts required for students registered in the Foodservice/Restaurant Management: Baking and Pastry Arts Track program. Practice & review preparation of baking and pastry arts skills learned in previous courses, and guided practice of selected baking and pastry arts skills including chocolate & sugar artistry. Culminating evaluation of baking and pastry skills based on standards established by the American Culinary Federation and current industry standards demonstrated with completion of special project. "C" or better is required

Lecture: 1 hour – Lab: 2 hours

Instructor permission required Lab fee: \$90.00

HOSP 2286 Apprenticeship Final Project (SP) 2 credits

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.

Lecture: 2 hours
Instructor permission required Lab fee: \$150.00

HOSP 2294 Special Topics: Hospitality Management (On Demand) 2 credits

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.

Lecture: 2 hours

HOSP 2901 Hospitality Cooperative Work Experience (A, SP, SU) 3 credits

A minimum of 300 hours will be spent in cooperative work experience, with one classroom hour per week in an on-line seminar.

Lecture: 1 hour - Practicum: 20 hours

Instructor permission required

HOSP 2902 Hospitality Cooperative Work Experience II (A, SP, SU) 3 credits

This course offers a 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.

Lecture: 1 hour - Practicum: 20 hours

Instructor permission required Lab fee: \$225.00

HOSP 2903 Hospitality Cooperative Work Experience III (SP) 3 credits

This course is a continuation of HOSP 2902 and required for second year chef apprentices. It consists of on-the-job training in the foodservice industry following the guidelines of American Culinary Federation (ACF) National Apprenticeship Training Program for Cooks. The equivalent of one classroom 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."

Lecture: 1 hour - Practicum: 20 hours

Prerequisite: HOSP 2902 Lab fee: \$120.00

Human Resources Management (HRM)

HRM 1121 Human Resources Management (A, SP, SU) 3 credits

This is an introductory course 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. Recommended: CRJ 2252 for Criminal Justice majors.

Lecture: 3 hours

Prerequisite: BMGT 1111 Lab fee: \$10.00

HRM 1222 Personnel Interviewing (A, SP, SU) 2 credits

The course provides an in-depth study of the legal aspects of interviewing, the various types of interviews conducted in business, and interviewing techniques. Students participate, as both an interviewer and an interviewee, in selection, disciplinary, exit, and performance appraisal interview simulations. Interviewing techniques and skills are evaluated using videotape playback.

Lecture: 1 hour - Lab: 2 hours

Prerequisite: HRM 1121, ENGL 1100, BOA 1200 Lab fee: \$4.00

HRM 1223 HR Policy and Procedure Writing (SP) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisites: HRM 1121; minimum grade of "C", BOA 1200, CSCI 1101, ENGL 1100 Lab fee: \$10.00

HRM 1224 Employee Training (SP) 3 credits

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. Students develop and present training programs using PowerPoint, Audacity, and Camtasia.

Lecture: 2 hours - Lab: 3 hours

Prerequisites: HRM 1121; minimum grade of "C", BOA 1200, CSCI 1101, ENGL 1100 Lab fee: \$8.00

HRM 1225 Labor Relations (A, SP, SU) 3 credits

The course provides a study of labor 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. Students participate, as members of labor and management teams, in contract negotiations, a third-step grievance meeting, and grievance arbitration simulations.

Lecture: 2 hours - Lab: 3 hours

Prerequisites: HRM 1121; minimum grade of "C", BOA 1200, CSCI 1101, ENGL 1100, STAT 1350 (or concurrently) Lab fee: \$10.00

HRM 1825 Monetary Compensation (SU) 3 credits

This 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.

Lecture: 3 hours

Prerequisites: HRM 1121, BOA-1200, CSCI-1101, minimum grade of "C", ENGL 1100,

Corequisite: STAT 1350 (may be taken before or concurrently)

Lab fee: \$10.00

HRM 1826 Mandatory Benefits (SU) 3 credits

This course provides an in-depth study of benefits mandated by federal law, including 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 develop policies, procedures, forms, and handbook summaries for each topic.

Lecture: 3 hours

Prerequisites: HRM 1121 and HRM 1223; minimum grade of "C", ENGL 1100, STAT 1350

HRM 1827 Voluntary Benefits (SU) 2 credits

This course provides an in-depth study of voluntary benefits which are those benefits employers most commonly choose to offer to help attract and retain employees. The course will focus on health insurance options (medical, dental, vision, prescription drug, catastrophic illness) and the types of providers of these 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).

Lecture: 2 hours

Prerequisites: HRM 1121 and HRM 1223; minimum grade of "C", ENGL 1100, STAT 1350 Lab fee: \$4.00

HRM 2221 Staffing Under the Law (A) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours

Prerequisites: HRM 1121 and HRM 1223; minimum grade of "C", STAT 1350 Lab fee: \$10.00

HRM 2223 Workplace Safety (A) 3 credits

This course provides the student in the Human Resources Management with an in-depth study of alcohol and drug use as they relate to contemporary workplace issues, violence in the workplace, AIDS and other communicable diseases as workplace issues, and management's obligations and options under OSHA and other safety regulations. The course also focuses on the legal aspects of safety issues. Students make presentations, write executive summaries on the topics, and develop policies, procedures, programs, and handbook summaries in each of the four major topic areas. Presentation skills and techniques are evaluated using videotape playback.

Lecture: 2 hours - Lab: 2 hours

Prerequisites: HRM 1121, HRM1223, and HRM 1224; minimum grade of "C", ENGL 1100, STAT 1350 Lab fee: \$4.00

HRM 2224 Human Resource Records Management (A) 2 credits

This course provides an in-depth study of the records governing the employment relationship required by federal and state laws and the legal aspects of those records. The course also explores approaches to developing record keeping systems that meet professional and industry standards. Students are required to demonstrate skills through the development of legally sound records management policies and procedures. Recommended: Students complete HRM 1121 with grade of "C" or better.

Lecture: 2 hours

Prerequisites: HRM 1121 and HRM 1223; minimum grade of "C", ENGL 1100 Lab fee: \$4.00

HRM 2240 Administration of Human Resources (SP, SU) 3 credits

As a part of the capstone sequence for the Human Resources Management, this course provides a hands-on application environment wherein students serve as the "Board of Directors," developing the full range of human resources policies, procedures, and programs. To demonstrate the depth and breadth of their knowledge, understanding, and skill, students are assigned three to six individual projects in the major topic areas (employment, compensation, benefits, performance appraisal, discipline, safety, and training), in the form of presentations. They develop policies and/or procedures appropriate to the presentation and develop/secure the documents appropriate to the presentation. As a group, students review, revise, and approve or reject policy, procedure, and program recommendations made by the presenter.

Lecture: 1 hour - Lab: 6 hours

Prerequisites: HRM 1222, HRM 1223, HRM 1224, HRM 1225, HRM 1825 HRM 1826, HRM 1827, HRM 2221, HRM 2223 and HRM 2224; minimum grade of "C." Lab fee: \$4.00

HRM 2901 Human Resource Management Practicum/Seminar (A, SP, SU) 3 credits

As a part of the capstone sequence for the Human Resources Management, 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. Instructor consent is required.

Seminar: 1 hour - Practicum: 14 hours

Prerequisites: HRM 1222, HRM 1223, HRM 1224, HRM 1225, HRM 1825, HRM 1826, HRM 1827, HRM 2221, HRM 2223, HRM 2224; minimum grade of "C."

Corequisite: HRM 2240 (may be taken concurrently)

Humanities (HUM)

Students who enroll in Humanities courses must have placed into ENGL 1100 and are encouraged either to have completed ENGL 1100 or to be enrolled in that course when scheduling a Humanities course.

HUM 1100 Introduction to Humanities (A, SP, SU) 3 credits

This course examines the role of art, music, and theater in the construction, maintenance and criticism of values and beliefs within specific historical and cultural periods.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$12.00

HUM 1160 Music & Art since 1945 (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$12.00

HUM 1270 Comparative Religions (A, SP, SU) 3 credits

This course introduces the study of religion through a historical overview and comparison of the major world religions. Students will look at readings in translation from the sacred texts of Judaism, Christianity, Islam, Buddhism and Hinduism. 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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

HUM 1275 Introduction to Visual Representation (A, SP, SU) 3 credits

This course examines the use of visual representation to generate and transmit ideas, information and knowledge in contemporary culture.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$7.00

HUM 1294 Special Topics: Humanities (On Demand) 1-3 credits
Students explore special topics in humanities designed to meet specific needs.
Lecture: 1 hour
Prerequisite: Placement into ENGL 1100

Information Technology Support Technician Major (ITST)

(See also **Electro-Mechanical Engineering Technology**)

ITST 1101 Comp Apps Construction/Engineering I (A, SP) 2 credits
This is an introductory level computer course for Construction Science and Engineering Technology students. The course introduces computer technology critical to the subsequent success in studies relating to manufacturing, construction, aviation, automation, GIS, robotics and programming for technicians. The students will learn effective utilization of supplier databases and have hands-on experience with applications and learn basic skills required by today's employers.
Lecture: 1 hour - Lab: 3 hours Lab fee: \$20.00
Prerequisite: No Reading Required, Placement into MATH 1010 or MATH 1020 or DEV 0114 with a minimum grade of "C"

ITST 1102 Comp Apps Construction/Engineering II (A SP) 2 credits
The second course in the introductory series of computer courses for Construction Science and Engineering Technology students. The course introduces computer technology critical to the subsequent success in studies relating to manufacturing, automation, GIS, robotics and programming for technicians. The students will study logic as it applies to the digital world and have hands-on experience with applications and hardware.
Lecture: 1 hour - Lab: 3 hours
Prerequisite: ITST 1101 Lab fee: \$20.00

ITST 1123 PC Tech Essentials I (A, SP) 3 credits
This course will focus on the Domains covered by the first exam for the CompTIA A+ Certification, the international, vendor-neutral certification which proves competence in areas such as installation, preventative maintenance, networking, security and troubleshooting.
Lecture: 1 hour - Lab: 4 hours
Prerequisite: ITST 1101 Lab fee: \$60.00

ITST 1136 Intro to Open Source (A, SP) 3 credits
This course introduces the Open Source system and provides the knowledge necessary to use it and its tools productively. The course will focus on the Domains the first exam requires for the Linux Professional Institute Certification 1 [LPIC-1].
Lecture: 1 hour – Lab: 4 hours
Prerequisites: ITST 1101, ITST 1102 Lab fee: \$60.00

ITST 2137 E-Mail for Tech Support (A, SP) 3 credits
The course will review e-mail from the support technician's perspective and discuss the roles, behavior, and components of the e-mail system. User creation, standards, configuration files, monitoring, ethics, and regulations will be addressed as will day-to-day and long-term support issues. Troubleshooting and configuring techniques for POP3, SMTP and IMAP e-mail clients will be discussed, practiced and tested.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: ITST 1123

ITST 2143 PC Tech Essentials II (A, SP) 3 credits
This course will focus on the Domains covered by the second exam for the

CompTIA A+ Certification, the international, vendor-neutral certification which proves competence in areas such as installation, preventative maintenance, networking, security and troubleshooting. The students will rehab older equipment for students in need and charitable organizations
Lecture: 1 hour – Lab: 4 hours
Prerequisite: ITST 1123

ITST 2246 Intermediate Open Source (A, SP) 3 credits
The second of a two-course series, ITST 2246 covers the intermediate level use of an Open Source operating system and its applications in support of business needs. Students will apply Open Source applications to real-world technical problem solving. The course covers the Domains of the Linux Professional Institute Certification 2 [LPIC-2]
Lecture: 1.5 hours - Lab: 4.5 hours
Prerequisite: ITST 1136 Lab fee: \$60.00

ITST 2252 Computer Program Tech (A, SP) 2 credits
This course is designed to instruct students in the use of Python in solving engineering problems. Students will design, flowchart, code, compile, and debug programs in this course. Hands-on experience is gained through interfacing digital I/O boards using Python.
Lecture: 1 hour - Lab: 3 hours
Prerequisites: ITST 1101, ITST 1102 Lab fee: \$24.00

ITST 2256 Tech Support Fund (A, SP) 3 credits
Effective technical support is a very demanding and much in demand skill. Today's technical support professionals must possess solid technical abilities combined with 'soft' and self-management skills. This course will present the skills needed to deliver excellent customer service, in-person and remotely. Students will learn a 'how-to' approach for delivering quality, technical customer support. Students will utilize real-world case studies as they practice hands-on crucial skills.
Lecture: 1 hour – Lab: 4 hours
Lab fee: \$20.00

ITST 2699 Capstone Experience in ITST (A, SP) 3 credits
This is a capstone course focusing on computer electronic systems. Students will master the skills related to the support, 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, and troubleshooting, testing, and functional demonstration of a capstone system project. Specific student projects will vary, based on current and emerging technologies.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: ITST 2143 Lab fee: \$25.00

Interactive Media (IMM)

IMM 1100 Principles of Interactive Design (A, SP, SU) 3 credits
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. 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 websites to bring state-of-the-art information directly to the student in a timely manner.
Lecture: 2 hours – Lab: 2 hours Lab fee: \$2.00

IMM 1115 Survey of Gaming Industry (A, SP, SU) 3 credits
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.

Lecture: 2 hours – Lab: 2 hours Lab fee: \$2.00

IMM 1116 Storytelling for Games (AU, SP) 3 credits

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.

Lecture: 2 hours – Lab: 2 hours Lab fee: \$2.00

IMM 1120 Fundamentals of Interactive Media (A, SP, SU) 4 credits

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.

Lecture: 3 hours – Lab: 2 hours Lab fee: \$8.00

IMM 1140 Cascading Style Sheets (SP) 3 credits

IMM 1140 promotes 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.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: CSCI 1145 Lab fee: \$6.00

IMM 1160 Media Graphics/Optimization (AU, SP) 3 credits

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 written, verbal and graphic communication skills.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: IMM 1100 Lab fee: \$8.00

IMM 1201 3D Modeling 1 (A, SP, SU) 4 credits

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 more advanced principles of multi texture creation and application.

Lecture: 3 hours – Lab: 2 hours Lab fee: \$13.00

IMM 1202 3D Modeling 2 (SP) 3 credits

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.

Lecture: 1 hour – Lab: 4 hours

Prerequisite: IMM 1201 Lab fee: \$19.00

IMM 1220 Digital Media Preparation (A) 2 credits

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.

Lecture: 1 hour – Lab: 2 hours

IMM 1500 Basics of Video & Sound (A, SP, SU) 3 credits

IMM 1500 introduces students to the process of using the power of audio and video to communicate. Topics covered include basic digital audio and video editing in a nonlinear environment, basic shooting and camera work, production planning, importing of assets, and exporting to the Web.

Lecture: 2 hours – Lab: 2 hours Lab fee: \$9.00

IMM 1510 Audio Production (SP) 3 credits

IMM 1510 is designed to develop an understanding of the relationship of audio production to various related media including multimedia and broadcast. 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 in a typical production environment.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: IMM 1500 Lab fee: \$10.00

IMM 1520 Single Camera Video Production (SP) 3 credits

IMM 1520 provides students with a comprehensive overlook and 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: dialogue framing, planning action scenes, lighting techniques, using boom mics, scoring a video. 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 poster aimed at a specific target audience.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: IMM 1500 Lab fee: \$10.00

IMM 1530 Screenwriting (A) 3 credits

IMM 1530 deals with common writing principles and theories used in the digital audio and video fields. In addition to basic writing principles students will learn to develop a treatment, plan characters, write effective scenes, and a screenplay for use in both audio and video. Different screenwriting programs will be highlighted.

Lecture: 2 hours – Lab: 2 hours

IMM 1580 Motion Graphics (AfterEffects) (A) 2 credits

IMM 1580 students will learn fundamentals of using Adobe AfterEffects to create motion graphics by integrating interactive media, sound, and video into interesting compositions. Students will learn how to set key frames 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.

Lecture: 1 hour – Lab: 2 hours

Prerequisite: IMM 1500 Lab fee: \$10.00

IMM 2201 3D Modeling 3 (A) 3 credits

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.

Lecture: 1 hour – Lab: 4 hours

Prerequisite: IMM 1202 Lab fee: \$26.00

IMM 2370 Flash I & II (A, SP) 3 credits

IMM 2370 provides the students with an overview of how to begin, storyboard, create and design a fully functional Flash website. Topics covered include becoming familiar with the palettes and tool box, new design, and drawing techniques, using Flash as an authoring tool, and understanding and applying Flash'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.

Lecture: 2 hours – Lab: 3 hours

Prerequisite: IMM 1160 Lab fee: \$16.00

IMM 2371 Adobe Edge (A) 3 credits

IMM 2371 provides the students with an overview of the software -- Adobe Edge. Edge Animate is a motion and interaction tool for creating animated, interactive content using HTML, JavaScript, and CSS. Edge Animate is designed to be powerful yet approachable and easy to use. Edge Animate is ideal for web designers, interactive designers, and web developers who want to energize their content for the web with motion and interactivity.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: IMM 1160 Lab fee: \$8.00

IMM 2372 Adobe PhoneGap (SP) 3 credits

IMM 2372 provides the students with an overview of the software -- Adobe PhoneGap. PhoneGap is Adobe's distribution of the free and open source framework. Using PhoneGap, developers can build native mobile apps using standard HTML 5, JavaScript, and CSS, and then deploy those apps to every leading mobile platform with little or no recoding. Through realistic examples, the student will master key PhoneGap APIs for everything from GPS to the file system, contacts to camera, device to events, and more.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: IMM 1140, CSCI 2447 Lab fee: \$8.00

IMM 2390 Advanced Flash III (Games) (SP) 3 credits

IMM 2390 builds on the previous course IMM 2370. Students learn the deeper interactive scripting capabilities of Flash. This course briefly details the science of game development using Flash software, including design, story character development, the physics and motion of a game, and audio issues. Through this course, a variety of games are created using the power of Flash and the most recent advancements in ActionScript 3.0. With an intermediate knowledge of Flash, the designers will get more of an understanding of what developers do to enhance their productivity and produce high quality games that make a real impact.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: IMM 2370 Lab fee: \$8.00

IMM 2520 Advanced Video Production (A) 3 credits

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 nonprofit 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.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: IMM 1510

IMM 2600 DVD Creation (Encore) (SP) 3 credits

IMM 2600 students will develop a DVD demo reel with the use of Adobe Encore. Topics will include DVD workflow, preparing video assets, compressing video for DVD, DVD menus, and promotion using DVD covers. At the end of the course, students will be able to develop their

own DVD demo reel for external use in locating a professional position.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: IMM 2520 Lab fee: \$1.00

IMM 2601 Game Development 1 (A) 2 credits

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 to overcome them. They will discover the difference between just creating art assets, and actually making functional game play elements.

Lecture: 1 hour – Lab: 3 hours

Prerequisite: IMM 1115, IMM 1116, IMM 1202

IMM 2602 Game Development 2 (SP) 2 credits

IMM 2602 is the second course of game development. Students will continue work on their game. They will further add scripts, assets, animated characters, and gameplay elements to get their vertical slice complete.

Lecture: 1 hour - Lab 3 hours

Prerequisite: IMM 2601

IMM 2603 Collaborative Project (SP) 2 credits

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: 4 hours

Prerequisite: IMM 2601 Lab fee: \$10.00

IMM 2620 Web Design/Creation (AU, SP) 3 credits

IMM 2620 provides the student with an overview of how to begin, storyboard, create and design a fully functional website. 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.

Lecture: 1 hour – Lab: 4 hours

Prerequisite: IMM 1160 Lab fee: \$8.00

IMM 2621 Adobe Muse (SP) 3 credits

IMM 2621 provides the students with an overview of the software -- Adobe Muse. Students will learn Muse from the ground up and create websites using the latest web standards without writing code. They will learn how to plan projects using site maps and master pages, design pages and add interactivity through buttons, links and widgets and publish a website via Business Catalyst or standard web hosting.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: IMM 1120 or IMM1160 Lab fee: \$8.00

IMM 2622 WordPress (A) 3 credits

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.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: IMM 1120 Lab fee: \$8.00

IMM 2710 Interactive Portfolio (SP) 3 credits

Interactive Portfolio will assist students in building confidence and focus when marketing themselves, their skills, and their creativity using Flash.

During this course, students will author their own interactive CD resume for external use in locating a professional job. Other marketing uses include Web, social media and print versions.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: IMM 2370 Lab fee: \$9.00

IMM 2760 Web Communications (SP) 2 credits

IMM 2760 follows a curriculum directed by Adobe, which centers on the Adobe Dreamweaver software application. This course prepares students for testing in the Adobe Certified Associate “Web Communications” program. Upon successful conclusion of this course material, students will participate in a certification test from Adobe. The fee for this test is included in the lab fee. Successful test takers receive a certificate of accomplishment directly from Adobe in their Adobe Certified Associate program for Web Communications.

Lecture: 1 hour - Lab: 2 hours Lab fee: \$21.00

IMM 2802 IMM Seminar (A, SP, SU) 1 credit

IMM 2802 offers supervised, on-the-job application of knowledge and skills acquired in the classroom. Student must be an IMM major, who has completed 12 hours in the technology and has permission of the instructor.

Seminar: 1 hour

Corequisite: IMM 2902

IMM 2902 IMM Practicum (A, SP, SU) 1 credit

IMM 2902 explores the application of business knowledge to specific areas of on-the-job practicum experience. Student must be an IMM major, who has completed 12 hours in the technology and has permission of the instructor.

Practicum: 7 hours

Corequisite: IMM 2802

IMM 2994 IMM Current Topics (On Demand) 1-3 credits

IMM 2994 course is a detailed examination of a selected current topic in Interactive Media. This course can be repeated.

Lecture: Varies

Interpreter Education Program (IEP)

IEP 1100 Introduction to Deaf Community (A, SP, SU) 3 credits

This course is designed to provide students with an overview of the Deaf community, focusing on social, cultural and educational experiences. This course also examines employment, local services available to the Deaf community, and majority culture’s myths and misconceptions of the Deaf community. This class is an Entrance Requirement for admission into the Interpreter Education Program Associate Degree.

Lecture: 3 hours Lab fee: \$15.00

IEP 1101 Beginning ASL (A, SP, SU) 4 credits

This course utilizes a practical approach to teaching vocabulary, grammar, and culture through conversational experiences. The student is further acclimated to the new modality of this language via classroom experiences conducted without voice. Comprehension skills are given greater attention in this course. Additional information about the Deaf community is introduced via outside readings, class discussion and required cultural experiences outside of class time. This class is an Entrance Requirement for admission into the Interpreter Education Program Associate Degree.

Lecture: 3 hours - Lab: 2 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$15.00

IEP 1102 Intermediate ASL (A, SP, SU) 4 credits

This course further acclimates the students to the visual/gestural modality

of ASL by teaching intermediate-level language structures used for short presentations and conversations. The course utilizes a practical approach to teaching vocabulary, grammar, and cultural information. Sign production and comprehension skills are given equal attention in this course. Additional information about the Deaf community is introduced via outside readings, class discussions and participation in cultural experiences.

Lecture: 3 hours - Lab: 2 hours

Prerequisite: IEP 1101 with minimum grade of “C”

Lab fee: \$15.00

IEP 1103 Advanced ASL (A, SP, SU) 4 credits

As the final course in the three course series, IEP 1103 provides students with opportunities to expand their production and comprehension skills. Communication activities focus on advanced functions of language usage.

Lecture: 3 hours - Lab: 2 hours

Prerequisite: IEP 1102; minimum grade of “C” Lab fee: \$15.00

IEP 1109 Fingerspelling & Numbers (A, SP, SU) 2 credits

This course offers students the opportunity to work on producing and comprehending fingerspelling and numbers. The emphasis of this course is on using fingerspelling and numbers in context. Opportunities are provided for the students to work with videotaped materials as well as live models. This class is an Entrance Requirement for admission into the Interpreter Education Associate Degree Program.

Lecture: 1 hour – Lab: 2 hours

Prerequisite: Placement into ENGL 1100

Corequisite: IEP 1101 Lab fee: \$15.00

IEP 1120 Introduction to Interpreting Profession (A) 3 credits

This course provides students with a general overview of the practice profession of interpreting. Students will examine the following topics: the intersections of communication and culture as they impact the work of interpreters, the historical development of the profession, past and present philosophies and practices, and interpreting competencies and responsibilities.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: Admission to IEP through Mandatory Information Session

Corequisites: IEP 1102, IEP 1150 Lab fee: \$15.00

IEP 1150 Linguistics of ASL & English (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: IEP 1101; minimum grade of “C”

Corequisite: IEP 1102 Lab fee: \$5.00

IEP 1194 Special Topics in Interpreting (On Demand) 1-5 credits

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.

Lecture: 1- 5 hours

Prerequisite: Instructor permission required Lab fee: \$5.00

IEP 1201 Beginning Interpreting (SP) 4 credits

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 and convey it accurately into the target language, both ASL and English. Students will apply ASL to English skills to consecutive settings.

Lecture: 3 hours - Lab: 2 hours

Prerequisites: IEP 1102, IEP 1120, IEP 1150; all courses completed with minimum grade of “C”

Corequisites: IEP 1103, IEP 1401 Lab fee: \$15.00

IEP 1294 Special Topics in ASL (On Demand) 1-5 credits

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.

Lecture: 1-5 hour(s)

Prerequisite: Instructor permission required

IEP 1394 Special Topics in Deaf Studies (On Demand) 1-5 credits

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.

Lecture: 1-5 hour(s)

Prerequisite: Instructor permission required

IEP 1401 Theoretical Foundations of Interpreting (SP) 3 credits

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.

Lecture: 3 hours

Prerequisites: IEP 1102, IEP 1120, IEP 1150; all courses completed with minimum grade of "C"

Corequisites: IEP 1103, IEP 1201 Lab fee: \$15.00

IEP 2202 Intermediate Interpreting (SU) 3 credits

This course is a continuation of IEP 1201. 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.

Lecture: 2 hours - Lab: 2 hours

Prerequisites: IEP 1201, IEP 1401, IEP 1103; all courses completed with minimum grade of "C"

Corequisites: IEP 2402, IEP 2204 Lab fee: \$15.00

IEP 2203 Advanced Interpreting (A) 3 credits

This course continues to increase student's knowledge and skills of interpreting from ASL to English and English to ASL, both consecutively and simultaneously. Focus will be placed on the assignment environment. The student will also increase his/her knowledge of teamwork. "Real world" interpreting assignments will be assigned without prior practice.

Lecture: 2 hours - Lab: 2 hours

Prerequisites: IEP 2202, IEP 2402, IEP 2204; all courses completed with minimum grade of "C"

Corequisite: IEP 2403 Lab fee: \$15.00

IEP 2204 ASL to English Interpreting (SU) 3 credits

This course provides students with experience in the process of ASL to English interpreting. Students will practice with a variety of deaf and hard-of-hearing individuals using different mediums, as well as "live" Deaf individuals to enhance team and solo voicing skills.

Lecture: 2 hours - Lab: 2 hours

Prerequisites: IEP 1103, IEP 1201, IEP 1401

Corequisites: IEP 2202, IEP 2402 Lab fee: \$15.00

IEP 2402 Ethics & Decision Making for Interpreters (SU)**3 credits**

This course offers students an opportunity to expand their understanding of decision-making within the field of interpreting. Students explore the demand control schema, interpersonal communication and professional relationships, the RID Code of Professional Conduct, and the understanding of interpreting as a community of reflective practice. Throughout this

course, self-reflection, consideration of consequences, and the ability to see issues from multiple perspectives are continually stressed as critical to the decision-making processes of practice professionals.

Lecture: 2 hour - Lab: 2 hours

Prerequisites: IEP 1103, IEP 1201, IEP 1401; all courses completed with minimum grade of "C"

Corequisites: IEP 2202, IEP 2204 Lab fee: \$5.00

IEP 2403 Educational Interpreting (A) 3 credits

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 interpreter as a member 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.

Lecture: 2 hours - Lab: 2 hours

Prerequisites: IEP 2202, IEP 2204, IEP 2402; all courses completed with minimum grade of "C"

Corequisites: IEP 2203 Lab fee: \$15.00

IEP 2404 Specialized Interpreting (SP) 2 credits

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.

Lecture: 1 hour - Lab: 2 hours

Prerequisites: IEP 2203, IEP 2403; all courses completed with a minimum grade of "C" Lab fee: \$15.00

IEP 2701 Processing (On Demand) 1 credit

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.

Lecture: 1 hour

IEP 2703 Advanced Fingerspelling (On Demand) 1 credit

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.

Lecture: 1 hour

Prerequisite: IEP 1109, course completed with a minimum grade of "C"

IEP 2704 Religious Interpreting (On Demand) 1 credit

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.

Lecture: 1 hour

Prerequisites: IEP-2202, IEP-2204 IEP-2402; all courses completed with a minimum grade of "C"

IEP 2901 Community Interpreting Practicum I (A, SP, SU)**3.5 credits**

Students participate in a minimum 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 1.5 hours 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.

Seminar: 1.5 hours - Practicum: 14 hours

Instructor/advisor permission is required.

Prerequisites: IEP 2202, IEP 2402, IEP 2204; all courses completed with minimum grade of "C"

Corequisites: IEP 2203, IEP 2403 Lab fee: \$40.00

IEP 2902 Community Interpreting Practicum II (A, SP, SU)

3.5 credits

Students participate in a minimum 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 1.5-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 satisfy IEP.AAS graduation requirements.

Seminar: 1.5 hours - Practicum: 14 hours

Instructor/advisor permission is required.

Prerequisites: IEP 2203, IEP 2403; courses completed with minimum grade of "C"

Corequisite: IEP 2404 Lab fee: \$40.00

IEP 2903 K-12 Educational Interpreting Practicum (A, SP)

3.5 credits

Students participate in a minimum 160-hour practicum supervised in a K-12 educational setting where utilization and practice of the knowledge and skills in the corresponding courses are required. In addition, students participate in a 1.5-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 satisfy IEP.AAS graduation requirements.

Seminar: 1.5 hours - Practicum: 14 hours

Instructor/advisor permission is required.

Prerequisites: IEP 2202, IEP 2402, IEP 2204; all courses completed with minimum grade of "C"

Corequisites: IEP 2203, IEP 2403 Lab fee: \$15.50

Italian (ITAL)

ITAL 1101 Beginning Italian I (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$10.00

ITAL 1102 Beginning Italian II (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: ITAL 1101, minimum grade of "C" Lab fee: \$10.00

ITAL 1103 Intermediate Italian (SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: ITAL 1102; minimum grade of "C" Lab fee: \$10.00

ITAL 1193 Independent Study in Italian (On Demand) 1-3 credits

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.

Lecture: 1-3 hours

Prerequisites: ITAL 1103; minimum grade of "C" or Instructor Permission Lab fee: \$2.00

ITAL 1194 Special Topics in Italian (On Demand) 1-3 credits

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.

Lecture: 1-3 hours

Prerequisites: ITAL 1103; minimum grade of "C" or Instructor Permission Lab fee: \$2.00

Japanese (JAPN)

JAPN 1101 Beginning Japanese I (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$10.00

JAPN 1102 Beginning Japanese II (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: JAPN 1101; minimum grade of "C" Lab fee: \$10.00

JAPN 1103 Intermediate Japanese (SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: JAPN 1102; minimum grade of "C" Lab fee: \$10.00

JAPN 1193 Independent Study in Japanese (On Demand) 1-3 credits
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.
Lecture: 1-3 hours
Prerequisites: JAPN 1103; minimum grade of “C” or Instructor Permission Lab fee: \$2.00

JAPN 1194 Special Topics in Japanese (On Demand) 1-3 credits
JAPN 1194 offers groups of students an opportunity to examine selected topics in Japanese in detail. Special Topic courses are offered to meet the special needs or interests of a group of students and to pilot new courses.
Lecture: 1-3 hours
Prerequisites: JAPN 1103; minimum grade of “C” or Instructor Permission Lab fee: \$2.00

Landscape Design and Management (LAND)

Also see Horticulture (HORT)

LAND 1100 Introduction to the Landscape Profession (A, SP, SU) 2 credits
This course is an overview of landscape professions in the green industry, with emphasis in environmental, design and horticultural applications.
Lecture: 2 hours Lab fee: \$15.00

LAND 1106 Landscape for the Home Gardener (A, SP, SU) 3 credits
Landscape maintenance will be discussed with an emphasis on procedures best suited to promote optimum growth of landscape plants.
Lecture: 2 hours - Lab: 3 hours

LAND 1160 Landscape Principles (A, SP, SU) 2 credits
This course offers 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.
Lecture: 1 hour - Lab: 3 hours

LAND 1165 Landscape Survey (A, SP) 1 credit
This course explores various company structures through on site visits of landscape companies.
Lab: 3 hours Lab fee: \$17.00

LAND 1545 Landscape Computer Applications (A, SP, SU) 2 credits
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.
Lecture: 1 hour - Lab: 3 hours
Prerequisites: LAND 1560, ARCH 1112 Lab fee: \$22.00

LAND 1560 Residential Design (A, SP) 4 credits
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.
Lecture: 1 hour - Lab: 6 hours
Prerequisites: ARCH 1110, ARCH 1112, LAND 1160
Lab fee: \$40.00

LAND 1565 Landscape Graphics (A, SP) 2 credits
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.
Lecture: 1 hour - Lab: 3 hours
Prerequisites: ARCH 1110, ARCH 1112, LAND 1160
Lab fee: \$22.00

LAND 1590 Landscape Management I (SP) 3 credits
Basic landscape management principles will be discussed with an emphasis on procedures best suited to promote optimum growth and aesthetic qualities of landscape plants.
Lecture: 1.5 hours – Lab: 4.5 hours
Prerequisites: HORT 1130, LAND 1160, ESSH 2120
Lab fee: \$25.00

LAND 2145 Specialty Gardens (SU) 3 credits
This course will study issues that all landscape designers must confront philosophically, ethically and practically. The class will define the “meanings and makings” of gardens through the exploration of design ethics, design principles, garden history and design and garden types. Instructor permission is required for enrollment into this class.
Lecture: 2 hours - Lab: 3 hours
Instructor permission required
Prerequisite: LAND 1160 Lab fee: \$17.00

LAND 2155 Sustainable Practices (SP, SU) 3 credits
This class will explore the philosophical underpinnings of the green movement while dealing with the practical day to day issues on how to create livable landscapes using sustainable practices and design. Instructor permission is required for enrollment into this class.
Lecture: 1 hour - Lab: 3 hours
Instructor permission required
Prerequisite: LAND 1560 Lab fee: \$17.00

LAND 2160 Landscape Construction (A, SU) 4 credits
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.
Lecture: 1 hour – Lab: 6 hours
Prerequisites: MATH 1075, LAND 1560 Lab fee: \$25.00

LAND 2165 Landscape Irrigation (A, SP) 3 credits
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.
Lecture: 1 hour - Lab: 3 hours
Prerequisites: LAND 1560, MATH 1075 Lab fee: \$17.00

LAND 2175 Sustainable Sites (A, SP) 4 credits
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.
Lecture: 1 hour – Lab: 6 hours
Prerequisite: LAND 1560 Lab fee: \$33.00

LAND 2190 Landscape Management II (A) 3 credits
Basic landscape management principles will be discussed with an emphasis on procedures best suited to promote optimum growth and aesthetic qualities of landscape plants.
Lecture: 1.5 hours – Lab: 4.5 hours
Prerequisite: LAND 1590 Lab fee: \$40.00

LAND 2560 Planting Design (SP, SU) 4 credits
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.
Lecture: 1 hour – Lab: 6 hours
Prerequisites: HORT 2130, LAND 1565, LAND 2160
Lab fee: \$33.00

LAND 2590 Landscape Operations (A, SP, SU) 3 credits
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.
Lecture: 1.5 hours – Lab: 4.5 hours
Prerequisites: BMGT 1111, LAND 2160
Corequisite: LAND 2560 Lab fee: \$26.00

LAND 2900 LAND Field Experience (A, SP, SU) 3 credits
This course provides an opportunity for an off-campus experience. It will reinforce the formal education received in the program with actual work conditions. Nontraditional Credit (“N”) will not be accepted. Instructor permission is required for enrollment into this class.
Field Experience: 40 hours
Instructor permission required

LAND 2994 Special Topics: LAND (On Demand) 1-3 credits
This course will allow for special topics to be offered in a timely and responsive manner.
Lecture: 1-3 hours

Latin (LATN)

LATN 1101 Beginning Latin I (A, SP, SU) 4 credits
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.
Lecture: 4 hours
Prerequisite: Placement into ENGL 1100 Lab fee: \$10.00

LATN 1102 Beginning Latin II (A, SP, SU) 4 credits
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.
Lecture: 4 hours
Prerequisite: LATN 1101, minimum grade of “C” Lab fee: \$10.00

LATN 1103 Intermediate Latin (SU) 4 credits
This course is a continuation of LATN 1102. It meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature.
Lecture: 4 hours
Prerequisite: LATN 1102; minimum grade of “C” Lab fee: \$10.00

LATN 1193 Independent Study in Latin (On Demand) 1-3 credits
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.
Lecture: 1-3 hours
Prerequisites: LATN 1103; minimum grade of “C” or Instructor Permission Lab fee: \$2.00

LATN 1194 Special Topics in Latin (On Demand) 1-3 credits
LATN 1194 offers groups of students an opportunity to examine selected topics in Latin in detail. Special Topic courses are offered to meet the special needs or interests of a group of students and to pilot new courses.
Lecture: 1-3 hours
Prerequisites: LATN 1103; minimum grade of “C” or Instructor Permission Lab fee: \$3.00

Marketing (MKTG)

MKTG 1105 Retailing (A, SP, SU) 3 credits
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.
Lecture: 3 hours Lab fee: \$1.00

MKTG 1110 Marketing Principles (A, SP, SU) 3 credits
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.
Lecture: 3 hours
Prerequisite: ECON 2200 Lab fee: \$1.00

MKTG 1120 Branding (A, SP, SU) 3 credits
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.
Lecture: 3 hours Lab fee: \$1.00

MKTG 1125 Introduction to Social Media (A, SP, SU) 3 credits
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.
Lecture: 3 hours Lab fee: \$1.00

MKTG 1230 Customer Service & Sales (A, SP, SU) 3 credits
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 and 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.

Lecture: 3 hours Lab fee: \$2.00

MKTG 1230A Customer Service & Sales-A (A, SP, SU) 1 credit

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.

Lecture: 1 hour

MKTG 1230B Customer Service & Sales-B (A, SP, SU) 2 credits

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 customer service managers in business.

Lecture: 2 hours Lab fee: \$2.00

MKTG 2100 Social Media Marketing Strategy (SP) 3 credits

MKTG 2100 describes how to use social media for various marketing functions: target market communication, advertising, promotion, customer relations, and customer service (Community, Commerce, Publishing, and Entertainment). The focus is on the introduction to emerging social media 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 social media features and tools to be explored include online communities, public relations activities, blogs, vlogs, podcasts, RSS feeds, mobile communication devices, and the connection with other web-based and electronic tools and applications. An overview of the marketing and technical aspects of social media will be examined and how various markets use social media in community, commerce, publishing/content, and entertainment decisions.

Lecture: 3 hours

Prerequisite: STAT 1350 Lab fee: \$1.00

MKTG 2200 Digital Marketing (A, SP) 3 credits

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.

Lecture: 3 hours

Prerequisite: MKTG 1110 Lab fee: \$3.00

MKTG 2290 Business to Business Marketing (A) 3 credits

MKTG 2290 is designed to provide students with a comprehensive understanding of fundamental marketing principles, practices and strategies utilized in business to business marketing. An empirical approach is taken to deepen the discussion of marketing topics relevant to the dynamics of the business environment. Additional emphasis is placed on organizational marketing, future trends and decisions facing business to business marketing managers.

Lecture: 3 hours

Prerequisite: MKTG 1110 Lab fee: \$1.00

MKTG 2360 Direct & Database Marketing (SP) 3 credits

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.

Lecture: 3 hours

Prerequisite: MKTG 1110 Lab fee: \$2.00

MKTG 2400 Advertising & Promotion (A, SP) 3 credits

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.

Lecture: 3 hours

Prerequisite: MKTG 1110 Lab fee: \$4.00

MKTG 2450 Services & Non-Profit Marketing (A) 3 credits

MKTG 2450 studies the characteristics of services, their contribution to an economy, service quality, service customer behavior and the relationship between organizational performance and customer retention. This course will also give students an understanding of the basic organizational structures, systems and practices of nonprofit organizations. Emphasis will be placed on identifying the various types of nonprofit organizations, nonprofit marketing mixes, and nonprofit marketing strategies.

Lecture: 3 hours

Prerequisite: MKTG 1110 Lab fee: \$2.00

MKTG 2550 Marketing Information & Consumer Analysis (A) 3 credits

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.

Lecture: 3 hours

Prerequisite: MKTG 1110 Lab fee: \$2.00

MKTG 2650 Merchandise Buying & Retail Math (SP) 3 credits

MKTG 2650 provides the student with an overview of the impact of merchandising strategies on the fiscal management of store operations. Students will use basic math formulas that are used by buyers, department managers and store owners in order to operate their businesses, stores or departments profitably. The process of assembling merchandise assortments and the management of retail inventories will be discussed. This course is dedicated to quantitative procedures for planning and analyzing sales, profit, and inventory for retailers.

Lecture: 3 hours

Prerequisite: MKTG 1105 Lab fee: \$2.00

MKTG 2750 Global Marketing (A, SP) 3 credits
MKTG 2750 is a capstone course for marketing majors. This course builds on the knowledge acquired in other marketing and business courses to give students the skills and knowledge necessary to successfully analyze economic, cultural, political and fiscal issues in global marketing and to suggest appropriate business solutions. As a result of completing this course, students will develop a broader understanding of the marketing function and its relationship to business strategy in the context of a global marketing environment. Student must be a Marketing major who has completed 12 hours in the technology and has permission of the instructor.
Lecture: 3 hours
Instructor permission required
Prerequisite: MKTG 1110 Lab fee: \$1.00

MKTG 2802 Marketing Seminar (A, SP, SU) 1 credit
MKTG 2802 allows for the application of marketing knowledge to specific areas of an on-the-job internship. Student must be a Marketing major who has completed 12 hours in the technology and has permission of the instructor.
Seminar: 1 hour
Instructor permission required
Corequisite: MKTG 2902 Lab fee: \$1.00

MKTG 2902 Marketing Practicum (A, SP, SU) 1 credit
MKTG 2902 offers a chance for a supervised, on-the-job application of knowledge and skills acquired in the classroom. Student must be a Marketing major who has completed 12 hours in the technology.
Practicum: 7 hours
Instructor permission required
Corequisite: MKTG 2802 Lab fee: \$1.00

MKTG 2994 Marketing Current Topics (On Demand) 1-3 credits
MKTG 2994 offer an opportunity for detailed examination of various topics in marketing.
Lecture: 1 hour Lab fee: \$2.00

Massage Therapy (MASS)

MASS 1236 Massage Therapy Law & Ethics (A) 2 credits
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. Also discussed are the professional practices 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.
Lecture: 2 hours
Prerequisite: Acceptance into program

MASS 1261 Massage Techniques (A) 4 credits
This course is an introduction to the professional practice of massage therapy, including hygiene and the 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.
Lecture: 2 hours - Lab: 6 hours
Prerequisite: Acceptance into program Lab fee: \$75.00

MASS 1273 Massage Pathophysiology (SP) 4 credits
This course provides the student with the indication and contraindication for conditions, disorders and dysfunctions of the human body. Students will learn the appropriate application of massage techniques for a variety of conditions, disorders, dysfunctions and structures.

Lecture: 2 hours -Lab: 6 hours
Prerequisite: BIO 2232 Lab fee: \$40.00

MASS 2240 Fundamentals of a Massage Therapy Practice (A, SP, SU) 2 credits
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.
Lecture: 2 hours
Prerequisite: MASS 1261, MASS 1236, Minimum grade C and acceptance into program

MASS 2280 Nationwide Children's Hospital Advanced Studies (A, SP) 2 credits
The student will have the opportunity to work with the massage therapy staff of Nationwide Children's Hospital in the care and treatment of hospital patients in a variety of the clinical specialty units. The care units students may work in include, but are not limited to, General Surgery, Burns, Hematology/Oncology, Pulmonary Rehabilitation, Cardiac Rehabilitation, Heart and Lung Transplant, Pediatric Intensive Care, Physical Medicine and Rehabilitation and the Pain Clinic. The course will also discuss issues surrounding dying patients and patient death.
Lecture: 1 hour - Lab: 6 hours
Instructor permission required

MASS 2281 Hot Stone Massage (SU) 2 credits
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 its use, safety and sanitary procedures.
Lecture: 1 hour -Lab: 2 hours
Prerequisites: MASS 1261, BIO 2232 Lab fee: \$40.00

MASS 2282 Trigger Point Therapy (SU) 4 credits
Course includes physiology of trigger point therapy and treatment modalities, including fascial release, stretch and spray, post-isometric muscle release, and advanced Swedish techniques.
Lecture: 2 hours - Lab: 4 hours
Prerequisites: MASS 1261, BIO 2232 Lab fee: \$40.00

MASS 2284 Sports Massage (SU) 2 credits
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 massage, specific sports massage techniques, hydrotherapy, stretching, trigger points, and myofascial release.
Lecture: 1 hour - Lab: 2 hours
Prerequisites: MASS 1261, BIO 2232 Lab fee: \$40.00

MASS 2285 Aromatherapy Basics for Massage Therapy (SU) 2 credits
This course is designed for the massage therapist/massage student who has an interest in aromatherapy in combination with massage.
Lecture: 1 hour - Lab: 2 hours
Prerequisites: MASS 1261, BIO 2232 Lab fee: \$40.00

MASS 2286 Spa Services for Massage Therapy (SU) 2 credits
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.

Lecture: 1 hour - Lab: 2 hours

Prerequisites: MASS 1261, BIO 2232 Lab fee: \$40.00

MASS 2296 Massage Therapy Board Review (SU) 2 credits

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.

Lecture: 2 hours

Prerequisite: MASS 2891

MASS 2298 Special Topics: Massage Therapy (On Demand) 2 credits

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.

Lecture: 1 hour - Lab: 2 hours

Prerequisites: MASS 1261, BIO 2232 Lab fee: \$40.00

MASS 2891 Massage Clinical (SP) 4 credits

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 his/her clinical skills with the experience gained in the student clinic.

Lecture: 2 hours - Lab: 6 hours

Prerequisites: MASS 1261, BIO 2232 Lab fee: \$75.00

Mathematics (MATH)

MATH 1000 Mathematics Skills for Health Professionals (A, SP, SU) 1 credit

This course is designed to provide students with the mathematical skills and strategies required to successfully work in the allied health fields. The course begins with a basic review of math skills necessary for administering basic health care. The course also includes ratio and proportion calculations, an introduction to the metric and apothecary systems of measure, metric-household-apothecary conversions, strengths of solutions, general accounting concepts applicable to running medical offices, unit conversions between Fahrenheit and Celsius scales, dose conversions, and a brief introduction to descriptive statistics.

Lecture: 1 hour

Prerequisite: DEV 0114; minimum grade of "C" Lab fee: \$2.00

MATH 1010 Math for Business Apps (A, SP, SU) 4 credits

This course covers business-related computations and mathematical concepts including percent and the percent formula; units of measurement; scientific notation; gross earnings; FICA and withholding; markup and markdown; simple and compound interest; simple discount notes; loan amortization; depreciation and inventory; fundamentals of geometry; introduction to descriptive statistics, modeling with data and probability. Emphasis is on applications.

Lecture: 4 hours

Prerequisite: DEV 0114; minimum grade of "C" Lab fee: \$6.00

MATH 1020 Beginning Algebra I (A, SP, SU) 2 credits

This is the first course of a two-semester sequence. It 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 in two variables, introduction to functions. Course also presents applications and activities to build skills in problem solving.

Lecture: 2 hours

Prerequisite: DEV 0114; minimum grade of "C" or completion of MATH 1099 (DEV-0114 module) Lab fee: \$4.00

MATH 1025 Quantitative Literacy (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: DEV 0114; minimum grade of "C" or completion of MATH 1099 (DEV-0114 module) Lab fee: \$4.00

MATH 1030 Beginning Algebra II (A, SP, SU) 3 credits

This is the second course of a two-semester sequence. It covers the study of 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. Course also presents applications and activities to build skills in problem solving.

Lecture: 3 hours

Prerequisite: MATH 1020; minimum grade of "C" or placement by completion of MATH 1099 (MATH 1020 module) Lab fee: \$4.00

MATH 1050 Elementary Algebra (A, SP, SU) 5 credits

This is the first course of a two-semester sequence. It covers 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. Course also emphasizes applications and activities to build skills in problem solving. Not open to students with credit for MATH 1020 and 1030, or 1075 and above.

Lecture: 5 hours

Prerequisite: DEV 0114; minimum grade of "C" or completion of MATH 1099 (DEV 0114 module) Lab fee: \$4.00

MATH 1075 Intermediate Algebra (A, SP, SU) 5 credits

This is the second course of a two-semester sequence. It covers 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. Course also includes applications and activities to build skills in problem solving. Not open to students with credit for MATH 1110, 1116, 1113, or 1130 and above.

Lecture: 5 hours

Prerequisite: MATH 1030 or MATH 1050; minimum grade of "C" or placement by completion of MATH 1099 (MATH 1030 or MATH 1050 module) Lab fee: \$4.00

MATH 1099 Bridge to College Math (A, SP, SU) 3 credits

The topics contained in DEV 0114, MATH 1050 (or MATH 1020 & 1030), and MATH 1075 will be delivered 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 modules and courses as they can within the time limits of the course. This

modularized, mastery approach will pre-test, 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 series of modules associated with one or more courses, 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 recommended for students who have an appropriate placement score and have passed High School Algebra II within the last 5 years.

Lab: 6 hours

Prerequisite: Placement score which allows for DEV 0114 or DEV 0115 or MATH 1020 or MATH 1030 or MATH 1075 registration Lab fee: \$7.00

MATH 1109 Math for Emergency Services (A, SP, SU) 3 credits

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 not guaranteed.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: DEV 0145; minimum grade “C” and DEV 0114; minimum grade “C” Lab Fee: \$6.00

MATH 1110 Math Skilled Trades (A, SP) 3 credits

This course is intended to be a basic math course for students in the skilled trades. Special emphasis will be given to the practical application of topics in elementary algebra and elementary geometry. Topics include measurement, ratio and proportion, systems of equations, the study of quadratic equations, basic plane geometry, and basic right triangle trigonometry. Not open to students with credit for MATH 1148.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: MATH 1020; minimum grade of “C” or placement by completion of MATH 1099 (MATH 1020 module) Lab fee: \$3.00

MATH 1113 Technical Mathematics (A, SP, SU) 5 credits

This is a technical mathematics course which covers rules for measurement; the study of rational expression arithmetic and simplification; operations on radical expressions and expressions containing rational exponents; the complex number system; solving rational, radical, and quadratic equations; solving polynomial inequalities in one variable; solving compound inequalities in one and two variables; graphs, relations and functions including quadratic and trigonometric functions, the distance and midpoint formulas and circles. Emphasis is on technically oriented applications and activities to build skills in applied problem solving.

Lecture: 4 hours - Lab: 2 hours

Prerequisite: MATH 1030 or MATH 1050; minimum grade of “C” Lab fee: \$2.00

MATH 1116 Math for Liberal Arts (A, SP, SU) 3 credits

A survey of modern mathematical topics relevant to everyday life, intended for students who are not majoring in the physical sciences. This course applies critical thinking and problem solving skills to topics such as elementary graph theory, the mathematics of voting and apportionment, and probability. Not open to students with credit for MATH 1130, MATH 1148, or above.

Lecture: 3 hours

Prerequisite: MATH 1075; minimum grade of “C” or placement by completion of MATH 1099 (MATH-1075 module) Lab fee: \$4.00

MATH 1125 Concept Math Teachers I (A, SP, SU) 5 credits

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. Lecture: 5 hours

Prerequisite: MATH 1075; minimum grade of “C” or placement by completion of MATH 1099 (MATH-1075 module) Lab fee: \$5.00

MATH 1126 Concept Math Teachers II (A, SP, SU) 5 credits

A continuation of MATH 1125. This course is designed as an in-depth study of the basic concepts of logic, geometric constructions and 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. Lecture: 5 hours

Prerequisite: MATH 1125; minimum grade of “C” Lab fee: \$5.00

MATH 1130 Business Algebra (A, SP, SU) 5 credits

This course focuses on college algebra topics for students majoring in economics and business. It 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 are highlighted throughout the content. Not open to students with credit for MATH 1116 or 1148 and above.

Lecture: 5 hours

Prerequisite: MATH 1075; minimum grade of “C” Lab fee: \$3.00

MATH 1131 Calculus for Business (A, SP, SU) 6 credits

This course provides an introduction to calculus. Topics covered include 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 are highlighted throughout the content. Not open to students with credit for MATH 1151 and above.

Lecture: 6 hours

Prerequisite: MATH 1130, MATH 1148, MATH 1149 or MATH 1150; minimum grade of “C”

MATH 1148 College Algebra (A, SP, SU) 4 credits

This course is a continuation of the study of functions. The concept of transformations is used to graph and analyze functions including quadratic, higher degree polynomial, power, piecewise, rational, exponential, and logarithmic functions. The function concept is applied to solving equation inequalities, and applications regarding these types of functions. Factor and remainder theorems and roots of polynomial functions are included. The concept of functions is extended to include composition of functions and inverse functions. Systems of linear and non-linear equations are solved using algebraic and graphical methods. Trigonometric functions of right angles are defined and used in problem solving. This course meets the general education requirement for the AA degree. Not open to students

with credit for MATH 1149 and above. Lecture: 4 hours
Prerequisite: MATH 1075; minimum grade of "C" or placement by completion of MATH 1099 (MATH-1075 module) Lab fee: \$3.00

MATH 1149 Trigonometry (A, SP, SU) 4 credits

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; DeMoivre's Theorem. The conic sections are defined and analyzed algebraically and graphically. Not open to students with credit for MATH 1150 and above.

Lecture: 4 hours
Prerequisite: MATH 1148; minimum grade of "C" Lab fee: \$3.00

MATH 1150 Pre-Calculus (A, SP) 6 credits

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.

Lecture: 6 hours
Prerequisite: MATH 1075; minimum grade of "A" or placement by completion of MATH 1099 (MATH-1075 module with overall course average of at least 90%) Lab fee: \$3.00

MATH 1151 Calculus I (A, SP, SU) 5 credits

This course provides and introduction to differential calculus. Topics presented include functions, limits, continuity, derivatives, differentiation rules, derivatives of the trigonometric, exponential, and logarithmic functions, related rates, extrema, curve sketching, and optimization. Course also introduces 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, hyperbolic, and inverse hyperbolic functions. Applications to problems in science and engineering are highlighted. Sections of this course are H-designated Honors classes.

Lecture: 5 hours
Prerequisite: MATH 1149 or MATH 1150; minimum grade of "C"
Lab fee: \$2.00

MATH 1152 Calculus II (A, SP, SU) 5 credits

This course continues the introduction to integral calculus. Topics covered include integration of exponential, logarithmic, trigonometric, inverse trigonometric functions, volume and surface area of solids of revolution, arc length, and methods of integration. Course also presents L'Hopital's Rule and Improper Integrals. Students will learn to analyze plane curves given parametrically or in polar coordinates, and their differential and integral calculus. Students will learn about infinite sequences and series, their sum and/or convergence, conic sections, vectors in the plane and in space. Applications to problems in science and engineering are noted. Not open to students with credit for MATH 1157 and above.

Lecture: 5 hours
Prerequisite: MATH 1151, minimum grade of "C"
Lab fee: \$2.00

MATH 1172 Engineering Mathematics A (A, SP, SU) 5 credits

This course covers integration techniques, sequences and 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.

Lecture: 5 hours
Prerequisite: MATH 1151, minimum grade of "C"

MATH 1193 IS in Mathematics (A, SP, SU) 1-5 credits

This course is designed to give students an opportunity for a detailed study of topics of interest in mathematics.

Lecture: Varies
Instructor permission required

MATH 1194 SPT: Mathematics (A, SP, SU) 1-5 credits

This course is designed to give groups of students an opportunity for a detailed study of topics of interest in mathematics not otherwise offered.

Lecture: Varies
Instructor permission required

MATH 2153 Calculus III (A, SP, SU) 5 credits

MATH 2153 is an introduction to multivariable calculus. Students will learn about 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 will be highlighted.

Lecture: 5 hours
Prerequisite: MATH 1152; minimum grade of "C" Lab fee: \$2.00

MATH 2173 Engineering Mathematic B (A, SP, SU) 5 credits

This course covers multiple integrals, line integrals, vector fields, and second order constant coefficient ODEs.

Lecture: 5 hours
Prerequisite: MATH 1172; minimum grade of "C"

MATH 2174 Linear Algebra Differential Equations for Engineering (A, SP, SU) 5 credits

This course delves into matrix theory, eigenvectors and eigenvalues, ordinary and partial differential equations.

Lecture: 5 hours
Prerequisite: MATH 2173; minimum grade of "C"

MATH 2193 IS Mathematics II (A, SP, SU) 1-5 credits

This course is designed to give students an opportunity for a detailed study of topics of interest in mathematics.

Lecture: Varies
Instructor permission required

MATH 2194 SPT: Mathematics II (A, SP, SU) 1-5 credits

This course is designed to give groups of students an opportunity for a detailed study of topics of interest in mathematics not otherwise offered.

Lecture: Varies
Instructor permission required

MATH 2255 Elementary Differential Equations (SP, SU) 4 credits

This course is a study of the basic concepts and methods for 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; and numerical methods. Applications to physical sciences and engineering are highlighted.

Lecture: 4 hours
Prerequisite: MATH 2153, minimum grade of "C"
Lab fee: \$2.00

MATH 2366 Discrete Math Structures (SU) 5 credits

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. Applications to computer science will be noted.
Lecture: 5 hours
Prerequisite: MATH 1152; minimum grade of "C"

MATH 2415 Ordinary Partial Differential Equations (A, SP, SU) **4 credits**

This course presents 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. Topics covered have applications to physical sciences and engineering.
Lecture: 4 hours
Prerequisite: MATH 2153 or MATH 1172 and MATH 2568; minimum grade of "C"

MATH 2568 Linear Algebra (SP, SU) **4 credits**

This course explains systems of linear equations, matrices, and determinants; vector spaces and their subspaces, R^n , coordinate systems and bases; linear transformations; eigenvalues including complex eigenvalues, eigenvectors; inner product and orthogonality, and orthogonal matrices. Topics covered have geometric and real-world applications.
Lecture: 4 hours
Prerequisite: MATH 1172 or MATH 2153; minimum grade of "C"
Lab fee: \$2.00

Mechanical Engineering Technology (MECH)

MECH 1130 Statics (A, SP) **3 credits**

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.
Lecture: 2 hours - Lab: 2 hours
Prerequisite: MATH 1113 Lab fee: \$23.00

MECH 1145 CAD I (A, SP, SU) **3 credits**

This course will cover nonparametric-based CAD in 2D and 3D. Course presents fundamental and intermediate Computer Aided Design concepts to produce detailed mechanical drawings and models.
Lecture: 1 hour - Lab: 5 hours
Prerequisites: ENGT 1100, ENGT 1115 Lab fee: \$23.00

MECH 1150 Manufacturing Materials & Processes (A, SU) **3 credits**

This is a course that will acquaint the technician with the nature, properties, performance, characteristics, manufacturing processes, and practical uses of various engineering materials. Materials such as ferrous and nonferrous metals as well as polymers, ceramics, and composites will be covered. Both primary and secondary processes will be covered.
Prerequisite: Placement into No Reading Required
Lecture: 2 hours - Lab: 2 hours Lab fee: \$19.00

MECH 1240 Machine Tools (A, SP, SU) **3 credits**

This course features hands-on operation of mills, lathes, 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.
Lecture: 1 hour - Lab: 5 hours
Prerequisite: Placement into MATH 1020 or higher Lab fee: \$48.00

MECH 2215 CAD II (A, SP, SU) **3 credits**

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.
Lecture: 1 hour - Lab: 5 hours
Prerequisite: MECH 1145 Lab fee: \$23.00

MECH 2242 Strength of Materials (A, SP) **3 credits**

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.
Lecture: 2 hours - Lab: 2 hours
Prerequisite: MECH 1130 Lab fee: \$23.00

MECH 2243 Robotics (SP, SU) **2 credits**

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.
Lecture: 1 hour - Lab: 2 hours
Prerequisite: ENGT 1100 Lab fee: \$19.00

MECH 2253 Computer Numerical Control (SP) **2 credits**

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.
Lecture: 1 hour - Lab: 2 hours
Prerequisites: ITST 1101, ENGT 1115, , MECH 1240 and placement into MATH 1020
Lab fee: \$27.00

MECH 2270 Engineering Statistics (SP, SU) **3 credits**

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.
Lecture: 2 hours - Lab: 2 hours
Prerequisite: MATH 1030 or MATH 1050 Lab fee: \$23.00

MECH 2299 Machine Design/CAM (SP) **3 credits**

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.
Lecture: 1 hour - Lab: 5 hours
Prerequisites: MECH 1240, MECH 2215, MECH 2242

Lab fee: \$30.00

Medical Assisting (MAT)

MAT 1100 Clinical Medical Assisting I (A) 2 credits

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 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.

Lecture: 2 hours

Prerequisites: Placement into MATH 1020 and acceptance into the program.

Corequisite: MAT 1200

MAT 1122 Administrative Medical Assisting (A) 4 credits

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.

Lecture: 4 hours

Prerequisite: Placement into MATH 1020 and acceptance into the program.

Corequisite: MAT 1123

MAT 1123 Administrative Medical Assisting Laboratory (A) 1 credit

This course provides demonstration of entry level administrative skills for the medical office. Topics include communications, medical records management, telephone procedures, scheduling and monitoring appointments, operating office equipment, application of ICD and CPT coding, managed care policies and procedures, insurance and managing practice finances.

Lab: 3 hours

Prerequisites: Placement into MATH 1020 and acceptance into the program.

Corequisite: MAT 1122 Lab fee: \$18.00

MAT 1200 Clinical Medical Assisting I Laboratory (A) 1 credit

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.

Lab: 3 hours

Prerequisites: Placement into MATH 1020 and acceptance into the program.

Corequisite: MAT 1100 Lab fee: \$45.00

MAT 1230 Pharmacology (SP) 2 credits

This course will introduce students to the pharmacology of commonly prescribed drugs in the medical office. Topics 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 are discussed. Accurate recording of medications into the medical record is emphasized.

Lecture: 2 hours

Prerequisites: MAT 1100, MAT 1122, MAT 1123, MAT 1200, MAT 1300, MAT 1400 with grade of "C" or higher

Corequisite: MAT 1231

MAT 1231 Pharmacology Laboratory (SP) 1 credit

This course provides demonstration and technique of administration of medications in the medical office setting, including 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: 3 hours

Prerequisites: MAT 1100, MAT 1122, MAT 1123, MAT 1200, MAT 1300, MAT 1400 with grade of "C" or higher

Corequisite: MAT 1230 Lab fee: \$60.00

MAT 1238 Computer Applications for the Medical Office Lab (SP) 1 credit

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 data base, 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: 3 hours

Prerequisites: MAT 1100, MAT 1122, MAT 1123, MAT 1200, MAT 1300, MAT 1400 with grade of "C" or higher

Lab fee: \$10.00

MAT 1240 Laboratory Techniques for the Medical Office (SP) 2 credits

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.

Lecture: 2 hours

Prerequisites: MAT 1100, MAT 1122, MAT 1123, MAT 1200, MAT 1300, MAT 1400 with grade of "C" or higher

Corequisite: MAT 1241

MAT 1241 Physician's Office Laboratory (SP) 2 credits

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: 6 hours

Prerequisites: MAT 1100, MAT 1122, MAT 1123, MAT 1200, MAT 1300, MAT 1400 with grade of "C" or above.

Corequisite: MAT 1240 Lab fee: \$150.00

MAT 1300 Clinical Medical Assisting II (A) 2 credits

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 diseases treated in the medical office by the various medical specialties will be studied.

Lecture: 2 hours

Prerequisites: MAT 1100, MAT 1200 with grade of “C” or higher and acceptance into the program

Corequisite: MAT 1400

MAT 1400 Clinical Medical Assisting II Laboratory (A) 1 credit

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.

Lab: 3 hours

Prerequisites: MAT 1100, MAT 1200 with grade of “C” or higher and acceptance into the program

Corequisite: MAT 1300 Lab fee: \$70.00

MAT 2800 Seminar: Medical Assisting (SU) 1 credit

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.

Seminar: 1 hour

Prerequisites: MAT 1100, MAT 1122, MAT 1123, MAT 1230, MAT 1231, MAT 1238, MAT 1240, MAT 1241, MAT 1200, MAT 1300, MAT 1400 with grade of “C” or higher

Corequisite: MAT 2950

MAT 2950 Clinic Practicum: Medical Assisting (SU) 2 credits

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.

Practicum 14 hours

Prerequisites: MAT 1100, MAT 1200, MAT 1122, MAT 1123, MAT 1230, MAT 1231, MAT 1238, MAT 1240, MAT 1241, MAT 1300, MAT 1400 with grade of “C” or higher

Corequisite: MAT 2800

Medical Imaging (IMAG)

IMAG 1101 Introduction to RAD Equipment/Patient Care (A, SP, SU) 0.5 credit

This is a modular 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.

Lecture: 0.2 hour - Lab: 0.6 hour

Prerequisite: IMAG 1190

IMAG 1102 Radiographic Positioning of Upper Extremities (A, SP, SU) 0.5 credit

This module introduces the student to radiographic positioning of the upper extremities.

Lecture: 0.2 hour - Lab: 0.6 hour

Prerequisite: IMAG 1101

IMAG 1103 Radiographic Positioning of Lower Extremities (A, SP, SU) 0.5 credit

This module introduces the student to radiographic positioning of the lower extremities.

Lecture: 0.2 hour - Lab: 0.6 hour

Prerequisite: IMAG 1101

IMAG 1104 Radiographic Positioning of Chest & Abdomen (A, SP, SU) 0.5 credit

This module introduces the student to radiographic positioning of the chest and abdomen.

Lecture: 0.2 hour - Lab: 0.6 hour

Prerequisite: IMAG 1101

IMAG 1105 Radiographic Positioning of Spine, Skull and Sinuses (A, SP, SU) 0.5 credit

This module introduces the student to radiographic positioning of the spine, skull and sinus.

Lecture: 0.2 hour – Lab: 0.6 hour

Prerequisite: IMAG 1101

IMAG 1111 Introduction to Radiologic Technology (A) 1 credit

This is an introduction to radiologic principles and clinical radiography. Areas of emphasis include fundamentals of radiation protection, medical ethics, body mechanics, patient care skills, and clinical observation. This course is a prerequisite for all other radiologic technology courses.

Lecture: 1 hour Lab fee: \$30.00

IMAG 1113 Radiologic Science (SP) 2 credits

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 applications of equipment are discussed.

Lecture: 2 hours

Prerequisite: IMAG 1111, BIO 2300, MATH 1148

IMAG 1118 Radiographic Exposure & Processing (SU) 2 credits

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.

Lecture: 1 hour - Lab: 3 hours Lab fee: \$44.00

Prerequisite: IMAG 1113, BIO 2232

IMAG 1141 Radiographic Procedures I (A) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours Lab fee: \$97.60

IMAG 1142 Radiographic Procedures II (SP) 3 credits

This course serves as a continuation of IMAG 1141, with progression through the positioning categories and radiographic anatomy. Course topics include the vertebral column, bony thorax, pediatric radiography, surgical radiography, skull radiography, tomography, and interventional radiography of the skeletal, digestive, and biliary systems.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: IMAG 1141, MATH 1148, BIO 2300, BIO 2232 Lab fee: \$97.60

IMAG 1143 Radiographic Special Procedures (SU) 3 credits

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.

Lecture: 2 hours - Lab: 3 hours

Prerequisite: IMAG 1142 Lab fee: \$5.00

IMAG 1190 Radiation Protection for General Machine Operators (A, SP, SU) 1.5 credits

This course is designed to prepare the 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.

Lecture: 1.5 hours

IMAG 1901 RAD Field Experience/Internship I (A) 1 credits

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. Field Experience: 14 hours

Corequisite: IMAG 1111 Lab fee: \$49.60

IMAG 1902 RAD Field Experience/Internship II (SP) 1 credits

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.

Field Experience: 14 hours

Prerequisite: IMAG 1901 Lab fee: \$49.60

IMAG 1903 RAD Field Experience/Internship III (SU) 1 credits

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, and the computed tomography 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.

Field Experience: 14 hours

Prerequisite: IMAG 1902 Lab fee: \$31.00

IMAG 2126 Radiographic Biology & Protection (SP) 2 credits

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.

Lecture: 2 hours

Prerequisite: IMAG 1113 Lab fee: \$30.00

IMAG 2212 Radiographic Sectional Anatomy (A) 2 credits

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.

Lecture: 2 hours

Prerequisite: IMAG 1142 Lab fee: \$3.00

IMAG 2222 Radiographic Digital Imaging (A) 2 credits

This course presents a survey of computerized modalities related to radiography to include an introduction to computers in medical imaging, digital radiography, computed tomography, magnetic resonance imaging, positron emission tomography and Picture Archival and Communication Systems (PACS).

Lecture: 2 hours

Prerequisite: IMAG 1118, MULT 1110 Lab fee: \$49.00

IMAG 2620 Radiographic Pathology (SP) 2 credits

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 pathological process.

Lecture: 2 hours

Prerequisite: IMAG 1143 Lab fee: \$3.00

IMAG 2800 Radiography/Medical Imaging Seminar (SP) 1 credit

This course offers an evaluation and review of radiography cases and discussion of current issues in the radiologic sciences.

Seminar: 1 hour

Prerequisite: IMAG 2904

IMAG 2806 Post Primary Seminar I (A) 1 credit

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., Mammography, 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.

Seminar: 1 hour

Lab Fee: \$50.00

Instructor permission required

IMAG 2807 Post Primary Seminar II (A) 1 credit

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., Mammography, 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.

Seminar: 1 hour

Lab Fee: \$50.00

Instructor permission required

IMAG 2904 RAD Directed Practice I (A) 3 credits

This Directed Practice course 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, magnetic resonance imaging, computed tomography, cardiovascular, and interventional radiology. Film critique and case presentations are continued.

Directed Practice: 21 hours

Prerequisite: IMAG 1903

Lab fee: \$49.60

IMAG 2905 RAD Directed Practice II (SP) 3 credits

In this second Directed Practice course, 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, cardiovascular and interventional radiology, and computed tomography. Film critique and case presentations are continued.

Directed Practice: 21 hours

Prerequisite: IMAG 2904

Lab fee: \$49.60

IMAG 2906 Post Primary Imaging I (A) 2 credits

This directed practice in the clinical area provides an opportunity for the student to become familiar with imaging protocols, and care and positioning of the patient. Proficiency requirements are completed using a competency-based educational format over the course material presented in Post Primary Seminar I. Image critique is incorporated to provide a correlation of all factors that comprise a finished scan to include an analysis of anatomic structures, patient positioning, radiation protection, and fundamental exposure techniques.

Practicum: 14 hours

Prerequisite: IMAG 1111, IMAG 1113

Corequisite: IMAG 2212, IMAG 2806

Lab fee: \$50.00

IMAG 2907 Post Primary Imaging II (A) 2 credits

This directed practice in the clinical area provides an opportunity for the student to become familiar with imaging protocols, and care and positioning of the patient. Proficiency requirements are completed using a competency-based educational format over the course material presented in Post Primary Seminar I. Image critique is incorporated to provide a correlation of all factors that comprise a finished scan to include an analysis of anatomic structures, patient positioning, radiation protection, and fundamental exposure techniques.

Practicum: 14 hours

Prerequisite: IMAG 2906

Corequisite: IMAG 2807

Lab fee: \$50.00

Medical Laboratory Technology (MLT)

MLT 1100 Basic Concepts in Health Care (A, SP, SU) 2 credits

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.

Lecture: 2 hours

Prerequisite: Placement into No Reading Required; Placement into ENGL 1100

MLT 1110 Introduction to MLT Lecture (SU) 1 credit

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 and 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. Student must be admitted to the MLT program.

Lecture: 1 hour

Prerequisite: MLT Program Admission

Corequisite: MLT 1111

MLT 1111 Introduction to MLT Laboratory (SU) 1 credit

This course provides a lab component to complement MLT 1110. Students will have an opportunity to visit a clinical laboratory and meet with practicing laboratory personnel. Students will be introduced to specimen collection and processing procedures, principles of math, quality assurance, safety and the laboratory operational activities.

Lab: 1 hour

Prerequisites: MLT Program Admission, completed Health Record

Corequisite: MLT 1110 Lab fee: \$50.00

MLT 1120 Hematology I Lecture (SU) 2 credits

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.

Lecture: 2 hours

Prerequisite: MLT Program Admission

Corequisite: MLT 1121

MLT 1121 Hematology I Laboratory (SU) 2 credits

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: 6 hours

Prerequisites: MLT Program Admission, completed Health Record

Corequisite: MLT 1120 Lab Fee: \$175.00

MLT 1130 Immunology Lecture (A) 2 credits

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.

Lecture: 2 hours

Prerequisite: MLT Program Admission

Corequisite: MLT 1131

MLT 1131 Immunology Laboratory (A) 1 credit

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: 2.5 hours

Prerequisites: MLT Program Admission, completed Health Record

Corequisite: MLT 1130 Lab fee: \$175.00

MLT 1140 Clinical Chemistry Lecture (A) 3 credits

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.

Lecture: 3 hours

Prerequisites: BIO 2300, MLT Program Admission

Corequisite: MLT 1141

MLT 1141 Clinical Chemistry Laboratory (A) 2 credits

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: 6 hours

Prerequisites: BIO 2300, MLT Program Admission, completed Health Record

Corequisite: MLT 1140 Lab Fee: \$250.00

MLT 1294 Special Topic: Medical Laboratory (On Demand)

1-3credits

Students work independently on a research project related to the field of clinical laboratory science and present their findings.

Lecture: Varies

Prerequisites: MLT Program Admission, permission of MLT Program Coordinator

MLT 2250 Body Fluids Lecture (SP) 2 credits

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.

Lecture: 2 hours

Prerequisite: MLT Program Admission

Corequisite: MLT 2251

MLT 2251 Body Fluids Lab (SP) 1 credit

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: 2 hours

Prerequisite: MLT Program Admission, completed Health Record

Corequisite: MLT 2250 Lab fee: \$100.00

MLT 2260 Clinical Micro Lecture (SP) 4 credits

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.

Lecture: 4 hours

Prerequisites: BIO 2215, MLT Program Admission

Corequisite: MLT 2261

MLT 2261 Clinical Microbiology Laboratory (SP) 3 credits

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 and parasitology.

Lab: 9 hours

Prerequisites: BIO 2215, MLT Program Admission, completed Health

Record

Corequisite: MLT 2260 Lab fee: \$250.00

MLT 2270 Immunohematology Lecture (SU) 3 credits

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.

Lecture: 3 hours

Prerequisites: MLT 1130, MLT 1131, MLT Program Admission

Corequisite: MLT 2271

MLT 2271 Immunohematology Laboratory (SU) 2 credits

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: 6 hours

Prerequisites: MLT 1130, MLT 1131, MLT Program Admission, completed Health Record

Corequisite: MLT 2270 Lab fee: \$250.00

MLT 2280 Hematology II Lecture (SU) 2 credits

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.

Lecture: 2 hours

Prerequisites: MLT 1120, MLT 1121, MLT Program Admission

Corequisite: MLT 2281

MLT 2281 Hematology II Laboratory (SU) 1 credit

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: 2 hours

Prerequisites: MLT 1120, MLT 1121, MLT Program Admission, completed Health Record

Corequisite: MLT 2280 Lab fee: \$150.00

MLT 2290 Medical Laboratory Case Studies (SU) 2 credits

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 their clinical practicum.

Lecture: 2 hours

Prerequisites: MLT 1110, MLT 1111, MLT 1120, MLT 1121, MLT 1130, MLT 1131, MLT 1140, MLT 1141, MLT 1916, MLT 2260, MLT 2261, MLT 2250, and MLT 2251; all courses completed with a

Corequisites: MLT 2270, MLT 2271, MLT 2280, MLT 2281

MLT 2800 MLT Clinical Seminar (A) 1 credit

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, guest speakers are provided to prepare students for credentialing examinations, postgraduate studies, employment opportunities, and to introduce the latest technological advances in the clinical laboratory science field.

Seminar: 1 hour

Prerequisites: MLT 1110, MLT 1111, MLT 1120, MLT 1121, MLT 1130, MLT 1131, MLT 1140, MLT 1141, MLT 2260, MLT 2261, MLT 2250, MLT 2251, MLT 2270, MLT 2271, MLT 2280, MLT 2281, MLT 2290, MULT 1916; all courses completed with minimum grade of "C"
Corequisite: MLT 2900

MLT 2900 MLT Clinical Practicum (A) 4 credits

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 about a 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.

Practicum: 28 hours

Prerequisites: MLT 1110, MLT 1111, MLT 1120, MLT 1121, MLT 1130, MLT 1131, MLT 1140, MLT 1141, MLT 2260, MLT 2261, MLT 2250, MLT 2251, MLT 2270, MLT 2271, MLT 2280, MLT 2281, MLT 2290, MULT 1916, completed Health Record
Corequisite: MLT 2800

Clinical Laboratory Assisting Certificate (CLA)

CLA 1100 Laboratory Theory Health Related Industry (A) 2 credits

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 positions. 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.

Lecture: 2 hours

Prerequisites: BIO 0100 or BIO 1101, placement into ENGL 1100, and placement into No Reading Required

CLA 1101 Laboratory Technique for Health Related Industry (A) 1 credit

This course is designed to provide 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 or for potentially increasing employability in entry-level, health-related positions. 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: 2 hours

Prerequisites: BIO 0100 or BIO 1101, placement into ENGL 1100, and placement into No Reading Required
Corequisite: CLA 1100
Lab fee: \$300.00

Multi-Skilled Health (MULT)

(See also Clinical Laboratory Assisting Technology, Bioscience Technology, Occupational Health and Safety, Interpreter Education Program, Massage Therapy Program, Nursing, Surgical Technology, and Sterile Processing Technology)

MULT 1110 Medical Terminology (A, SP, SU) 2 credits

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.

Lecture: 2 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$5.00

MULT 1120 Cardiopulmonary Resuscitation (A, SP, SU) 0.50 credit

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.

Lecture: 0.50 hour

Prerequisite: Placement into ENGL 1100 Lab fee: \$40.00

MULT 1130 Responding to Emergencies (A, SP, SU) 2 credits

This course covers the requirements for Red Cross Certification including artificial respiration, bleeding control, treatment of shock, and care of fractures. This course includes MULT 1120. American Heart Association CPR-Basic Life Support.

Lecture: 1 hour - Lab: 2 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$55.00

MULT 1140 Adult and Pediatric CPR (A, SP, SU) 0.50 credit

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.

Lecture: 0.50 hour Lab fee: \$40.00

MULT 1160 Exploring Health Care Professions (A, SP, SU) 1 credit

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.

Lecture: 1 hour

Prerequisite: Placement into ENGL 1100

MULT 1170 Current Issues: HIV (A, SP, SU) 1 credit

This is an introductory course covering the psychological, social, legal, and epidemiological issues surrounding HIV infection.

Lecture: 1 hour

Prerequisite: Placement into ENGL 1100

MULT 1194 Special Topics: Multi-Skilled Health (A, SP, SU) 1-4 credits

This course provides various topics in response to community needs and to meet industry standards.

Lecture: Varies

Prerequisite: Instructor permission required.

MULT 1500 Concepts for the Pharmacy Technician (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Co-requisites: MATH 1000, BMGT 1008, MKTG 1230

MULT 1525 Basic Health Care Analytical Concepts (A, SP, SU) 1 credit

This course provides students with the mathematical skills and strategies required to successfully work in the allied health fields.

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, dosage calculations.

Lecture: 1 hour

MULT 1910 Basic Electrocardiography (A, SP) 3 credits

This course provides 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.

Lecture: 2.5 hours - Lab: 1 hour - Directed Practice: 1 hour

Prerequisite: Placement into ENGL 1100 Lab fee: \$28.00

MULT 1916 Venipuncture for Health Care Providers (SP) 2 credits

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.

Lecture: 1 hour - Lab: 1 hour - Directed Practice: 2 hours

Prerequisites: MLT 1110, MLT 1111 Lab fee: \$28.00

MULT 1950 Phlebotomy (A, SP) 3.50 credits

This course is the first of a two-course sequence required to be eligible for a national exam which will qualify the student as 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 include safety, the health care system, quality assurance and professional standards. A 60 hour clinical experience and 50 successful blood collections in an out-patient setting is required.

Lecture: 2 hours - Lab: 3 hours - Directed Practice: 3 hours

Prerequisites: MULT 1110 or HIMT 1121, completed with grade of "C" or higher; placement into ENGL 1100, Placement into No Reading Required Lab fee: \$55.00

MULT 2070 HR Management for Health Services (A) 2 credits

The focus of this course is the application, analysis, synthesis, and evaluation of human resource management principles and practices for healthcare managers.

Lecture: 2 hours

Prerequisite: Placement into ENGL 1100

MULT 2072 Health Care Resource Management (A) 2 credits

This course is designed to provide management approaches to health care resources (budget, equipment, supplies, etc.). It is intended for health care managers with limited financial skills.

Lecture: 2 hours

Prerequisite: Placement into ENGL 1100

MULT 2074 TQM/UM/Accreditation (SP) 2 credits

This course prepares health care professionals to apply, analyze, synthesize, and evaluate principles and practices of Total Quality Management, Utilization Management, and Accreditation.

Lecture: 2 hours

Prerequisite: Placement into ENGL 1100

MULT 2076 Legal Aspects of Risk Management (SP) 2 credits

This course provides a basic overview of the legal aspects of health services management and develops a general framework for managers to understand the legal dimension of problems.

Lecture: 2 hours

Prerequisite: Placement into ENGL 1100

MULT 2950 Phlebotomy Practicum II (SP, SU) 1 credit

This course is designed to be a continuation of MULT 1950 by providing an additional 40 hours clinical phlebotomy experience and requiring an additional 50 successful blood collections in an in-patient 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 complete the NAACLS approved program.

Directed Practice: 5 hours

Prerequisites: Instructor permission required; MULT 1950, completed with minimum grade of "C"

Music (MUS)

MUS 1101 Introduction to Vocal Techniques I (A, SP, SU) 1 credit

This course is an introduction to vocal technique for nonmusic majors. It 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.

Studio: 2 hours Lab fee: \$7.00

MUS 1102 Introduction to Vocal Technique II (A, SP, SU) 1 credit

This course is a continuation of MUS 1101, which offers 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.

Studio: 2 hours

Instructor permission required

Prerequisite: Audition Lab fee: \$7.00

MUS 1103 Class Piano I (A, SP, SU) 2 credits

This course presents an introduction to the fundamentals of keyboard technique combined with the development of music reading and basic aural skills. It is designed for those without prior keyboard experience.

Lecture: 1 hour - Studio: 2 hours Lab fee: \$7.00

MUS 1104 Class Piano II (A, SP, SU) 2 credits

MUS 1104 is a continuation of MUS 1103, which introduces the 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.

Lecture: 1 hour - Studio: 2 hours

Prerequisite: MUS 1103 or permission from instructor

Lab fee: \$7.00

MUS 1120 Introduction to Electronic Music (On Demand) 2 credits

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.

Lecture: 2 hours

Prerequisite: MUS 1103 or permission from instructor

Lab fee: \$2.00

MUS 1121 Fundamentals of Music Theory (A, SP, SU) 3 credits
MUS 1121 introduces the elements of music for nonmusic majors, including notation and the basic skills necessary for listening and performance. The class will acquaint students with the elements and procedures necessary for the composition and performance of music.
Lecture: 3 hours
Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

MUS 1122 Beginning Musical Composition (SP) 3 credits
This course presents the 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.
Lecture: 3 hours
Prerequisite: MUS 1121 or permission from instructor
Lab fee: \$7.00

MUS 1130 Electronic Music Lab (On Demand) 2 credits
This course is a continuation of MUS 1120, with an emphasis on hands-on studio experience.
Lecture: 1 hour - Studio: 2 hours
Prerequisite: MUS 1120 Lab fee: \$2.00

MUS 1203 Vocal Ensemble (A, SP, SU) 1 credit
Students audition and participate in a large conducted choral ensemble; admission is by audition. Participants prepare a variety of music for concert performance.
Studio: 2 hours
Instructor permission required
Prerequisite: Audition Lab fee: \$2.00

MUS 1204 Concert Band (A, SP) 1 credit
Students audition and participate in a large, conducted instrumental ensemble; admission is by audition. Participants prepare a variety of music for concert performance.
Studio: 2 hours
Instructor permission required
Prerequisite: Audition Lab fee: \$2.00

MUS 1205 Small Instrumental Ensemble (A, SP, SU) 1 credit
Placement is through audition. This course allows a specialized ensemble to concentrate on specific instrumental techniques and to explore specialized musical literature. Prior experience in instrumental music is expected.
Studio: 2 hours
Instructor permission required
Prerequisite: Audition Lab fee: \$2.00

MUS 1206 Gospel Vocal Ensemble (A, SP, SU) 1 credit
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 is not required. Course is repeatable to a total of 6 credit hours.
Studio: 2 hours
Instructor permission required
Prerequisite: Audition Lab fee: \$7.00

MUS 1208 Electronic Music Ensemble (On Demand) 1 credit
Admission is through audition or permission of instructor. Class consists of a select group of musicians rehearsing, arranging and performing music on electronic instruments.
Studio: 2 hours
Prerequisite: MUS 1130 or permission from Instructor
Lab fee: \$2.00

MUS 1221 Musicianship I (A) 4 credits
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.
Lecture: 3 hours - Studio: 2 hours
Prerequisite: MUS 1121 or permission from Instructor
Lab fee: \$2.00

MUS 1222 Musicianship II (SP) 4 credits
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.
Lecture: 3 hours - Studio: 2 hours
Prerequisite: MUS 1221 Lab fee: \$2.00

MUS 1251 Survey of Music History (A, SP, SU) 3 credits
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.
Lecture: 3 hours
Prerequisite: Placement into ENGL 1100 Lab fee: \$7.00

MUS 1271 Business of Music (A) 3 credits
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.
Lecture: 3 hours
Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

MUS 2221 Audio Production I (A, SP) 3 credits
This course presents an examination of recording techniques in the studio for live performance. Analog and digital formats will be explored as well elements of post-production.
Lecture: 2 hours - Studio: 3 hours Lab fee: \$2.00

MUS 2222 Audio Production II (SP) 3 credits
This course is a continuation of MUS 2221. This course explores recording and sound reinforcement techniques and principles, in addition to post production issues such as editing techniques, maintenance, and repair.
Lecture: 2 hours - Studio: 3 hours
Prerequisite: MUS 2221

MUS 2294 Special Topic: Music (On Demand) 1-5 credits
Students explore special topics in Music designed to meet specific needs.
Lecture: Varies
Instructor permission required

Nursing (NURS)

NURS 1100 Spiritual Nursing Care (A) 2 credits
Nursing elective: Students are introduced to the basic concepts of spiritual nursing care. Students utilize assessment tools and interventions to meet patient's spiritual care needs and assist in understanding their own spirituality. This course may be used to fulfill the elective requirement for nursing.
Lecture: 2 hours
Prerequisite: NURS 1861, minimum grade of "C"

NURS 1101 Neonatal Nursing (A) 2 credits
Nursing elective: Students focus on the roles of the nurse as the provider of care for high risk neonates and their families. This course examines potential complications in the antepartum and postpartum periods. Students gain specialized knowledge and skills ranging from pre-hospitalization through post discharge and follow up. This course may be used to fulfill the elective requirement for nursing.
Lecture: 1.5 hours – Lab: 1.5 hour
Prerequisite: NURS 1862, minimum grade of “C” Lab fee: \$20.00

NURS 1102 Principles of Basic Trauma Nursing (A) 2 credits
Nursing elective: This course is designed to introduce students to the basic concepts of Trauma Nursing. The focus of the course is exploration of the major concepts and conceptual issues underlying the specialty of Trauma Nursing. 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.
Lecture: 2 hours
Prerequisite: NURS 1862, minimum grade of “C” Lab fee: \$25.00

NURS 1103 Holistic Intervention (SP) 2 credits
Nursing elective: The students are introduced to the concept of holism particularly in relationship to holistic nursing. Included is an overview of the body/mind/spirit paradigm. The scope of practice, core values and standards of holistic nurses will be explored. A survey of commonly used techniques such as guided imagery, therapeutic touch, and relaxation techniques will be explored. This course may be used to fulfill the elective requirement for nursing.
Lecture: 2 hours
Prerequisite: Admission to Health Technology or permission of instructor

NURS 1104 Gerontological Nursing (A) 2 credits
Nursing elective: This course focuses on meeting the needs of the elderly. Content will reflect the influence of legal, ethical, cultural, and economic issues related to health care needs of the elderly. This course may be used to fulfill the elective requirement for nursing.
Lecture: 2 hours
Prerequisite: Admission to Health Technology or permission of instructor

NURS 1105 End of Life Care (SP) 2 credits
Nursing elective: Students are introduced to various interventions appropriate at the end of life. This includes an overview of commonly experienced problems. Nine critical areas are explored. This course may be used to fulfill the elective requirement for nursing.
Lecture: 2 hours
Prerequisite: Admission to Health Technology or permission of instructor

NURS 1106 Critical Care Nursing (SP) 2 credits
Nursing elective: Students are exposed to advanced theory and skills needed to manage the care of individuals in a variety of critical care areas. The focus identifies critical situations and potential problems then selects and implements appropriate interventions. Human Patient Simulator is used. 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.
Lecture: 2 hours
Prerequisite: NURS 1862, minimum grade of “C” Lab fee: \$25.00

NURS 1107 Current Trend Pediatric Nursing (SU) 2 credits
Nursing elective: The course is designed to increase the depth of knowledge for students considering specializing in pediatric nursing. Current health care trends and their effects on the delivery of nursing care will be examined. The course will provide students with an opportunity to assess personal goals regarding employment opportunities as a pediatric

nurse. Human Patient Simulator is used. This course may be used to fulfill the elective requirement for nursing.

Lecture: 2 hours

Prerequisite: NURS 1862, minimum grade of “C” Lab fee: \$20.00

NURS 1108 Information Technology in Healthcare (SP) 2 credits
Nursing elective: This introductory course in computer applications helps simulate the attainment of knowledge and skills needed to function in today’s computerized environment. Emphasis is placed on the application of information technology used in health care; IT’s impact on society is also considered. 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.

Lecture: 2 hours

Prerequisite: Admission to Health Technology or permission of instructor

NURS 1109 Cultural Immersion in Health Promotion of Family and Community (SP, SU) 1 credit

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 U.S. passport. This course may be used to fulfill the elective requirement for nursing. . This course may be offered in the Autumn term on an On Demand basis.

Lab: 3 hours

Instructor permission required

Prerequisite: NURS 1862, minimum grade of “C” Lab fee: \$5.00

NURS 1110 Student Transition (On Demand) 1 credit

This course assists the student who has life experience credit for one or more designated nursing courses with transition into the RN sequence. The components of the course include socialization into the Associate Nursing Degree student role at Columbus State, nursing process, communication skills, and selected psychomotor skills.

Lecture: 1 hour

Prerequisite: Acceptance into the RN program via the LPN route or as a transfer student from another nursing program

NURS 1130 Concepts of Pharmacology (A, SP, SU) 2 credits

This course focuses on the nurse’s role in the safe administration of medications to persons of all ages. Drug classifications and their relationship to promotion, maintenance, and restoration of health will be presented. Students must receive a grade of “C” or better in this course.

Lecture: 2 hours

Prerequisite: NURS 1861, minimum grade of “C”

Corequisite: NURS 1862 (autumn admission) or NURS 1863 (spring admission)

NURS 1194 Special Topic: Nursing (On Demand) 1-4 credits

This course is designed for special course topics.

Lecture: varies

Prerequisite: Instructor permission required

NURS 1861 Foundations of Nursing (A, SP) 7 credits

The student will examine the historic and current role of the nurse in health care. The nursing process is introduced and utilized in lab and clinical experiences. The student will learn and perform holistic nursing assessments of a diversity of patients across the lifespan. The student will incorporate concepts related to communication, teaching/learning, informatics, safety, economics, critical thinking, and legal/ethical issues in the lab and clinical settings. Students must receive a grade of “C” or better in this course.

Lecture: 3 hours - Lab: 2 hours - Clinical: 4 hours - Seminar: 2 hours

Prerequisites: Admission to the Nursing program

Corequisites: BIO 2300, PSY 2340 Lab fee: \$83.00

NURS 1862 Introduction to Nursing Concepts of Health Maintenance & Restoration (A, SP) 8 credits

The student will focus on the role of the nurse as a provider of care for persons in need of maintenance and/or restoration of health. The student will study the impact of developmental levels and the effect of acute, chronic or terminal conditions as they relate to the ability of the person and family to care for themselves. The physical, psychological, and spiritual well being of the person and family during the dying and death process will be emphasized. The concepts studied include perioperative nursing, cancer, fluid and electrolyte imbalances, healthy/altered nutrition, musculoskeletal system, urinary system and integumentary system. Lab will consist of basic and advanced nursing skills. A variety of community settings will be utilized for the clinical experience. Students must receive a grade of "C" or better in this course. The student must have completed BIO 2232 or BIO 2263 or take BIO 2232 (autumn admission) or BIO 2263 (spring admission) concurrently with this course. The student must have completed ENGL 1100 or take concurrently with this course. (spring admission)

Lecture: 3 hours - Lab: 2 hour - Clinical: 7 hours - Seminar: 2 hours
Prerequisites: NURS 1861, BIO 2300, PSY 2340,
Corequisite: BIO 2232 or BIO 2263 Lab fee: \$154.00

NURS 1863 Health Promotion Family & Community (SU) 6 credits

The student will focus on the role of the nurse as a provider of care in the promotion of health for families with quality and safety as primary concepts. The influence of cultural diversity and health care economics on families will be included. The student will use the nursing process in providing care and promoting self-care activities. Emphasis will be placed on the teaching/learning process. Concepts of mental and spiritual health will be introduced. Community resources available to families will be examined. Clinical experiences will be provided in a variety of community settings. The student will begin application of critical thinking principles. Students must receive a grade of "C" or better in this course. The student must have completed ENGL 1100 and BIO 2232 or BIO 2263 or take BIO 2233 (autumn admission) or BIO 2232 (spring admission) concurrently with this course. The student must have completed ENGL 1100 or take concurrently with this course. (autumn admission)

Lecture: 3 hours - Clinical: 3 hours - Seminar: 2 hours
Prerequisites: NURS 1861, BIO 2300, PSY 2340,
Corequisites: BIO-2232, or BIO 2263, ENGL 1100
Lab fee: \$73.00

NURS 2861 Nursing Concepts of Health Maintenance & Restoration (A, SP) 5 credits

The student will continue to develop in the role of the registered nurse as manager and provider of holistic healthcare and healthcare promotion to clients across the lifespan integrating the QSEN competencies. The focus of this course is the maintenance and restoration of health in relation to clients experiencing alterations of function in the respiratory, cardiovascular, gastrointestinal, and endocrine systems. In the lab setting the student will satisfactorily discuss, demonstrate, and apply select skills. Students must receive a grade of "C" or better and a grade of "Satisfactory" on skills and clinical evaluations in order to pass this course. This course is provided over eight weeks. The student must have completed BIO 2215 or take it concurrently with this course. It is recommended that COMM 2232 be taken concurrently with this course

Lecture: 2 hours - Lab: 1.5 hours - Clinical: 4.5 hours - Seminar: 1 hour
Prerequisites: NURS 1862, NURS 1130, BIO 2263, ENGL 1100
Corequisites: COMM 2232, BIO 2215 Lab fee: \$135.00

NURS 2862 Psychiatric Mental Health Nursing (A, SP) 4 credits

Psychiatric Mental Health Nursing is caring for the whole person with a special focus on patient behavior and thought with the purposeful use of self. The course offers basic level instruction on general psychiatric concepts, mental health disorders, disorders of regulation, and special populations. Students will learn the role of the nurse in the promotion

of mental health through the assessment, diagnosis, and treatment of human responses to mental health problems and psychiatric disorders. Students will develop knowledge and skill in caring for people going through crises, including physical, psychological, and spiritual distress. Clinical opportunities in psychiatric mental health settings are offered to integrate evidence-based practice into nursing care of patients. This course is provided over eight weeks. Students must receive a grade of "C" or better in this course. The student must have completed BIO 2215 or take it concurrently with this course. It is recommended that COMM 2232 be taken concurrently with this course

Lecture: 1.5 hours - Clinical: 4.5 hours - Seminar: 1 hour
Prerequisites: NURS 1862, NURS 1130, BIO 2263, ENGL 1100
Corequisites: BIO 2215, COMM 2232 Lab fee: \$69.00

NURS 2863 Advanced Concepts of Nurse Leader Mgmt (A, SP) 8 credits

The student will synthesize concepts of care management to develop leadership skills inherent in the profession of nursing. The student will assume the roles of provider of care, manager of care, and member within the discipline of nursing. Ethical, legal, political, and economic issues as they relate to professional nursing will be presented. Current trends in nursing practice are analyzed. The student will focus on holistic care of groups of clients and their families in the promotion of self-care activities. The clinical experience will be conducted in a variety of community settings. Students must receive a grade of "C" or better in this course. The student must have completed COMM 2232 or take it concurrently with this course.

Lecture: 2 hours - Lab: 3 - Clinical: 12 hours - Seminar: 1 hour
Prerequisites: NURS 1863, NURS 2861, NURS 2862, BIO 2215
Corequisite: COMM 2232, STAT 1350
Lab fee: \$88.00

Nursing Certificate (NURC)

(See also Clinical Laboratory Assisting Technology, Interpreter Education Program, Medical Laboratory Technology and Nursing Certificate.)

NURC 1001 Nurse Aide Training Program (A, SP, SU) 3 credits

The Nurse Aide Training Program is designed to instruct the student in the knowledge and skills needed to provide basic care for clients in the long-term care setting. The student who completes this course will receive a "certificate of class completion" and will be eligible to take the state test for nurse aides in Ohio. This course satisfies the NURC 1001 prerequisite for specific health technologies at the college. Because this is a skills-based course, classroom, clinical and laboratory attendance is mandatory. The completion of the health record and the background check is required for the student to enroll in this course. Lecture: 1.5 hours - Lab: 4.5 hours
Prerequisites: Placement into ENGL 1100; Placement into DEV 0114; Placement into No Reading Required, or college transcript with previous ENGL coursework Lab fee: \$28.00

NURC 1102 Patient Care Skill Course (A, SP, SU) 3 credits

This course is an introduction to skills that will be learned in the pre-licensure nursing program and presents the rationale for and practice of skills that may be performed by patient care technicians in an acute care setting. It is a combination of lecture and laboratory skills demonstration and practice. Major topics include wound care, specimen collection, airway care, oxygen administration, enteral nutrition and elimination assistance. Because this is a skills-based course, classroom and laboratory attendance

is mandatory. Prior Learning Assessment (PLA) credit for NURC 1001 Nurse Aide Training may be available to a student with a valid State of Ohio Nurse Aide Registry Card.

Lecture: 1.5 hours - Lab: 4.5 hours

Prerequisites: NURC 1001 with grade of "C" or better; Placement into ENGL 1100; Placement into DEV 0114; Placement into No Reading Required, or college transcript with previous ENGL coursework Lab fee: \$30.00

NURC 1170 Holistic Healing Methods (A, SP, SU) 3 credits

This course offers an introduction to the fundamentals of holistic healing, which includes philosophical and theoretical foundations, alternatives methods and their uses for health maintenance, and development of personal healing capacities. This class facilitates the development of daily self-healing practices.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$5.00

NURC 1171 Fundamentals of Herbology (A, SP, SU) 3 credits

This course outlines the uses of herbs in the healing process from ancient history to the present day. Herbs will be discussed according to their traditional uses and current clinical trial/research. The course will provide a foundation of how to use herbs in cooking, as well as in creating simple home preparations. Emphasis will be on therapeutic self-care first aid.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$5.00

NURC 1172 Principles of Homeopathy (A, SP, SU) 3 credits

This course is designed to introduce the student to the principles and theories behind the use of homeopathic preparations to treat diseases and disorders. The practical applications of homeopathy are presented by familiarizing the student with homeopathic case taking, homeopathy for acute conditions and the study of *materia medica*.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$5.00

NURC 1194 Special Topics: Health Care (A, SP, SU) 1-4 credits

This course offers the student the opportunity to explore current issues and topics in health care.

Lecture: Varies

NURC 1250 Train the Trainer Program (A, SP, SU) 2 credits

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/LPN licensure in Ohio; minimum of two years of experience in caring for elderly or chronically ill; letter of verification documenting employment history.

Lecture: 2 hours

Instructor permission required

NURC 1901 RN First Assistant (A) 4 credits

This is an intensive Web-based program which is designed to provide the experienced perioperative nurse with the advanced preparation and study necessary to assume the role of first assistant. The course is based on AORN's Core Curriculum for the RN First Assistant. The following requirements must be met to enroll in this course: current RN licensure; two years current perioperative experience; CNOR certified or eligible; current ACLS or CPR; liability insurance; two letters of recommendation.

Lecture: 2 hours - Seminar: 1 hour - Practicum: 7 hours

Instructor permission required Lab fee: \$425.00

NURC 1902 RNFA Experience (SP) 4 credits

This course provides the student with the continuation of the Web-based program for the completion of the RN First Assistant Program.

Lecture: 2 hours - Seminar: 1 hour - Practicum: 7 hours

Prerequisite: NURC 1901 Lab fee: \$8.00

Nutrition (NUTR)

NUTR 2310 Fundamentals of Human Nutrition & Metabolism (A, SP, SU) 3 credits

This course presents a study of nutrient and food energy needs of humans throughout the life cycle with consideration of socio-psychological factors. Course content includes processes, chemistry, digestion, absorption, metabolism, and utilization of nutrients. An online 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.

Lecture: 3 hours

Prerequisites: BIO 2300, BIO 2232, CHEM 1112 and CHEM 1113 or BIO 1121, BIO 1122, CHEM 1112 and CHEM 1113

Lab fee: \$4.00

Paralegal Studies (LEGL)

LEGL 1101 Introduction to Paralegal Studies & Ethics (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$40.00

LEGL 1102 Law Office Technology (A, SP, SU) 3 credits

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.

Lecture: 2 hours – Lab: 2 hours Lab fee: \$100.00

LEGL 1105 Torts & Contracts (A, SP, SU) 3 credits

In this course, the two cornerstones of legal practice, torts and contracts, will be extensively reviewed. Course will present the elements, theories and principles of torts and contracts and their impact on the everyday practice of law.

Lecture: 3 hours Lab fee: \$40.00

LEGL 1111 Research and Writing (A, SP) 3 credits

This course offers an introduction to conducting legal research and to 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.

LEGL 2051 Computer Assisted Legal Research (SU) 2 credits

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 research techniques and sites to obtain both legal and nonlegal 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.

Lecture: 1 hour – Lab: 2 hours

Prerequisite: LEGL 2012 Lab fee: \$100.00

LEGL 2061 Business Law I (A, SP, SU) 3 credits

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 cyberlaw. It also explores the law of agency, corporation, partnerships, and property.

Lecture: 3 hours

LEGL 2064 Legal Environment of Business (A, SP, SU) 3 credits

This course presents an overview of the American legal system with an introduction to the legal concepts and principles that form its foundation. The course will examine the judicial system and methods of dispute resolution, while focusing on business crimes and torts, including product liability, ethics, contract formation and enforcement, consumer protection, employment law, environmental regulations, business organizations, particularly sole proprietorship, partnerships, and corporations. Students will be able to understand the legal ramifications of their business decisions.

Lecture: 3 hours

LEGL 2072 Mediation (SP, SU) 2 credits

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 an in-class mediation and prepare a mediation notebook as a final project.

Lecture: 2 hours

Prerequisite: LEGL 2043

LEGL 2194 Special Topics in Paralegal Studies (On Demand) 1-3 credits

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.

Lecture: 1-3 hours

LEGL 2815 LEGL Practicum & Seminar (A, SP, SU) 2 credits

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.

Seminar: 1 hour - Practicum: 7 hours Lab fee: \$40.00

Philosophy (PHIL)

PHIL 1101 Introduction to Philosophy (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

PHIL 1130 Ethics (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

PHIL 1150 Introduction to Logic (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisites: MATH 1075 and placement into ENGL 1100

Lab fee: \$2.00

PHIL 2250 Symbolic Logic (SP) 3 credits

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.

Lecture: 3 hours

Prerequisites: MATH 1075 and placement into ENGL 1100

Lab fee: \$2.00

PHIL 2270 Philosophy of Religion (SP) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

PHIL 2294 Special Topics: Philosophy (On Demand) 1-3 credits

Students explore special topics in Philosophy designed to meet specific needs.

Lecture: Varies

Physics (PHYS)

Students must complete 60% of the laboratories to receive course credit. Courses in this area may require additional hours outside of the scheduled class time.

NOTE: Courses taught via distance/online format have higher student costs. Web sections of PHYS 1200 require the purchase of a home lab kit. Cost is approximately \$175.00. Web sections of PHYS 1201 require the purchase of a home lab kit. Cost is approximately \$175.00. Contact the Physical Sciences department for exact pricing and ordering information of home lab kits as soon as you have registered.

PHYS 0100 Introduction to Physics (A, SP, SU) 4 credits

This course is a survey of the basic concepts of physics. Topics include mechanics, electrostatics, nuclear physics and electromagnetism.

Lecture: 3 hours – Lab: 2 hours

Prerequisites: MATH 1020 or higher and placement into ENGL 0190

Lab fee: \$11.00

PHYS 1103 World of Energy: Forces, Electricity, Magnetism, Machines (A, SP, SU) 3 credits

This course explores the basic principles of physics in the context of energy use. It covers the topics of forces, electricity, magnetism and machines.

Lecture: 3 hours

Prerequisites: MATH 1020 or higher and placement into ENGL 1100

Lab fee: \$1.00

PHYS 1200 Algebra-Based Physics I (A, SP, SU) 5 credits

This is a laboratory course in classical mechanics (kinematics, Newton's laws, gravitation, energy, momentum, rotational motion, and angular momentum) as well as fluids, harmonic motion, waves, and sound.

Lecture: 4 hours – Lab: 2 hours

Prerequisites: MATH 1148 or MATH 1113 or higher, and placement into ENGL 1100

Lab fee: \$17.00 (Additional kit costs for Web sections)

PHYS 1201 Algebra-Based Physics II (A, SP, SU) 5 credits

This is a laboratory course in classical electromagnetism (electric charge, field and potential, DC 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).

Lecture: 4 hours – Lab: 2 hours

Prerequisite: PHYS 1200

Lab fee: \$16.00 (Additional kit costs for Web sections)

PHYS 1250 Calculus-Based Physics I (A, SP, SU) 5 credits

This is a laboratory course in classical mechanics (kinematics, energy, momentum, rotation, simple harmonic motion, etc.) as well as mechanical waves and sound.

Lecture: 4 hours - Lab: 2 hours

Prerequisites: High school physics or PHYS 0100; placement into ENGL 1100; MATH 1151 (or concurrently) Lab fee: \$17.00

PHYS 1251 Calculus-Based Physics II (A, SP, SU) 5 credits

This is a laboratory course in classical electromagnetism (electric charge, field and potential, DC 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).

Lecture: 4 hours – Lab: 2 hours

Prerequisites: PHYS 1250 and MATH 1151 or higher

Corequisite: MATH 1152 or MATH 1172

Lab fee: \$16.00

PHYS 2293 Independent Study: Physics (A, SP, SU) 1-3 credits

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.

Instructor permission required

Lecture and Lab: Varies with subject matter

Lab fee: \$1.00

PHYS 2294 Special Topics: Physics (A, SP, SU) 1-3 credits

This course provides an opportunity to explore selected topics of interest in physics.

Instructor permission required

Lecture and Lab: Varies with subject matter

Lab fee: \$1.00

PHYS 2300 Dynamics of Particles & Waves I (A) 4 credits

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.

Lecture: 4 hours

Prerequisite: PHYS 1251

Corequisite: MATH 2153

Lab fee: \$1.00

PHYS 2301 Dynamics: Particles & Waves II (SP) 4 credits

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.

Lecture: 4 hours

Prerequisites: PHYS 2300 and MATH 2153

Lab fee: \$1.00

Political Science (POLS)

Students who enroll in Political Science courses must have placed into ENGL 1100 and are encouraged either to have completed ENGL 1100 or be enrolled in that course when scheduling a Political Science course.

Online/Distance Learning (DL) versions of several POLS courses are available. Students taking the Web-based version of these courses must be familiar with computers, have an email address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for online/distance learning courses are administered at the Testing Center.

POLS 1100 Introduction to American Government (A, SP, SU)

3 credits

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.

Lecture: 3 hours

Prerequisite: ENGL 0190 or placement into ENGL 1100

Lab fee: \$3.00

POLS 1194 Special Topics: Political Science (on Demand)**1-3 credits**

POLS 1194 offers a detailed examination of selected topics of interest in political science.

Lecture: 1-3 hours Lab fee: \$3.00

POLS 1200 Comparative Politics (A, SP, SU)**3 credits**

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 study specific countries by analyzing their history, institutions, political culture and economy.

Lecture: 3 hours

Prerequisite: ENGL 0190 or placement into ENGL 1100

Lab fee: \$3.00

POLS 1250 State & Local Government (A, SP, SU)**3 credits**

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.

Lecture: 3 hours

Prerequisite: ENGL 0190; minimum grade of "C" or placement into ENGL 1100

POLS 1300 International Relations (A, SP, SU)**3 credits**

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.

Lecture: 3 hours

Prerequisite: ENGL 0190 or placement into ENGL 1100

Lab fee: \$3.00

POLS 2193 Independent Study in Political Science (On Demand)**1-3 credits**

POLS 2193 provides 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.

Lecture: 1-3 hours

Prerequisite: Instructor permission required Lab fee: \$3.00

Practical Nursing Certificate (PNUR)

PNUR 1100 PN Fundamentals (A, SU)**2 credits**

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.

Lecture: 1 hour - Lab: 3 hours Lab fee: \$35.79

PNUR 1200 Mental Health Concepts PN (SP, SU)**1 credit**

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.

Lecture: 1 hour

Prerequisite: PNUR 1100

PNUR 1201 Intro Relaxation Tech (On Demand)**1 credit**

The student will be introduced to various relaxation, stress reduction, and coping techniques.

Lecture: 1 hour

Prerequisite: PNUR 1100

PNUR 1202 Care of the Older Adult (On Demand)**1 credit**

The student will explore selected issues relevant to the licensed practical nurse working with older adults in a variety of settings. Enrollment in this course requires acceptance into the Practical Nursing program.

Lecture: 1 hour

PNUR 1203 Transcultural Nursing (On Demand)**1 credit**

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. Enrollment in this course requires acceptance into the Practical Nursing program.

Lecture: 1 hour

PNUR 1204 Ethical Issues Healthcare and Nursing (On Demand)**1 credit**

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. Enrollment in this course requires acceptance into the Practical Nursing Program.

Lecture: 1 hour

Prerequisite: PNUR 1100

PNUR 1205 PN Role with ECGs (On Demand)**1 credit**

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. Enrollment in this course requires acceptance into the Practical Nursing Program.

Lecture: 1 hour

Prerequisite: PNUR 1100

PNUR 1206 Care of Immobile Patients (On Demand)**1 credit**

Students will explore various problems of the immobile patient. Enrollment in this course requires acceptance into the Practical Nursing program.

Lecture: 1 hour

PNUR 1294 SPT: Practical Nursing (On Demand) 1 credit
The student will examine current topics and issues as they relate to practical nursing practice and roles.
Lecture: 1 hour
Prerequisite: PNUR 1100

PNUR 1300 Pharmacology I for the Practical Nurse (AU, SP) 2 credits
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.
Lecture: 1 hour - Lab: 3 hours
Prerequisites: PNUR 1100, BIO 2300, NURC 1102
Corequisites: PNUR 1766, PNUR 1866 Lab fee: \$44.20

PNUR 1400 Pharmacology II/PN (A, SP) 2 credits
This course continues to build on student's understanding of basic concepts of drug classifications and nursing implications for medications prescribed to affect various body functions. Intravenous therapy theory and regulations governing this therapy will be presented. 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. In the laboratory, safe medication administration skills and documentation will be practiced. Basic phlebotomy and IV infusion skills will be presented and practiced. A performance exam will be performed by students to demonstrate mastery and competence of IV skills. Math dosages and calculations practice and evaluations will be included.
Lecture: 1 hour - Lab: 3 hours
Prerequisite: PNUR 1300
Corequisite: PNUR 1767, PNUR 1867 Lab fee: \$96.80

PNUR 1765 PN Maternal/Child (A, SP) 2 credits
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 related 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.
Lecture: 1 hour - Lab: 3 hours
Prerequisites: NURC 1102, PNUR 1100, BIO 2300,
Corequisite: PNUR 1865 Lab fee: \$48.13

PNUR 1766 PN Concepts Related to Health Promotion & Restoration I (A, SP) 2 credits
This course focuses on application of the nursing process to promote and restore health of clients experiencing alterations in functioning of specific body systems. The practical nurse role in observation and assessment is presented with emphasis on observing the physical, psychosocial and developmental components of adult and geriatric clients. Nursing concepts related to fluid balance, perioperative care, cancer, and pain management will be presented. The concepts of critical thinking, communication and

promotion of safety and self-care will be threaded throughout the class. Students will practice related nursing skills in the laboratory. Math dosages and calculations practice and evaluation will be included.
Lecture: 1 hour - Lab: 3 hours
Prerequisites: PNUR 1100, BIO 2300, NURC 1102
Corequisite: PNUR 1300, PNUR 1866 Lab fee: \$51.39

PNUR 1767 PN Concepts Related to Health Promotion & Restoration II (A, SP) 2 credits
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 systems. 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 clinical setting. Math dosages and calculations practice and evaluations will be included.
Lecture: 1 hour - Lab: 3 hours
Prerequisite: PNUR 1766, PNUR 1866
Corequisite: PNUR 1400, PNUR 1867 Lab fee: \$43.15

PNUR 1865 PN Maternal and Child Clinical (A, SP) 1 credit
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 and promotion of safety and self-care will be applied in practice.
Clinical: 2 hours
Prerequisite: PNUR 1100, NURC 1102, BIO 2300
Corequisite: PNUR 1765

PNUR 1866 PN Concepts Related to Health Promotion & Restoration I Clinical (A, SP) 1 credit
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.
Clinical: 3 hours
Prerequisite: PNUR 1100, NURC 1102, BIO 2300
Corequisite: PNUR 1300, PNUR 1766

PNUR 1867 PN Concepts Related to Health Promotion & Restoration II Clinical (A, SP) 2 credits
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.
Clinical: 6 hours
Prerequisite: PNUR 1300, PNUR 1766, PNUR 1866
Corequisite: PNUR 1400, PNUR 1767

PNUR 1900 Transition to Practice (SP) 2 credits
The 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.

Lecture: 0.5 hours - Lab: 1.5 hours – Seminar: 1 hour

Prerequisites: PNUR 1766, PNUR 1866, PNUR 1300

Corequisite: PNUR 1906 Lab fee: \$138.75

PNUR 1906 PN Transition to Practice Practicum (SP) 1 credit

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.

Practicum: 7 hours

Prerequisite: PNUR 1400, PNUR 1767, PNUR 1867

Corequisite: PNUR 1900

Psychology (PSY)

Students who enroll in Psychology courses must have placed into ENGL 1100 and are encouraged either to have completed ENGL 1100 or to be enrolled in that course when scheduling a Psychology course.

Note: Courses taught through online/distance learning (DL) may have a higher lab fee than traditionally taught courses.

PSY 1100 Introduction to Psychology (A, SP, SU) 3 credits

This introductory course provides an overview of the origins, growth, content and applications of psychology, including the application of the scientific method to the following topics: research methodology; beginning statistics; theories of physical, cognitive, moral and emotional development; sensation; perception; learning; motivation; intelligence; memory; personality; coping processes; abnormality; adjustment; and the individual in small groups and a pluralistic society. Sections of this course are H-designated Honors classes.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

PSY 1194 Special Topics in Psychology (On Demand) 1-3 credits

PSY 1194 allows students to examine, in detail, selected topics of interest in psychology.

Lecture: 1-3 hours

PSY 2193 Independent Studies in Psychology (On Demand) 1-3 credits

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.

Lecture: 1-3 hours

Instructor permission required

Prerequisite: PSY 1100; minimum grade of “C”

PSY 2200 Educational Psychology (A, SP, SU) 3 credits

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 beginning training to use educational databases and Microsoft PowerPoint software.

Lecture: 3 hours

Prerequisite: PSY 1100; minimum grade of “C” Lab fee: \$2.00

PSY 2245 Children with Exceptionalities (A, SP, SU) 3 credits

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 assessment of 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 and home-school collaboration for lifelong learning.

Lecture: 3 hours

Prerequisite: PSY 1100; minimum grade of “C” Lab fee: \$2.00

PSY 2261 Child Development (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: PSY 1100; minimum grade of “C” Lab fee: \$2.00

PSY 2325 Social Psychology (A, SP, SU) 3 credits

This course provides an overview of the origins, growth, content, and interaction of individuals in social settings, including the application of the scientific method and cultural influence to the following topics: attitudes and attitude change, attribution, social identity (self and gender), social perception (understanding others), social cognition (thinking about others and their social environment), prejudice and discrimination, nonverbal communication, obedience to authority, conformity, aggression, prosocial behavior, interpersonal attraction, and behavior in groups.

Lecture: 3 hours

Prerequisite: PSY 1100; minimum grade of “C” Lab fee: \$2.00

PSY 2331 Abnormal Psychology (A, SP, SU) 3 credits

Abnormal Psychology presents the basic concepts of abnormalities as defined by the American Psychiatric Association’s current Diagnostic and Statistical Manual of Mental Disorders. The course focuses on classification schemes of diagnoses and looks at descriptive terms and symptoms. Research, major perspectives and myths in the field of mental health are examined.

Lecture: 3 hours

Prerequisite: PSY 1100; minimum grade of “C” Lab fee: \$2.00

PSY 2340 Human Growth & Development (A, SP, SU) 3 credits

This course is a survey of developmental change throughout the lifespan. It is an interdisciplinary course which studies human growth and development for each stage of life from the time of conception and prenatal growth through infancy, childhood, adolescence, and adulthood. The course focuses on the physical, social, emotional, and cognitive development of human beings and familiarizes students with the many forces that shape individual development. This is an S-designated Service-Learning course.. Students are required to complete curriculum-related service hours at a local nonprofit agency

Lecture: 3 hours

Prerequisite: PSY 1100; minimum grade of “C” Lab fee: \$2.00

PSY 2530 Psychology of Personality (A, SP, SU) 3 credits

Psychology of Personality is an exploration of major personality theories (trait, biological, psychodynamic, humanistic, socio-cultural, behavioristic, social learning, and cognitive). It includes examination of the structure, dynamics, development, and assessment of personality and related psychological processes.

Lecture: 3 hours

Prerequisite: PSY 1100; minimum grade of “C” Lab fee: \$2.00

PSY 2551 Adolescent Psychology (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: PSY 1100; minimum grade of “C” Lab fee: \$2.00

Quality Assurance Technology (QUAL) (See also Bioscience Technology, Electronic Engineering Technology and Mechanical Engineering Technology)

QUAL 1112 Total Quality Management (A, SP) 4 credits

This course focuses on the urgency of making people, organizations, and businesses more functional and competitive in a global economic environment. The course is a study of the major elements and concepts of Total Quality Management principles and styles of quality management, systems thinking, continuous improvement, (which include team tools, statistical techniques and statistical tools used by teams and individuals), scientific management using data, and the historic influences of leaders in quality management. Lecture: 2 hours – Lab: 4 hours Lab fee: \$20.00

QUAL 2111 Reliability Systems Analysis (SP, SU) 4 credits

This course is an examination of current methods use to ensure the reliability of measurements, data, products, systems and services. Students examine methods used in TQM, Six Sigma and Lean Manufacturing, including the use of simulations, and ways to improve performance from the design stage. The concept of value engineering, which identifies the function of a product or service, establishes a monetary value for that function, and provides the necessary function reliability or maintainability, is studied. Reliable data collection procedures using measurements traceability to NIST standards are also presented, and measurement instrument capability is demonstrated. Lecture: 2 hours – Lab: 4 hours

Prerequisite: QUAL 1112 Lab fee: \$20.00

QUAL 2900 Field Experience QUAL (On Demand) 2 credits

This is a field experience class offering 24 hours of field experience.

Real Estate (REAL)

REAL 1011 Real Estate Principles & Practices (A, SP, SU) 3 credits

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.

Lecture: 3 hours Lab fee: \$2.00

REAL 1012 Real Estate Law (A, SP, SU) 3 credits

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.

Lecture: 3 hours Lab fee: \$2.00

REAL 1013 Real Estate Finance (A, SP, SU) 2 credits

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.

Lecture: 2 hours Lab fee: \$2.00

REAL 1014 Real Estate Appraisal (A, SP, SU) 2 credits

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.

Lecture: 2 hours Lab fee: \$2.00

REAL 1221 Residential Sales Practices (SP) 2 credits

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.

Lecture: 2 hours Lab fee: \$2.00

Prerequisite: REAL 1011

REAL 2194 SPT: Real Estate (On Demand) 1 credit

The student will explore selected issues relevant to the real estate industry. Lecture: 1 hour Lab fee: \$2.00

REAL 2220 Real Estate Ethics & Etiquette (A, SP) 2 credits

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.

Lecture: 2 hours Lab fee: \$2.00

Prerequisite: REAL 1011

REAL 2221 Professional Property Management (A, SP) 2 credits

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.

Lecture: 2 hours Lab fee: \$2.00

Prerequisite: REAL 1011

REAL 2250 Commercial Real Estate (A, SP) 2 credits

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.

Lecture: 2 hours Lab fee: \$2.00

Prerequisite: REAL 1011 or Real Estate license

REAL 2270 Introduction to Real Estate Investing (A, SP) 2 credits

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.

Lecture: 2 hours Lab fee: \$2.00

REAL 2275 Introduction to Property Renovation (A, SP) 2 credits

This course will introduce students to a broad overview of common repair issues and typical maintenance requirements for residential buildings. Students will cover primary issues and requirements associated with historical properties. Students will review architectural and construction styles as a method of determining the age of 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, tools, and techniques used in residential repairs.

Lecture: 1 hour – Lab: 2 hours Lab fee: \$15.00

REAL 2294 SPT: Real Estate (On Demand) 2 credits

The student will explore selected issues relevant to the real estate industry.

Lecture: 2 hours Lab fee: \$2.00

REAL 2394 SPT: Real Estate (On Demand) 3 credits

The student will explore selected issues relevant to the real estate industry

Lecture: 3 hours Lab fee: \$2.00

Real 2950 REAL Seminar/Practicum (A, SP, SU) 2 credits

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.

Lecture: 1 hour – Practicum: 7 hours Lab fee: \$2.00

Instructor permission required.

Respiratory Care (RESP)

RESP 1110 Introduction to Respiratory Care (A) 3 credits

This course introduces students to the role and responsibilities of the respiratory therapist. Fundamental concepts including effective communication skills, legal and ethical principles, and infection control will be presented. Emphasis will be placed physical examination techniques and general respiratory therapeutics.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: RESP 1220

Corequisites: RESP 1230, RESP 1370, RESP 1861

Lab fee: \$66.00

RESP 1220 Cardiopulmonary Anatomy & Physiology (SU) 3 credits

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. Student must be accepted into the Respiratory Care program.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: Admission to RESP program

RESP 1230 Respiratory Pharmacology (A) 2 credits

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.

Lecture: 2 hours

Prerequisite: RESP 1220

Corequisites: RESP 1110, RESP 1370, RESP 1861

Lab fee: \$55.00

RESP 1240 Patient Assessment I (SP) 2 credits

This course focuses on the role of the respiratory therapist in patient assessment. Topics included are pulmonary functions, clinical laboratory studies, imaging studies, electrocardiography, and sleep studies.

Lecture: 1 hour – Seminar: 1 hour

Prerequisite: RESP 1220

Corequisites: RESP 1862, RESP 1350, RESP 1360

RESP 1350 Respiratory Pathophysiology I (SP) 2 credits

This course is focused on the etiology, pathophysiology, treatment, and prognosis of chronic and infectious diseases affecting the respiratory and cardiopulmonary systems.

Lecture: 1 hour – Seminar: 1 hour

Prerequisite: RESP 1220

Corequisites: RESP 1240, RESP 1360, RESP 1862

RESP 1360 Therapeutic Procedures I (SP) 3 credits

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 and arterial blood gas sampling. 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.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: RESP 1220

Corequisites: RESP 1240, RESP 1862, RESP 1350

Lab fee: \$54.00

RESP 1370 Respiratory Equipment I (A) 1 credit

This course provides a study of the principles of operation of respiratory care equipment used in basic therapeutic procedures such as medical gas

therapy, humidity and aerosol therapy, lung expansion therapy, airway management and bronchial hygiene. Emphasis will be placed on assembly, troubleshooting, infection control and quality control.

Lab: 2 hours

Prerequisite: RESP 1220

Corequisites: RESP 1110, RESP 1230, RESP 1861

Lab fee: \$25.00

RESP 1861 Introduction to the Clinical Experience (A) 1 credit

This course is focused on introducing the student to the clinical setting. Emphasis is placed on patient safety, patient confidentiality, infection control, health care informatics and communication within the healthcare team.

Directed Practice: 5 hours

Prerequisite: RESP 1220

Corequisites: RESP 1110, RESP 1230, RESP 1370

Lab fee: \$25.00

RESP 1862 Clinical Practice I (SP) 2 credits

This course is focused on conducting general therapeutic respiratory care procedures in the acute care setting. Modalities include bronchial hygiene therapy and performance of arterial blood gas sampling. Experience with the pediatric and neonatal patient will be provided.

Directed Practice: 10 hours

Prerequisite: RESP 1861

Corequisites: RESP 1350, RESP 1360, RESP 1240

Lab fee: \$25.00

RESP 2442 Patient Assessment II (SU) 2 credits

This course focuses on the role of the respiratory therapist in advanced patient assessment and diagnostic procedures. Topics included are bronchoscopy, hemodynamics, nutritional assessment and neurologic assessment.

Lecture: 1 hour – Seminar: 1 hour

Prerequisite: RESP 1240

Corequisites: RESP 2452, RESP 2870, RESP 2462, RESP 2472

RESP 2452 Respiratory Pathophysiology II (SU) 2 credits

This course is focused on the etiology, pathophysiology, treatment, and prognosis of acute disease processes affecting the respiratory and cardiopulmonary systems seen in critically ill patients.

Lecture: 1 hour – Seminar: 1 hour

Prerequisite: RESP 1350

Corequisites: RESP 2442, RESP 2462, RESP 2472, RESP 2870

RESP 2462 Therapeutic Procedures II (SU) 3 credits

This course is focused on advanced therapeutic procedures performed by the respiratory therapist. Topics include advanced airway care and Special emphasis will be placed on the indications, contraindications, techniques and effectiveness of each. An introduction to neonatal, pediatric and adult ventilatory support will be presented. The student will practice procedures in a simulated patient care environment.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: RESP 1360

Corequisites: RESP 2442, RESP 2452, RESP 2472, RESP 2870,

Lab fee: \$77.00

RESP 2472 Respiratory Equipment II (SU) 1 credit

This course provides a study of the theory and principles of operation of mechanical ventilators used in the treatment of neonatal, pediatric and adult patients. Emphasis will be placed on manipulation, troubleshooting, infection control and quality control.

Lab: 2 hours

Prerequisite: RESP 1370

Corequisites: RESP 2442, RESP 2452, RESP 2462, RESP 2870

Lab fee: \$67.00

RESP 2530 Therapeutic Procedures III (A) 3 credits

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.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: RESP 2462

Corequisite: RESP 2890 Lab fee: \$10.00

RESP 2850 RESP: Seminar (A) 1 credit

This capstone course presents issues relating to the practice of respiratory care for the graduating practitioner, including licensure and credentialing, membership in professional organizations and bachelor's degree completion opportunities. Students will the option of attending a board review seminar and will be required to take practice credentialing examinations.

Seminar: 1 hour

Prerequisite: RESP 2890

Corequisite: RESP 2950 Lab fee: \$110.00

RESP 2870 Clinical Practice II (SU) 2 credits

This course is focused on conducting respiratory care procedures in the acute care, long-term acute care, and critical care settings. Experience with the pediatric and neonatal patient will be provided.

Directed Practice: 10 hours

Prerequisite: RESP 1862

Corequisites: RESP 2442, RESP 2452, RESP 2462, RESP 2472

Lab fee: \$37.50

RESP 2890 Clinical Practice III (A) 2 credits

This course is focused on conducting respiratory care procedures in the critical care settings. Students will be involved in managing and providing advanced ventilatory support and monitoring in the adult intensive care units.

Directed Practice: 10 hours

Prerequisite: RESP 2870

Corequisite: RESP 2530 Lab fee: \$25.00

RESP 2950 Clinical Practicum (A) 2 credits

This course provides the student with the opportunity to apply previously learned skills in all patient care settings. Most time will be spent in the critical care setting. The students will complete the Advanced Cardiac Life Support provider course.

Practicum: 14 hours

Prerequisite: RESP 2890

Corequisite: RESP 2850 Lab fee: \$25.00

Social and Human Services (SAHS) (formerly Mental Health/Addiction Studies/Developmental Disabilities)

SAHS 1110 Careers in Human Services (A, SP, SU) 1 credit

This is an exploratory class for persons interested in the mental health, social work, addictions and the developmental disabilities field. The course provides a survey of careers, job opportunities and settings in the field of human services. There is exploration of knowledge, skills and qualities to be successful in this field of study. Students participate in individual career assessment. State of Ohio certification and licenses and their scopes of practice are discussed, as well as transfer opportunities for advanced degrees. Meets the SAHS technical elective requirement. This course must be completed with a 'C' or higher.

Lecture: 1 hour

Lab fee: \$5.00

SAHS 1111 Introduction to Social Work & Mental Health (A, SP, SU) 3 credits

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 mental health disorders will be included. This course must be completed with grade of "C" or higher.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$5.00

SAHS 1112 Introduction to Developmental Disabilities (A, SP, SU) 3 credits

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 grade of "C" or higher.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$5.00

SAHS 1114 Introduction to Addiction Studies (A, SP, SU) 3 credits

This introductory course provides an overview of the addiction services field including drugs of abuse, addictive disorders, evaluation, individual and group treatment approaches, service coordination, professionalism and ethics. This course meets the chemical dependency specific content required by the Ohio Dependency Professional Board for the Chemical Dependency Counselor Assistant Phase I Certification. It can be taken as a part of the associate degree program or alone for certification. This course must be completed with grade of "C" or higher.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 or permission of the Addiction Studies lead instructor Lab fee: \$5.00

SAHS 1115 Introductory Helping Skills (A, SP, SU) 3 credits

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. State, federal and HIPPA guidelines are reviewed. This course must be completed with grade of "C" or higher.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$5.00

SAHS 1120 Service Delivery & Ethics in Human Services/Social Work (A, SP, SU) 2 credits

This course prepares students for their practicum experiences by reviewing clinical expectations, supervision, professionalism and ethics. Practicum sites where social work, mental health, developmental disabilities, and addiction treatment services are provided and discussed. Students sign a confidentiality pledge and a professional commitment document. Students complete required documentation for practicum. Licensure requirements are reviewed. This course must be completed with a grade of "C" or higher.

Lecture: 2 hours

Prerequisites: SAHS 1111, SAHS 1112, SAHS 1114, SAHS 1115,

ENGL 1100, COLS 1100 Lab fee: \$4.00

SAHS 1130 Intervention Strategies (On Demand) 2 credits

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. This course must be completed with grade of "C" or higher. Requires admission to SAHS program or certificate.

Lecture: 2 hours Lab fee: \$4.00

SAHS 1140 Family & Aging Services (A, SP, SU) 2 credits

This course provides an overview of family dynamics in both traditional and nontraditional families. The impact of and resources available to family members of individuals with developmental disabilities, mental health and/or addictive disorders are explored. In addition, this course provides the student with an overview of the aging process. Gerontological challenges, needs and resources for the growing number of individuals in later life and their family members are discussed. This course must be completed with grade of "C" or higher.

Lecture: 2 hours

Prerequisites: SAHS 1111, SAHS 1112, SAHS 1114, SAHS 1115, ENGL 1100, COLS 1100 Lab fee: \$4.00

SAHS 1150 Pharmacology in Human Services (On Demand) 1 credit

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. This course must be completed with a "C" or higher. Requires admission to SAHS program or certificate.

Lecture: 1 hour Lab fee: \$2.00

SAHS 1300 Supported Employment (On Demand) 2 credits

This course provides information about the Employment First Initiative sweeping the country and how to make this initiative a reality. History of work, supported employment/customized employment, the discovery process, job analysis, person centered job development strategies, job carving, job coaching and follow along services will be explored. Understanding basic roles of key stake holders and Social Security work incentives will be included. This course can be taken as a SAHS.AAS technical elective or as part of the Supported Employment or Advanced Supportive Services Certificate. This course must be completed with a "C" or higher.

Lecture: 2 hours

Prerequisite: Placement into ENGL 1100

Lab fee: \$5.00

SAHS 1301 Supportive Housing (SP, On Demand) 2 credits

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 SAHS.AAS degree program or independent from certificate or degree programs. This course must be completed with a "C" or higher.

Lecture: 2 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$5.00

SAHS 1400 Screen for Substance Use SBIRT (On Demand) 1 credit

This course is designed for interdisciplinary health workers to introduce SBIRT as an evidence-based approach proven to be effective in the prevention and identification of substance use disorders. As greater attention is being given to identifying substance use disorders in non-treatment settings, the SBIRT has become an essential intervention to engage those impacted by substance use. Students will be prepared to implement SBIRT in various settings. This course must be completed with a 'C' or higher. This course will be offered in Summer semester in

an On Demand basis.

Lecture: 1 hour
Lab fee: \$5.00

SAHS 1401 Integrated Healthcare (On Demand) 2 credits

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.

Lecture: 2 hours
Lab fee: \$5.00

SAHS 1402 Self-care for Human Service Professionals (On Demand) 2 credits

This course provides an overview of the importance of managing stress and burnout in professional practice as 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.

Lecture: 2 hours Lab fee: \$4.00

SAHS 2114 Chemical Dependency Counselor Assistant, Phase II (A, SP, SU) 2 credits

This course provides the thirty (30) hours of required addictions specific content for the renewal of the CDCA as required by the Ohio Chemical Dependency Professionals Board. The following areas of content are included: addiction and treatment knowledge, individual and group counseling, evaluation, service coordination, documentation and professionalism. This course can be taken as a technical elective for SAHS AAS students or certificate students. This course must be completed with a 'C' or higher.

Lecture: 2 hours
Prerequisites: SAHS 1114 Lab fee: \$5.00

SAHS 2194 SPT: SAHS (On Demand) 1-4 credits

These courses are designed to meet specific needs of students who wish to pursue additional 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. Students enroll in these courses with permission of faculty. These courses must be completed with grade of "C" or higher. Courses may include content required during transition from quarters to semesters.

Lecture: Varies Lab fee: \$5.00

SAHS 2234 Therapeutic Laughter (On Demand) 2 credits

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 community based "laughter sessions" are required components 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.

Lecture: 2 hours Lab fee: \$8.00

SAHS 2236 Prevention Services (On Demand) 3 credits

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 AOD 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.

Lecture: 3 hours Lab fee: \$5.00

SAHS 2241 Advanced Helping Skills (A, SP) 2 credits

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 grade of "C" or higher.

Lecture: 2 hours
Prerequisite: SAHS 1120
Corequisites: SAHS 2861, SAHS 2901 Lab fee: \$5.00

SAHS 2251 Social Welfare & Policy (A, SP, SU) 3 credits

This course examines the history and structure of social welfare institutions in the United States. Students will examine a variety of social problems which 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.

Lecture: 3 hours
Prerequisites: ENGL 1100, PSY 1100 Lab fee: \$5.00

SAHS 2261 Advanced Addiction Studies (SU) 2 credits

This 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. The course must be completed with a "C" or better

Lecture: 2 hours Lab fee: \$5.00
Prerequisite: SAHS 2861
Instructor permission required

SAHS 2271 Assessment & Treatment of Problem Gambling (On Demand) 2 credits

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

Lecture: 2 hours Lab fee: \$4.00
Prerequisites: Admission into the SAHS program, Advanced Certificate or verification of professional license

SAHS 2861 Fundamentals Social and Human Services (A, SP) 4 credits

This course provides the knowledge and skills that are the foundation for working in the Human Services field. It covers observation, data gathering, bio-psycho-social assessment, person-centered/individualized treatment planning, case management/service coordination and documentation. The 12 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 grade of “C” or higher.

Lecture: 4 hours

Prerequisite: SAHS 1120

Corequisites: SAHS 2901, SAHS 2241 Lab fee: \$5.00

SAHS 2862 Treatment Approach SAHS (A, SP) 4 credits

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, supported employment and recovery management This course integrates class content with practicum objectives. The identification of the 12 core functions occurs throughout the course. This course must be completed with grade of “C” or higher.

Lecture: 4 hours

Prerequisites: SAHS 2861, SAHS 2901, SAHS 2241

Corequisite: SAHS 2922 Lab fee: \$5.00

SAHS 2901 Practicum & Seminar I in Social & Human Services (A, SP) 4 credits

Students participate in a 210-hour supervised practicum experience in a community agency where utilization and practice of the knowledge and skills in the corresponding course are required. Students participate in a 2-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 and ethical principles, self-awareness and critical thinking skills conduct are emphasized. This course must be completed with grade of “C” or higher. Each component, the practicum and the seminar, must be completed with grade of “C” or higher.

Seminar: 2 hours - Practicum: 14 hours

Prerequisite: SAHS 1120

Corequisites: SAHS 2861, SAHS 2241 Lab fee: \$23.00

SAHS 2905 Intervention Strategies Practicum & Seminar (On Demand) 4 credits

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.

Seminar: 2 hours – Practicum: 14 hours

Prerequisite: SAHS 1120

Corequisites: SAHS 1130 Lab fee: 23.00

SAHS 2922 Practicum & Seminar II in Social & Human Services (A, SP) 4 credits

Students participate in a 210-hour supervised practicum experience in a community agency in their program of study (SAHS) where utilization and practice of the knowledge, skills and intervention techniques in the corresponding course are required. Practicum includes a service learning component. Students participate in a 2-hour per week seminar experience for additional personal/professional support, supervision, feedback and exploration of field-related experiences. Evidence-based practices are emphasized. The opportunity to enhance/augment knowledge and skills related to specific client population is available. Confidentiality, professionalism, ethical principles, self-awareness, critical thinking skills, advocacy and engagement skills that advance social and economic justice are included This course must be completed with grade of “C” or higher.

Each component, the practicum and the seminar, must be completed with grade of “C” or higher.

Seminar: 2 hours - Practicum: 14 hours

Prerequisites: SAHS 2901 Corequisite: SAHS 2862 Lab fee: \$23.00

SAHS 2931 Mental Health Practicum & Seminar I (On Demand) 3.5 credits

This is the first of two practicum experiences in the Advanced Mental Health Certificate. Students participate in a 157.5 hour practicum experience in a community agency which provides services and support to individual with mental health concerns. Utilization and practice of the knowledge and skills in the corresponding courses 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 individuals with an addictions studies focus is provided. 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.

Seminar: 2 hours - Practicum: 10.5 hours

Prerequisite: SAHS 1120

Corequisite: SAHS 2861 Lab fee: \$23.00

SAHS 2932 Mental Health Practicum & Seminar II (On Demand) 3.5 credits

This is the second of two practicum experiences in the Advanced Mental Health Certificate. Students participate in a 157.5 hour practicum experience in a community agency which provides services and support to individuals with mental health concerns. Utilization and practice of the knowledge and skills in the corresponding courses 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 individuals with an addictions studies focus is provided. 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.

Seminar: 2 hours - Practicum: 10.5 hours

Prerequisite: SAHS 2931

Corequisites: SAHS 2862 Lab fee: \$23.00

SAHS 2936 Practicum in Prevention Services (On Demand) 3.5 credits

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.

Seminar: 2 hours – Practicum: 10.5 hours

Prerequisite: SAHS 1120

Corequisite: SAHS 2236 Lab fee: \$23.00

SAHS 2941 Addiction Studies Practicum & Seminar I (On Demand) 3.5 credits

This is the first of two practicum experiences in the Advanced Addiction Studies Certificate or as a technical elective for students pursuing the AAS degree. Students participate in a 157.5 hour practicum experience in a community agency which provides services and support to individuals with substance abuse disorder. There is an opportunity to utilize the 12 core

functions of an addictions counselor. Practice of the knowledge and skills in the corresponding courses 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 individuals with an addictions studies focus is provided. 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.

Seminar: 2 hours - Practicum: 10.5 hours

Prerequisite: SAHS 1120

Corequisites: SAHS 2861 Lab fee: \$23.00

SAHS 2942 Addiction Studies Practicum & Seminar II (On Demand) **3.5 credits**

This is the second of two practicum experiences in the Advanced Addiction Studies Certificate or as a technical elective for students pursuing the AAS degree. Students participate in a 157.5 hour practicum experience in a community agency which provides services and support to individuals with substance abuse disorder. There is an opportunity to utilize the 12 core functions of an addictions counselor. Practice of the knowledge and skills in the corresponding courses 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 individuals with an addictions studies focus is provided. 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.

Seminar: 2 hours - Practicum: 10.5 hours

Prerequisite: SAHS 2941

Corequisites: SAHS 2862 Lab fee: \$23.00

SAHS 2951 Developmental Disabilities Practicum & Seminar II (On Demand) **3.5 credits**

This is the first of two practicum experiences in the Community Habilitation Certificate or Advanced Developmental Disabilities Certificate or as a technical elective for students pursuing the SAHS.AAS degree. Students participate in a 150 hour practicum experience in a community agency which provides services and support to individuals with developmental disabilities. Knowledge and practice of the knowledge and skills in the corresponding courses 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 individuals with a developmental disabilities focus is provided. Confidentiality, professionalism, ethical principles and conduct are emphasized. Students enroll in this course with permission of faculty. SAHS.AAS students may take this course to enhance specific learning goals in the area of developmental disabilities. This course must be completed with 'C' or higher.

Seminar: 2 hours - Practicum: 10.5 hours

Prerequisite: SAHS 1120

Corequisites: SAHS 2861 Lab fee: \$23.00

SAHS 2952 Developmental Disabilities Practicum & Seminar II (on demand) **3.5 credits**

This is the second of two practicum experiences in the Advanced Developmental Disabilities Certificate. Students participate in a 157.5 hour practicum experience in a community agency which provides services and support to individuals with developmental disabilities. Utilization and practice of the knowledge and skills in the corresponding courses 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 individuals with a developmental disabilities focus is provided. 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.

Seminar: 2 hours - Practicum: 10.5 hours

Prerequisite: SAHS 2951

Corequisites: SAHS 2862 Lab fee: \$23.00

Skilled Trades (SKTR)

SKTR 1101 Survey of the Construction Industry (A, SP) 2 credits

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.

Lecture: 1 hour – Lab: 2 hours

Lab fee: \$10.00

SKTR 1110 Electrical: Fundamentals (A, SP) 2 credits

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.

Lecture: 1 hour – Lab: 2 hours

Prerequisite: Placement into MATH 1020 or higher

Lab fee: \$40.00

SKTR 1120 Carpentry: Fundamentals (A, SP, SU) 2 credits

This course introduces the learner to the varied complex systems that make up the Carpentry Trade and to the history of the trade; career opportunities and different types of construction are discussed. Safety for job-site working conditions will be covered. Wood building materials, fasteners and adhesives for wood framing are covered, as are Basic Carpentry formulas. 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.

Lecture: 1 hour – Lab: 2 hours

Prerequisite: Placement into MATH 1020 or higher

Lab fee: \$30.00

SKTR 1140 Plumbing: Introduction to Supply Systems (A) 2 credits

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.

Lecture: 1 hour – Lab: 2 hours

Prerequisite: Placement into MATH 1020 or higher

Lab fee: \$90.00

SKTR 1180 Welding: Introduction to Stick (A, SP, SU) 2 credits

This course introduces the learner to the welding profession, welding tools, welding safety, OxyFuel 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.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: Placement into MATH 1010 or higher
Lab fee: \$70.00

SKTR 1280 Welding: OxyFuel Methods and Plasma Cutting (A, SP) 2 credits

This course introduces the learner to OxyFuel welding (OFW) of mild steel and aluminum, and it 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 OxyFuel welding and cutting, Plasma Arc cutting, Carbon Arc gouging and proper fit up and preparation of materials for joining by the OxyFuel process.
Lecture: 1 hour – Lab: 2 hours
Prerequisites: Placement into MATH 1010 or higher Lab fee: \$95.00

SKTR 1300 Construction Industry Employability Skills (A) 2 credits

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 online applications as well as job search techniques suited specifically for construction and maintenance job placements are covered.
Prerequisite: Placement into ENGL 1100
Lecture: 2 hours Lab fee: \$5.00

SKTR 1310 Electrical: Wiring I (A, SP, SU) 2 credits

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.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: SKTR 1110 Lab fee: \$45.00

SKTR 1320 Carpentry: Structural Framing I (A, SP) 2 credits

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.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: SKTR 1120 Lab fee: \$50.00

SKTR 1340 Plumbing: Introduction to DWV Systems (SP) 2 credits

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 learner will engage in the installation of DWV systems and proper usage of required tools and installation methods.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: SKTR 1140 Lab fee: \$65.00

SKTR 1380 Welding: Introduction to MIG (A, SP) 2 credits

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 setup, 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 workforce. 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.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: Placement into MATH 1010 or higher Lab fee: \$75.00

SKTR 1470 Welding: Layout and Fit Up (A, SP) 2 credits

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.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: SKTR 1380 Lab fee: \$55.00

SKTR 1480 Welding: Specifications & Drawings (SP) 2 credits

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.
Lecture: 1 hour – Lab: 2 hours
Prerequisites: MATH 1020, SKTR 1180, ENGT 1115
Lab fee: \$10.00

SKTR 1510 Electrical: Low Volt Systems I (SP) 2 credits

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.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: SKTR 1310 Lab fee: \$55.00

SKTR 1520 Carpentry: Steel Framing Construction (On Demand) 2 credits

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, as well as the 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.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: SKTR 1320 Lab fee: \$50.00

SKTR 1570 Welding: Codes and Inspection (A, SP) 2 credits

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.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: SKTR 1470, SKTR 1480 Lab fee: \$10.00

SKTR 1580 Welding: Introduction to TIG Processes (A) 3 credits

This course will introduce the student, who is already proficient in basic SMAW, GMAW, and OxyFuel 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.

Lecture: 2 hours – Lab: 2 hours

Prerequisites: SKTR 1280, SKTR 1380 Lab fee: \$105.00

SKTR 1670 Welding: Metallurgy (A, SP) 2 credits

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.

Lecture: 1 hour – Lab: 2 hours

Prerequisite: SKTR 1470, SKTR 1480 Lab fee: \$10.00

SKTR 1675 Welding: Basic Principles of NDT (A, SP) 2 credits

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.

Lecture: 1 hour – Lab: 2 hours

Prerequisite: SKTR 1570, SKTR 1670 Lab fee: \$45.00

SKTR 1770 Welding: GTAW PLATE (A, SP) 3 credits

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: 6 hours

Prerequisite: SKTR 1580 Lab fee: \$140.00

SKTR 1894 Special Topics: Skilled Trades I (On Demand) 1-4 credits

Special topic course for year one type content.

Lecture: 1-4 hours – Lab: Varies

Prerequisite: Varies Lab fee: Varies

SKTR 1994 Special Topics: Skilled Trades II (On Demand) 1-4 credits

Special topic course for year one type content.

Lecture: 1-4 hours – Lab: Varies

Prerequisite: Varies Lab fee: Varies

SKTR 2010 Electrical: Wiring II (A) 2 credits

This course will continue with instructions for installing conduit raceway systems, conductors, devices, and branch circuits. 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.

Lecture: 1 hour – Lab: 2 hours

Prerequisite: SKTR 1310 Lab fee: \$46.00

SKTR 2020 Carpentry: Structural Framing II (A) 2 credits

This course introduces the learner to ceiling and roof framing concepts and methods. Course will cover rafter types and angle calculations for building roof framing systems. SKTR 2020 also introduces the learner to insulation, sheathing, vapor barriers, roofing materials, windows, and doors. The class 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 sheathing and insulation.

Lecture: 1 hour – Lab: 2 hours

Prerequisite: SKTR 1320 Lab fee: \$50.00

SKTR 2040 Plumbing: Intermediate Supply & DWV Systems (A) 2 credits

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 additional plumbing codes, sump pump and lift station systems in addition to plumbing system testing tools and method required for successful plumbing installations. The learner will engage in the installation of and testing of plumbing supply systems and proper usage of required tools and installation methods.

Lecture: 1 hour – Lab: 2 hours

Prerequisite: SKTR 1340 Lab fee: \$100.00

SKTR 2070 Welding: GTAW PIPE I (SP) 3 credits

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.

Lecture: 1 hour – Lab: 4 hours

Prerequisite: SKTR 1580 Lab fee: \$285.00

SKTR 2080 Welding: Intermediate Stick and MIG (A, SP) 2 credits

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.

Lecture: 1 hour – Lab: 2 hours

Prerequisite: SKTR 1380 Lab fee: \$75.00

SKTR 2110 Electrical: Repair & Service Practices (SP) 2 credits

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 his/her knowledge of wiring and circuitry for diagnoses and repair of common wiring problems.

Lecture: 1 hour – Lab: 2 hours

Prerequisites: SKTR 1101, SKTR 1300, SKTR 2010

Lab fee: \$46.00

SKTR 2120 Carpentry: Interior/Exterior Finish Systems (SP) 2 credits

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.

Lecture: 1 hour – Lab: 2 hours

Prerequisites: SKTR 1101, SKTR 1300, SKTR 2020

Lab fee: \$45.00

SKTR 2140 Plumbing: Repair and Service Practices (SP) 2 credits

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.

Lecture: 1 hour – Lab: 2 hours

Prerequisites: SKTR 1101, SKTR 1300, SKTR 2040

Lab fee: \$100.00

SKTR 2180 Welding: Intermediate Applications I (A, SP) 2 credits

Using techniques learned in the 2080 course and utilizing 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 encompass “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 while welding: Tee, Lap, and V-Groove joints in out-of-position setups.

Lecture: 1 hour – Lab: 2 hours

Prerequisites: SKTR 1101, SKTR 1300, SKTR 2080

Lab fee: \$85.00

SKTR 2185 Welding: Intermediate Applications II (A, SP) 2 credits

This class will introduce the learner to intermediate out of position SMAW, GMAW, FCAW, GTAW, and OxyFuel 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 OxyFuel Welding, for Horizontal, Vertical, and Overhead situations.

Lecture: 1 hour – Lab: 2 hours

Prerequisites: SKTR 1480, SKTR 1580, SKTR 2180

Lab fee: \$80.00

SKTR 2210 Electrical: Photovoltaic System (SU) 3 credits

This course will provide the learner with the 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.

Lecture: 2 hours – Lab: 2 hours

Prerequisites: SKTR 2010, EMEC 1251 Lab fee: \$100.00

SKTR 2280 Welding: Intermediate V Groove & Pipe (SP) 3 credits

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. During this course, the student will hone his/her 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.

Lecture: 1 hour – Lab: 4 hours

Prerequisite: SKTR 2180 Lab fee: \$95.00

SKTR 2370 Welding: SMAW PIPE I (A, SP) 3 credits

This course will teach 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.

Lecture: 1 hour – Lab: 4 hours

Prerequisite: SKTR 2080 Lab fee: \$695.00

SKTR 2410 Electrical: NFPA70E Workplace Safety (A, SP, SU) 1 credit

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.

Lecture: 1 hour

Prerequisite: APPL 2010 or SKTR 2010

SKTR 2470 Welding: SMAW PIPE II (A, SP) 3 credits

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.

Lecture: 1 hour – Lab: 4 hours

Prerequisite: SKTR 2370 Lab fee: \$695.00

SKTR 2570 Welding: GMAW PIPE I (A, SP) 3 credits

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.

Lecture: 1 hour – Lab: 4 hours

Prerequisite: SKTR 1380 Lab fee: \$255.00

SKTR 2670 Welding: FCAW PIPE I (SP) 3 credits

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.

Lecture: 1 hour – Lab: 4 hours

Prerequisite: SKTR 1380 Lab fee: \$785.00

SKTR 2710 Electrical: NEC & Electrical Contracting (SP) 4 credits

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.

Lecture: 3 hours – Lab: 2 hours

Instructor permission required

Prerequisite: Placement into MATH 1020 or higher

Lab fee: \$25.00

SKTR 2780 Welding: Certification Preparation I (SU) 1 credit

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: 2 hours

Prerequisite: SKTR 2280 Lab fee: \$100.00

SKTR 2894 Special Topics: Skilled Trades III (On Demand) 1-4 credits

Special topic course for year two type content.

Lecture: 1-4 hours – Lab: Varies

Prerequisite: Varies Lab fee: Varies

SKTR 2994 Special Topics: Skilled Trades IV (On Demand) 1-4 credits

Special topic course for year two type content.

Lecture: 1-4 hours – Lab: Varies

Prerequisite: Varies Lab fee: Varies

Social Sciences (SSCI)

SSCI 1798 Study Tour/Social Science (On Demand) 1-3 credits

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.

Lecture: 1-3 hours

Prerequisite: Instructor permission required Lab fee: \$4.00

Sociology (SOC)

Students who enroll in Sociology courses must have placed into ENGL 1100 and are encouraged either to have completed ENGL 1100 or to be enrolled in that course when scheduling a Sociology course.

Online/Distance Learning (DL) versions of several SOC courses are available. Students taking the Web-based version of these courses must be familiar with computers, have an email address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for online/distance learning courses are administered at the Testing Center.

SOC 1101 Introduction to Sociology (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$3.00

SOC 1194 Special Topic: Sociology (On Demand) 1 - 3 credits

This course offers a detailed examination of selected topics of interest in sociology.

Lecture: 1- 3 hours

Lab fee: \$3.00

SOC 1500 Introduction to Rural Sociology (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$4.00

SOC 2193 Independent Study in Sociology (On Demand) 1-3 credits

This is 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.

Lecture: 1-3 hours

Prerequisite: Instructor permission required Lab fee: \$3.00

SOC 2202 Social Problems (A, SP, SU) 3 credits

This course examines how various conditions within society come to be defined as social problems. Individual, social, cultural, economic and 332

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$3.00

SOC 2209 Sociology of Criminal Justice System (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$3.00

SOC 2210 Sociology of Deviance (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$3.00

SOC 2309 Law and Society (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$3.00

SOC 2330 Marriage and Family Relations (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$3.00

SOC 2380 American Race & Ethnic Relations (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$3.00

SOC 2410 Sociological Aspects of Criminology (A, SP, SU) 3 credits

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 course's primary focus 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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$3.00

Spanish (SPAN)

SPAN 1101 Beginning Spanish I (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$10.00

SPAN 1102 Beginning Spanish II (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: SPAN 1101, minimum grade of "C" Lab fee: \$10.00

SPAN 1103 Intermediate Spanish (A, SP, SU) 4 credits

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.

Lecture: 4 hours

Prerequisite: SPAN 1102; minimum grade of "C" Lab fee: \$10.00

SPAN 1105 Spanish Conversation & Composition (A, SP, SU)

1 credit

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.

Lecture: 1 hour

Prerequisite: SPAN 1103; minimum grade of "C" Lab fee: \$10.00

SPAN 1120 Spanish for Law Enforcement (A, SP, SU) 2 credits

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.

Lecture: 2 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$10.00

SPAN 1121 Spanish for Landscaping (A, SP, SU) 2 credits

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.

Lecture: 2 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$10.00

SPAN 1193 Independent Study: Spanish (On Demand) 1-4 credits

Designed to give a student an opportunity for a detailed study of topics of interest in Spanish not otherwise offered.

Lecture: 1 hour

Prerequisite: Varies, minimum grade of "C" Lab fee: \$2.00

SPAN 1194 Special Topics: Spanish (On Demand) 1-4 credits

Designed to give groups of students an opportunity for a detailed study of topics of interest in Spanish not otherwise offered.

Lecture: 1 hour

Prerequisite: Varies, minimum grade of "C" Lab fee: \$2.00

Speech and Hearing Science (SHS)

SHS 2230 Intro to Communication Disorders (SP) 3 credits

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.

Lecture: 3 hours

Prerequisite: Placement into ENGL 1100 Lab fee: \$2.00

Sport and Exercise Studies (SES)

SES 1100 Personal Fitness Concepts (A, SP, SU) 3 credits

This course focuses on fitness issues which affect Americans today and into 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.

Lecture: 3 hours Lab fee: \$10.00

SES 1101 Introduction to Sport & Exercise Studies (A, SP, SU)

3 credits

This course offers a survey of the health and fitness arena, both private and public, including the study of facilities, recreational fitness options for the client, profiles, daily operations, legal aspects, personnel issues, and program administration.

Lecture: 3 hours Lab fee: \$2.00

SES 1102 Recreation & Leisure Operations (A, SP, SU) 3 credits

This course explores and analyzes sport and leisure management from historical and organizational perspectives. Course will also discuss 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.

Lecture: 3 hours

Prerequisite: SES 1101

SES 1104 Yoga (A, SP, SU) 1 credit

This course offers an introduction to yoga to include breathing, strength, balance and flexibility.

Lab: 2 hours Lab fee: \$2.00

SES 1105 Introduction to Strength & Resistance (A, SP, SU)

1 credit

SES 1105 offers 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 are included. Also covered are 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: 2 hours Lab fee: \$10.00

SES 1106 Golf (A, SP, SU)**1 credit**

This course provides an introduction to playing the game of golf. Course includes laboratory experiences which introduce the golf swing and club selection, in addition to driving range and game/course experience.

Lab: 2 hours Lab fee: \$150.00

SES 1108 Women's Self Defense (A, SP, SU)**1 credit**

Course presents basic concepts of and rationale for self-defense training, with special concentrations on the self-defense needs of women. Beginning techniques that empower women to defend themselves in a variety of situations are emphasized.

Lab: 2 hours Lab fee: \$2.00

SES 1109 Bowling (A, SP, SU)**1 credit**

This class offers instruction in the methods of teaching fundamentals and participation in bowling. It includes 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: 2 hours Lab fee: \$50.00

SES 1110 Fitness Kick Boxing (A, SP, SU)**1 credit**

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, tae kwon do and boxing as ways to improve the individual's cardiovascular fitness.

Lab: 2 hours Lab fee: \$2.00

SES 1112 Total Body Conditioning (A, SP, SU)**1 credit**

This course consists of participation in a fitness program to include cardio-respiratory fitness, muscle strength and endurance, strength training and flexibility.

Lab: 2 hours Lab fee: \$2.00

SES 1327 Individual Sport & Activity (A)**2 credits**

SES 1327 presents a survey of individual activities/sports to include equipment, safety concerns, breakdown of skills and game play.

Lecture: 1 hour - Lab: 2 hours

Prerequisite: SES 1101 Lab fee: \$5.00

SES 1328 Team Sport & Activity (SP)**2 credits**

A survey of team activities/sports to include equipment, safety concerns, breakdown of skills and game play.

Lecture: 1 hour - Lab: 2 hours

Prerequisite: SES 1101 Lab fee: \$5.00

SES 2213 Aquatics Management (A, SP, SU)**2 credits**

Course offers a survey of the recreational aquatics environment. Students receive hands-on training in filtration systems and their operation, along with an understanding of federal and state guidelines for licensure for pool operation and maintenance. Legal aspects of the aquatics area are covered, as are staffing requirements and training of aquatics personnel for indoor/outdoor facilities. Students also will complete the American Red Cross Lifeguard Certification as a part of this course.

Lecture: 1 hour - Lab: 2 hours

Prerequisite: SES 1101 Lab fee: \$10.00

SES 2214 Aerobic & Group Fitness (A, SP, SU)**2 credits**

This course offers an introduction into the methods of teaching participation in a fitness program, including a thorough understanding of the fundamental techniques of group exercise. Also covered are the history and value of group exercise for the client, the basic movements of group exercise, and the interpretation of music and language for group fitness conditioning. Students will demonstrate the fundamental techniques of a fitness program including safety, motivation, goal setting and variations of aerobic and group fitness programs as well as proficiency in music and movement.

Lecture: 1 hour - Lab: 2 hours

Prerequisite: SES 1101 Lab fee: \$2.00

SES 2216 Basics of Golf (A, SP, SU)**2 credits**

This course offers an in-depth analysis of the game of golf. It covers the history of the game, the rules which govern play, and a perspective of the growth and increasing significance of the game inside and out of our industry. Offered is a study of the management of the golf facility, turf and environmental issues, employment options and the instruction of the game.

Lecture: 1 hour - Lab: 2 hours Lab fee: \$150.00

SES 2217 Tae Kwon Do (A, SP, SU)**2 credits**

SES 2217 offers instruction in the methods of teaching and participation in Advanced 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 also covered.

Lecture: 1 hour - Lab: 2 hours Lab fee: \$2.00

SES 2222 Tennis (SP, SU)**2 credits**

This course includes instruction in playing and coaching the sport, as well as a thorough presentation of the rules of the game and strategy for mastering it. History of the sport, coaching techniques for the client, tournament set up/implementation for the facility are also covered.

Lecture: 1 hour - Lab: 2 hours

Prerequisite: SES 1101 Lab fee: \$10.00

SES 2223 Racquetball (A, SP)**2 credits**

Course includes instruction in coaching and participation in the sport. Students gain a thorough understanding of the history, rules and strategy of the game. They also learn coaching techniques for clients and tournament set up/implementation for the facility.

Lecture: 1 hour - Lab: 2 hours

Prerequisite: SES 1101 Lab fee: \$10.00

SES 2233 Outdoor Community Recreation (SP, SU)**2 credits**

This course offers a survey of the outdoor recreational market and its application through corporate America. Content will cover outdoor recreational opportunities, basic activities, skills and the necessary equipment, in addition to safety, liability and associate programming issues. The course will also examine the business, career and recreational applications.

Lecture: 1 hour - Lab: 3 hours

Prerequisite: SES 1101 Lab fee: \$75.00

SES 2410 Conditioning and Training the Youth Athlete (A, SP)**3 credits**

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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: SES 1105

SES 2415 Advanced Strength & Resistance Training Concepts (A, SP, SU) 4 credits

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.

Lecture: 3 hour - Lab: 2 hours

Prerequisite: SES 1101 Lab fee: \$20.00

SES 2426 Athletic Injury Control/First Aid (A, SP, SU) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: SES 2440 Lab fee: \$20.00

SES 2437 Health Promotion (A, SP, SU) 3 credits

This course 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.

Lecture: 3 hours

Prerequisite: SES 1101

SES 2438 Fitness Concepts across the Lifespan (A, SP) 3 credits

This course presents a survey of the response of children, seniors, and physically challenged persons to exercise. Emphasis is 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.

Lecture: 3 hours

Prerequisite: SES 1101

SES 2440 Exercise Physiology (A, SP, SU) 4 credits

This course presents human anatomy and physiology as related to physical activity, exercise and work. Course content includes a study of the musculoskeletal and cardiovascular systems, bioenergetics, body composition and behavior modification, and 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 Human Performance Laboratory.

Lecture: 3 hours - Lab: 2 hours

Prerequisite: BIO 2300 Lab fee: \$20.00

SES 2441 Kinesiology (A, SP, SU) 4 credits

SES 2441 is an 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.

Lecture: 3 hours - Lab: 2 hours

Prerequisite: SES 2440 Lab fee: \$20.00

SES 2442 Exercise Prescription & Quantitative Analysis (On Demand) 3 credits

This course presents 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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: SES 2440

SES 2443 Advanced Athletic Assessment (A, SP, SU) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: SES 2415 Lab fee: \$20.00

SES 2444 Advance Athletic Conditioning (A, SP) 3 credits

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.

Lecture: 2 hours - Lab: 2 hours

Prerequisite: SES 2415

SES 2524 Sport Management Foundations (A, SP, SU) 3 credits

This course offers an advanced study of sport and business management theory applied in the sport environment. It includes an analysis of organizational structure/theory and management style application. Also covered are an overview of the budgeting, personnel process, staffing requirements and staff development procedures including advanced budgetary practice. SES 2524 presents a study of activity programming/facility needs and customer service protocols for the sport environment to include ethics, leadership strategies, risk management, evaluation procedures, as well as proper equipment care and storage.

Lecture: 3 hours

Prerequisite: SES 1101 Lab fee: \$2.00

SES 2528 Casino Culture (SP, SU) 3 credits

This course analyzes the operations of casinos and examines the many internal and environmental cultures that surround and make up the casino. Students will study the structures of the casino organizations into departments and their function. Also discussed is the examination of the interior culture of casinos: how their culture, organization, management, and make-up have evolved. Finally, the course looks at casino culture as part of larger and local communities through its addressing of gambling and addictive behaviors, and how it functions as a community-minded business.

Lecture: 3 hours

SES 2529 Sport & Event Management (A) 3 credits

This course will detail how sport and event managers design, plan, and market a sporting event of any size. It will cover the management of revenue streams and cost identification, as well as sponsorship arrangements and solicitation. The course will describe the safety requirements to ensure the safety of staff and attendees. This course will also look at legal compliance, risk management, financial control, and evaluation of the success of an event.

Lecture: 3 hours

Instructor permission required

SES 2534 Sport Marketing (A, SP, SU) 3 credits

This course offers an advanced study of marketing strategies for the sport environment, both internal and external. Concepts for promotional activity and promotional guidelines are discussed. Also covered are the budgetary process, differentiation of budget styles, and implementation of the budgetary process in both the private and public sectors.

Lecture: 3 hours

Prerequisite: SES 1101 Lab fee: \$2.00

SES 2535 Sport Law (A, SP, SU) 3 credits
This course presents a survey of the legal framework of the athletic environment. It includes a study of the nature of the legal system and the law pertaining to sports, tort law, contractual agreements and civil law.
Lecture: 3 hours
Prerequisite: SES 1101

SES 2544 Recreational Administration & Programming in Sports (On Demand) 3 credits
This course offers a study of the recreational environment. Included in course content are an overview of program delivery, facilities, maintenance, and equipment, as well as the various avenues for sport and recreation: intramural/extramural sport, informal club sport, instructional sport and fitness.
Lecture: 3 hours
Prerequisite: SES 1101

SES 2548 Adapted Physical Education Programming (SU) 3 credits
The Adapted Physical Education Programming course is based upon the concept of service-learning. This particular course was designed to enable the students enrolled to serve the annual Nationwide Children's Hospital Myelo Camp.
Lecture: 3 hours
Prerequisite: SES 1101

SES 2625 Concepts of Coaching (A, SP) 3 credits
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 encountered 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. Also presented are lessons on development of policies related to athlete usage and consequences and/or interaction guidelines.
Lecture: 3 hours
Prerequisite: SES 1101

SES 2626 Coaching the Young Athlete (A, SP) 3 credits
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.
Lecture: 3 hours
Prerequisite: SES 1101

SES 2660 Ethics in Sport (A, SP, SU) 3 credits
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.
Lecture: 3 hours
Prerequisite: SES 1101

SES 2670 Sport Psychology (A, SP) 3 credits
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.
Lecture: 3 hours
Prerequisite: SES 1101

SES 2680 History of Physical Education/Sport (A, SP, SU) 3 credits
This course offers an in-depth study of the history of sport in the United States and the impact of sport upon society.
Lecture: 3 hours
Prerequisite: SES 1101

SES 2694 Special Topic: Sport (A, SP, SU) 1-3 credits
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.
Lecture: 1-3 hours
Instructor permission required Lab fee: \$2.00

SES 2700 Sport Tourism (A, SP, SU) 3 credits
This course explores the basic concepts pertaining to sport tourism and highlights the growth in the sport tourism industry. It also will provide insight into the government regulations associated with the sport tourism industry.
Lecture: 3 hours
Prerequisite: SES 1101

SES 2710 Sport Finance (A, SP, SU) 3 credits
This course is designed to provide the prospective sport manager with an overview of the major financial issues he/she might face in 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. Also discussed will be auditing and budgeting as it relates to a successful sport organization.
Lecture: 3 hours
Prerequisite: SES 2524

SES 2711 Financial Controls and Regulations (A, SU) 3 credits
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.
Lecture: 3 hours

SES 2712 Promotion and Public Relations in Sport and Events (A, SP) 3 credits
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 in relationships with its publics, and foster desirable relationships between the organization and its publics.
Lecture: 3 hours

SES 2720 Facilities Management (A, SP, SU) 3 credits
This course discusses the multiple 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. Course also includes 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.
Lecture: 3 hours
Prerequisite: SES 1101

3 credits

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 a variety of approaches that can be tailored to large or small events.

Lecture: 3 hours

Prerequisite: SES 2524

SES 2740 Dimensions of Wellness (A, SP, SU) 3 credits

The word “wellness” so often appears in the news, on billboards, and in everyday conversation, but what is wellness? 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.

Lecture: 3 hours

Prerequisite: SES 1100

SES 2750 Chronological & Physiological Wellness (A, SP, SU) 3 credits

This course is designed to develop knowledge and awareness of the major physiological changes that occur in humans relative to chronological aging. Students will use a dimensional wellness approach to design chronological wellness programming.

Lecture: 3 hours

Prerequisite: SES 1100

SES 2760 Clinical & Corporate Wellness (A, SP, SU) 3 credits

This course is designed to develop knowledge and awareness of the major issues in the field of worksite 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 costs of unhealthy lifestyle choices for the individual and the employer and their relationship to the workplace will be explored.

Lecture: 3 hours

Prerequisite: SES 1100

SES 2770 Society and Wellness (A, SP, SU) 3 credits

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.

Lecture: 3 hours

Prerequisite: SES 1100

SES 2950 SES Practicum/Seminar (A, SP, SU) 2 credits

This course presents an opportunity for practical training in the sport profession to include activity preparation, personnel evaluation and budget analysis. 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.

Seminar: 1 hour – Practicum: 7 hours

Instructor permission required Lab fee: \$2.00

correlation and linear regression, basic concepts in probability and simulation, sampling distributions and the Central Limit Theorem, confidence intervals, and significance testing.

Lecture: 3 hours

Prerequisite: MATH 1025 or MATH 1030 or MATH 1050, minimum grade of “C” or by placement by COMPASS, ACT test, or MATH 1099 equivalent Lab fee: \$2.00

STAT 1450 The Practice of Statistics (A, SP, SU) 4 credits

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.

Lecture: 3 hours – Lab: 2 hours

Prerequisites: MATH 1116, MATH 1130, MATH 1148 or MATH 1150, minimum grade of “C” Lab fee: \$7.00

STAT 2430 Business Statistics (A, SP, SU) 5 credits

STAT 2430 is designed to acquaint students with statistical methods used in gathering and analyzing data. The course covers 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; Chi-Square test of independence; and multiple linear regression. Applications for business, management and economics are emphasized.

Lecture: 4 hours - Lab: 2 hours

Prerequisite: MATH 1131 or MATH 1151, minimum grade of “C” Lab fee: \$7.00

STAT 2450 Introduction to Statistics Analysis (SU) 4 credits

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.

Lecture: 3 hours – Lab: 2 hours

Lab Fee: \$7.00

Prerequisite: MATH 1131 or MATH 1151, minimum grade of “C”

STAT 2470 Introduction to Probability Statistics Engineering/ Science (A, SP) 4 credits

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.

Lecture: 3 hours – Lab: 2 hours

Prerequisites: MATH 1152 or MATH 1172; minimum grade of “C” Lab fee: \$7.00

Statistics (STAT)

STAT 1350 Elementary Statistics (A, SP, SU) 3 credits

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,

Sterile Processing Technology (SPT)

SPT 1861 Sterile Processing Tech I (A) 9 credits

This course presents and discusses the development and history of a modern Sterile Processing Department. It also looks at the roles and responsibilities of Sterile Processing Technicians. Class reviews the anatomy and physiology of the human body in relation to processing of medical devices and patient care equipment. There is a discussion of basic microbiology and the identification of common microbes and diseases found in today's health care environment. Course also introduces infection control techniques in relation to disease transmission and demonstrates appropriate decontamination techniques and protocol of medical devices and patient care equipment to eliminate the occurrence of a health care-acquired infection. Course discusses federal and private organizations affecting daily functions in this field of study, as well as the legal and ethical aspects of Sterile Processing practice. Course provides hands-on clinical experience in understanding the Central Service Department workflow: decontamination (Soiled Items) to Preparation/Packaging/Sterilization (Clean Items) to Sterile Storage (Sterile Items). Students will learn to utilize medical terminology to interpret correct procedures listed on surgery schedules/preference sheets/instrument count sheets and to use their knowledge of anatomy in identifying surgical procedures and sterile supplies associated with those procedures while performing the activity of pulling case carts. Students will learn to don personal protective equipment (PPE) in the decontamination area and utilize PPE during the sorting and washing activities performed in that area because they have grasped the concept of transmission of microorganisms. Course further demonstrates the appropriate use of tools for cleaning, i.e., brushes, sponges, stylets, high pressure nozzles, etc., in the decontamination area. Manufacturer's recommendations will be referenced for appropriate washing and sterilization of equipment and instrumentation. Students will learn and demonstrate proper hand hygiene and will apply the use of universal standard precautions for infection prevention and control.

Lecture: 4 hours - Clinical: 15 hours

Prerequisite: Admission to the SPT program Lab fee: \$50.00

SPT 1862 Sterile Process Tech II (SP) 9 credits

This course presents and discusses the techniques and protocol of processing patient care equipment. Students will learn about the various packaging methods currently in use in today's health care environment for sterile processing of critical medical devices. There will be discussion and identification of surgical instruments, including techniques for recognizing instrumental damage and/or poor working condition to allow technicians to remove items for preventive maintenance. There will also be discussion and identification of the various methods of sterilization currently used in health care and of appropriate monitoring techniques used to achieve the required degree of sterile assurance level. Identification of sterile storage procedures and concepts. Review and demonstration of appropriate distribution methods and effect each has on the cost of medical/surgical supplies. Course will present and discuss the history, development and current trends in the daily operation of modern hospitals, as well as hospital governance, administration and management. Course includes a review of the functions of clinical inpatient care areas, outpatient care, surgery, emergency services, ancillary diagnostic and rehabilitation services. Students will also explore patient, facility and administrative support services. There will be discussion of the critical, interrelated functions of all the departments of a hospital to insure quality patient care is delivered. Students will be introduced to hospital budgeting, marketing, financing, billing, quality improvement and accreditation. Case studies will be used

to emphasize ethical concerns that may arise in performance of duties.

Lecture: 4 hours - Clinical: 15 hours

Prerequisite: SPT 1861 Lab fee: \$50.00

SPT-1863 Sterile Process Technology BIO (A, SP, SU) 2 credits

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. Course also introduces basic sciences and scientific vocabulary, including anatomy, physiology, microbiology, and medical terminology. 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.

Lecture: 2 hours Lab fee: \$111.90

Supply Chain Management (SCM)

SCM 1100 Supply Chain Management Principles (A, SP, SU)

3 credits

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.

Lecture: 3 hours Lab fee: \$1.00

SCM 1100A Supply Chain Management Principles-A (On Demand)

1 credit

SCM 1100A provides an abridged 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.

Lecture: 1 hour Lab fee: \$1.00

SCM 1100B Supply Chain Management Principles-B (On Demand)

2 credits

SCM 1100-B provides a more extensive overview of the key processes, concepts, and methodologies of supply chain management. The course relies more significantly on projects, case studies and additional content from the text book. 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.

Lecture: 2 hours Lab fee: \$1.00

SCM 1101 Transportation & Traffic Management (A) 3 credits

SCM 1101 is designed to provide the student with a practical learning experience of what a person in traffic management might encounter in his or her daily work schedule. Course will also review some of the evolution 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.

Lecture: 3 hours

Prerequisite: SCM 1100 Lab fee: \$1.00

SCM 1101A Transportation & Traffic Management-A (On Demand) 1 credit

SCM 1101A is designed to provide the student with an abridged, 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.

Lecture: 1 hour

SCM 1101B Transportation & Traffic Management-B (On Demand) 2 credits

SCM 1101B is designed to provide the student with a more extensive, practical learning experience of what a person in traffic management might encounter in his or her daily work schedule. Course will also review some of the evolution 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.

Lecture: 2 hours

Prerequisite: SCM 1100 Lab fee: \$1.00

SCM 1190 International Business (A, SP, SU) 3 credits

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 an organization's 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.

Lecture: 3 hours Lab fee: \$1.00

SCM 1501 IT in Logistics (A, SP) 3 credits

SCM 1501 introduces students to the IT 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.

Lecture: 3 hours

Prerequisite: SCM 1100 Lab fee: \$1.00

SCM 1510 Strategic Procurement (A, SP) 4 credits

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.

Lecture: 4 hours

Prerequisite: SCM 1100 Lab fee: \$2.00

SCM 1510A Strategic Procurement-A (A, SP) 1 credit

Through adaptive learning, SCM 1510A 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, cost management and the establishment of teams to support complex supply chain and logistic programs.

Lecture: 1 hour

SCM 1510B Strategic Procurement-B (A, SP) 3 credits

Through the textbook, projects and case studies, SCM 1510B 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, cost management, and the establishment of teams to support complex supply chain and logistic programs. Lecture: 3 hours

Prerequisite: SCM 1100, SCM 1510A Lab fee: \$2.00

SCM 2110 Warehouse Management (A, SP) 4 credits

SCM 2110 is a basic warehouse management procedures and skills course that focuses on "nuts & bolts" warehousing skills including basic warehousing functions and supporting skills such as: receiving, storage, order picking, shipping, 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.

Lecture: 4 hours

Prerequisite: SCM 1100 Lab fee: \$2.00

SCM 2110A Warehouse Management-A (On Demand) 1 credit

Through online, adaptive learning material, SCM 2110A gives students an abridged overview of warehouse management procedures and skills. The course focuses on "nuts & bolts" warehousing skills including basic warehousing, e.g.: receiving, storage, order picking, 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.

Lecture: 1 hour

Prerequisite: SCM 1100 Lab fee: \$2.00

SCM 2110B Warehouse Management-B (On Demand) 3 credits

Through textbook, projects and case studies, SCM 2110B gives students a more extensive overview of warehouse management procedures and skills. The course focuses on “nuts & bolts” warehousing skills including basic warehousing functions and supporting skills such as: receiving, storage, order picking, shipping, 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.

Lecture: 3 hours

Prerequisite: SCM 1100 Lab fee: \$2.00

SCM 2111 Inventory Management (A, SP) 3 credits

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.

Lecture: 3 hours

Prerequisite: SCM 1100 Lab fee: \$1.00

SCM 2111A Inventory Management-A (On Demand) 1 credit

SCM 2111A discusses inventory management. It covers such topics as purchasing, physical distribution, and just-in-time manufacturing.

Lecture: 1 hour

SCM 2111B Inventory Management-B (On Demand) 1 credit

SCM 2111B discusses inventory management and control functions giving an overview of the topic and specifically covering total quality management.

Lecture: 1 hour

Prerequisite: SCM 1100, SCM 2111A, SCM 2111C Lab fee: \$2.00

SCM 2111C Inventory Management-C (On Demand) 1 credit

SCM 2111C specifically discusses the demand planning side of inventory management. It covers such topics as forecasting and economic order quantity.

Lecture: 1 hour

SCM 2160 Perishable Supply Chain & Logistics (A) 3 credits

SCM 2160 provides an in-depth analysis of the key processes, concepts, and methodologies of the business management of the perishable supply chain and logistics, including such perishables as pharmaceuticals, food products, and transplantable organs and tissues. Emphasis is given to the study of the impact that the supply chain management and logistics has on perishable items, including procurement, inventory, distribution, transportation and information technology components. Businesses managing perishables focus on the critical attributes of security, speed, and cost, using technology including RFID and GPS tracking. The decision making process within supply chain and logistics and other consideration areas will be covered. The overall focus is the strategic impact and significance that supply chain and logistics has on firms managing perishable items and products.

Lecture: 3 hours

Prerequisite: SCM 1510 Lab fee: \$1.00

SCM 2250 International Shipping (A, SP, SU) 3 credits

SCM 2250 discusses international shipping issues from the perspective of logistical services users, e.g., importers, exporters, and international firms. Course looks at 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 Incoterms®.

Lecture: 3 hours

Prerequisite: SCM 1100 Lab fee: \$1.00

SCM 2290 Introduction to Import/Export Regulations and Compliance (SP) 4 credits

SCM 2290 presents 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.

Lecture: 4 hours

Prerequisite: SCM 1100 Lab fee: \$3.00

SCM 2450 Transportation Rates & Claims (A) 3 credits

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.

Lecture: 3 hours

Prerequisite: SCM 1100 Lab fee: \$2.00

SCM 2460 Procurement Planning & Negotiations (SP) 3 credits

SCM 2460 is a capstone course 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, acquisition planning process, customer relations and control functions such as inventory control, budgeting, and production in today’s business environment.

Lecture: 3 hours

Prerequisite: SCM 1510 Lab fee: \$2.00

SCM 2601 Performance Management for SCM Managers (A, SP) 3 credits

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 placed 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.

Lecture: 3 hours

Prerequisites: SCM 1510, SCM 2110, ACCT 1211 Lab fee: \$1.00

SCM 2802 SCM Seminar (SP) 1 credit

SCM 2802 focuses on the application of logistics knowledge to specific areas of on-the-job experience. Course is open only to Supply Chain Management Technology students who have completed 12 hours in the technology and have permission of the instructor.

Seminar: 1 hour

Instructor permission required

Corequisite: SCM 2902 Lab fee: \$1.00

SCM 2902 SCM Practicum (SP) **1 credit**
SCM 2902 presents an opportunity for supervised, on-the-job application of knowledge and skills acquired in the classroom. Open only to Supply Chain Management Technology students who have completed 12 hours in the technology and have permission of the instructor.
Practicum: 7 hours
Instructor permission required
Corequisite: SCM 2802 Lab fee: \$1.00

SCM 2910 CLA Certification (A) **1 credit**
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.
Lecture: 1 hour Lab fee: \$1.00

SCM 2911 CLT Certification (A) **1 credit**
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.
Lecture: 1 hour Lab fee: \$1.00

SCM 2994 SCM Current Topics (On Demand) **1-3 credits**
SCM 2994 gives students an opportunity to examine, in detail, special topics of interest in supply chain management (logistics). Topics will vary.
Lecture: Hours vary Lab fee: \$2.00

Surgical Technology (SURG)

SURG 1861 Surgical Technology I (A) **6 credits**
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. The principles of aseptic technique to include surgical asepsis, scrubbing, gowning, gloving, sterilization, disinfection, and operating room sanitation are explored. Course introduces direct patient care interventions to include positioning, prepping, draping techniques, and related operative procedures. Anesthesia and pharmacological considerations for patient surgical care are investigated. Students will learn the surgical use of instrumentation as well as the utilization of common surgical supplies. 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. Preadmission to the program is required before enrolling in this course.
Lecture: 2 hours - Clinical: 12 hours Lab fees: \$50.00

SURG 1862 Surgical Technology II (SP) **6 credits**
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 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.
Lecture: 2 hours - Clinical: 12 hours
Prerequisite: SURG 1861 Lab fees: \$50.00

SURG 1863 Surgical Technology III (SU) **8 credits**
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.
Lecture: 3 hours - Clinical: 15 hours
Prerequisite: SURG 1862 Lab fees: \$50.00

SURG 2864 Surgical Technology IV (A) **6 credits**
The principles of asepsis and the patient care concepts of positioning, prepping, draping, and procedural techniques are directly applied to the investigation of Plastic and Reconstructive, Otorhinolaryngology and Throat (EENT), Ophthalmic (OP), Thoracic, Peripheral Vascular (PV), and Cardiovascular (CV) surgical services. The role of the surgical technologist as the "scrub" member and as the "circulator" member of the surgical team continues to be explored throughout various surgical procedures. Investigation of instrumentation, sutures, needles, dressings, packings, and drainage tubes/systems will continue with a focus on ocular implants, microscopic use, skin grafting techniques, liposuction use, mammoplasty implants, inner ear shunts, and tracheotomy tubes, endoscopy use, chest tubes, cardiopulmonary bypass, vascular autografts and allografts, intra aortic balloon pumps, and vascular 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 and ambulatory surgery centers.
Lecture: 2 hours – Clinical: 12 hours
Prerequisite: SURG 1863 Lab fees: \$50.00

SURG 2865 Surgical Technology V (SP) **9 credits**
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.

Lecture: 4 hours – Clinical: 15 hours

Prerequisite: SURG 2864 Lab fees: \$50.00

Surveying (SURV)

(See Civil Engineering Technology CIVL for Surveying course descriptions)

Theatre (THEA)

(Also see Communication)

THEA 1100 Introduction to Theatre (A, SP, SU) 3 credits

This course is designed to help students bring critical thinking skills into their experience as theatre goers.

Lecture: 3 hours

Prerequisite: ENGL 1100 Lab fee: \$2.00

THEA 1180 Theatre Practicum (A, SP, SU) 3 credits

This is a supervised practical experience in acting in a theatre production.

Lecture: 1 hour – Lab: 6 hours

Prerequisites: THEA 1100 and permission of instructor

Lab fee: \$2.00

THEA 2205 Technical Production Practicum (A, SP, SU) 2 credits

This course offers a supervised practical experience in the technical area(s) of a theatre production.

Lab: 4 hours

Prerequisite: THEA 1100 or permission of instructor

Lab fee: \$2.00

THEA 2210 Technical Production: Stage Lighting (On Demand) 2 credits

This course presents an introduction to the basic principles and functions of stage lighting.

Lecture: 1 hour - Lab 3 hours

Prerequisite: THEA 1100 Lab fee: \$2.00

THEA 2215 Fundamentals of Script Analysis (On Demand) 3 credits

THEA 2215 offers an intensive study of the play script as a basis for production. Students will learn techniques for assessing a script from the diverse perspectives of designers, directors, and performers.

Lecture: 3 hours

Prerequisites: THEA 2280 Lab fee: \$3.00

THEA 2230 Introduction to Dramatic Literature (A, SP) 3 credits

In this course, students will study selected masterpieces of Western drama and discuss their social, political and cultural influences.

Lecture: 3 hours

Prerequisite: ENGL 1100 Lab fee: \$2.00

THEA 2231 Literature for Theatre I (A) 3 credits

This course presents 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.

Lecture: 3 hours

Prerequisites: THEA 1100 Lab fee: \$2.00

THEA 2232 Literature for Theatre II (SP) 3 credits

This course offers a survey of representative world drama and theatre from the 19th century to the present with a focus on plays as potential theatre.

Lecture: 3 hours

Prerequisites: THEA 1100 Lab fee: \$2.00

THEA 2280 Fundamentals of Acting (A, SP, SU) 3 credits

This course covers the basic principles of stage acting. Areas of emphasis include stage movement, vocal delivery, body language, concentration techniques, and basic script analysis and scoring.

Lecture: 1 hour – Lab: 4 hours Lab fee: \$2.00

THEA 2281 Advanced Acting: Styles of Performance (A, SP) 3 credits

This is a second-level acting course. It is focused on the stylistic demands of acting in various genres and historical styles, including Shakespeare.

Lecture: 1 hour – Lab: 4 hours

Prerequisites: THEA 2280 Lab fee: \$2.00

THEA 2283 Writing Plays (A, SP) 3 credits

This course introduces the art and craft of writing plays. Emphasis is on the student's own work.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: ENGL 1100 Lab fee: \$2.00

THEA 2293 Independent Study: Theatre (On Demand) 1-3 credits

Course offers opportunity for independent study in individual topics and projects in theatre designed to meet specific needs.

Lecture: 1 hour

Prerequisite: THEA 1100, and permission of instructor

Lab fee: \$2.00

Veterinary Technology (VET)

VET 1103 Introduction to Small Animal Medicine (A) 2 credits

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.

Lecture: 1 hour - Lab: 2 hours Lab fee: \$79.50

VET 1105 Veterinary Parasitology (A) 2 credits

VET 1105 offers 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.

Lecture: 1 hour - Lab: 2 hours

Corequisite: VET 1103 Lab fee: \$84.10

VET 1324 Principles of Veterinary Radiology (A, SP) 1 credit

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.

Lecture: 1 hour

Prerequisites: BIO 1121, BIO 1122 Lab fee: \$24.00

VET 1331 Veterinary Anatomy & Physiology (SP) 2 credits
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.
Lecture: 2 hours
Prerequisites: BIO 1121, BIO 1122 Lab fee: \$19.00

VET 1335 Clinical Pathology I (SP) 4 credits
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.
Lecture: 2 hours – Lab: 6 hours
Prerequisites: BIO 1121, BIO 1122 Lab fee: \$126.35

VET 1338 Veterinary Surgical Techniques (SP) 2 credits
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.
Lecture: 2 hours
Prerequisites: VET 1103, BIO 1121, BIO 1122 Lab fee: \$14.50

VET 1426 Principles of Veterinary Anesthesia (A, SP) 3 credits
This course provides an introduction to veterinary anesthesia that correlates principles of animal physiology as it pertains to anesthetic agents. Students will learn patient pre-anesthetic evaluation, properties and uses of pre-anesthetic 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.
Lecture: 2 hours – Lab: 2 hours
Prerequisites: BIO 1121, BIO 1122 Lab fee: \$66.65

VET 1501 Animal Nutrition (SU) 2 credits
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.
Lecture: 2 hours

VET 1502 Laboratory and Exotic Animal Medicine (SU) 1 credit
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.
Lecture: 0.5 hours - Lab: 1 hour Lab fee: \$122.50

VET 1533 Clinical Application I (SP, SU) 2 credits
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: 4 hours
Prerequisites: VET 1324, VET 1331, VET 1338, VET 1426
Lab fee: \$264.15

VET 1536 Small Animal Health & Disease (SU) 2 credits
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.
Lecture: 2 hours
Prerequisite: VET 1103 Lab fee: \$20.00

VET 2535 Clinical Pathology II (A, SP) 4 credits
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.
Lecture: 2 hours – Lab: 6 hours
Prerequisite: VET 1335 Lab fee: \$297.36

VET 2562 Veterinary Pharmacology (A, SP) 2 credits
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.
Lecture: 2 hours
Prerequisites: VET 1331, VET 1426
Lab fee: \$17.00

VET 2563 Clinical Application II (A, SP) 2 credits
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: 64 hours
Prerequisites: VET 1105, VET 1335, VET 1501, VET 1502, VET 1533, VET 1536 Lab fee: \$226.00

VET 2566 Large Animal Health & Disease (A, SP, SU) 2 credits
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.
Lecture: 2 hours
Prerequisite: VET 1103

VET 2599 Clinical Application III (A, SP) 2 credits
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: 4 hours
Prerequisites: VET 1105, VET 1335, VET 1501, VET 1502, VET 1533, VET 1536, VET 2563 Lab fee: \$149.30

VET 2800 Veterinary Seminar I (A, SP) 1 credit
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.

Seminar: 1 hour Prerequisites: VET 1105, VET 1335, VET 1501, VET 1502, VET 1533, VET 1536
Corequisite: VET 2900

VET 2820 Veterinary Seminar A/B (A) 1 credit

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 are discussed.

Seminar: 1 hour Prerequisites: VET 1105, VET 1335, VET 1501, VET 1502, VET 1533, VET 1536
Corequisites: VET 2921, VET 2922

VET 2830 Veterinary Seminar C/D (SP) 1 credit

This course 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 examined.

Seminar: 1 hour
Prerequisites: VET 1105, VET 1335, VET 1501, VET 1502, VET 1533, VET 1536
Corequisites: VET 2931, VET 2932

VET 2850 Veterinary Seminar II (A, SP) 1 credit

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.

Seminar: 1 hour
Prerequisite: VET 2800
Corequisite: VET 2950

VET 2900 Veterinary Practicum I (A, SP) 2 credits

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.

Practicum: 14 hours

Prerequisites: VET 1105, VET 1335, VET 1501, VET 1502, VET 1533, VET 1536 Lab fee: \$168.00

VET 2921 Veterinary Practicum A (A) 1 credit

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.

Practicum: 7 hours
Prerequisites: VET 1105, VET 1335, VET 1501, VET 1502, VET 1533, VET 1536 Lab fee: \$93.00

VET 2922 Veterinary Practicum B (A) 1 credit

This course is a continuation of VET 2921 designed for the evening program student.

Practicum: 7 hours
Prerequisites: VET 1105, VET 1335, VET 1501, VET 1502, VET 1533, VET 1536 Lab fee: \$93.00

VET 2931 Veterinary Practicum C (SP) 1 credit

This course is a continuation of VET 2922 designed for the evening program student.

Practicum: 7 hours
Prerequisites: VET 1105, VET 1335, VET 1501, VET 1502, VET 1533, VET 1536 Lab fee: \$93.00

VET 2932 Veterinary Practicum D (SP) 1 credit

This course is a continuation of VET 2931 designed for the evening program student.

Practicum: 7 hours
Prerequisites: VET 1105, VET 1335, VET 1501, VET 1502, VET 1533, VET 1536 Lab fee: \$93.00

VET 2950 Veterinary Practicum II (A, SP) 2 credits

This course is a continuation of VET 2900.

Practicum: 14 hours
Prerequisites: VET 1105, VET 1335, VET 1501, VET 1502, VET 1533, VET 1536 Lab fee: \$168.00

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Directories

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 Assistant Professor Jonathan M. Kreger, B.S., Northern Michigan University, M.A., Wayne State University;
 Professor Tracy L. Little, B.S., University of Tennessee at Chattanooga, M.A., Ph.D., The Ohio State University
 Associate Professor Rebecca Mobley, B.A., Beloit College, M.A., Indiana University
 Instructor Amy Ng, ABD Capella University, B.S. Ohio University, MSCJA, Tiffin University

Associate Professor Adam N. Moskowitz, B.A., M.A., Ph.D., The Ohio State University
 Associate Professor Eric C. Neubauer, B.S., West Liberty State College, M.A., Ph.D., The Ohio State University
 Instructor Irene Petten, B.A., Temple University, M.A., Ph.D., University of Reading, UK
 Professor Mary Lia Reiter, B.B.A., Texas A & M University; M.A., J.D., The Ohio State University
 Instructor Shauna Sowga, B.A., Concordia College, M.S., North Dakota State University
 Associate Professor James A. Stewart, B.A., M.A., The Ohio State University
 Associate Professor Erica D. Swarts, B.A., Miami University, M.A., Ph.D., The Ohio State University

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Faculty

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 Assistant Professor Don C. Laubenthal, B.S. and M.S., Ohio University, NSCA CSCS
 Associate Professor Antoinette Perkins, B.S., University of Florida, M.A., Ball State University, Ph.D., Capella University
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 Joshua J. Bowles, Central Sterile Supply Unit Mgr. OSU Medical Center

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- Emily McClune, Surgery Unit Education Coord.. Mount Carmel East
- Susan Curren, Sterile Processing Unit Manager.... Mount Carmel East
- Joshua J. Bowles, Central Sterile Supply Unit Mgr.OSU Medical Center

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Program Coordinator, Instructor, Peggy Williams, D.V.M., *The Ohio State University*

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Associate Professor Terence A. Olive, D.V.M., *The Ohio State University*

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- Michael Kelleher, D.V.M..... Healthy Pets of Rome Hilliard
- Gwen E. Myers, D.V.M..... MedVet Medical Center for Pets
- Linda Larger..... Community Member
- Abraham Osorio R.V.T Health Pets of Lewis Center

Accreditations and Certifications

Columbus State Community College is accredited by The Higher Learning Commission, Member-North Central Assn. (NCA), 230 S. LaSalle St., Suite 7-500, Chicago, IL 60604-1413, 312-263-0456 or 800-621-7440, www.ncahlc.org. Many of

Columbus State's degree programs are accredited by professional associations and agencies as listed below.



Electronic Engineering Technology
ABET Technology Accreditation Commission
415 N. Charles St.
Baltimore, MD 21201
410-347-7700 www.abet.org

Landscape Design and Management
Professional Landscape Network (PLANET)
150 Elden Street, Suite 270
Herndon, VA 20170
703-736-9666

Business and Marketing

**Accounting, Finance, Business Management,
Business Office Administration, Human Resources
Management Technology, Marketing,
Supply Chain Management**

Accreditation Council for Business Schools and
Programs (ACBSP)
7007 College Boulevard, Suite 420
Overland Park, KS 66211
913-339-9356

Paralegal Studies

American Bar Association
Standing Committee on Legal Assistants
321 North Clark Street,
Chicago, Illinois 60654-7598
312-988-5618

Construction Sciences & Engineering Technologies

Automotive Technology & Ford ASSET
National Institute for Automotive Service
Excellence (ASE)
National Automotive Technicians Education
Foundation (NATEF)
101 Blue Seal Drive, Suite 101
Leesburg, VA 20175
703-669-6650

Aviation Maintenance Technology

Federal Aviation Administration
2780 Airport Drive, Suite 300
Columbus, OH 43219
614-255-3120

Construction Management

Amer. Council of Construction Education (ACCE)
1717 North Loop 1604 East, Suite 320
San Antonio, TX 78232-1570
210-495-6161 acce@acce-hq.org

Health and Human Services

Health-Related Programs

Dental Hygiene
American Dental Association Commission on
Dental Accreditation
211 East Chicago Avenue
Chicago, IL 60611-2678
312-440-4653

Health Information Management Technology

Commission on Accreditation for Health Informatics and
Information Management Education (CAHIIM)
233 N. Michigan Avenue, Suite 2150
Chicago, IL 60601-5800
312-233-1100

Medical Assisting

Commission on Accreditation of Allied Health
Education Programs (CAAHEP)
1361 Park Street
Clearwater, FL 33756 727-210-2354

Medical Laboratory Technology and

Multi-Competency Health (Phlebotomy)
National Accrediting Agency for Clinical Laboratory
Sciences (NAACLS)
5600 N. River Road, Suite 720
Rosemont, IL 60018-5119
713-714-8880

Nursing

Accreditation Commission for Education in Nursing
(ACEN)
3343 Peachtree Road, NE, Suite 850
Atlanta, GA 30326 404-975-5000

Ohio Board of Nursing
17 S. High Street, Suite 400
Columbus, OH 43215-7410
614-466-3947

Nurse Aide Training Program (NATP)
Ohio Department of Health NATCEP Unit
246 North High Street
Columbus, OH 43216 614-752-8285

Practical Nursing
Ohio Board of Nursing
17 S. High Street, Suite 400
Columbus, OH 43215-7410
614-466-3947

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

Respiratory Care
Commission on Accreditation for Respiratory Care
(CoARC)
1248 Harwood Road, Bedford, TX 76021-4244
817-283-2835

Surgical Technology
Commission on Accreditation of Allied Health
Education Programs (CAAHEP)
1361 Park Street
Clearwater, FL 33756
727-210-2350

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

Human Services Programs

Early Childhood Development and Education
National Association for the Education of Young
Children
Marcia Mitchell, Accreditation Coordinator
1313 L Street NW, Suite 500
Washington, DC 20005-4101
202-232-8777

Ohio Department of Education
25 South Front Street
Columbus, OH 43215-4183
614-995-1545

**Emergency Medical Technician–Paramedic
Program**
The Commission on Accreditation of Allied
Health Education Programs (CAAHEP) Upon
Recommendation of the Committee on Accreditation
of Educational Programs for the Emergency Medical
Services Professions
(CoAEMSP #600009)
8301 Lakeview Parkway, Suite 111-312
Rowlett, TX 75088 214-703-8445

**Emergency Medical Technician (EMT) and
Paramedic Programs**
Ohio Department of Public Safety (#311)
Division of EMS, P.O. Box 182073
Columbus, OH 43219 614-466-9447
Fire Science Charter
Ohio Department of Public Safety
Division of EMS, P.O. Box 182073
Columbus, OH 43219
614-466-9447

Interpreter Education Program
Ohio Department of Education
25 S. Front Street
Columbus, OH 43215-4183
614-995-1545

Law Enforcement Academy
Basic Training Academy
Ohio Peace Officer Training Commission
Ohio Attorney General's Office
P. O. Box 309
London, OH 43140

Massage Therapy
The State Medical Board of Ohio
30 East Broad Street, 3rd Floor
Columbus, OH 43215-6127
614-466-3934

Social and Human Services
Council for Standards in Human Service
Education (CSHSE)
Susan Kincaid, Ph.D., VP, Program Accreditation
PMB 703, 1050 Larrabee Avenue, Suite 104
Bellingham, WA 98225-7367

Hospitality, Sport & Exercise Studies

Culinary Apprenticeship Major, Restaurant and Foodservice Management Major

American Culinary Federation Education Foundation
Accrediting Commission
180 Center Place Way
St. Augustine, FL 32095
800-624-9458

Dietetic Technician Major

Accreditation Council for Education in Nutrition and
Dietetics
Academy of Nutrition and Dietetics
120 South Riverside Plaza, Suite 2000
Chicago, IL 60606-6995
800-877-1600 ext. 4874

Dietary Manager Certificate

Association of Nutrition & Foodservice Professionals
406 Surrey Woods Drive
St. Charles, IL 60174
800-323-1908

Hospitality Management

Accrediting Commission for Programs in Hospitality
Administration
P.O. Box 400, Oxford, MD 21654
410-226-5527

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