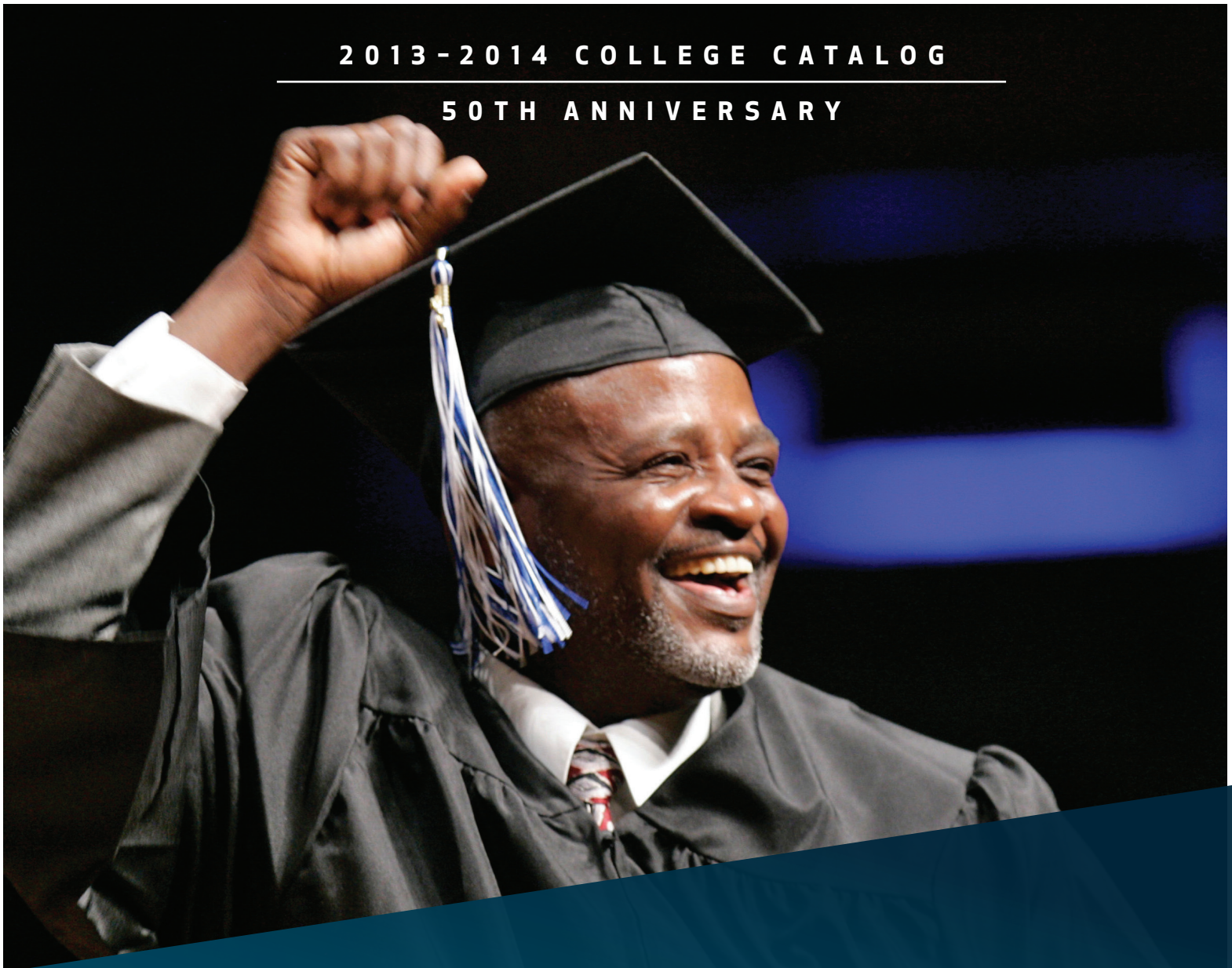
2013-2014 COLLEGE CATALOG

50TH ANNIVERSARY



Making history every day.

COLUMBUS STATE
Community
College

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

Nondiscrimination Policy

It is the established policy of Columbus State Community College not to discriminate against any individual or group of individuals for reasons of race, color, sex, religion, ancestry, national origin, disability or veteran status. The college is fully committed to providing equal opportunities in all employment-related activities, educational programs, and other activities of the college. Columbus State promotes equal opportunities through a positive and continuing Affirmative Action Program. Columbus State Community College will fully comply with all federal, state, and local laws and regulations to guarantee equal opportunities.

Reasonable Accommodations

It is the Columbus State Community College policy to provide reasonable accommodation to students with disabilities. If you would like to request such accommodation because of a physical, mental, or learning disability, please contact Disability Services, Eibling Hall, Room 101, (614) 287-2570 (VOICE/TTY).

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.ncahlc.org.

Message from the President

Dear Students,

Columbus State celebrates its 50th anniversary this year, and such a milestone warrants reflection on where we've been, and more important, where we're headed.

There's a short, but memorable adage that reminds us, "If you fail to plan, you plan to fail." Those few words say it all when it comes to education. Successful individuals and institutions are the ones that develop a challenging plan of action and follow it through to completion. Columbus State has a Master Plan on the books, and we're making steady progress on implementing it. One of our goals that we recently achieved was to be selected an "Achieving the Dream" college. With that selection, comes a host of supportive services, along with valuable data and proven research that help a college develop to its potential. Our selection as an ATD institution last fall will positively impact the quality of education you, and other students just like you, receive for the next half century.

What about you? Do you have a plan in place for achieving your dreams? This catalog can help you get started or change directions, if that's your intent. The 2013-14 Columbus State Catalog contains plans of study for all of our degree and certificate programs as well as descriptions of required and elective courses. Use this catalog, especially the online official version, to plot each semester of your path to an associate degree—and then on to a transfer to pursue a bachelor's degree at another college, or on to a rewarding career.

The 2013-14 Catalog is also a handy reference of the many knowledgeable individuals and academic resources available at Columbus State. Take advantage of what this college has to offer. Preparing you for a bright future is our No. 1 concern. Whether it's in the classroom or the computer center, the library or the vet lab, the Tutoring Center or the Transfer Center, working with the patient simulator or jet planes at Bolton Field, we give you access to the people and resources that can help you prime for success. And your success will be how we measure our success for the next 50 years.

Have a great academic year at Columbus State!

Sincerely,

David T. Harrison

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

Columbus State Directory

Department	Location	Phone
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 Office	NH 108	287-2782
Cashiers and Student Accounting	RH 2nd Floor	287-2414
Child Development Center	CDC	287-3600
Columbus State Bookstore (DX)	DX	287-2427
Columbus State Foundation	LO	287-2436
Counseling Services	NH 010	287-2818
Delaware Campus(Moeller Hall)	MO	(740) 203-8000
Developmental Education	AQ 215	287-5193
Disability Services	EB 101	287-2570
Diversity/Study Abroad Programs	FH 223	287-5648
Dual Enrollment	DH 233	287-5961
Dublin Center	DB	287-7050
Financial Aid	RH Ground Fl	287-2648
Fitness Center	DE 082	287-5918
Food Court	DE 1st Fl	287-2483
Gahanna Center	GH/CH	476-4711
GED Preparation Program	WD 1090	287-5858
Health Records Office	UN 134A	287-2450
Human Resources	RH 115	287-2408
Instructional Tech./Distance Learning	CT 108	287-5991
IT Support Services	CO-LL	287-5050
Language Institute	WD 1090	287-5858
Library	CO	287-2465
Marysville Center	ML	(937) 6441616
Parking and Student IDs	DE 047	287-2525
Pickaway Center (Teays Valley H.S.)	PC	(740) 983-5086
Public Safety (Both Campuses)	DE 047	287-2525
Records and Registration	MA 201	287-5353
Regional Learning Centers (Off-Campus)	ETC 236	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 Life	EB 201	287-5299
Telephone Information Center	TIC	287-5353
Testing Center (Columbus Campus)	AQ 002	287-2478
Testing and Talent Assessment Center	WD 223	287-5750
Tolles Center	TC	287-2696
Transfer Center	AQ 126	287-2847
TRiO Programs	FH 223	287-5777
Tutoring Services	AQ 241	287-2232
Veterans Services	DE 156	287-2644
Westerville Center	WV	287-7000

Academic Programs

Arts and Sciences Division	NH 425	287-2512
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
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

Career and Technical Division	EB 201	287-2550
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 Applications	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
Criminal Justice	FR 206B	287-2591
Dental Hygiene	UN 318	287-3655
Digital Design and Graphics	EB 401	287-3697
Digital Photography	EB 401	287-5045
Early Childhood Dev. and Education	UN 219	287-2540
Electro-Mech. Engineering Technology	DH 205	287-5350
Electronic Engineering Technology	DH 205	287-5350
Emergency Medical Serv. Technology	GA 001	287-3812
EMS/Fire Science	GA 001	287-3812
Environmental Sci., Safety and Health	DH 205	287-5030
Finance	DE 259	287-5420
Fire Science	GA 001	287-3812
Geographic Information Systems	DH 205	287-5030
Health Information Mgmt. Technology	UN 316	287-2541
Heating, Ventilating and A/C Technology	DE 243	287-2657
Hospitality Management	EB 136	287-5126
Human Resources Mgmt. Technology	DE 240	287-5351
Interactive Media	EB 401	287-5010
Interpreter Education Program	UN 219	287-2540
Landscape Design and Management	DH 205	287-5030
Marketing	EB 401	287-2559
Massage Therapy	UN 410	287-5786
Mechanical Engineering Technology	DH 205	287-5350
Medical Assisting	UN 318	287-3638
Medical Laboratory Technology	UN 320A	287-5152
Mental Hlth./Addiction Std./Dev. Disabilities	UN 219	287-2540
Multi-Competency Health	UN 310	287-2608
Nuclear Medicine Technology	GR 109	287-5215
Nursing	UN 507	287-2506
Paralegal Studies	FR 206B	287-2591
Quality Assurance Technology	DH 205	287-5350
Radiography	GR 109	287-5215
Real Estate (includes Appraisal)	WD 1099	287-5397
Respiratory Care	UN 317	287-2633
Skilled Trades Technology	DE 259	287-5211
Sport and Exercise Studies	DE 007	287-2189
Sterile Processing Technology	UN 407	287-3655
Supply Chain Management	EB 401	287-5175
Surgical Technology	UN 407	287-3655
Veterinary Technology	VT 104	287-5135

Community Education and Workforce Development

Community Ed. & Workforce Dev. Division	WD 1090	287-2571
Center for Workforce Development	WD 317	287-5000
Transitional Workforce	WD 1099	287-5858
Conference Center	WD	287-5500
CEWD Operations/Information Center	WD	287-5858

Building Codes

AQ ..... Aquinas Hall
AV ..... Aviation Facility (Bolton Field)
CDC .... Child Dev. Center
CH ..... Clark Hall (Gahanna Ctr.)
CO ..... Columbus Hall
CT ..... Center for Teaching and Learning Innovation
DA ..... Delaware Administration Bldg.
DB ..... Dublin Center
DE ..... Delaware Hall
DH ..... Davidson Hall
DX ..... Discovery Exchange/Bookstore
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
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

General Information

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The 2013-2014 Catalog contains information and resources for the academic year encompassing Autumn Semester 2013, Spring Semester 2014, and Summer Semester 2014.

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For academic planning purposes, please consult the online catalog to verify the currency of the information presented here.

Academic Calendar: Autumn Semester 2013

August 21, 2013 – December 7, 2013

April 15, 2013 (M)..... Autumn Semester 2013 On-Time Registration begins
June 22, 2013 (S)..... Readmission Deadline for Academic Dismissal and Academic Review-AU13
July 31, 2013 (W) ..... On-Time Admissions Application Deadline for Autumn Semester 2013
August 6, 2013 (T)..... Autumn Semester On-Time Registration ends
August 7, 2013 (W)..... Autumn Semester Late Registration begins – late fee will be assessed
August 14, 2013 (W)..... Final Admissions Application Deadline for Full Term, First 8-week Term and First 5-week Term for Autumn Semester 2013
August 21, 2013 (W)..... *Full Term classes begin
August 21, 2013 (W)..... *First 8-week Term classes begin
August 21, 2013 (W)..... *First 5-week Term classes begin
August 21, 2013 (W)..... Ohio Residency Reclassification Deadline for Autumn Semester 2013
August 30, 2013 (F)..... First 8-week Term Last Day to Register – Late Registration ends
August 30, 2013 (F)..... First 5-week Term Last Day to Register – Late Registration ends
August 30, 2013 (F)..... Full Term Last Day to Register – Late Registration ends
September 2, 2013 (M)..... Labor Day – Campus closed
September 5-18, 2013..... Late Admissions Application Period for 2nd 8-week Term, 2nd 5-week Term and 3rd 5-week Term for Autumn Semester 2013
September 10, 2013 (T) ..... Last day to drop from First 5-week Term classes
September 13, 2013 (F) ..... AU13 Petition to Graduate Deadline due in Records & Registration by 4:30 pm
September 23, 2013 (M)..... Last day to drop from First 8-week Term classes
September 24, 2013 (T) ..... First 5-week Term classes end – grades due 09/26/13 before 11:00 pm
September 25, 2013 (W) ..... *Second 5-week Term classes begin
September 26, 2013 (TH)..... In-Service Day – Offices closed; no day classes
September 27, 2013 (F) ..... Second 5-week Term Last Day to Register – Late Registration ends
October 1, 2013 (T) ..... Last day to remove Incompletes (I) incurred Summer Semester 2013
October 11, 2013 (F) ..... Columbus Day – Campus closed
October 15, 2013 (T) ..... First 8-week Term classes end – grades due 10/17/13 before 11:00 pm
October 15, 2013 (T) ..... Last day to drop from Second 5-week Term classes
October 16, 2013 (W)..... *Second 8-week Term classes begin
October 20, 2013 (SU) ..... Second 8-week Term Last Day to Register – Late Registration ends
October 25, 2013 (F) ..... Last day to drop from Full Term classes
October 29, 2013 (T) ..... Second 5-week Term classes end – grades due 10/31/13 before 11:00 pm
October 30, 2013 (W)..... *Third 5-week Term classes begin
November 1, 2013 (F) ..... Third 5-week Term Last Day to Register – Late Registration ends
November 11, 2013 (M)..... Veterans' Day – Campus closed
November 14, 2013 (TH)..... Readmission Deadline for Academic Dismissal and Academic Review-SP14
November 16, 2013 (S) ..... Last day to drop from Second 8-week Term classes
November 21, 2013 (TH)..... Last day to drop from Third 5-week Term classes
Nov. 28 – Dec. 1, 2013 ..... Thanksgiving Holiday – Campus closed (TH, F, S, SU)
December 6, 2013 (F) ..... Graduation Ceremony
December 7, 2013 (S) ..... Full Term, Second 8-week Term and Third 5-week Term classes end – grades due 12/09/13 before 11:00 pm
December 7, 2013 (S) ..... Autumn Semester 2013 ends

Please refer to the college website, **www.cscc.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 2014

January 13, 2014 – May 10, 2014

NOTE: See online catalog for Admissions Application Deadlines for Spring Semester 2014

October 21, 2013 (M) ..... Spring Semester 2014 On-Time Registration begins
November 14, 2013 (TH)..... Readmission Deadline for Academic Dismissal and Academic Review-SP14
December 25, 2013 (W) ..... Christmas Day – Campus closed
December 29, 2013 (SU)..... Spring Semester On-Time Registration ends
December 30, 2013 (M)..... Spring Semester Late Registration begins – late fee will be assessed
January 1, 2014 (W)..... New Year's Day – Campus closed
January 13, 2014 (M) ..... *Full Term classes begin
January 13, 2014 (M) ..... *First 8-week Term classes begin
January 13, 2014 (M) ..... *First 5-week Term classes begin
January 13, 2014 (M) ..... Ohio Residency Reclassification Deadline for Spring Semester 2014
January 20, 2014 (M) ..... Dr. Martin Luther King, Jr. Day – Campus closed
January 23, 2014 (TH)..... First 8-week Term Last Day to Register – Late Registration ends
January 23, 2014 (TH)..... First 5-week Term Last Day to Register – Late Registration ends
January 23, 2014 (TH)..... Full Term Last Day to Register – Late Registration ends
February 2, 2014 (SU)..... Last day to drop from First 5-week Term classes
February 7, 2014 (F)..... SP14 Petition to Graduate Deadline due in Records & Registration by 4:30 pm
February 14, 2014 (F)..... Presidents' Day – Campus closed
February 15, 2014 (S) ..... Last day to drop from First 8-week Term classes
February 16, 2014 (SU)..... First 5-week Term classes end – grades due 02/18/14 before 11:00 pm
February 17, 2014 (M)..... *Second 5-week Term classes begin
February 20, 2014 (TH)..... Second 5-week Term Last Day to Register – Late Registration ends
February 23, 2014 (SU)..... Last day to remove Incompletes (I) incurred Autumn Semester 2013
March 9, 2014 (SU)..... First 8-week Term classes end – grades due 03/11/14 before 11:00 pm
March 10-15, 2014 (M-S) ..... Spring Break – No classes
March 13, 2014 (TH) ..... Last day to drop from Second 5-week Term classes
March 16, 2014 (SU)..... *Second 8-week Term classes begin
March 20, 2014 (TH) ..... Second 8-week Term Last Day to Register – Late Registration ends
March 27, 2014 (TH) ..... Readmission Deadline for Academic Dismissal and Academic Review-SU14
March 24, 2014 (M)..... Last day to drop from Full Term classes
March 30, 2014 (SU)..... Second 5-week Term classes end – grades due 04/01/14 before 11:00 pm
March 31, 2014 (M)..... *Third 5-week Term classes begin
April 2, 2014 (W)..... Third 5-week Term Last Day to Register – Late Registration ends
April 17, 2014 (TH)..... In-Service Day – Offices closed, no day classes
April 18, 2014 (F)..... Last day to drop from Second 8-week Term classes
April 20, 2014 (SU)..... Easter – Campus closed
April 20, 2014 (SU)..... Last day to drop from Third 5-week Term classes
May 4, 2014 (SU) ..... Third 5-week Term classes end – grades due 05/06/14 before 11:00 pm
May 9, 2014 (F) ..... Graduation Ceremony
May 10, 2014 (S)..... Full Term and Second 8-week Term classes end – grades due 05/12/14 before 11:00 pm
May 10, 2014 (S)..... Spring Semester 2014 ends

Please refer to the college website **www.cscc.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: Summer Semester 2014

May 26, 2014 – August 9, 2014

NOTE: See online catalog for Admissions Application Deadlines for Summer Semester 2014

February 17, 2014 (M)	Summer Semester 2014 On-Time Registration begins
March 27, 2014 (TH)	Readmission Deadline for Academic Dismissal and Academic Review-SU14
May 11, 2014 (SU)	Summer Semester On-Time Registration ends
May 12, 2014 (M)	Summer Semester Late Registration begins – late fee will be assessed
May 26, 2014 (M)	Memorial Day – Campus closed
May 26, 2014 (M)	*Full Term begins
May 26, 2014 (M)	*First 8-week Term begins
May 26, 2014 (M)	*First 5-week Term begins
May 26, 2014 (M)	Ohio Residency Reclassification Deadline for Summer Semester 2014
May 27, 2014 (T)	First day of classes for Full Term
May 27, 2014 (T)	First day of classes for 8-week Term
May 27, 2014 (T)	First day of classes for 5-week Term
June 1, 2014 (SU)	First 8-week Term Last Day to Register – Late Registration ends
June 1, 2014 (SU)	First 5-week Term Last Day to Register – Late Registration ends
June 1, 2014 (SU)	Full Term Last Day to Register – Late Registration ends
June 6, 2014 (F)	SU14 Petition to Graduate Deadline due in Records & Registration by 4:30 pm
June 15, 2014 (SU)	Last day to drop from First 5-week Term classes
June 28, 2014 (S)	Last day to drop from First 8-week Term classes
June 28, 2014 (S)	Readmission Deadline for Academic Dismissal and Academic Review-AU14
June 29, 2014 (SU)	First 5-week Term classes end – grades due 07/01/14 before 11:00 pm
June 30, 2014 (M)	*Second 5-week Term classes begin
July 2, 2014 (W)	Second 5-week Term Last Day to Register – Late Registration ends
July 4, 2014 (F)	Independence Day – Campus closed
July 6, 2014 (SU)	Last day to remove Incompletes (I) incurred Spring Semester 2014
July 10, 2014 (TH)	Last day to drop from Full Term classes
July 20, 2014 (SU)	First 8-week Term classes end – grades due 07/22/14 before 11:00 pm
July 20, 2014 (SU)	Last day to drop from Second 5-week Term classes
August 3, 2014 (SU)	Second 5-week Term classes end – grades due 08/05/14 before 11:00 pm
August 9, 2014 (S)	Full Term classes end – grades due 08/11/14 before 11:00 pm
August 9, 2014 (S)	Summer Semester 2014 ends

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

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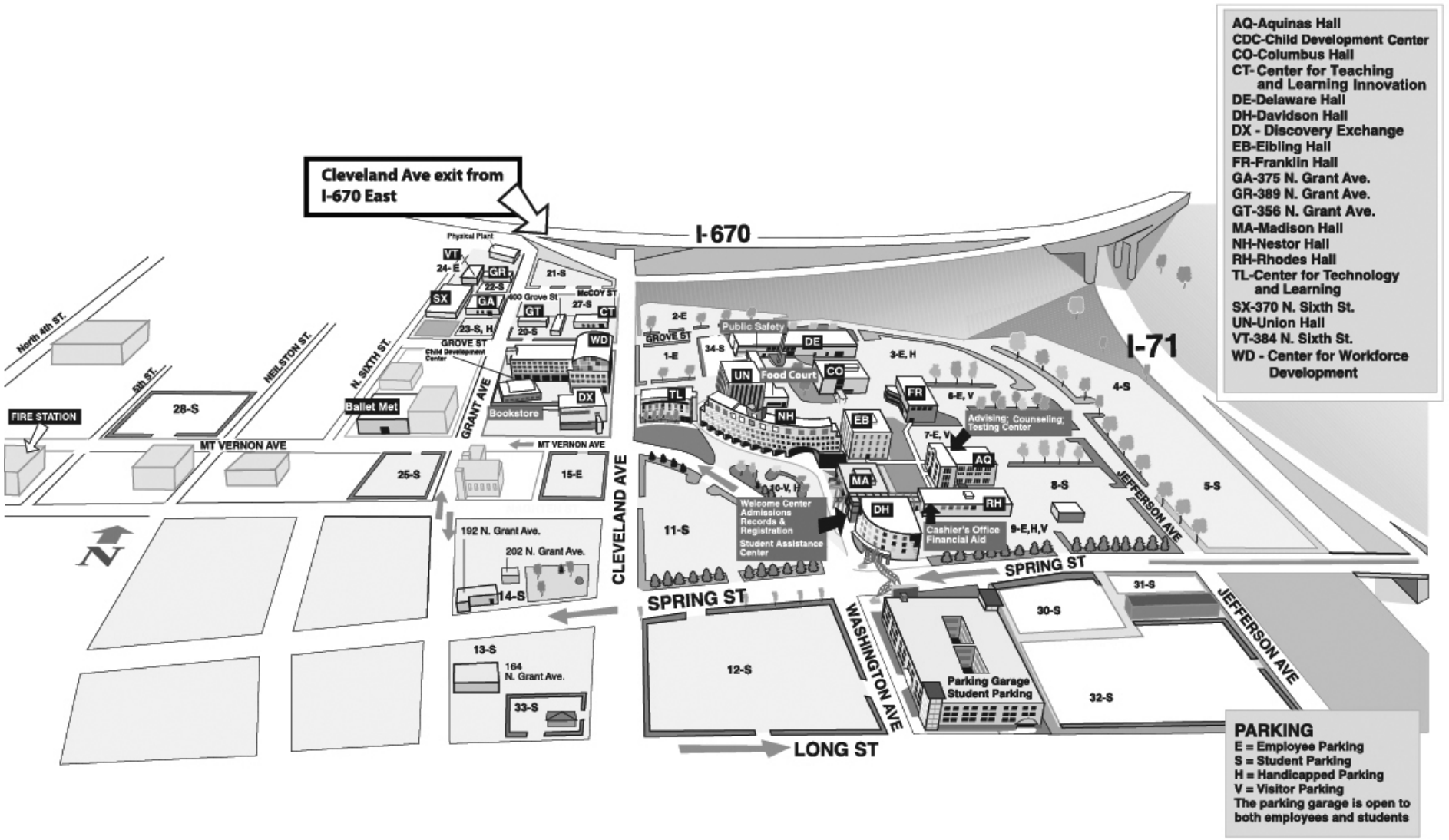
Note: Tuition refunds are based upon the percentage of time elapsed in each course. If the course is dropped before 10% of the time elapsed in the course, a 100% tuition refund will be issued. If the course is dropped before 20% of the time elapsed in the course, a 50% tuition refund will be issued.

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



Columbus State In Brief

In 2013,Columbus State Community College celebrates 50 years of meeting the diverse educational needs of the community. The college is proud to be an important contributor to the growth and progress of 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 today, more than 30,000 students have earned associate degrees in 50+ technical fields and transfer programs. The success of the college is reflected in the many accomplishments of these graduates and in those of the other students who have completed courses to improve and enhance their skills.

On July 1, 1987, Columbus Technical Institute was rechartered 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 those 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 eight major areas: business and marketing, computers and interactive media, construction sciences, engineering technologies, health and human services, hospitality, public services, and skilled trades technologies. 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 partnership degree programs are being developed all the time, e.g., the Preferred Pathway partnership that puts students on a direct-to-degree path between Columbus State Community College and The Ohio State University. The Community Education and Workforce Development Division 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 centrally 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 welcomed its first students for Autumn Quarter 2010 classes. The campus, located between Columbus and Delaware along U.S. 23, 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 four degrees and two certificates through the Delaware Campus. This campus also partners with The Ohio State University—Marion to offer classes to Ohio State students on the Columbus State Delaware Campus.

Additionally, Columbus State offers classes at nine 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 there. 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.cscc.edu

Delaware Campus

5100 Cornerstone Drive
Delaware, OH 43015
(740) 203-8000
www.cscc.edu/delaware

Campus Tours

Campus tours, which are led by Columbus State students, give prospective/future students, their families, and new applicants an opportunity to explore and learn more about the campus. To make a reservation, click "Admissions" and then "Tours & Visit Days" at **www.cscc.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 Delaware Campus

The Delaware Campus opened in mid-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 Spanish. 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.

The unique Delaware Campus partnership between The Ohio State University and Columbus State Community College 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 degrees and two 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 and Medical Assisting Technology 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 they can transfer earned credits to institutions offering baccalaureate degrees, whether in Ohio or across the country.

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:

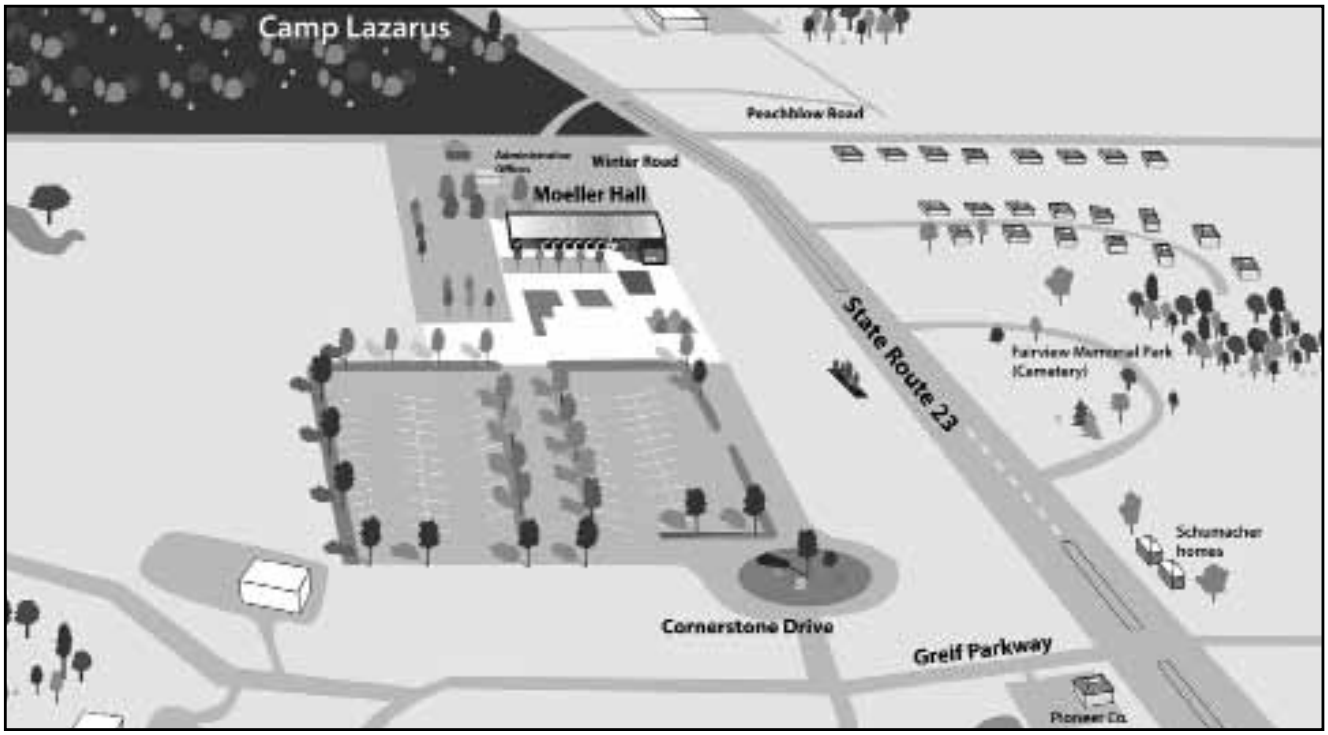
- Admissions
- Advising
- Disability Services
- Diversity/Study Abroad
- Financial Aid
- Orientation
- Registration
- Student Engangement and Leadership
- Testing
- Tutoring

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

Hours of operation may change during breaks between semesters. View current hours of operation online at **ww.cscc.edu/delaware**.

Columbus State Delaware Campus
5100 Cornerstone Dr.
Delaware, OH 43015
(740) 203-8000 or (614) 287-5353
www.cscc.edu/delaware

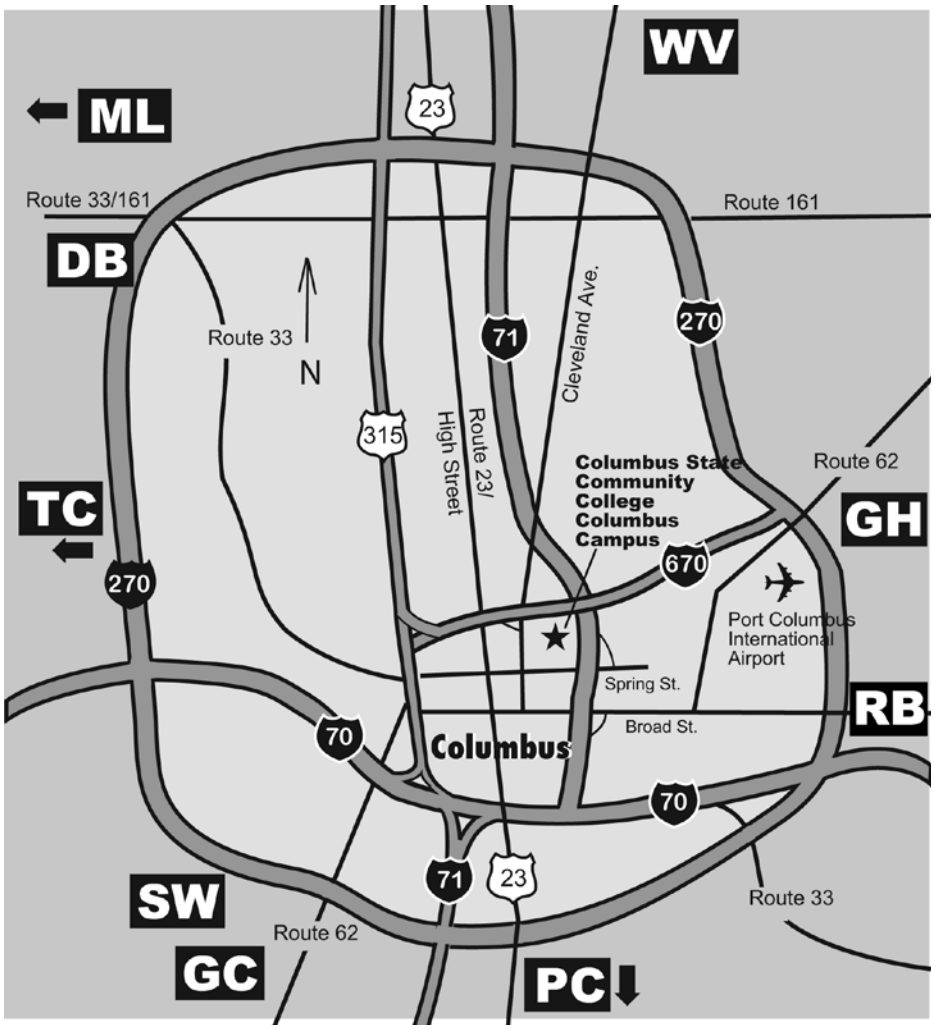


Regional Learning Centers

Susan Norris-Berry, Administrator
(614) 287-2696

Columbus State's regional learning centers, located throughout the college's four-county service district and in Pickaway County, provide educational opportunities for more than 15,000 students each year 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 Degree in Business Management 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.

For specific hours for student services, please contact the individual center.



DB Dublin Center
6190 Shamrock Court
Dublin, Ohio 43016
Hours: M – F, 8:00 a.m. – 10:30 p.m.
Sat.: 8 a.m. – 4 p.m., Sun.: 1 – 5 p.m.
Phone: (614) 287-7050
Fax: (614) 761-1531
(Academic advising, Bookstore, COMPASS testing, Testing Center, open Computer Lab, and tutoring available)

GH Gahanna Center
380 Granville St.- Suite "B"
Clark Hall
Gahanna, Ohio 43230
Hours: M – F, 8:00 a.m. – 10:30 p.m.
Sat.: 8 a.m. – 4 p.m., Sun.: 1 – 5 p.m.
Phone: (614) 476-4711
Fax: (614) 476-4764
(Academic advising, COMPASS testing, Testing Center, and open Computer Lab available)

ML Marysville Center
Marysville High School
800 Amrine Mill Road
Marysville, Ohio 43040
Hours: M – R, 5 – 8 p.m.
Phone: (937) 644-1616

PC Pickaway Center
Teays Valley High School
3887 State Route 752
Ashville, Ohio 43103
Hours: M – R, 5 – 8 p.m.
Phone: (740) 983-5086

RB Reynoldsburg Center
6699 East Livingston Ave.
Reynoldsburg, Ohio 43068
M – Th, 8 a.m. – 10:30 p.m.
Phone: (614) 287-7200
Fax: (614) 287-7201
(Academic advising, tutoring and library services available)

SW Southwest Center at Bolton Field
5355 Alkire Road
Columbus, Ohio 43228
Hours: M – F, 3:00 – 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, 5:00 – 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: M – R, 5 – 10 p.m.
Phone: (614) 873-4666 ext. 298

WV Westerville Center
7233 Northgate Way and
7207 Northgate Way
Westerville, Ohio 43082
Hours: M – F, 8:00 a.m. – 10:30 p.m.
Sat: 8 a.m. – 4 p.m., Sun.: 1 – 5 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)

Admissions

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 advisors assist new students with the application and admission process and provide information on programs of study and next steps for enrollment, including new student orientation, placement testing, and applying for financial aid. Admissions advisors also provide information about the many services and resources available to help students succeed at Columbus State and the wide variety of opportunities to get involved in campus activities and organizations. For more information, contact the Admissions Office at (614) 287-2669, or view our online resources at **www.cscc.edu** (click on "Admissions").

Advisors are available in Moeller Hall on the Delaware Campus to help students there with admissions and other enrollment-related services. Prospective/Future students there can stop by Student Services or call (740) 203-8345.

Enrollment Services

Pages 13-22

Enrollment Services

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, felony, underage, and transfer students. Specific information about each category is maintained in the Admissions 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, prospective applicants are encouraged to contact the Admissions Office or refer to an academic department's online resources. For some students, prerequisite credit and/or noncredit coursework in science, reading, mathematics and 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 classes:

- 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 22, 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).

Effective July 1, 2012, to be eligible for federal student aid, students enrolling in college for the first time must have a high school diploma or GED. Students completing a home school program must complete a GED or obtain a final, official high school transcript from their school district, verifying completion of all high school requirements and certifying high school graduation.

For more information, contact the Admissions Office in the lower level of Madison Hall, (614) 287-2669, or at admissions@cscc.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.cscc.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 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 their 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 the Student Help Desk at (614) 287-5050.

(Please refer to the statement on Family Educational Rights and Privacy Act found on pages 33-34 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. Please check the Specific Program Admissions Information online or in the Programs of Study section of this catalog to determine if your high school transcript/GED scores are required for admission to a particular program of study.

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 information 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.cscc.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 required to register and successfully complete the noncredit Cougar Edge English and Mathematics courses prior to enrollment in credit-bearing courses.

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 original or certified photocopies of secondary school records showing graduation. 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, **http://cscc.edu/admissions/international-student/**, or contact International Enrollment Services in the Admissions Office on the lower level of Madison Hall, istudent@cscc.edu, (614) 287-2074.

Applicants who are F-1 Status Visa Holders (International Applicants) must submit official secondary school records verifying graduation, 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, **http://cscc.edu/admissions/international-student/**, or contact International Enrollment Services on the lower level of Madison Hall, istudent@cscc.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, **http://cscc.edu/admissions/international-student/**, or contact International Enrollment Services in the Admissions Office on the lower level of Madison Hall, istudent@cscc.edu, (614) 287-2074.

Applicants who are high school students interested in the Post Secondary Enrollment Options (PSEO), Dual Enrollment, or other Early College Options 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 PSEO/Dual Enrollment Office at (614) 287-5961 or visit their website at **http://cscc.edu/community/k12/** (for general information), **http://cscc.edu/community/pseo/** (for PSEO information), or **http://cscc.edu/community/dual-enrollment/** (for dual enrollment information).

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 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 Student Assistance Center located in Madison Hall, Room 225.

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 all official arrest records, a personal statement, and letter of recommendation, 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. 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

Columbus State offers a Getting Started Information Session (Orientation Part I) to help new students get oriented to the college and get off to a good start. All new students, including those transferring from another institution, must complete this orientation prior to course registration. These sessions are offered in person or online in a self-paced format. For more information and to make a reservation for an in-person session, click "Admissions" and "Orientation" at **www.cscc.edu** or contact the Admissions Office in the lower level of Madison Hall, (614) 287-2669. Delaware Campus students can inquire about orientation 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 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 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. They also attend a CougarWeb Orientation session to learn how to register for courses and complete the additional steps in the enrollment process.

Placement testing, or an approved college readiness assessment equivalent(s), is required for all applicants prior to registering for classes. Please see the "Admissions Policy" section or visit **http://cscc.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 Advising Services, Aquinas Hall, Room 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 22 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://cscc.edu/admissions/need-compass.shtml** or contact the Admissions Office in the lower level of Madison Hall, 614-287-2669, admissions@cscc.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, Room 002, (614) 287-2478; Delaware Campus Testing Center in Moeller Hall, (740) 203-8383 or visit our website at **www.cscc.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 that provides Basic English, reading, and mathematics instruction. Mandatory Cougar Edge placement is determined by reading and mathematics COMPASS test scores. Students who are required to start with Cougar Edge must demonstrate proficiency in both reading and mathematics before they will be allowed to register for credit classes.

The purpose of Cougar Edge is to:

1. Align remediation services for students who are not college-ready
2. Save dollars for students and the state
3. Find better instructional options for students who need considerable remediation.

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 to create a project as part of the Ohio Developmental Education Initiative funded by the Gates and Lumina Educational Foundation. Columbus State's Cougar Edge 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.cscc.edu**, with a Telephone Information Center representative at (614) 287-5353, on the Columbus Campus in person with 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. Please 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, please 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 Armed Forces of the United States. 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. When you receive your Selective Service number, please report it to the Telephone Information Center at (614) 287-5353.

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 at (614) 287-5353, as well as on the Columbus Campus in person with the Records and Registration Department in Madison Hall, on the Delaware Campus in Moeller Hall, or at one of the regional learning centers.

Student Assistance Center – Columbus Campus

The Student Assistance Center is located in Madison Hall Room 225. Student Assistance Center services include:

- Assisting students with CougarWeb registration
- Assisting students with navigating CougarWeb
- Conducting Free Application for Federal Student Aid (FAFSA) Workshops
- Assisting students with completing various online financial aid processes such as Entrance Counseling and Master Promissory Notes
- Conducting CougarWeb Workshops

A CougarWeb Workshop teaches students how to utilize Columbus State's many online tools and resources. In this hands-on, interactive session, students learn how to set up a user name and password, access email, register for classes, pay fees online, and more. These sessions are offered several times per day in the Student Assistance Center. Reservations are not needed. For more information and session times, contact the Student Assistance Center, (614) 287-5538.

Hours of Operation
Monday – Thursday: 8 a.m. to 7:30 p.m.
Friday: 9:30 a.m. to 4:30 p.m.
Saturday: 9 a.m. to 12 p.m.
(Please check online to verify current hours of operation.)

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.cscc.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

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 online at **www.cscc.edu**.

For all federal financial 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.

Application Procedures

Students can apply for financial aid electronically via the Internet at www.fafsa.ed.gov. Students who prefer to submit a paper copy of the FAFSA may print a copy of the form at the same website or request a paper FAFSA by calling the Federal Student Aid Information Center at 1-800-4-FED-AID (1-800-433-3243) or 1-319-337-5665. Hearing-impaired persons can use the TTY line at 1-800-730-8913. Students may also request information by calling (614) 287-2648. Students must apply for financial aid 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.cscc.edu**.

How Do I Apply?

1. Make application for admission to Columbus State Community College.
2. Apply online at www.fafsa.ed.gov or complete and submit the Free Application for Federal Student Aid (FAFSA) paper application to the U.S. Department of Education. Computers in the Student Assistance Center or in any computer lab at CSCC may be used for submission of the FAFSA.
   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.
   b. Be sure to list Columbus State as the school you plan to attend by denoting school code **006867** in step 6 of the FAFSA.
   c. If you complete your FAFSA online, use your PIN to sign the application. If you do not have a PIN, be sure to print the signature page. You must sign the signature page and mail it to the address listed on the page.
3. Approximately four weeks after your FAFSA has been received and processed by the U.S. Department of Education, you will receive a Student Aid Report (SAR). Review these results. If corrections to your FAFSA are necessary, you may submit them electronically at www.fafsa.ed.gov, or you may bring the appropriate materials to the Financial Aid Office and have those corrections submitted electronically by personnel in the Financial Aid Office.
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, you will be sent an official Financial Aid Award letter, explaining 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, GED, or recognized equivalent. Proof of passing GED scores must be on file with the Records and Registration Department before your application can be processed. Students without a high school diploma or GED may establish eligibility under the Ability-to-Benefit regulations by passing a test approved by the U.S. Department of Education. The COMPASS™ placement test is the approved test available at Columbus State through the Testing Center in Aquinas Hall 002. To qualify for consideration students must have the following minimum scores: Writing Skills: 32; Reading: 62; Math (Pre-Algebra): 25.
- Have complied with current Selective Service registration regulations. For more information on Selective Service requirements, contact the Financial Aid Office or our webpage, **www.cscc.edu**.
- Be a regularly admitted student, enrolled in an eligible program, working toward a degree or certificate.
- Maintain satisfactory academic progress as defined by the Financial Aid Standards of Academic Progress Policy. Students who already hold a bachelor's degree are not eligible for federal grants, but may be eligible for loans and work study. 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. Signed copies of IRS income tax returns, Verification Worksheets, and documentation of untaxed income are generally required for completion of verification. If other documents are needed the Financial Aid Office will notify the student.

Satisfactory Academic Progress

Federal regulations require that Columbus State Community College monitor the academic progress of students who apply for and/or receive federal financial 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 financial aid, students must maintain satisfactory academic progress toward a degree or certificate. For additional information refer to the "High Finance" publication available from the Financial Aid Office or the webpage, **www.cscc.edu**. Failure to maintain satisfactory academic progress will result in funds either being terminated or withheld until eligibility is regained.

Scholarships

A scholarship is financial assistance awarded primarily on the basis of scholastic achievement. As with grants, they generally 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.cscc.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.cscc.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.cscc.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.

Freeze Dates

CSCC 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 financial aid. For more information on this policy, please refer to the "High Finance" publication that is available in the Financial Aid Office or the Financial Aid Office webpage, www.cscc.edu.

Information and Services

The Financial Aid Office is located in Rhodes Hall, Lower Level. Customer Service Representatives are available in person or over the phone to answer questions and direct students to the appropriate resources. Financial Aid Customer Service is located on the lower level of Rhodes Hall or by calling (614) 287-2648.

Telephone Numbers
Financial Aid
Representative (614) 287-2648
Toll Free 1-800-621-6407

Customer Service Hours
Financial Aid Office
Monday – Thursday 8:00 a.m. – 7:30 p.m.
Friday 9:30 a.m. – 4:30 p.m.
Saturday9 a.m. – noon

Check online to verify current service hours.

Veterans Services

Columbus State Community College is proud to support the educational and career goals of our veteran community. We are dedicated to expanding the minds and changing the lives of our veterans, military and their family members, who have served and supported our country with dignity, honor and courage.

The Veterans Services program is here to facilitate a more seamless transition from boots to book bag. We are devoted to assisting veterans, service members and their family members in applying for benefits, navigating admissions, advising, and registration processes and facilitating successful program completion.

At Columbus State, we serve more than one thousand student veterans and their families receiving educational benefits through various GI Bill programs and other military tuition assistance programs. We also participate in a new Department of Veterans Affairs educational initiative called the Veteran Retraining and Assistance Program (VRAP). The college offers a variety of associate degree and certificate programs that prepare students for the next level of academic achievement and/or career attainment. Veterans Services is here to work with students toward academic goals and the building of a competitive workforce.

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 Veterans Services team is committed to successfully serving each veteran as an individual.

To request further assistance or information pertaining to VA benefits, please contact Veterans Services at (614) 287-2814, 2644, 5682 or Toll Free at 1 (800) 621-6407.

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 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. 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 their sponsor. The student will be billed for any costs not paid by the sponsor.

Fees

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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.

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.

Please Note: If you are a returning student who has not previously paid 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 $129.25 (*at time of publication*) is based on a $115.75 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.

Semester Academic Fees

Ohio Residents

Ohio residents are charged a combined instructional and general fee of $129.25 per credit hour. This fee includes a $115.75 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 $286.25 per credit hour. This fee includes a $262.25 instructional fee and a $24 general fee.

International Students

International students are charged a fee of $343.50 per credit hour. This fee includes a $312.00 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 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.cscc.edu under "Academic Profile" (select "My Schedule"). Students can also check their charges or make a payment at the same website under "Financial Information." Fee payment deadlines are listed at **www.cscc.edu** under Quick Links, (select "Academic Calendar"). All fee payment information is posted at **www.cscc.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.**cscc.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*** will 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 will 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 Student Fees

Transient 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 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 nondirectory 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.cscc.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 balance is owed to the college, Columbus State will not release a 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 (see pages 33-34 for a summary of the Act).

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 beyond 20% of the term.

Please check www.cscc.edu for the refund deadlines.
At the above website, under Quick Links, select "Academic Calendar."

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

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 with the statement of explanation, written and signed by the student, and supporting third party documentation by the deadline 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** year
Spring Semester – August 15th of the **same** year
Summer Semester – November 15th of the **same** year

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

Non-Resident, International, and Resident Status for Tuition Purposes

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

Residency group sessions and appointments are scheduled each semester to assist students in a re-determination of their current residency status with 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.

The deadlines to apply for in-state residency are:

Summer Semester 2013: May 20, 2013
Autumn Semester 2013: August 21, 2013
Spring Semester 2014: January 13, 2014
Summer Semester 2014: May 26, 2014

To inquire about the residency status process or to make an appointment for a residency session, call (614) 287-5533 or stop by the Student Assistance Center, Madison Hall 225.

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 and are nonrefundable.**

Lost or stolen permits may be replaced at cost. All parking permits are registered to the student who was issued the permit and are nontransferable.

For those with verified and current parking permits, temporary parking permits may be issued by the Department of Public Safety for special needs, including temporary handicap permits with documentation from a doctor.

For important instructions on affixing parking permits, see the Public Safety section of this catalog (under Additional Services to Students) or go online to www.cscc.edu and click on the "Public Safety" Quick Link.

NOTE: Parking meters are for visitors only. Students parking at meters will be cited, even if they have a current parking permit and/or money is placed in the meter.

More information on parking regulations, fines, and the appeals process can be found at **www.cscc.edu by** clicking on the "Public Safety" Quick Link.

Grades and Academic Procedures

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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. Please refer to **www.cscc.edu** for specific semester date information. See "Course Drop/Withdrawal Procedure" in this section of the catalog.

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.cscc.edu**. An individual who is not enrolled in a course at the time of grade reporting is not eligible to register for the course and receive a grade after the course ends.

Academic Standing

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

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 2 or more terms) to raise his/her cumulative grade point average to that designated by the Standards of Satisfactory Academic Progress.

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	(Credits x Point Value)	Course Grade Points
Composition (ENGL 1100)	3	A	4	3x4 =	12
Med Term (MULT 1010)	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 1030)	2	B	3	2x3 =	6
Total Credit Hours =	13		Total Grade Points =		40

$$GPA = \frac{\text{Total Grade Points } 40}{\text{Total Credit Hours } 13} = 3.08$$

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, 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

Autumn 2013: June 22, 2013
Spring 2014: November 14, 2013
Summer 2014: March 27, 2014
Autumn 2014: June 28, 2014
Spring 2015: November 20, 2014
Summer 2015: March 26, 2015

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 CSCC.

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 (Sciences, Technology, Engineering and Mathematics–STEM), 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.cscc.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.cscc.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.cscc.edu.**

Repeating Courses

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

Program of Study Change

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.cscc.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.cscc.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 2013: September 13, 2013 before 4:30 p.m.
Spring Semester 2014: February 7, 2014, before 4:30 p.m.
Summer Semester 2014: June 6, 2014, 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.cscc.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.cscc.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:

a. Name
b. Address (home/present)
c. Telephone Number (home)
d. Program of Study/Technology
e. Participation in officially recognized activities and sports
f. Weight and height of members of athletic teams
g. Enrollment status (less than half-time, half-time, part-time, full-time, over full-time, inclusive dates and semesters of enrollment)
h. Degrees, certificates, transfer module and awards received (including Dean's List and other honors)
i. 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.

Additional Services to Students

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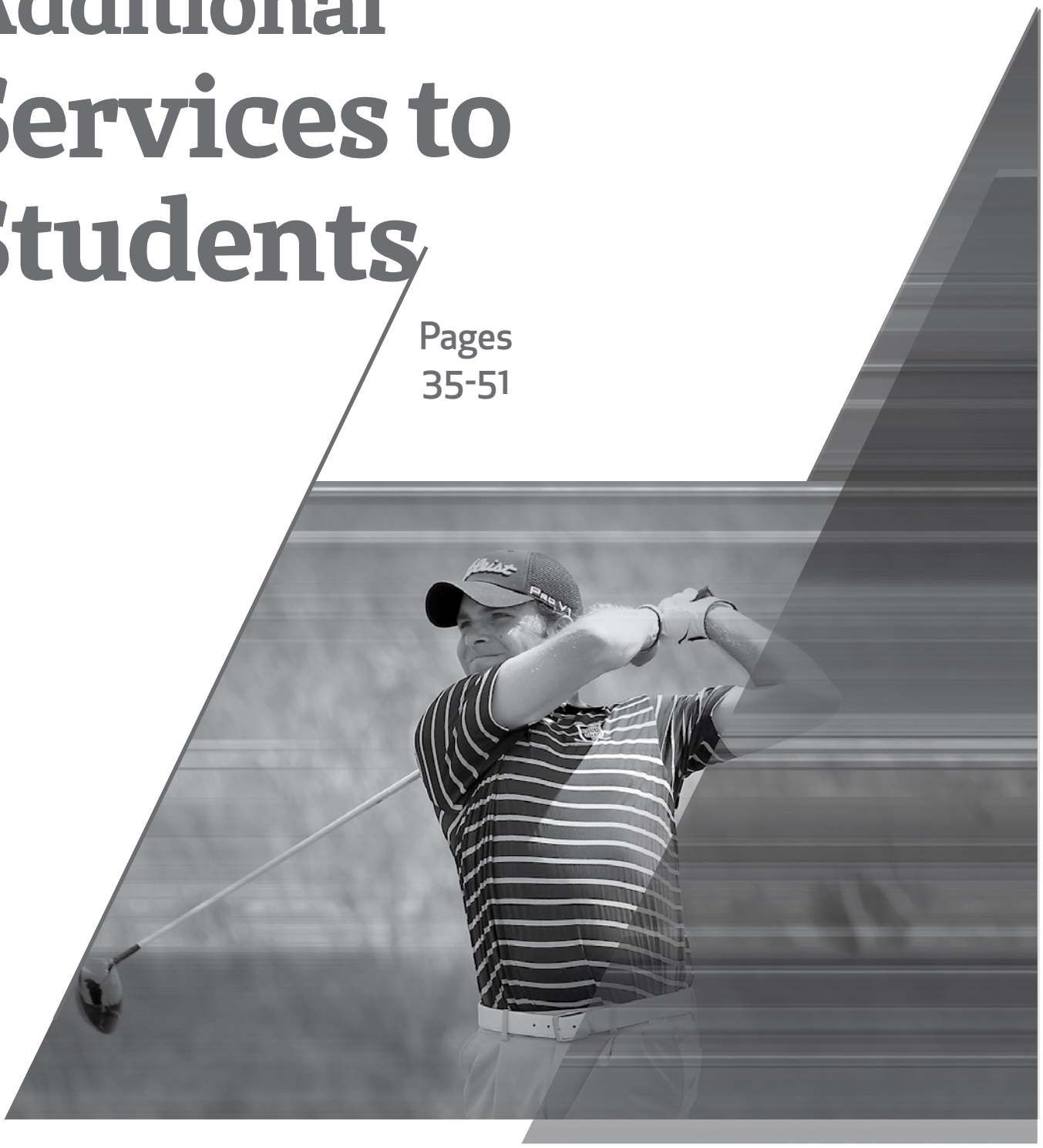

Additional Services to Students

Advising Services

The mission of Advising Services is to anticipate the needs of Columbus State's diverse student population and to support students in achieving lifelong educational, career, and personal goals. We strive to inspire our students and promote their autonomy.

Advising Services offers a full range of academic advising and planning services to Columbus State learners. We assist students in:

- 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 the various services offered, and current hours of operation, please visit **www.cscc.edu/advising**. Hours listed below were at time of publication.

Advising Services: Columbus Campus
Aquinas Hall, Room116
(614) 287-2668
Monday – Thursday: 8 a.m. to 7:30 p.m.
Friday: 9:30 a.m. to 4:30 p.m.
Saturday: 9 a.m. to 1 p.m.

Advising Services: Delaware Campus
Moeller Hall, Student Services
(740) 203-8345 or delaware@cscc.edu
Please check online, **www.cscc.edu/delaware**, for current Delaware Campus Advising Services hours.

Academic advisors are also available at the regional learning centers listed below. Call ahead for hours.
Dublin Regional Learning Center: (614) 287-7050
Gahanna Regional Learning Center: (614) 476-4711
Westerville Regional Learning Center: (614) 287-7000

Athletics and College Recreation

Fitness Center and Locker Rooms

The college's renovated and expanded Fitness Center is open to all Columbus State students, faculty and staff (with a valid college ID) from 7 a.m. to 8 p.m., Monday – Thursday and from 8 a.m. to 6 p.m. on Fridays, as well as, Saturdays, 9 a.m. through 1:00 p.m.. The Fitness Center, located on the lower level of Delaware Hall, offers cardio and multipurpose strength equipment as well as free weights. Men's and Women's locker rooms are adjacent to the Fitness Center, making it convenient for individuals to work out before and after classes or during lunchtime. Call 287-5092 for more information.

Intercollegiate Athletics

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 or stop by Athletics and College Recreation, located in Delaware Hall 134, or visit **www.cscc.edu/campus-life/athletics**.

Intramural Sports and Open Gym

The Intramural Sports program is an integral part of campus life. Intramural activities provide the campus community with 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 offerings include basketball, volleyball, soccer, floor hockey, Wiffle ball, badminton, table tennis and flag football. The gymnasium in Delaware Hall hosts Open Gym Monday through Friday, from 9 a.m. until 12 noon. For more information, call (614) 287-5092 or stop by Athletics and College Recreation in Delaware Hall, Room 134.

Bookstore/Retail Center
Discovery Exchange (DX) Retail Center:

Columbus State Community College Bookstore
DX Café
Convenience Store (C-Store)

The Discovery Exchange building, which is located at the corner of Cleveland and Mt. Vernon avenues on the college's Columbus Campus, houses the Columbus State Bookstore, DX Café, and Convenience Store.

The Columbus State Bookstore

The Bookstore offers a variety of textbook options including new, used, eBooks, and a selection of rental titles. With two floors of retail space, the Bookstore is a one-stop shop for materials needed to succeed at Columbus State — and those that display Cougar pride, too. The Bookstore offers office supplies, apparel and gifts, general and reference books, electronics, and computer software and accessories. To make education as affordable as possible, the Bookstore strives to keep prices low and attempts to price-match competitors by consistently monitoring bookstore industry standards.

The Bookstore's Customer Care Center offers additional resources and services for students and the community, including textbook and used calculator buyback.

The Bookstore provides a convenient online service for the purchase of textbooks and merchandise at **www.cscc.edu/bookstore.** The online site services the Columbus and Delaware campuses and the regional learning centers by providing the same convenience and competitive pricing seen in the store. The online store accepts Visa, MasterCard, and Discover credit cards and funds available from the Financial Aid Book Allowance.

DX Café

The Café is a coffee and food service bar serving hot, cold, and iced signature lattes, mochas and other coffee and tea drinks. Located on the first floor of the DX building, the Café boasts a selection of bagels, pastries, soups, salads, and made-to-order sandwiches—many of which will satisfy health-conscious and vegan patrons.

The Convenience Store

The C-Store provides a variety of selections to make everyday life easier. "Grab and Go" items available include candy, drinks, sandwiches, coffee, snacks, frozen meals and treats. In addition to edible options, health and beauty items are also available.

Please call (614) 287-2427 or visit the website at www.**cscc.edu/bookstore** for hours of operation and additional information.

Career Services

Career Development

Career Services offers career counseling for undecided students, including assistance with career decision-making, choosing a major, assisting students in 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
- Career resource library
- Career web resources
- Career workshops
- Classroom presentations
- Internships, Mmentorships and Eexternships

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

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

Career Planning

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

- Career postings
- Career fairs
- Resume workshops
- Career search materials
- Interviewing tips
- Connections with career opportunities and area employers

To access career resources available through the Department of Career Services, current students and alumni can visit Nestor Hall, Room 108, on the Columbus Campus, or call (614) 287-2782. Office hours are 8 a.m. –5 p.m. Monday through Thursday and 9:30 a.m. – 4:30 p.m. on Friday. Students attending the Delaware Campus can make an appointment and meet personnel at the Columbus Campus office.

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

Cashiers and Student Accounting

The Cashiers and Student Accounting operation handles all fee payments including ($35) parking permits, replacement identification cards ($4), transcript requests, approved tuition and financial aid refunds, and collection of outstanding balances. COTA bus passes and postage stamps also can be purchased through the Cashiers and Student Accounting Office, located on the second floor of Rhodes Hall (Columbus Campus). Hours of Operation are Monday through Thursday, 8 a.m. – 6 p.m.; Friday, 9:30 a.m. – 4:30 p.m.; the office is closed Saturdays. There are extended hours during fee payment rush periods each semester. For more information, contact Cashiers and Student Accounting at (614) 287-5658.

On the Delaware Campus, student accounting services, including IDs, are provided at the Business Services Office, located near Student Services in Moeller Hall. Student accounting services are available on Wednesdays from 1 – 6 p.m. (Hours in effect at time of catalog publication; check online for current hours.) Like the Columbus

Campus, there are extended hours during fee payment rush periods each semester. The Delaware Campus does not have a dedicated Cashier's Office and is a cashless operation. 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 the regional learning centers and distance learning classes. Mailing address is CSCC, P.O. Box 1609, Columbus, Ohio 43216-1609.

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. Once an account is referred for collection, the balance will increase due to collection, interest and other related charges. Questions regarding an account in collection should initially be directed to the Office of the Ohio Attorney General at 1-888-665-5440.

Counseling Services

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. Presentations, workshops, programs and printed materials about mental health, alcohol, and other drug prevention and abuse issues also are offered.

Additionally, Counseling Services provides self-development groups and 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 such as consultation, in-class workshops on specific mental health topics, and information about community resources are also available.

All counseling services are free and available by appointment. Call (614) 287-2818, for an appointment. You can also stop by Nestor Hall, Room 010 (formerly Seminar A, lower level), to schedule an appointment.

Hours of Operation
Monday through Thursday: 8 a.m. – 5 p.m.
Friday: 9:30 a.m. – 4:30 p.m.

Delaware Campus students interested in counseling services can stop by Student Services in Moeller Hall or call (740) 203-8345.

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

For Veterans Services, see page 21.

Disability Services

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 media, 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. Enter through Room 101. More information is available on the web at **www.cscc.edu/disability**. Disability Services' email address is disability@cscc.edu.

On the Delaware Campus, Student Services, (740) 203-8345, 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.

Diversity Programs

Diversity Programs lead Columbus State's efforts, events, and initiatives to increase the awareness, equity and inclusion of college community members from diverse backgrounds.
Our goals are to:

- Create programs and initiatives that will promote and contribute to the success and graduation of diverse students;
- Coordinate professional development programs related to diversity and inclusion for administrative, instructional, professional, and support personnel of the college; and
- Market Columbus State Community College as an attractive institution of higher education for community members with diverse backgrounds to pursue their career and educational goals.

Tools and initiatives facilitated by Diversity and Study Abroad Programs to promote awareness, equity and inclusion include the Pono Learning Community, the MAN Initiative and the Employee Resource Group program. The Pono Learning Community is a 6-module diversity awareness program. The MAN Initiative is a scholarship program focused on the retention and engagement of at-risk male students. The Employee Resource Group program 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 the 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.

The office for Diversity Programs is located in Franklin Hall 223, (614) 287-2426. On the Delaware Campus, see Student Services or call (740) 203-8345.

Academic Study Abroad Opportunities

Columbus State also offers study tour courses that promote learning in multiple locations, mostly outside the United States. The Study Abroad office works in partnership with faculty to support study tour 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 trip 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 tour course opportunities and travel requirements, contact the Study Abroad office by email at studytour@cscc.edu or visit us in WD 1079.

Dual Enrollment Programs

The mission of Dual Enrollment Programs is to enhance the educational opportunities for youth in Columbus State's service area while fostering the development of lifelong learning. Dual Enrollment is directly responsible for the following programs:

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 they complete may apply toward high school graduation or homeschool completion requirements, as established by the

secondary institution/homeschool they are attending.

Secondary to Post Secondary Articulation

Columbus State Career and Technical Programs have worked with area high school career and 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.

College Tech Prep Program

Through this initiative, current high school Tech Prep students can enter into articulated two-year associate degree technical programs with advance placement from articulation agreements. Agreements are available in a number of disciplines with the amount of credit received determined by the respective departments.

For information about Dual Enrollment initiatives, visit the webpage, **http://www.cscc.edu/community/dual-enrollment** or call (614) 287-5961.

Email

Columbus State Community College offers a free, individual email account (Student Mail) to each currently enrolled student. Student Mail is accessible at the website **student.cscc.edu/**.

All currently enrolled first-semester students will receive a letter in the mail notifying them of their account and instructions. Information and instruction booklets are available at the IT Learner Support Center and at the Student Mail website. Individual email user name and password can also be used to access Blackboard courses and to log in to campus labs.

The IT Learner Support Center, (614) 287-5050, is on the ground floor of the Library in Columbus Hall. Lab assistants are available in TL 116 computer lab to answer questions regarding your Student Mail account. Lab assistants are available to answer questions on the Delaware Campus as well; inquire at the Learning Center in Moeller Hall.

Food Services

Columbus State Food Services offers a number of options for enjoying a meal, snack, or hot or cold beverage on the Columbus Campus. The Food Court, located in Delaware Hall on the Columbus Campus, is open Monday through Friday. Check the website **www.cscc.edu/food** for current hours of operation. Breakfast foods are served each day of operation until 10:15 a.m. For lunch and dinner, the Food Court presents a wide choice of foods daily, including entrées, grilled combo meals, hot sandwich station and a salad bar. Other options, like sushi, may vary due to the season and availability of fresh ingredients. Nutritional information about all food is provided upon request.

The DX Café is located in the Discovery Exchange Retail Center/Bookstore. The Café is a coffee and food service bar that serves made-to-order lattes, mochas, and other coffee and tea drinks (served hot, frozen, or on ice). The Café boasts a selection of bagels, pastries, soups, salads, and sandwiches, many of which will satisfy health-conscious and vegan patrons.

For quick, casual service, students can visit the Cougar Coffee Cart in the Nestor Hall Lounge from 7 a.m. until 1 p.m. The cart serves a variety of breakfast and lunch "grab 'n' go" items, in addition to coffee.

Food Services also contracts with several food carts, located on the Columbus and Delaware campuses, which feature a variety of made-to-order grilled sandwiches, pasta and salads. Food carts operate from 10 a.m. – 4 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 Cafe, located in Moeller Hall on the Delaware Campus, serves deli-style sandwiches, soups, pizzas, pastries, and coffee. It is open Monday – Friday (closed Saturday and Sunday.). Hours vary by the day of the week.

For more information and current hours of operation, call (614) 287-2483 or visit **www.cscc.edu/food.**

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 CO 116 to assist with wireless needs. 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 traditional library services including the Learning Commons (on the first floor), group study rooms for students, open computer labs, the Multimedia Support Center, the Document Management System Offices, 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, reserve materials, legal reference, periodicals (magazines and journals), microforms, and newspapers. The library catalog can be accessed through the Library webpage, **www.cscc.edu/library**, 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 over 340 print periodical titles, users may search over 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 over 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. Cougar IDs are also needed to release computer print jobs from the printers in the study areas on each floor.

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 an iPad 3 or laptop computer with an active Ccougar ID. For more information about library services on the Delaware Campus, call (740) 203-8183.

Public Safety/Columbus State Police Department

COLUMBUS CAMPUS

Emergencies – Dial 911
Columbus State Department of Public Safety/Police: (614) 287-2525
Located on the Columbus Campus in Delaware Hall 047, available 24 hours a day, seven (7) days a week.

DELAWARE CAMPUS

Emergencies – Dial 911
Columbus State Department of Public Safety/Police: (614) 287-2525
Located on the Delaware Campus in the Administration Building

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

The Columbus State Community College Department of Public Safety, Delaware Hall 047, is responsible for law enforcement, parking enforcement, environmental health and safety, emergency management, crime prevention, security, and access to facilities. Columbus State Community College Campus Police Officers along with Security Specialists provide law enforcement and safety 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 Department of Public Safety's main office 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 Public Safety Office is in the Administration Building, Room 133-A. The Administration Building is on the Winter Road side of the campus. Public Safety 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, theft or vandalism, and other criminal activity
- Security escort [call (614) 287-2525]
- First aid
- Enforcement of state laws and college policy
- Timely warnings and emergency alerts.

The Department of Public Safety 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 through 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. – 4:00**

p.m. The Delaware Campus is staffed 24/7 by Columbus State Community College Department of Public Safety personnel.

Blue-light phones in Moeller Hall and in the parking lot connect directly to Public Safety. Criminal acts, accidents, suspicious behaviors, or emergencies must be reported to the Columbus State Department of Public Safety 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 Department of Public Safety administration, public safety communication technicians, emergency management coordinator, President, Senior Vice President, or Vice President of Student Affairs 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 Department of Public Safety 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 such crimes as murder, sexual assault, aggravated assault, motor vehicle theft, and arson. Issuing a timely crime warning is decided on a case-by-case basis by the Public Safety administration in light of all the facts surrounding a crime, including the nature of the crime, the continuing danger to the campus community, Clery criteria, and the possible risk of compromising a law enforcement investigation. Once the known facts are assessed, warnings can be issued through the college email system, media, or Rave emergency text system.

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 Public Safety Communications Center sounds an alarm, showing the communication technician that person's profile so they can then 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 Public Safety Communications Center so the caller can speak directly to a communication technician to have a police officer come to their assistance. For emergencies also call 911.

Reporting a Crime, Accident, Fire, or Emergency

If an emergency exists, immediately call 911, then the Department of Public Safety 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 Department of Public Safety. You can call public safety, 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 calling 911. Columbus State has an excellent safety record. Be prepared to give the Communications Center the following information:

- Nature of emergency, e.g., fire, personal 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 non-residential 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, but are not routinely monitored. The Department of Public Safety and Security unit is responsible for the operation and maintenance of safety, fire, and security systems.

Fire Suppression and Monitoring

- Columbus State'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 Department of Public Safety Communications Center.
- Columbus State Community College has had no loss of life and no major building structure fires.
- Designated employees receive annual fire prevention training through the Columbus State Safety Academy, including the proper use of a fire extinguisher.
- Columbus State Department of Public

Safety conducts monthly fire drills in designated areas, in accordance with the Ohio Revised Code.

- 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.

Smoking is prohibited in Columbus State buildings and in front of the entrances to campus buildings.

Emergency Management Information

During an emergency, each of us must take responsibility for our own safety, and assist those around us, especially helping people with disabilities during an emergency. For more information, go to the Columbus State Public Safety website (**http://cscc.edu/services/publicsafety/**) and select the "Emergencies" link.

The Department of Public Safety Emergency Management 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.** They 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 Public Safety 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 public safety 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/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 bookbags, 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 trunk of 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 college Public Safety/ Police 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 Public Safety.

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 section below.

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, HR,

physical plant and public safety 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.

Missing Persons
In the event a person should become missing from campus, the Department of Public Safety should be notified immediately. A campus police officer will respond and gather information and relay it to other public safety 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. Columbus State Department of Public Safety will assist the investigating agency as requested by that agency.

Victim Counseling – Columbus Campus (614) 287-2818 or **http://www.cscc.edu/counselingservices**
Counseling Services can help with mental health issues, such as sexual assault, depression or stress. They can also 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.

Clery Crime Statistics
Clery crime statistics, annual security report, warnings, crime logs, and emergency information, are available online at http://cscc.edu/Publicsafety/cucr**.**

Crime Statistics
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 Public Safety crime statistics and crime log can be found online at: http://www.cscc.edu/services/publicsafety/crime-statistics.shtml .

Advising the Campus about Sex Offenders
eSORN is Ohio's **E**lectronic **S**ex **O**ffender **R**egistration and **N**otification system. The Department of Public Safety provides a link to the Ohio Attorney General's website for sex offenders. This link is http://www.cscc.edu/services/publicsafety/so.shtml

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.

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 Dept. of Public Safety. 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.

Parking and Traffic Rules and Regulations
Parking on property controlled by Columbus State Community College (CSCC) is by permit only, including motorcycles and vehicles with handicap placards. Student permits expire on the last day of each semester. Parking is restricted to college-related business. Students, faculty, and associates are not permitted to park in spaces designated for visitors, including meters. Parking is prohibited in any area not specifically designated as parking.

Tips for Parking on Campus
1. Read all parking signs before you park.
2. Allow enough time to park and walk to your class or meeting.
3. Check the parking map for lots where you are permitted to park.
4. Extra parking is available in Lot 28 on Mt. Vernon Ave., just west of Cleveland Ave., and Lot 32 (east side of the parking garage) on the Columbus Campus.
5. Remember to abide by policies, local, state and federal laws. Campus police are Ohio certified law enforcement officers empowered to enforce traffic and criminal laws. They also stand ready to assist you when needed.
6. Do not leave valuables in plain sight in your vehicle. Trunk storage is the best. Lock your doors and roll up the windows. Report crimes or anything suspicious to Public Safety at (614) 287-2525; and call 911 for emergencies.
7. Be prepared to park in the outer lots around campus due to the closer lots being full at peak times between 9:00 am and 1:00 pm, Monday through Thursday. Allow yourself extra time to walk in from these lots.
8. Be aware that special events, construction, or emergencies could result in lot closures at any time. Be prepared to go to an alternate parking lot.
9. Parking fines must be paid at the Cashier's Office in Rhodes Hall. Failure to pay fines may result in the charges being forwarded to the State of Ohio Attorney General's Office for collection, per Ohio Revised Code.

Any questions about parking, vehicle parking permits, temporary parking permits, visitor parking, handicap parking, or citations should be emailed to parking@cscc.edu. Parking permit and ticket payments may be made through the Telephone Information Center (TIC) 614-287-5353 or in person at the Cashiers and Student Accounting Office in Rhodes Hall.

Parking Permit Purchase and Placement on Vehicles

Parking permits are required on both campuses and at all regional learning centers. Before you begin the permit registration process, be sure to update your address with the Records and Registration Office. This is done on CougarWeb under "User Account" located below "Additional Services," which is where you register for your parking permit. Once that is done, you may proceed to register your car. This is a two-step process for all students – Columbus and Delaware campuses as well as regional learning center students.

1. Log in to CougarWeb to register for your permit.
2. Pay for your permit. This may be done one of three ways:
   • Pay via CougarWeb when you complete your permit registration (under Make A Payment) – Credit card only
   • Pay at the Cashiers and Student Accounting Office in Rhodes Hall – Credit/Debit card, cash, or check
   • Call the Telephone Information Center (TIC) at (614) 287-5353 – Credit/Debit card only.

PLEASE NOTE

1. In accordance with the Campus Student Fees Policy 7-06 (B), Parking Permits are non-refundable. Parking permit fees are $35/semester.
2. Parking permits MUST be clearly displayed and affixed inside the rear windshield on the passenger side or placed on the front dash on the driver's side.
3. Failure to have your permit clearly displayed may result in a violation for Failure to Display Valid Permit. If you have tinted windows, place the permit in the front windshield on the driver's side so all information is clearly visible from outside the car.
4. If you have ordered and paid for your parking permit and have not yet received it, go to Public Safety in the lower level of Delaware Hall to request a temporary hang tag.
5. Replacement student permits may be purchased from the Cashier's Office for a fee. To prevent unauthorized use, the replaced permit will be invalidated and placed on a tow list.

Illegal Use, Falsification, Alteration, or Reproduction of Permits

All parking permits are nontransferable between students or employees. Any person who provides false information, registers a vehicle belonging to another student, illegally sells, transfers, alters, reproduces, or uses a permit not intended for his/her use may be subject to a fine and disciplinary action as well as possible towing. This could also result in loss of parking privileges and forfeiture of all parking permit fees.

Citation Appeals

Note: This section does not include State of Ohio or municipal citations, which are processed by local courts, not the Columbus State appeals process.

1. A Columbus State citation may be appealed if the recipient feels the citation was unjustified.
2. Appeals must be filed **within ten (10) calendar days** of receipt. Appeals may be filed online at this link: **https://web.cscc.edu/pca/default.aspx**
3. The appeal will be reviewed by the Parking Appeals Committee.
4. You will be notified of the appeal results through email notification to your CSCC email account. All decisions of the Parking Appeals Committee are final.

Disclaimer

Columbus State disclaims all responsibility from losses or damages to vehicles parked on Columbus State property. **Columbus State is not responsible for losses or damage to any vehicle towed from campus.**

Handicap Parking

- Anyone parking in a handicapped parking space must have a state-issued handicapped license plate or placard in accordance with Ohio Revised Code 4511.69 **and** a valid Columbus State Community College parking permit.
- Handicap permits are nontransferrable.
- Violators can be cited and towed at the owner's expense and fined up to $500.00 according to state law.
- If a current, state-issued handicapped placard is properly displayed, along with a college parking permit, parking is available in any lot on campus (not just handicap spaces), if designated handicap spaces are full.

Lost and Found Items

In accordance with Columbus State Community College Procedure No. 13-11 (E) (l), the collection and disposal of lost and found items of value is the responsibility of the Department of Public Safety. 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 Department of Public Safety at the Columbus or 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 Department of Public Safety on the Columbus Campus (Delaware Hall, Room 047) between 9 am and 5 pm, Monday – Friday.

ID Cards

Student ID cards are made by the Department of Public Safety at the Columbus Campus, Monday through 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 coming to Public Safety to obtain the ID. The student should bring a paid receipt to the Communications Center in Public Safety 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 Department of Public Safety 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 Department of Public Safety in Delaware Hall 047, Monday through 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 Public Safety personnel of the phone location. The system also notifies our Department of Public Safety 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 you can hear the Department of Public Safety Communications Technician and also speak directly to the Technician.

Fire and Arson

Columbus State, a nonresidential college, has had no significant loss of life or building loss. Employees receive annual fire prevention training which includes proper use of a fire extinguisher.

Campus Crisis Response

Crisis Intervention (CIT)

The Department of Public Safety 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 Public Safety. 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, please call 911 and then the Columbus State Police, 24 hours a day, at (614) 287-2525.

Communications Center

The Communications Section is staffed by non sworn members of the Department of Public Safety. Some of the duties performed by the Communications Section include central monitoring of campus alarm systems, customer service, issuance of ID cards for both students and staff, answering telephone calls for service and dispatching appropriate resource(s) to the scene, conducting vehicle registration and 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 nonpolice 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.

The Student Handbook is online at **http://www.cscc.edu/Handbook/index.asp**

Student Engagement and Leadership

The Department of Student Engagement and Leadership, Nestor Hall 116, offers a variety of co-curricular activities that enhance students' educational experiences and aid in the development of lifelong skills. Through this department, students can access opportunities to practice leadership and community service and to enjoy social interactions with diverse cultures and individuals. For information, call (614) 287-2637 or visit the Student Engagement and Leadership website, **www.cscc.edu/seal.**

Housing

Columbus State does not provide campus housing, but the Student Engagement and Leadership Department (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 Program was developed to give students the opportunity to participate in various public relations

and recruiting activities at Columbus State. The primary objectives of the program are to provide students with basic leadership training and to allow students the opportunity to work in a number of departments on campus. Community outreach and community service are also components of the Student Ambassador Program. Applications for the program are available during spring semester.

The Columbus State Leadership Society

The mission of the Columbus State Leadership Society (CSLS) is to encourage students to develop and utilize their leadership skills by practicing them—not only within the college setting, but in the larger community as well. CSLS challenges and supports first-year students by providing them with diverse educational opportunities to become successful. The focus of the society is on LEADERSHIP rather than on academic achievement per se as it creates countless and varied opportunities for primarily first-year students. Participants must meet all necessary requirements and have an interest in building the college community and improving leadership skills. The Columbus State Leadership Society will also aid in student retention by encouraging involvement on the college's campuses and among the student population at large.

Special Events

The Department of Student Engagement and Leadership offers a number of special events throughout the year such as Welcome Back (Autumn Semester), Spirit Week and Spring Fling (Spring Semester), and Jazz in July (Summer Semester). In addition, Black History Month, Women's History Month, Asian-Pacific American Awareness Month, and other special interest activities are celebrated at the college.

Student Activities

The Nestor Hall Department Office is a good starting place for discovering all the possibilities at Columbus State. The office can put you in touch with student clubs and organizations and help you enjoy your time in college through all kinds of activities. If you need a place to study or relax between classes, Nestor Hall is home to a study lounge (west side) and a recreation lounge (east side). In the recreation lounge, there is a large-screen monitor and students can catch a movie (changes weekly) Monday through Friday, from 9:00 a.m. to 3:30 p.m. 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.

For more information about special events and college activities, call (614) 287-2637.

The Delaware Campus hosts student activities Inquire at Student Services about any upcoming events, call (740) 203-8345.

Student Organizations

In order to be recognized by Columbus State Community College and be eligible for benefits of that recognition, student clubs and organizations must register as a new club or organization and annually renew the registration of an existing club or organization with the Department of Student Engagement and Leadership, Nestor Hall Room 116, (614) 287-2637. Registration signifies that the club or organization will comply with the rules, regulations, and guidelines of the college. Each year, new clubs and organizations are added to enhance campus diversity. At the time of catalog publication, active clubs at Columbus State included:

Autism Club
Black Student Union
College Democrats
Columbus State Landscape Association
Columbus State Student Nurses Association
Construction Specification Institute (CSI) Student Chapter
Cougar Pride (GLBT)
CSCC Tae Kwon Do and Martial Arts Club
Eta Sigma Delta– Hospitality Management Honorary
International Student Association
Massage Therapy Student Association
Muslim Student Association
OTAKU
Phi Theta Kappa, Rho Epsilon Chapter
Pan-African Student Union
Pre-Law Society
Respiratory Therapy Student Organization
Senior Nursing Class Organization
Sport and Exercise Studies Club
Student American Dental Hygienist Association (SADHA)
Veterinary Technicians

Please note that the active status of some of these groups varies from year to year. To learn if the group you are interested in is currently active, please check out the organization list on the Student Engagement and Leadership webpage. To learn more about Columbus State clubs and organizations, or to start your own group, stop by the Dept. of Student Engagement and Leadership, Nestor Hall 116, or call (614) 287-2637.

Wellness Program

(See page 52.)

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 EEO officer 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, please contact the Dean of Student Life Office, Eibling Hall 201, (614) 287-5299 or (614) 287-2117.

Student Handbook

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

Sexual Harassment and Sexual Assault Policy

Columbus State Community College believes that all students should be able to learn in an environment free from sexual harassment and assault. To help ensure that students are not subjected to any form of sexual misconduct, the college prohibits any gender-based verbal or physical conduct that has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creates an intimidating, hostile, or offensive working or educational environment. Sexual harassment includes any situation in which there is gender-based misconduct that is sufficiently severe, pervasive, persistent or objectively offensive that it alters the conditions of education or employment. Sexual misconduct also includes any nonconsensual physical contact of a sexual nature that is committed either by force or intimidation or through the use of the victim's mental or physical incapacity, including through consumption of drugs or alcohol.

For more information, or to make a report of sexual misconduct, contact the college's Title IX Coordinator in the Human Resources Dept., Rhodes Hall lower level, (614) 287-2636. You may also contact the Student Conduct Program Coordinator, Eibling Hall 201, (614) 287-2117. In cases where the student is the alleged perpetrator, the Student Code of Conduct governs sexual misconduct. Violation of this policy may result in sanctions up to and including expulsion from the college.

In emergency cases or after business hours, you may contact the Public Safety Department, Delaware Hall 047, (614) 287-2525. Columbus State Police are available 24 hours a day, 7 days a week. Confidential personal counseling and support for students are available free of charge in Counseling Services, Aquinas Hall 116. To make an appointment with a counselor, please call (614) 287-2818. For more information on student rights, responsibilities, and support resources, feel free 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, (614) 287-5299, Eibling Hall 201.

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. To obtain additional information, contact the Public Safety Department, Delaware Hall 047, (614) 287-2525, or access **www.cscc.edu/about/publicsafety**.

Testing Centers

Columbus Campus:
www.cscc.edu/testingcenter

Delaware Campus:
www.cscc.edu/delaware

Regional Learning Centers:
www.cscc.edu/services/testingcenter/off-campus-testing
Testing is available at any one of these three: Dublin, Gahanna, Westerville

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 also provides a community outreach proctoring service for non-Columbus State academic examinations. There is a service fee of $25 per non-Columbus State exam. The proctoring service is available to anyone in the community; however, the Testing Center reserves the right to deny a proctor request at any given time. 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. 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. All exams must be finished by closing time.

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 there 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.cscc.edu/services/testingcenter** for more information and for hours of operation. Delaware Campus Testing Center hours of operation are also available at **www.cscc.edu/delaware**.

Transfer Center

For a seamless transfer experience, students should begin their search at Columbus State's Transfer Center. The Center, located in Aquinas Hall 126, simplifies the transfer process by serving as a hub for related information and easy-to-use reference tools. The college has developed 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

A number of four-year institutions regularly hold office hours in Columbus State's Transfer Center, allowing students to meet individually with an advisor to secure timely and accurate transfer information. Students also can access Columbus State's Articulation Database and other resources to help plan a transfer though the Center. The Transfer Center represents the college's commitment to helping our students start right and finish strong. Stop by the Transfer Center, Aquinas Hall 126, (Mon. –Thurs. from 9 a.m. to 5 p.m.; Fri. from 9:30 a.m. to 4:30 p.m.) or call 287-2847 to make an appointment.

TRiO Programs

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. For more information please call (614) 287-5648 or visit the TRiO programs in Franklin Hall, Room 223.

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 ($279,736 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). **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.cscc.edu/services/tutoring**.

Automotive and Skilled Trades

- Columbus Campus, Delaware Hall, Room 259, (614) 287-5318

Tutoring is available for select courses in Automotive and Skilled Trades.

Biological and Physical Sciences

- Columbus Campus, Nestor Hall, Room 023, (614) 287-2522 or 2122
- Delaware Campus, Moeller Hall, Learning Center, (740) 203-8345
- Regional Learning Centers – Reynoldsburg, (614) 287-7200; Westerville, (614) 287-7020

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

Business Programs Tutoring

- Columbus Campus, Delaware Hall, Room 212

Tutoring is available for select courses in ACCT, BMGT, BOA, and FMGT.

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 you with topic selection, research strategies, outlining, coping with anxiety and delivery. Speech tutors will make digital recordings for you 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, Room 206, (614) 287-2591

Tutoring services by appointment are available for select CRJ courses.

Developmental Education Learning Skills Centers
- Reading/Writing, Columbus Campus, Aquinas Hall, Room 214, (614) 287-5193
- Basic Math/Pre-Algebra, Columbus Campus, Aquinas Hall, Room 213, (614) 287-5193

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

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

English as a Second Language
- Columbus Campus, Franklin Hall, Room 245, (614) 287-5400

Tutoring is available for ESL courses.

English Department Supported Writing Center
- Columbus Campus, Columbus Hall, Room 102, (614) 287-5717, writingcenter@cscc.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. 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.cscc.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
- Select Regional Learning Centers
- 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, Room 408, (614) 287-5043

Tutoring is available for Classics and History courses.

Integrated Media & Technology
- Columbus Campus, Eibling Hall, Room 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, Room 401.

Mathematics
- Columbus Campus, Davidson Hall, Room 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.cscc.edu** and search availability for Math Online Tutoring.

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

Modern Languages (Spanish)
- Columbus Campus, Franklin Hall, Room 245, (614) 287-5400

Tutoring is available for beginning Spanish courses.

Nursing Success Lab
- Columbus Campus, Union Hall, Room 437, (614) 287-3885

Walk-in support for first, second, or third semester nursing students currently in the program. Registrations for 30-minute personal sessions are also available. Call for current schedule.

Paralegal Studies
- Columbus Campus, Nestor Hall, Room 425, (614) 287-2591

Tutoring services by appointment are available for select LEGL courses.

Peer Tutoring Program
- Columbus Campus, Aquinas Hall, Room 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 your 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 the

Regional Learning Center near you based on a variety of schedules. See the course above or call (614) 287-2232 for more information.

Speech Lab – See Communication Center

Writing Center – See English Department

Veterans Services

(See page 21.)

Wellness Program

The Department of Student Engagement and Leadership sponsors a wellness program for students, faculty, and staff of the college. Individual wellness consists of five components: physical, social, emotional, mental, and spiritual. The activities offered through the wellness program attempt to balance the five components through lectures, hands-on demonstrations, and seminars. Typical wellness offerings include Zumba, Pilates, Tae Kwon Do, Tai Chi, women's self-defense, and yoga. Other offering include awareness and prevention programs on topics such as alcohol and drug abuse, mental health, eating disorders and sexual health. For more information, call (614) 287-2637.

Community Education and Workforce Development

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Community Education and Workforce Development

Nancy M. Case, Interim Dean (614) 287-2511

The Division of Community Education and Workforce Development (CEWD) is comprised of three departments:

1) Center for Workforce Development
2) Transitional Workforce
3) Columbus State Conference Center

The division provides mostly noncredit education and training opportunities in support of workforce and economic development. Skill development training for individuals occurs at basic and professional levels. Organizational solutions provide businesses with enhanced workforce capacity. Services are designed for incumbent employees, as well those who are unemployed, underemployed, or simply wanting to change their career options. CEWD provides a gateway into credit programs at Columbus State through noncredit-to-credit articulation opportunities and through college readiness preparation.

The Center for Workforce Development (CWD) 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 consulting. 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, as well as for individuals seeking career growth. Each year, the Center for Workforce Development at Columbus State delivers thousands of skill ability and behavioral assessments and offers more than 50 professional development seminars. Employees wanting to move ahead in their careers also can complete professional and industry-recognized certifications.

New and emerging entrepreneurs can tap the Ohio Small Business Development Center at Columbus State, 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.

The Transitional Workforce Department provides courses for individuals who want to gain the skills needed to enter, re-enter, or advance in the workforce. Transitional Workforce offerings can help those students who want to pursue initial career and educational goals via noncredit courses, and those who are not yet eligible or ready for credit classes. Through the Transitional Workforce Department, individuals can take advantage of language instruction, academic enrichment, technology training, job training, and continuing education — in traditional and nontraditional settings — including jobsite presentations.

The Columbus State Conference Center features over 13,000 square feet of multi-functional space on one convenient level. The Columbus State Conference Center is an ideal venue for productive and successful events, in a professional setting, at an affordable cost. Government and business leaders, from nonprofit and private sector groups alike, find the Columbus State Conference Center a perfect location for their functions. The Conference Center features multi-use spaces with plenty of natural light and all-inclusive pricing that covers audio-visual set-ups, wireless Internet access, and a business center.

For many visitors to the Center for Workforce Development, the Information Center, (614) 287-5858, serves as the first point of contact. Staff is available during business hours to answer questions, provide directions, assist with registration, and ensure that customers receive the assistance they need concerning the many non-credit programs available through Community Education and Workforce Development.

The Center for Workforce Development is administered by Cheryl Hay, (614) 287-2415. Douglas House, (614) 287-2576, directs the efforts of the Transitional Workforce Department and Information Center. Rita Bedritis, (614) 287-5761, supervises Conference Center operations and services. For more information about available programs, visit us on the web at **www.cscc.edu/workforce**.

Center for Workforce Development (614) 287-5000

The Center for Workforce Development (CWD) at Columbus State is a full-service resource for individuals and businesses. The Center for Workforce Development provides innovative approaches to training, consulting, and education through customer-driven partnerships. The CWD's varied services can help companies assess, analyze and target cost-effective solutions to meet their specific organizational challenges.

CWD provides organizations with:

- Training in leadership and supervisory skills
- Customer service training
- Training in business communications, verbal and written
- Programming that develops communication, interpersonal and team building skills
- Consulting services and business/ organizational development
- Quality programs such as Lean Manufacturing and ISO training certification
- End-user computer training involving word processing spreadsheets, presentations, email, web authoring, and more
- Technology programs relevant to many industries, including hydraulics, pneumatics, electric motors, HVAC, and advanced manufacturing
- Accounting and financial training/ consulting for financial and nonfinancial managers
- Human Resources training
- Customized individual, small or large training built around organizational needs

- Talent development including job analysis and employee assessments
- Experienced personnel to coordinate/ implement training
- Quality trainers, consultants and instructors

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**.

The Ohio Small Business Development Center at Columbus State Community College (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 emerging business owners. The SBDC regional 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 36 centers. It is the only region in Ohio that has centralized services of the SBDC, as well as centers specializing in manufacturing, technology, and international trade, that provides consulting as well as workshops, seminars and conferences.

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, MTSBDC, or ITAC activity, call (614) 287-5294 or visit **www.SBDC.cscc.edu.**

Columbus State Testing & Talent Assessment Center

University System of Ohio (USO) Talent Development Network at the CWD

Columbus State Community College's Testing and Talent Assessment Center is an authorized Test Center which delivers computer-based and paper-pencil national, state, and professional certification and licensor 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 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 Testing & Talent Assessment Center at (614) 287-5750 or email **act1@cscc.edu.**

Transitional Workforce Department (614) 287-5858

The Transitional Workforce Department provides courses for students who want to gain the skills needed to enter, re-enter, or advance in the workforce. This includes individuals who want to pursue initial career and educational goals via noncredit courses and those who are not yet eligible or ready for credit classes.

GED Preparation Program

Classes in the GED Preparation Program are designed for students who want to earn a GED to increase their career and/or educational opportunities. This preparatory program also welcomes students wishing to improve math and language arts literacy skills for personal achievement and enrichment.

Language Arts classes provide instruction in reading, writing, grammar, spelling, and vocabulary. Math classes are designed to build skill in number functions, multi-step word problems, and beginning algebra and geometry. Students wishing to earn their GED are required to take Fundamentals of Writing, which prepares them for the essay portion of the GED test and teaches critical writing skills that will help them succeed in the workplace and in credit-bearing college courses.

The classes review GED test subjects through the high school level for the purpose of improving college placement test scores or as preparation for the Ohio General Education Development (GED) test which leads to the Ohio High School Equivalent Diploma. Language Arts 4 and Math 4 courses are intended to help students who have earned a GED or high school

diploma prepare for college entrance exams and course work. These courses prepare students for college through instruction in critical thinking, writing, statistics, research, media literacy and 21st century skills. Direct classroom instruction is supported by instructional software, extensive practice for the GED test, and tutorials in math and writing areas where the student specifically needs development. The GED Preparation Program is committed to differentiating instruction – teaching to each student – rather than to a "one size fits all" approach that is used more commonly.

Services available to program participants include placement testing/orientation, academic planning, disability services, and a graduation ceremony for GED Preparation Program students who earn their GED.

Cost per course is $99 (fees increase to $149 one (1) week before first day of term), plus materials.

Course offerings include:

TWBSC 101	Language Arts 1
TWBSC 201	Language Arts 2
TWBSC 301	Language Arts 3
TWBSC 401	Language Arts 4
TWBSC 102	Math 1
TWBSC 202	Math 2
TWBSC 302	Math 3
TWBSC 402	Math 4
TWBSC 099	Accelerated GED Prep

Call (614) 287-5858, or come to the CEWD Information Center, 315 Cleveland Ave., for more information.

Language Institute

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 courses 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 on the Language Institute, contact Tara L. Narcross, Ph.D., (614) 287-5448.

Basic English Program

The Basic English Program is a series of nine noncredit courses designed to improve understanding and use of the English language. A placement test determines the starting level. 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, health care and business.

Cost per course for most Basic English courses (starting Spring 2013) 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-0120 Reading Skills 1
LILNG-0125 Basic English for Health Care
LILNG-0130 Basic English for Business
LIBSC-0100 Basic Communication 1
LIBSC-0150 Basic Communication 2

LICPT-0100 Introduction to Computers
Cost $40

Noncredit Language and Culture Courses

These classes are designed to develop a basic level of conversational skill and cultural understanding. Cost per course (starting Spring 2013) is $160, 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

Introduction to Interpretation and Translation

These classes provide bilingual individuals with the professional skills needed in the fields of interpretation and translation. Cost per course is $200, plus materials.

LILNG-2000 Introduction to Interpretation and Translation
LILNG-2010 Ethics in Interpretation and Translation
LILNG-2020 Introduction to Legal Interpretation and Translation
LILNG-2022 Introduction to Business Interpretation and Translation

For more information, call (614) 287-5858, email cewdreg@cscc.edu, come to the CEWD Information Center at 315 Cleveland Ave., or visit **www.cougarweb.cscc.edu** and click on CougarWeb for Continuing Education.

Career Counseling

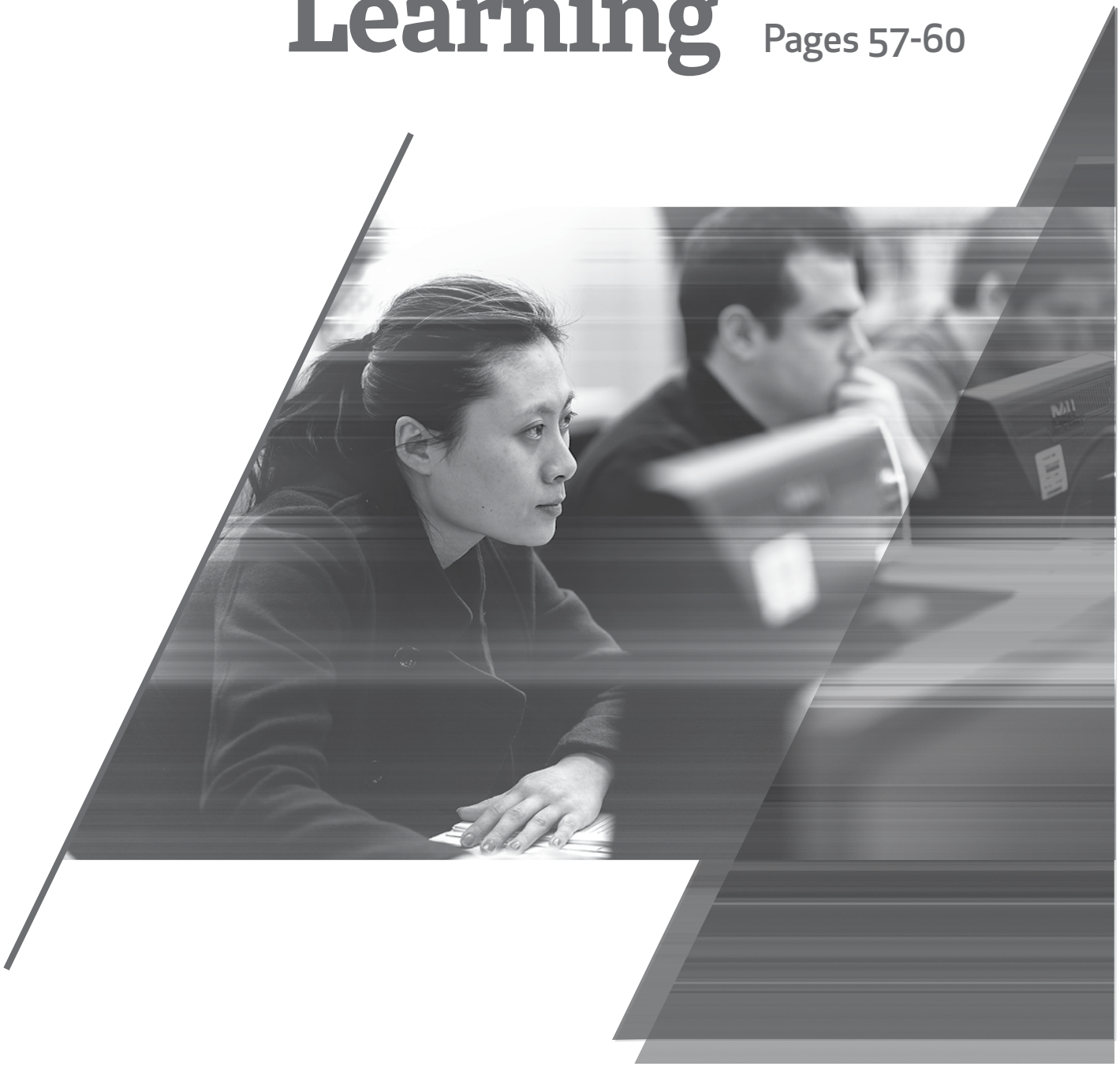
The Transitional Workforce Department offers career counseling for:

1) Noncredit students who are enrolled in Community Education and Workforce Development programs
2) Credit students who are receiving services from the Workforce Investment Act and/or the North American Free Trade Act.

For more information, call (614) 287-5515, email tradeinfo@cscc.edu, or come to the CEWD Information Center at 315 Cleveland Ave.

Online/Distance Learning

Pages 57-60



Online/Distance Learning

Columbus State's online/distance learning offerings are a unique alternative to traditional on-campus learning. Online/distance learning allows students from around the city or around the globe to learn, using the latest interactive Web and video technologies, without the limits of "time and place."

Getting Started in Online Learning

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

Columbus State has an orientation to Blackboard to help students become familiar with online learning before they enrolling in an online class. To take the online orientation, please go to the following link: h**ttp://bborientation.cscc.edu .**

ATTENTION: 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 hybrid) 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.

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

1) **Within Columbus State's five 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. Our web site, **http://cscc.edu/services/testingcenter**, provides more information on hours of operation, locations, and policies.

2) **Outside of Columbus State's five-county service area,** students should locate a testing site (a college, a library, etc.) that is convenient and then **complete and submit an Out of City Proctor Request Form** to this email address: dloctest@cscc.edu, to initiate the process. Detailed information and the requirements for this process are located at the website **http://cscc.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. 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@cscc.edu or by telephone at (614) 287-5219.

Types of Distance Learning Courses

Web (online)
Web course instruction is held completely online, although most web 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 a Web 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 Web courses require real-time, online collaboration at specific dates and times using Web-conferencing. Please consult the course syllabus or academic department for details and technical requirements for your computer.

Hybrid (online and face-to-face)
A hybrid course is held *both* online and at required real-time, face-to-face sessions. Hybrid 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 hybrid course, a student must have basic computer knowledge along with access to a computer and the Internet. 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 hybrid 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. Please consult the course syllabus or academic department for details and technical requirements for your computer.

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 by 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.

Distance Learning Degree Programs

Associate of Arts
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 3D Visualization
Certificate in Accounting Concentration
Certificate in Adobe Illustrator
Certificate in Adobe Photoshop Advanced
Certificate in Bookkeeping
Certificate in Complementary Care
Certificate in Digital Media
Certificate in Digital Painting
Certificate in Direct Marketing
Certificate in Electronic Marketing
Certificate in Entrepreneurship
Certificate in Geographic Information Systems
Certificate in Health Care Manager
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 Patient Care Skills
Certificate in Basic Digital Photography
Certificate in Photoshop for Photographers
Certificate in Pre-MBA (Marketing)
Certificate in Registered Nurse First Assistant
Certificate in Rich Media Communication
Certificate in Strategic Procurement
Certificate in Supply Chain Management
Certificate in Sustainable Building
Certificate in System Z Foundations
Certificate in Taxation Specialist
Certificate in Visual Communication
Certificate in Web Communication

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

Online/Distance Learning (DL) Courses

The following programs of study/departments offer distance learning courses:
Accounting
Anthropology
Architecture
Arts and Sciences
Astronomy
Automotive Technology
Biology
Business Management
Business Office Applications
Chemistry
Civil Engineering Technology
Classics
Communication
Computer Science
Construction Management
Criminal Justice (Law Enforcement)
Dental Hygiene
Dental Laboratory Technology/Small Business Mgmt.
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
Nuclear Medicine Technology
Nurse Aide Training Program
Nursing Certificate
Nursing
Paralegal Studies
Philosophy
Physics
Political Science
Practical Nursing
Psychology
Quality Assurance Technology
Radiography
Real Estate
Respiratory Care
Skilled Trade Technologies
Sport and Exercise Studies
Sociology
Social Sciences
Spanish
Supply Chain Management (Logistics)
Surveying
Theatre
Veterinary Technology

For a complete listing of distance learning courses, please refer to this website: **http://global.cscc.edu/CoursesDegrees/coursesindex.asp**

Programs of Study and Course Descriptions

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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 Articulation Database at **http://www.cscc.edu/academics/transfer/.** Click on "Search Transfer Agreements." 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 is different from the Associate of Arts degree primarily in the level of mathematics and science coursework required. 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 Articulation Database mentioned above.

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

1. All students must satisfactorily complete at least 61 credit hours of approved courses, a minimum of 23 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. All students must attain an overall grade point average of 2.0 or better for all courses taken at Columbus State that are used to meet degree requirements. 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 32 of this catalog for complete details.

I. General Education Core Requirements: 30 hours

COLS 1100 (1 hour) First Year Experience Seminar or COLS 1101 (1 hour) College Success Skills is required for all new degree-seeking students or students new to Columbus State with fewer than 15 applicable hours of transfer credit from their previous college. Students are to take this course within their first 15 hours of enrollment at Columbus State. COLS 1101 is for students who place into two or more Developmental Education courses.

English Composition: 6 hours

College Composition (3 hours required)

ENGL 1100 Composition 1 (3 hours)

Intermediate Composition (3 hours required)

ENGL 2367 Composition II (3 hours)

Mathematics, Statistics, and Formal Logic: 3 hours

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 hrs)
MATH 1152 Calculus II (5 hrs)
MATH 1172 Engineering Mathematics A (5 hours)
MATH 2153 Calculus III (5 hrs)
MATH 2173 Engineering Mathematics B (5 hours)
MATH 2255 Elementary Differential Equations I (4 hrs)
MATH 2366 Discrete Mathematical Structures (5 hrs)
MATH 2415 Ordinary Partial Differential Equations (4 hours)
MATH 2568 Linear Algebra (4 hours)
STAT 1450 The Practice of Statistics (4 hours)
STAT 2180 Statistics for the Biological Sciences (4 hours)
STAT 2430 Business Statistics (5 hours)
STAT 2450 Introduction to Statistical Analysis (4 hours)

Both MATH 1125 (Conceptual Mathematics Teachers I – 5 hours) and MATH 1126 (Conceptual Mathematics Teachers II – 5 hours) may fulfill this requirement.

Natural Sciences: 7 hours

Choose two courses from the approved lists. At least one course must contain a laboratory component. Courses which include a laboratory are designated with an [L].

Physical Sciences

ASTR 1141	Life in the Universe (3 hours)
ASTR 1161	The Solar System (3 hours)
ASTR 1162	Stars and Galaxies (3 hours)
ASTR 1400[L]	Astronomy Laboratory (1 hour)
CHEM 1100	Chemistry and Society (5 hours)
CHEM 1111[L]	Elementary Chemistry I (4 hours)
CHEM 1112[L]	Elementary Chemistry II (4 hours)
CHEM 1171[L]	General Chemistry I (5 hours)
CHEM 1172[L]	General Chemistry II (5 hours)
CHEM 1200[L]	Introduction to General and Organic Chemistry (5 hours)
GEOG 1900[L]	Introduction to Weather and Climate (4 hours)
GEOL 1101[L]	Introduction to Earth Science (4 hours)
GEOL 1105	Geology and National Parks (3 hours)
GEOL 1121[L]	Physical Geology (4 hours)
GEOL 1122[L]	Historical Geology (4 hours)
GEOL 1151	Natural Disasters (3 hours)
PHYS 1103	World of Energy (3 hours)
PHYS 1106[L]	Physics by Inquiry: Property Matter and Motion (5 hours)
PHYS 1200[L]	Algebra-Based Physics I (5 hours)
PHYS 1201[L]	Algebra-Based Physics II (5 hours)
PHYS 1250[L]	Calculus- Based Physics I (5 hours)
PHYS 1251[L]	Calculus- Based Physics II (5 hours)

Biological Sciences

ANTH 2200*	Introduction to Biological Anthropology (3 hours)
BIO 1111[L]	Introduction to Biology I (4 hours)
BIO 1112[L]	Human Biology (4 hours)
BIO 1113[L]	Biological Sciences I (4 hours)
BIO 1114[L]	Biological Sciences II (4 hours)
BIO 1125[L]	Plant Biology (4 hours)
BIO 1127[L]	Environmental Science I (4 hours)
BIO 2215[L]	Introduction to Microbiology (4 hours)
BIO 2232[L]	Human Physiology (4 hours)

*NOTE: Students may not use ANTH 2200 to satisfy both Biological Science and Social Science requirements.

Social and Behavioral Sciences: 6 hours

Choose two courses from two of the content areas listed.

Individuals and Groups

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

Organizations and Polities

ECON 2201	Principles of Macroeconomics (3 hours)
POLS 1100	Introduction to American Government (3 hours)
POLS 1200	Comparative Politics (3 hours)
SOC 1101	Introduction to Sociology (3 hours)

Human, Natural and Economic Resources

ECON 2200	Principles of Microeconomics (3 hours)
GEOG 2400	Economic and Social Geography (3 hours)
GEOG 2750	World Regional Geography (3 hours)
POLS 1300	International Relations (3 hours)

Arts and Humanities: 6 hours

Choose one course from each group.

Historical Study options

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, and the Visual/Performing Arts Options

ART 1205	Beginning Drawing (3hours)
ART 1206	2 Dimensional Design (3 hours)
ART 1207	3 Dimensional Design (3 hours)
ART 2275	Beginning Painting (3hours)
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 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)
HUM 1275	Introduction to Visual Representation (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 2215	Fundamentals of Script Analysis (2 hours)
THEA 2230	Introduction to Dramatic Literature (3 hours)

II. Additional Requirements: 31 hours

An additional **9 hours** specific to the Ohio Transfer Module are required from a combination of courses in the Arts and Humanities and the Social and Behavioral Sciences. These hours must include **3 hours of Historical Study, 3 hours of Literature, Culture and Ideas, and the Visual/Performing Arts, and 3 hours of Social and Behavioral Sciences.** These courses must be chosen from the Transfer Module.

Arts and Humanities

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 II to 1500 (3 hours)
HIST 2224	African-American History II since 1877 (3 hours)

Literature, Culture and Ideas, and the 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 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

ANTH 2200	Introduction to Biological Anthropology (3 hours)
ANTH 2201	World Prehistory (3 hours)
ANTH 2202	Introduction to Cultural Anthropology (3 hours)
ECON 1110	Introduction to Economics (3 hours)
ECON 2200	Principles of Microeconomics (3 hours)
ECON 2201	Principles of Macroeconomics (3 hours)
GEOG 2400	Economic and Social Geography (3 hours)
GEOG 2750	World Regional Geography (3 hours)
POLS 1100	American Government (3 hours)
POLS 1200	Comparative Politics (3 hours)
POLS 1300	International Relations (3 hours)
PSY 1100	Introduction to Psychology (3 hours)
PSY 2200	Educational Psychology (3 hours)
PSY 2261	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)
SOC 1101	Introduction to 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)

An additional **22 hours** are required. The one-credit course, **ASC 1190 Critical Thinking in Arts and Sciences**, is recommended for the Associate of Arts degree.

The student may include: **Any advanced course which would be appropriate for the student's intended major at a four-year institution** listed under Anthropology, Art, Astronomy, Biology, Chemistry, Classics, Communication, Dance, Economics, Education, English, Foreign Languages, Geography, Geology, History, History of Art, Humanities, Math, Music, Philosophy, Physics, Political Science, Psychology, Sociology, Social Sciences, Speech and Hearing Science, Statistics, or Theater.

Business-related courses include: ACCT 1211, ACCT 1212, FMGT 1101, LEGL 2064, MKTG 1110.

Other options may be chosen from pre-approved lists available from Advising Services. Careful selection of Columbus State courses can ensure the greatest applicability of Columbus State credits to the requirements for a baccalaureate degree. Students should consult a specific college transfer guide, Transfer Assurance Guide or pre-major guide available from Advising Services. Online transfer advising support is available at **www.cscc.edu**. Navigate to the "Services for Students" page, "Academic Advisors," and then "Advising Resources."

Associate of Science Degree

1. All students must satisfactorily complete at least 61 credit hours of approved courses, a minimum of 23 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. All students must attain an overall grade point average of 2.0 or better for all courses taken at Columbus State that are used to meet degree requirements. 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 30 hours of General Education Requirements and 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 32 of this catalog for complete details.

I. General Education Core Requirements: 30 hours

COLS 1100 (1 hour) First Year Experience Seminar or COLS 1101 (1 hour) College Success Skills is required for all new degree-seeking students or students new to Columbus State with fewer than 15 applicable hours of transfer credit from their previous college. Students are to take this course within their first 15 hours of enrollment at Columbus State. COLS 1101 is for students who place into two or more Developmental Education courses.

English Composition: 6 hours

College Composition (3 hours required)

ENGL 1100 Composition 1 (3 hours)

Intermediate Composition (3 hours required)

ENGL 2367 Composition II (3 hours)

Mathematics, Statistics, and Formal Logic: 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 1156 Calculus for Biological Science (5 hours)
MATH 1157 Modeling for Bio Sciences (5 hours)
MATH 1172 Engineering Mathematics A (5 hours)
MATH 2153 Calculus III (5 hours)
MATH 2173 Engineering Mathematics B (5 hours)
MATH 2174 Linear Algebra Differential Equations (5 hours)
MATH 2255 Elementary Differential Equations (4 hours)
MATH 2366 Discrete Math Structures (5 hours)
MATH 2415 Ordinary Partial Differential Equations (4 hours)
MATH 2568 Linear Algebra (4 hours)
STAT 1450 The Practice of Statistics (4 hours)
STAT 2180 Statistics for the Biological Sciences (4 hours)
STAT 2430 Business Statistics (5 hours)
STAT 2450 Introduction to Statistical Analysis (4 hours)
STAT 2460 Principles of Stats for Engineers (4 hours)
STAT 2470 Introduction to Probability Statistics Eng/Sci (4 hours)

Natural Sciences: 7 hours

Choose two courses from the approved list. At least one course must contain a laboratory component. Courses which include a laboratory are designated with an [L].

Approved Associate of Science Courses

Physical Sciences

CHEM 1111[L] Elementary Chemistry I (4 hours)
CHEM 1112[L] Elementary Chemistry II (4 hours)
CHEM 1171[L] General Chemistry 1 (5 hours)
CHEM 1172[L] General Chemistry II (5 hours)
CHEM 1200[L] Introduction to General and Organic Chemistry (5 hours)
GEOG 1900[L] Weather and Climate (4 hours)
GEOL 1121[L] Physical Geology (4 hours)
GEOL 1122[L] Historical Geology (4 hours)
PHYS 1200[L] Algebra-Based Physics I (5 hours)
PHYS 1201[L] Algebra-Based Physics II (5 hours
PHYS 1250[L] Calculus-Based Physics I (5 hours)
PHYS 1251[L] Calculus-Based Physics II (5 hours)

Biological Sciences

ANTH 2200 Introduction to Biological Anthropology (3 hours)
BIO 1113[L] Biological Sciences I (4 hours)
BIO 1114[L] Biological Sciences II (4 hours)
BIO 1127[L] Environmental Science I (4 hours)
BIO 2215[L] Introduction to Microbiology (4 hours)
BIO 2232[L] Human Physiology (4 hours)

*NOTE: Students may not use ANTH 2200 to satisfy both Biological Science and Social Science requirements.

Social and Behavioral Sciences: 6 hours required

Choose two courses from two of the content areas listed.

Individuals and Groups

ANTH 2201 World Prehistory (3 hours)
ANTH 2202 Peoples and Culture (3 hours)
PSY 1100 Introduction to Psychology (3 hours)
PSY 2261 Childhood Development (3 hours)
SOC 2210 Sociology of Deviance (3 hours)
SOC 2380 American Race and Ethnic Relations (3 hours)

Organizations and Polities

ECON 2201 Principles of Macroeconomics (3 hours)
POLS 1100 Introduction to American Government (3 hours)
POLS 1200 Comparative Politics (3 hours)
SOC 1101 Introduction to Sociology (3 hours)

Human, Natural and Economic Resources

ECON 2200 Principles of Microeconomics (3 hours)
GEOG 2750 World Regional Geography (3 hours)
GEOG 2400 Economic and Social Geography (3 hours)
POLS 1300 International Relations (3 hours)

Arts and Humanities: 6 hours required

Choose one course from each group.

Historical Study options

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 options

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 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)

II. Additional Requirements: 31 hours

An additional **9 hours comprised of the following:**

1. Take one additional Ohio Transfer Module course in either **Math** at the level of MATH 1131, 1149 or higher, or **Statistics** at the level of STAT 1450 or higher.
2. Take one additional Ohio Transfer Module course in **Natural Sciences** with a lab.
3. Take one additional college level Transfer Module course in either of the above two areas

An additional **22 hours** are required. The one-credit-hour course, **ASC 1190 Critical Thinking in Arts and Sciences**, is recommended for the Associate of Science degree.

The student may include: Any advanced course which would be appropriate for the student's intended major at a four-year institution listed under Anthropology, Art, Astronomy, Biology, Chemistry, Classics, Communication, Dance, Economics, Education, English, Geography, Geology, History, History of Art, Humanities, Math, Music, Philosophy, Physics, Political Science, Psychology, Sociology, Social Sciences, Speech and Hearing Science, Statistics, or Theater.

Business-related courses (acceptable courses listed): ACCT 1211, ACCT 1212, FMGT 1101, LEGL 2064, MKTG 1110.

Other elective options may be chosen from pre-approved lists available from Advising Services. Careful selection of Columbus State elective courses can ensure the greatest applicability of Columbus State credits to the requirements for a baccalaureate degree. Students should consult a specific college transfer guide, Transfer Assurance Guide or pre-major guide available from Advising Services. Online transfer advising support is available at **www.cscc.edu**. Navigate to the "Services for Students" page, "Academic Advisors," and then "Advising Resources."

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

English Composition

College Composition (3 hours required)

ENGL 1100 Composition I (3 hours)

Intermediate Composition (3 hours required)

ENGL 2367 Composition II (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.

Biological Sciences

BIO 1111[L] Introduction to Biology I (4 hours)
BIO 1112[L] Human Biology (4 hours)
BIO 1113[L] Biological Sciences I (4 hours)
BIO 1114[L] Biological Sciences II (4 hours)
BIO 1125[L] Plant Biology (4 hours)
BIO 1127[L] Environmental Science I (4 hours)
BIO 2010[L] General Zoology and Animal Diversity (4 hours)
BIO 2215[L] Introduction to Microbiology (4 hours)
BIO 2232[L] Human Physiology (4 hours)
BIO 2263 Human Pathophysiology (3 hours)
BIO 2300[L] Human Anatomy (4 hours)

Physical Sciences

ASTR 1141 Life in the Universe (3 hours)
ASTR 1161 The Solar System (3 hours)
ASTR 1162 Stars and Galaxies (3 hours)
ASTR 1400[L] Astronomy Lab (1 hour)
CHEM 1110[*] Chemistry and Society (5 hours)
CHEM 1111[L] Elementary Chemistry 1 (4 hours)
CHEM 1112[L] Elementary Chemistry II (4 hours)
CHEM 1113[L] Elements Organic/Biochemistry (4 hours)
CHEM 1171[L] General Chemistry 1 (5 hours)
CHEM 1172[L] General Chemistry II (5 hours)
CHEM 1200[L] Introduction to General and Organic Chemistry (5 hours)
ESSH 1101 Introduction to Environmental Science, Safety, and Health (3 hours)
GEOG 1900[L*] Weather and Climate (4 hours)
GEOL 1101[L] Introduction to Earth Science (4 hours)
GEOL 1105 Geology and National Parks (3 hours)
GEOL 1151 Natural Disasters (3 hours)
GEOL 1121[L] Physical Geology (4 hours)
GEOL 1122[L] Historical Geology (4 hours)
GEOL 1151 Natural Disasters (3 hours)
HORT 1130[L] Plant Sciences (3 hours)
PHYS 1103 World of Energy (3 hours)
PHYS 1106[L] Physics by Inquiry: Introduction to Properties and Motion (5 hours)
PHYS 1200[L] Algebra-Based Physics I (5 hours)
PHYS 1201[L] Algebra-Based Physics II (5 hours)
PHYS 1250[L] Calculus- Based Physics I (5 hours)
PHYS 1251[L] 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 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 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 2750*	World Regional Geography (3 hours)
GEOG 2400*	Economic and Social 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 2200	Introduction to Biological Anthropology (3 hours)
ANTH 2201	World Prehistory (3 hours)
ANTH 2202	Peoples and Culture (3 hours)
SOC 1101	Introduction to 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	Sociology Aspects Criminology (3 hours)

***These courses were previously approved by the Ohio Board of Regents and are being re-evaluated because of curriculum changes.**

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 Course Applicability System 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 the following 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.

Institutional Agreements (at the time of publication)
(Public Colleges and Universities)
Bowling Green State University
Central State University
Ohio University
The Ohio State University
University of Akron
University of Cincinnati
Wright State University

Institutional Agreements (at the time of publication)
(Private Colleges and Universities)
Antioch University Midwest
Art Institute of Pittsburgh
Ashland University
Capella University
Capital University
Chamberlain College of Nursing
College of Mount Saint Joseph
Franklin University
Heidelberg University
Indiana Wesleyan University
Muskingum University
Ohio Christian University
Ohio Dominican University
Ohio Wesleyan University
Otterbein University
Strayer University
Tiffin University
Union Institute & University
University of Rio Grande
Urbana University
Walsh College
Western Governor's University
Wilberforce University
Wittenberg University

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.cscc.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. The attainment of a "C" (2.00) average in all technical courses and a "C" (2.00) average in all nontechnical courses.
3. The completion of no fewer than 23 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. Attainment of a "C" (2.00) average in all technical courses and a "C" (2.00) average in all nontechnical courses.
3. Completion of no fewer than 23 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")

Accounting
- Certificate of Accounting Concentration (CPA Exam Preparation)
- Certificate of Internal Auditing
- Certificate of Taxation Specialist

Architecture
- Architectural CAD Drafting Certificate
- 3D Visualization Certificate

Automotive Technology
- Automotive Service Management Major
- Ford ASSET Program
- Maintenance and Light Repair Certificate
- Ford Maintenance and Light Repair Certificate
- TechLINK Program

Aviation Maintenance Technology
- Aviation Maintenance Technician Airframe Certificate
- Aviation Maintenance Technician Powerplant Certificate

Business Management
- Business Management Major
- Entrepreneurship Major
- Entrepreneurship Certificate
- Managing Interpersonal Skills Certificate
- Nonprofit Management Certificate
- Pre-MBA Certificate
- Project Management Certificate

Business Office Applications
- Administrative Assistant Major
- Medical Administrative Assistant Track
- Bookkeeping Certificate
- Office Specialist Certificate

Civil Engineering Technology
- Civil Track
- Survey Track
- Surveying Certificate

Computer Science
- Game Developer Track
- MIS Project Management Track
- Network Administrator Track
- Network Security Track
- Software Developer Track
- Web Developer Track
- CCNA Discovery Certificate
- Computer Literacy Certificate
- Database Specialist Certificate
- Management Information Systems Certificate
- Network Administrator Certificate
- Network Security Certificate
- Software Developer Certificate
- System Z Certificate

Construction Management
- Building Information Modeling Certificate
- Estimating/Bidding Certificate
- Facility Conservation and Energy Management Certificate
- Field Supervision Certificate
- Residential Construction Management Certificate

Criminal Justice
- Corrections Major
- Criminal Justice Major
- Law Enforcement Major-Academy Track
- Law Enforcement Major-Professional Track
- Crime Scene Investigations Certificate
- Homeland Security Certificate
- Victim-Witness Advocacy Certificate

Dental Hygiene

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
- Advanced Digital Photography Certificate
- Black and White Film Certificate
- Business of Photography Certificate
- Photoshop for Photographers Certificate

Early Childhood Development and Education
- Basic Early Childhood Administrators Certificate
- Infant/Toddler Education Certificate

Electro-Mechanical Engineering Technology
- Information Technology Support Technician Major

Electronic Engineering Technology

Emergency Medical Services Technology
- Emergency Medical Technician (EMT) Certificate
- Paramedic Certificate

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

Engineering Technologies Certificates
- Computer Aided Drafting Technician Certificate
- Engineering Assembly Technician Certificate
- Engineering Technician Certificate
- Manufacturing Maintenance Technician Certificate

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

Fire Science

Geographic Information Systems

Academic Programs (continued)

- Geographic Information Systems Certificate

Health Information Management Technology
- Medical Coding Certificate
- Health Data Analyst Certificate
- Health IT Workflow/Information Management Certificate
- Health IT Implementation/Technical Software Support Certificate
- Project Management for Health IT Certificate

Heating, Ventilating and Air Conditioning Technology
- High Pressure Boiler License Training Program Certificate
- Large Commercial Certificate
- Residential/Light Commercial Certificate

Hospitality Management
- Culinary Apprenticeship Major
- Dietetic Technician 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
- Dietary Manager Certificate
- Meeting and Event Management Certificate
- School Foodservice Manager Certificate

Human Resources Management Technology

Interactive Media
- Digital Video and Sound Major
- Video Game Art and Animation Track
- 3D Content Creation Certificate
- Game Development Certificate
- Rich Media Communication Certificate
- Visual Communication Certificate
- Web Communication Certificate

Interpreter Education Program
- American Sign Language/Deaf Studies Certificate

Landscape Design and Management

Marketing
- Direct Marketing Major
- Retail Management Major
- Direct Marketing Certificate
- Electronic Marketing Certificate
- Pre-MBA Certificate

Massage Therapy/Entrepreneurship (A.T.S.)
- Massage Therapy Certificate
- Massage Therapy Advanced Techniques Certificate

Mechanical Engineering Technology

Medical Assisting (A.T.S.)
- Medical Assisting Certificate

Medical Laboratory Technology
- Clinical Laboratory Assisting Certificate

Mental Health/Addiction Studies/Developmental Disabilities
- Advanced Mental Health Certificate
- Advanced Addiction Studies Certificate
- Advanced Developmental Disabilities Certificate
- Community/Habilitation Assistant Certificate
- Peer Support Specialist Certificate

Multi-Competency Health
- Basic Electrocardiography Certificate
- Health Care Manager Certificate
- Phlebotomy Certificate
- ASL/Deaf Studies Certificate
- Clinical Laboratory Assisting Certificate
- Complementary Care Certificate
- Nurse Aide Training Program Certificate
- Patient Care Skills Certificate
- Pranic Healing Certificate Level I
- Pranic Healing Certificate Level II
- Pranic Healing Certificate Level III
- Registered Nurse First Assistant Certificate
- Train the Trainer Nurse Aide Certificate

Nuclear Medicine Technology

Nursing
- Practical Nursing Program
- Complementary Care Certificate
- Nurse Aide Training Program Certificate
- Patient Care Skills Certificate
- Pranic Healing Certificate Level I
- Pranic Healing Certificate Level II
- Pranic Healing Certificate Level III
- Registered Nurse First Assistant Certificate
- Train the Trainer Nurse Aide Certificate

Paralegal Studies
- Paralegal Studies Certificate (Post Baccalaureate Option)

Quality Assurance Technology
- Bioscience Technology Basic Certificate

Radiography
- General X-ray Machine Operator (GXMO) Certificate

Real Estate
- Appraisal Certificate
- Real Estate Pre-Licensure Certificate

Respiratory Care

Skilled Trades Technology
- Apprenticeship Partnership Degree Programs
- Associate of Technical Studies Degree in Construction Trades
- Facilities Maintenance Degree
- Facilities Maintenance Certificate
- Facilities Module Certificates
- Intermediate Welder Certificate
- Introduction to the Construction Industry Certificate

Sport and Exercise Studies
- Exercise Science Major
- Physical Education Major

Academic Programs (continued)

Sport Management Major
Exercise Specialist Certificate

Sterile Processing Technology (A.T.S.)
Sterile Processing Technology Certificate

Supply Chain Management
International Commerce Major
Strategic Procurement Major
International Business Certificate
International Commerce Certificate
Strategic Procurement Certificate
Supply Chain Management Certificate

Surgical Technology
Surgical Technology Certificate

Veterinary Technology

Accounting

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

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.

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

Continued next page

Accounting Associate Degree

COURSE		CR
Semester 1		
ACCT 1211	Financial Accounting	3
ENGL 1100	Composition I	3
ECON 2200	Principles of Microeconomics	3
BMGT 1111	Management	3
COLS 1100	First Year Experience Seminar	1
BOA 1102	Excel I	2
TOTAL CREDIT HOURS		**14**
Semester 2		
ACCT 1212	Managerial Accounting	3
ACCT 1400	Accounting Systems	3
STAT 1350	Elementary Statistics	3
FMGT 2201	Corporate Finance	3
LEGL 2064	Legal Environment of Business	3
TOTAL CREDIT HOURS		**15**
Summer Semester		
ACCT 2250	Intermediate Accounting I	4
ACCT 2211	Cost Accounting	3
NAT XXXX	Refer to approved GE - NAT list	4
TOTAL CREDIT HOURS		**11**
Semester 3		
ACCT 2252	Intermediate Accounting II	4
ACCT 2232	Federal Taxation I	3
SBS XXXX	Refer to approved GE - SBS list	3
HUM XXXX	Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS		**13**
Semester 4		
ACCT 2241	Auditing	4
ACCT XXXX	Technical Elective	3
ACCT 2901	Accounting Practicum	3
ACCT XXXX	Technical Elective	3
BMGT 2299	Case Studies Strategic Management	3
TOTAL CREDIT HOURS		**16**
TOTAL DEGREE CREDIT HOURS		**70**

Technical Electives

The following courses are approved for technical elective requirements:

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

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 I	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 1106	Physics by Inquiry: Properties & Motion	5
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

SBS

GE-SOCIAL BEHAVORIAL 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

Continued from previous page

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 or through video-based instruction.

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.

ACBSP ACCREDITED

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

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
BOA 1113	Quickbooks I	1
TOTAL CREDIT HOURS		7
Semester 3		
ACCT 2239	Advanced Taxation	3
ACCT 2240	Tax Practice	3
BOA 1114	Quickbooks II	1
TOTAL CREDIT HOURS		7
TOTAL CERTIFICATE CREDIT HOURS		20

Architecture

Architecture Associate Degree
Architectural CAD Drafting Certificate
3D Visualization 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.

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.

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	3
ARCH 1232	Building Codes	2
ARCH 1250	Enclosure Materials	2
TOTAL CREDIT HOURS		**14**
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 2237	Structures	3
ARCH 2266	Working Drawings	4
TOTAL CREDIT HOURS		**16**
Semester 4		
HUM XXXX	Refer to approved GE - HUM list	3
XXXX XXXX	Basic Elective	2
ARCH 2223	Design Studio II	4
ARCH 2270	Professional Practice	3
ARCH XXXX	Technical Elective	1
TOTAL CREDIT HOURS		**13**
TOTAL DEGREE CREDIT HOURS		**71**

Technical Electives

The following courses are approved for technical elective requirements:

ARCH 1115	MicroStation 2D	2
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

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.

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.

*Sustainable Building Certificate

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

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) PHYS 1106 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 I	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 1106	Physics by Inquiry: Properties & Motion	5
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS

GE-SOCIAL/BEHAVIORAL SCIENCES REQUIREMENT
(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

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**

3D Visualization Certificate

COURSE		CR
Semester 1		
ARCH 2242	3D Visualization I	3
TOTAL CREDIT HOURS		**3**
Semester 2		
ARCH 2243	3D Visualization II	3
TOTAL CREDIT HOURS		**3**
TOTAL CERTIFICATE CREDIT HOURS		**6**

Automotive Technology

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

Graduates of the Associate Degree program in Automotive Technology are qualified for entry-level positions as automotive service technicians, service advisors, and entry-level managers. Many persons already employed in the field use the program to progress to advanced technical or management positions, and to prepare for Automotive Service Excellence (ASE) certification examinations.

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.

The Automotive Technology program at Columbus State offers courses designed for a variety of individuals ranging from the beginner to those with advanced skills and years of experience. Students may earn an associate degree, obtain ASE certification, or take individual courses to meet their educational 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.

Columbus State's Automotive Technology program was the nation's first college automotive program to be certified by A.S.E. to train Master Automotive Technicians. 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. The program was recently re-evaluated and granted accreditation until 2014.

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 scheduling of courses is arranged to coordinate with the students' work schedules. TechLINK is a selective program and students must qualify to participate. For more information, students can refer to the website (www.cscc.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 credit for DEV 0105 or placement into DEV 0115 or MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher before beginning with AUTO 1101 and AUTO 1106.

Automotive Technology Associate Degree

COURSE		CR
Semester 1		
CSCI 1101	Computer Concepts & Applications	3
ENGL 1100	Composition I	3
COLS 1100	First Year Experience Seminar	1
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 1160	Electrical Systems: Theory & Operation	2
AUTO 1170	Heating & Air Conditioning: Theory & Operation	2
TOTAL CREDIT HOURS		19
Semester 2		
MATH 1010	Mathematics for Business Applications	4
XXXX XXXX	Business Elective: BMGT 1101 or FMGT 1101	3
*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
TOTAL CREDIT HOURS		19
Semester 3		
HUM XXXX	Refer to approved GE - HUM list	3
COMM XXXX	1105, 1110, 2200, or 2204	3
AUTO 2270	Heating & Air Conditioning: Diagnosis & Repair	2
AUTO 2130	Manual Trans: Theory & Operation	2
AUTO 2280	Engine Performance Theory & Operation II	2
AUTO 2230	Manual Trans: Diagnosis & In Car Repair	2
AUTO 2120	Auto Transmissions: Theory & Operations	2
TOTAL CREDIT HOURS		16
Semester 4		
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
AUTO 2220	Automatic Trans: Diagnosis & Car Repair	2
AUTO XXXX	Advanced Auto: AUTO 2360 or 2380	3
TOTAL CREDIT HOURS		15
TOTAL DEGREE CREDIT HOURS		69

*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 Exp.	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

The Service Management Major prepares students for entry into management positions available in automotive repair facilities. Potential job titles for graduates include service director, service manager, service advisor, dispatcher, customer relations specialist, or independent shop owner. The Service Management major shares the general education courses and first year 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.

Automotive Service Management Major

COURSE		CR
Semester 1		
CSCI 1101	Computer Concepts & Applications	3
ENGL 1100	Composition I	3
COLS 1100	First Year Experience Seminar	1
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 1160	Electrical Systems: Theory & Operation	2
AUTO 1170	Heating & Air Conditioning: Theory & Operation	2
TOTAL CREDIT HOURS		19
Semester 2		
MATH 1010	Mathematics for Business Applications	4
XXXX XXXX	Business Elective: BMGT 1101 or FMGT 1101	3
*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
TOTAL CREDIT HOURS		19
Semester 3		
MKTG 1010	Retailing	3
HUM XXXX	Refer to approved GE - HUM list	3
COMM XXXX	1105, 1110, or 2200	3
COMM 2204	Technical Writing	3
AUTO 2101	Auto Business Management	2
AUTO 2201	Service Advising	2
TOTAL CREDIT HOURS		16
Semester 4		
NAT XXXX	Refer to approved GE - NAT list	3
SBS XXXX	Refer to approved GE - SBS list	3
XXXX XXXX	Technical Elective	2
XXXX XXXX	Technical Elective	2
AUTO 2301	Auto Service Management	2
AUTO 2401	Auto Parts Management	2
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 1001	Autocare	2
BMGT 2231	Fundamentals of Entrepreneurship	3
MKTG 1230	Customer Service & Sales	3
MKTG 1020	Branding	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

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 automotive products 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.cscc.edu/autotech).

Ford ASSET Program

COURSE		CR
Semester 1		
CSCI 1101	Computer Concepts & Applications	3
ENGL 1100	Composition I	3
COLS 1100	First Year Experience Seminar	1
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 1160	Electrical Systems: Theory & Operation	2
AUTO 1170	Heating & Air Conditioning: Theory & Operation	2
TOTAL CREDIT HOURS		19
Semester 2		
MATH 1010	Mathematics for Business Applications	4
XXXX XXXX	Business Elective: BMGT 1101 or FMGT 1101	3
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
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		
HUM XXXX	Refer to approved GE - HUM list	3
COMM XXXX	1105, 1110, 2220, or 2204	3
FORD 2180	Engine Performance: Operation & Diagnosis	3
FORD 2130	Manual Transmissions/Driveline: Diagnosis & Repair	3
FORD 2952	Cooperative Work Experience/Seminar II	2
TOTAL CREDIT HOURS		14
Semester 4		
NAT XXXX	Refer to approved GE - NAT list	3
SBS XXXX	Refer to approved GE - SBS list	3
FORD 2120	Automatic Transmissions: Diagnosis & Repair	3
FORD 2280	Advanced Engine Performance: Diagnosis & Testing	2
FORD 2953	Cooperative Work Experience/Seminar I	2
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) PHYS 1103 is Recommended		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 I	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
GEOL1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1106	Physics by Inquiry: Properties & Motion	5
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS

GE-SOCIAL BEHAVORIAL 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
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

Maintenance and Light Repair Certificate Program

Students whose needs demand a short-term career track program can choose the Light Maintenance and Repair Certificate program. This program can be completed in six to nine months and gives students the knowledge and skills necessary to enter the automotive repair industry quickly.

Upon completion of this program, graduates are employable at local auto repair companies performing automotive maintenance services. Since this program 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 A.S.E. Master Technician certification.

Maintenance and Light Repair Certificate Program

COURSE		CR
Semester 1		
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 1160	Electrical Systems: Theory & Operation	2
AUTO 1170	Heating & Air Conditioning: Theory & Operation	2
TOTAL CREDIT HOURS		12
Semester 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		8
TOTAL DEGREE CREDIT HOURS		20

FORD Maintenance and Light Repair Certificate Program

COURSE		CR
Semester 1		
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 1160	Electrical 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 DEGREE CREDIT HOURS		20

Aviation Maintenance Technology

Aviation Maintenance Technology Associate Degree
Aviation Maintenance Technician 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

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

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 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)		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 I	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 1106	Physics by Inquiry: Properties & Motion	5
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS

GE-SOCIAL BEHAVORIAL 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

Approved General Education (GE) List continued

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

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**

Entrepreneurship Certificate
Foundations of Insurance Certificate
Managing Interpersonal Skills Certificate
Project Management Certificate
Nonprofit Management Certificate
Pre-MBA 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 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, with or without project management knowledge, 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 Entrepreneurship Certificate consists of eight (8) 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, concepts feasibility, market analysis, revenue identification, forecasting, and sources of financing. This eight (8) course certificate program is available to degree, as well as non-degree-seeking students.

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. The advisor for the Pre-MBA Certificate is located in the Integrated Media Department.

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		
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
BMGT 1101	Principles of Business	3
CSCI 1101	Computer Concepts & Applications	3
MATH 1030	Beginning Algebra II **or**	
MATH 1050	Elementary Algebra **or**	
STAT 1350	Elementary Statistics	3-5
BMGT 1102	Interpersonal Skills	2
TOTAL CREDIT HOURS		15-17
Semester 2		
BOA 1200	Business Language	2
HUM XXXX	Refer to approved GE - HUM list	3
NAT XXXX	Refer to approved GE - NAT list	4
BMGT 1111	Management	3
ACCT 1211	Financial Accounting	3
BOA 1300	Business Applications	2
TOTAL CREDIT HOURS		17
Summer Semester		
SBS XXXX	Refer to approved GE - SBS list	3
FMGT 2201	Corporate Finance	3
BMGT 2253	Conflict Management	3
ECON 2200	Principles of Microeconomics	3
TOTAL CREDIT HOURS		12
Semester 3		
BMGT 2280	Professional Development	1
LEGL 2064	Legal Environment of Business	3
MKTG 1110	Marketing Principles	3
ACCT 1212	Managerial Accounting	3
BMGT XXXX	Technical Elective	3
TOTAL CREDIT HOURS		13
Semester 4		
BMGT 2216	Business Ethics	3
BMGT 2258	Enterprise Planning & Analysis	3
BMGT 2299	Case Studies in Strategic Management	3
HRM 1121	Human Resources Management	3
BMGT 2901	Business Practicum/Seminar	3
TOTAL CREDIT HOURS		15
TOTAL DEGREE CREDIT HOURS		72-74

Technical Electives

The following courses are approved for technical elective requirements:

BMGT 1108	21st Century Skills	2
BMGT 2211	Organizational Behavior	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 2499	Nonprofit Management Capstone	3
BMGT 2250	Project Management Principles	3
BMGT 2251	Project Management Techniques	3
BMGT 2599	Project Management Capstone	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.

ACBSP ACCREDITED

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		
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
BMGT 1101	Principles of Business	3
CSCI 1101	Computer Concepts & Applications	3
MATH 1030	Beginning Algebra II or	
MATH 1050	Elementary Algebra or	
STAT 1350	Elementary Statistics	3-5
BMGT 1102	Interpersonal Skills	2
TOTAL CREDIT HOURS		15-17
Semester 2		
BOA 1200	Business Language	2
HUM XXXX	Refer to approved GE - HUM list	3
NAT XXXX	Refer to approved GE - NAT list	4
BMGT 1111	Management	3
ACCT 1211	Financial Accounting	3
BOA 1300	Business Applications	2
TOTAL CREDIT HOURS		17
Summer Semester		
FMGT 2201	Corporate Finance	3
LEGL 2064	Legal Environment of Business	3
SBS XXXX	Refer to approved GE - SBS list	3
ECON 2200	Principles of Microeconomics	3
TOTAL CREDIT HOURS		12
Semester 3		
ACCT 1212	Managerial Accounting	3
MKTG 1110	Marketing Principles	3
BMGT XXXX	Technical Elective	4
BMGT 2231	Fundamentals of Entrepreneurship	3
TOTAL CREDIT HOURS		13
Semester 4		
BMGT 2216	Business Ethics	3
BMGT 2232	Entrepreneurship: Business Plan Development	3
BMGT 2299	Case Studies in Strategic Management	3
HRM 1121	Human Resources Management	3
BMGT 2902	Entrepreneurship Practicum/Seminar	3
TOTAL CREDIT HOURS		15
TOTAL DEGREE CREDIT HOURS		72-74

Technical Electives

The following courses are approved for technical elective requirements:

BMGT 1108	21st Century Skills	2
BMGT 2211	Organizational Behavior	3
BMGT 2245	Introduction to Non-Profit Management	3
BMGT 2246	Operational Mgmt of Nonprofit Organization	3
BMGT 2247	Legal& FinancialNonprofit Management	3
BMGT 2250	Project Management Principles	3
BMGT 2251	Project Management Techniques	3
BMGT 2280	Business Professional Development	1
BMGT 2499	Nonprofit Management Capstone	3
BMGT 2599	Project Management Capstone	3
BOA 1113	Quickbooks I	1
BOA 1114	Quickbooks II	1
FMGT 2232	Principles of Insurance	3

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVORIAL 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

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 I	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 1106	Physics by Inquiry: Properties & Motion	5
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

Entrepreneurship Certificate

COURSE		CR
Semester 1		
BMGT 2231	Fundamentals of Entrepreneurship	3
BOA 1111	Bookkeeping I	3
LEGL 2064	Legal Environment of Business	3
BOA 1113	Quickbooks I	1
TOTAL CREDIT HOURS		10
Semester 2		
BMGT 2232	Entrepreneurship: Business Plan Development	3
MKTG 1110	Marketing Principles	3
FMGT 1101	Personal Finance	3
BOA 1114	Quickbooks II	1
TOTAL CREDIT HOURS		10
TOTAL CERTIFICATE CREDIT HOURS		20

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

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**

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 Nonprofit Management	3
TOTAL CREDIT HOURS		3
Semester 4		
BMGT 2499	Nonprofit Management Capstone	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

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**

Business Office Applications

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

The Business Office Applications Technology offers an Associate Degree in Business Office Applications with an Administrative Assistant Major and a Medical Administrative Assistant Track 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 that will prepare 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 Track 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 office workers 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.

The Bookkeeping Certificate prepares students for a career in office bookkeeping. This bookkeeping certificate includes preparatory courses enabling students to sit for a nationally recognized Bookkeeping certification exam. This certificate program may be completed in three quarters and provides a solid foundation of accounting and bookkeeping principles, electronic spreadsheets, and computerized accounting software packages. This certificate is also available as an online/distance learning option.

Columbus State Community College's Business degree programs are accredited by the Association of Collegiate Business Schools and Programs (ACBSP).

Upon completion of the Associate Degree in Business Office Applications, the graduate will be able to:

- Utilize business and industry tools and software to facilitate and enhance the creation, accessing, reporting, and analysis of business information
- Plan, implement, and manage business data and information by applying standard office procedures and practices
- Create written communication appropriate for the workplace, which meets standards of style and grammatical correctness
- Employ critical thinking, analytical problem–solving skills, and ethical decision-making techniques to resolve accounting and business issues
- Research information using a variety of resources, including the Internet, to accomplish tasks in the workplace environment
- Utilize current business models and technologies and be prepared to learn new technologies as they emerge
- Work effectively and efficiently within cross-functional workplace teams.

In addition to the general competencies, a graduate choosing the Medical Administrative Assistant Track will be able to:

- Perform administrative duties & tasks associated with a medical environment
- Demonstrate the ability to spell, pronounce, and define basic medical terminology.

ACBSP
ACCREDITED

The Business Office Applications 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 1150	Office Procedures I	2
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
BOA 1131	Keyboarding & Document Formatting	2
BOA 1102	Excel I	2
BOA 1103	PowerPoint I	2
TOTAL CREDIT HOURS		**14**
Semester 2		
BOA 1200	Business Language	2
BOA 1151	Office Procedures II	2
BOA 1132	Advanced Document Formatting	2
BOA 1191	Word II	2
BOA 1188	PowerPoint II	2
BOA 1172	Excel II	2
BOA 1104	Access I	2
TOTAL CREDIT HOURS		**14**
Summer Semester		
SBS XXXX	Refer to approved GE - SBS list	3
BOA 1111	Bookkeeping I	3
BMGT 1101	Principles of Business	3
BOA XXXX	Technical Elective	2
MATH 1010	Mathematics for Business Applications	4
TOTAL CREDIT HOURS		**15**
Semester 3		
NAT XXXX	Refer to approved GE - NAT list	4
FMGT 1101	Personal Finance	3
BOA 2125	Outlook	2
BOA 2167	Desktop Publishing	2
BOA 2195	Office Integration	2
BMGT 1111	Management	3
TOTAL CREDIT HOURS		**16**
Semester 4		
BOA 2999	BOA Capstone	3
BOA 2950	Practicum & Seminar	3
HUM XXXX	Refer to approved GE - HUM list	3
BMGT 2216	Business Ethics	3
TOTAL CREDIT HOURS		**12**
TOTAL DEGREE CREDIT HOURS		**71**

Technical Electives

The following courses are approved for technical elective requirements:

BOA 1113	Quickbooks I	1
BOA 1114	Quickbooks II	1
BOA 1115	Computerized Accounting with Peachtree	2
BOA 1116	Adjusting Entries and Error Correction	1
BOA 1117	Payroll	1
BOA 1118	Inventory	1
BOA 1119	Internal Controls & Fraud Prevention	1
BOA 1120	Depreciation	1
BOA 1121	Bookkeeping Certificate Review	1
BOA 1138	Computer Transcription	1
BOA 1139	Keyboarding Improvement	1
BOA 2112	Bookkeeping II	3
CSCI 1101	Computer Concepts & Applications	3
COMM 2200	Business Communications	3
IMM 1120	Fundamentals of Interactive Media	4

Medical Administrative Assistant Track

COURSE		CR
Semester 1		
BOA 1101	Word I	2
BOA 1150	Office Procedures I	2
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
BOA 1131	Keyboarding & Document Formatting	2
BOA 1102	Excel I	2
BOA 1103	PowerPoint I	2
TOTAL CREDIT HOURS		**14**
Semester 2		
BOA 1200	Business Language	2
BOA 1151	Office Procedures II	2
BOA 1132	Advanced Document Formatting	2
BOA 1191	Word II	2
MULT 1010	Medical Terminology	2
MLT 1100	Introduction to Health Care	2
BOA 1188	PowerPoint II	2
TOTAL CREDIT HOURS		**14**
Summer Semester		
BOA 1104	Access I	2
BOA 1172	Excel II	2
HIMT 1121	Advanced Medical Terminology	2
BOA 1111	Bookkeeping I	3
BOA XXXX	Technical Elective	2
MATH 1010	Mathematics for Business Applications	4
TOTAL CREDIT HOURS		**15**
Semester 3		
NAT XXXX	Refer to approved GE - NAT list	4
HIMT 1135	Health Data Management	3
BOA 2125	Outlook	2
SBS XXXX	Refer to approved GE - SBS list	3
BOA 2195	Office Integration	2
TOTAL CREDIT HOURS		**14**
Semester 4		
BOA 2999	BOA Capstone	3
BOA 2950	Practicum & Seminar	3
HIMT 1265	Medical Reimbursement	3
BOA 1138	Computer Transcription	1
HUM XXXX	Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS		**13**
TOTAL DEGREE CREDIT HOURS		**70**

Technical Electives

The following courses are approved for technical elective requirements:

BOA 1113	QuickBooks I	1
BOA 1114	QuickBooks II	1
BOA 1139	Keyboarding Improvement	1
BOA 1300	Business Applications	2
BOA 2167	Desktop Publishing	2
COMM 2200	Business Communications	3
CSCI 1101	Computer Concepts & Applications	3
IMM 1120	Fundamentals of Interactive Media	4

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVORIAL 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
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 I	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
GEOL1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1106	Physics by Inquiry: Properties & Motion	5
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

Bookkeeping Certificate

COURSE		CR
Semester 1		
MATH 1010	Mathematics for Business Applications	4
BOA 1102	Excel I	2
BOA 1101	Word I	2
COLS 1100	First Year Experience Seminar	1
BOA 1111	Bookkeeping I	3
TOTAL CREDIT HOURS		**12**
Semester 2		
BOA 2112	Bookkeeping II	3
BOA 1113	Quickbooks I	1
BOA 1114	Quickbooks II	1
BOA 1116	Adjusting Entries & Error Correction	1
BOA 1117	Payroll	1
BOA 1119	Internal Control & Fraud Prevention	1
TOTAL CREDIT HOURS		**8**
Semester 3		
BOA 1172	Excel II	2
BOA 1121	Bookkeeping Certificate Review	1
BOA 1115	Computerized Accounting with Peachtree	2
BOA 1120	Depreciation	1
BOA 1118	Inventory	1
TOTAL CREDIT HOURS		**7**
TOTAL CERTIFICATE CREDIT HOURS		**27**

Office Specialist Certificate

COURSE		CR
Semester 1		
BOA 1101	Word I	2
BOA 1131	Keyboarding & Document Formatting	2
COLS 1100	First Year Experience Seminar	1
BOA 1102	Excel I	2
BOA 1103	PowerPoint I	2
TOTAL CREDIT HOURS		**9**
Semester 2		
BOA 1104	Access I	2
BOA 1191	Word II	2
BOA 1172	Excel II	2
BOA 1188	PowerPoint II	2
TOTAL CREDIT HOURS		**8**
Summer Semester		
BOA 2125	Outlook	2
BOA 2195	Office Integration	2
TOTAL CREDIT HOURS		**4**
TOTAL CERTIFICATE CREDIT HOURS		**21**

Civil Engineering Technology

Associate Degree in Civil Engineering Technology – Civil Track
Associate Degree in Civil Engineering Technology – Survey Track
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	3
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
CMGT 1105	Construction Documents	3
ENGL 1100	Composition I	3
ESSH 1650	OSHA 30-Hr General Industry Safety & Health	2
SURV 1460	Computer Applications in Construction Science	2
TOTAL CREDIT HOURS		**16**
Summer Semester		
SURV 1420	Historical Surveying	2
GIS 1102	GIS in Industry	2
NAT XXXX	Refer to approved GE - NAT list	3
TOTAL CREDIT HOURS		**7**
Semester 3		
ARCH 1115	MicroStation 2D	2
HUM XXXX	Refer to approved GE - HUM list	3
CIVL 2210	Principles of Hydraulics	3
MATH 1149	Trigonometry	4
SURV 2410	Engineering Surveying	4
TOTAL CREDIT HOURS		**16**
Semester 4		
ARCH 2237	Structures	4
PSY 1100	Introduction to Psychology or	
SOC 1101	Introduction to Sociology	3
XXXX XXXX	Technical Elective	2
CIVL 2230	Public Utility Systems	3
SURV 2490	Land Development Systems	3
TOTAL CREDIT HOURS		**15**
TOTAL DEGREE CREDIT HOURS		**69**

Technical Electives

The following courses are approved for technical elective requirements:

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	4

- 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 Surveying Certificate encompasses those surveying courses, which, when coupled with a Bachelor of Science in Civil Engineering, fulfill 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	3
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		
SURV 1420	Historical Surveying	2
GIS 1102	GIS in Industry	2
SURV 2480	Geodetic Surveying	4
TOTAL CREDIT HOURS		8
Semester 3		
ARCH 1115	MicroStation 2D	2
HUM XXXX	Refer to approved GE - HUM list	3
MATH 1149	Trigonometry	4
SURV 2410	Engineering Surveying	4
TOTAL CREDIT HOURS		13
Semester 4		
XXXX XXXX	Technical Elective	3
PSY 1100	Introduction to Psychology or	
SOC 1101	Introduction to Sociology	3
SURV 2450	Legal Principles in Survey	3
SURV 2430	Transportation Systems	3
SURV 2490	Land Development Systems	3
TOTAL CREDIT HOURS		15
TOTAL DEGREE CREDIT HOURS		67

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	3
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)		CR
ASTR 1161	The Solar System	3
BIO 1112	Introduction to Biology I	4
CHEM 1111	Elementary Chemistry I	4
ESSH 1101	Intro Environmental Science, Safety, Health	3
GEOL 1101	Introduction to Earth Science	4
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5

Surveying Certificate

COURSE		CR
Semester 1		
ARCH 1112	Basic CAD Drafting	1
ENGL 1100	Composition I	3
MATH 1148	College Algebra or	
MATH 1113	Technical Mathematics	4
SURV 1410	Introduction to Surveying	3
SURV 1420	Historical Surveying	2
SURV 1460	Comp Applications in Construction Science	2
TOTAL CREDIT HOURS		15
Semester 2		
ARCH 2100	History of Architecture	3
SURV 2410	Engineering Surveying	4
SURV 2430	Transportation Systems	3
SURV 2450	Legal Principles in Surveying	3
SURV 2490	Land Development Systems	3
TOTAL CREDIT HOURS		16
Semester 3		
GIS 1102	GIS in Industry	2
SURV 2480	Geodetic Surveying	4
GEOG 2900	Elements of Cartography	3
TOTAL CREDIT HOURS		9
TOTAL CERTIFICATE CREDIT HOURS		40

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**

Cisco Certified Network Administrator (CCNA) Discovery Certificate
Computer Literacy Certificate
Database Specialist Certificate
Management Information Systems (MIS) Certificate
Network Administrator Certificate
Network Security Certificate
Software Developer Certificate
System Z 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) Discovery 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 Cisco Discovery 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 Security Network 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.

The System Z Certificate was developed to address industry's continuing need for skilled professionals with mainframe skills. This certificate was designed by area companies and IBM Corporation, which will provide access to hardware/software, course materials/speaker notes, student textbooks, etc. The System Z Certificate is a

Continued on next page

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 1551	Concepts of 3D Games Engines	3
CSCI XXXX	Technical Elective	3
ENGL 1100	Composition I	3
CSCI 1151	Operating Systems	2
CSCI 1152	Networking Concepts	3
MATH 1149	Trigonometry	4
TOTAL CREDIT HOURS		18
Summer Semester		
PHYS 1200	Algebra-Based Physics I	5
COMM 2204	Technical Writing	3
ECON 2200	Principles of Microeconomics	3
TOTAL CREDIT HOURS		11
Semester 3		
CSCI 2551	Graphics in 3D Games Engines	4
CSCI 2541	Foundations of 2D Game Programming	3
CSCI 2521	C++ 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	
MKTG 1020	Branding	3
HIST XXXX	1111, 1112, 1151, or 1152	3
TOTAL CREDIT HOURS		12
TOTAL DEGREE CREDIT HOURS		72

Technical Electives

The following courses are approved for technical elective requirements:

CSCI 1531	Game Programming Language	3
CSCI 1630	C# Programming 1	4
CSCI 2467	Java Programming	3

four-course sequence focused on the basics of enterprise networking, and it is designed for individuals with significant IT working experience or for current students with instructor's permission.

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, 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 1151	Operating Systems	2
CSCI 1152	Networking Concepts	3
CSCI 1610	Object Oriented Analysis & UML	3
CSCI 1145	HTML	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		
ACCT 1211	Financial Accounting	3
ECON 2200	Principles of Microeconomics	3
CSCI 2330	Project Management Fundamentals & Case Studies	4
CSCI XXXX	Technical Elective I	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
SCM 1501	Information Technology in Logistics	3
CSCI 2802	CSCI Seminar	1
CSCI 2902	CSCI Practicum	3
MKTG 1110	Marketing Principles	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 I	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
GEOL1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1106	Physics by Inquiry: Properties & Motion	5
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
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
MATH 1151	Calculus I	5
CSCI 1151	Operating Systems	2
CSCI 1152	Networking Concepts	3
COLS 1100	First Year Experience Seminar	1
TOTAL CREDIT HOURS		17
Semester 2		
CSCI 1145	HTML	3
ENGL 1100	Composition I	3
ECON 2200	Principles of Microeconomics	3
PHYS 1200	Algebra-Based Physics I	5
CSCI 1772	Networking I	3
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 2774	Networking II	4
CSCI 2770	Network Communication & TCP/IP	3
CSCI 2790	Linux Administration	3
HIST XXXX	1111, 1112, 1151, or 1152	3
CSCI XXXX	Technical Elective	1-3
TOTAL CREDIT HOURS		14-16
Semester 4		
CSCI 2778	Wireless, Voice & Mobile Communications	3
CSCI 2792	Virtualization	3
CSCI 2802	CSCI Seminar and	1
CSCI 2902	CSCI Practicum	3or
CSCI 2999	CSCI Capstone	3
IMM 1120	Fundamentals of Interactive Media	4
TOTAL CREDIT HOURS		13-14
TOTAL DEGREE CREDIT HOURS		70-73

Technical Electives

The following courses are approved for technical elective requirements:

CSCI 1445	Content Management & Integration	3
CSCI 2241	Intro Mainframe Z/Os-Basic	3
CSCI 2370	Database Systems Programing	3
CSCI 2371	Database Administration & Data Mining	4
CSCI 2994	CSCI Current Topics	1 - 3

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	
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	Networking for Home & Small Businesses	3
CSCI 2752	Working Small to Medium Business or ISP	3
CSCI 2780	Computer Forensics	3
CSCI XXXX	Technical Elective	3
TOTAL CREDIT HOURS		12
Semester 4		
CSCI 2790	Linux Administration	3
CSCI 2776	Network & Cybersecurity	3
CSCI 2802	CSCI Seminar	1
CSCI 2902	CSCI Practicum	3
CSCI 2786	Security Practice & Management	3
IMM 1120	Fundamentals of Interactive Media	4
TOTAL CREDIT HOURS		17
TOTAL DEGREE CREDIT HOURS		73

Technical Electives

The following courses are approved for technical elective requirements:

CSCI 2754	Intro Routing & Switching in Enterprise	3
CSCI 2756	Designing & Supporting Computer Network	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 Information Technology 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 1620	Visual Basic I	3
CSC I 1151	Operating Systems	2
CSCI 1152	Networking Concepts	3
CSCI 1145	HTML	3
CSCI 1610	Object Oriented Analysis & UML	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 2467	Java Programming I	3
CSCI 2447	JavaScript Fundamentals	3
SCM 1190	International Business	3
MKTG 1110	Marketing Principles	3
CSCI 2370	Database Systems Programming	3
TOTAL CREDIT HOURS		15
Semester 4		
CSCI XXXX	Technical Elective	1-2
BMGT 1111	Management	3
HIST XXXX	1111, 1112, 1151, or 1152	3
CSCI 2802	CSCI Seminar	1
CSCI 2902	CSCI Practicum	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 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

Computer Information Technology 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 1151	Operating Systems	2
CSCI 1152	Networking Concepts	3
CSCI 1145	HTML	3
ACCT 1211	Financial Accounting	3
ECON 2200	Principles of Microeconomics	3
TOTAL CREDIT HOURS		17
Summer Semester		
CSCI 1275	System Analysis	3
TOTAL CREDIT HOURS		3
Semester 3		
CSCI 2467	Java Programming I	3
CSCI 2412	Web Database Development	4
CSCI 2447	JavaScript Fundamentals	3
IMM 2620	Website Design Creation	3
COMM 2204	Technical Writing	3
TOTAL CREDIT HOURS		16
Semester 4		
CSCI 2489	Mobile Software Development	3
CSCI XXXX	Technical Elective	3
MKTG 1110	Marketing Principles	3
CHEM 1111	Elementary Chemistry I	4
CSCI 2802	CSCI Seminar	1
CSCI 2902	CSCI Practicum	3
TOTAL CREDIT HOURS		17
TOTAL DEGREE CREDIT HOURS		70

Technical Electives

The following courses are approved for technical elective requirements:

CSCI 1000	Introduction to HTML	1
CSCI 1052	Networking Terminology	1
CSCI 1100	Essential Computer Topics	1
CSCI 1620	Visual Basic I	3
CSCI 1630	C# Programming I	4
CSCI 2241	Introduction to Mainframe-Z/OS Basics	3
CSCI 2251	Intro to Mainframe Large Scale Commercial Computing	2
CSCI 2261	Introduction to Mainframe-Networking	2
CSCI 2271	Introduction to the Mainframe-Security	3
CSCI 2370	Database Systems Programming	3
CSCI 2371	Database Administration & Data Mining	4
CSCI 2479	Advanced Web Programming	3

CCNA Discovery Certificate

COURSE		CR
Semester 1		
CSCI 2750	Networking for Home and Small Businesses	3
CSCI 2752	Working Small to Medium Business or ISP	3
TOTAL CREDIT HOURS		6
Semester 2		
CSCI 2754	Introducing to Routing & Switching in Enterprise	3
CSCI 2756	Designing & Supporting Computer Network	3
TOTAL CREDIT HOURS		6
TOTAL CERTIFICATE CREDIT HOURS		12

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 2371	Database Administration & Data Mining	4
CSCI 1620	Visual Basic I	3
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

Software Developer Certificate

COURSE		CR
Semester 1		
CSCI 2467	Java Programming I	3
CSCI 1145	HTML	3
CSCI 1630	C# Programming I	4
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

System Z Certificate

COURSE		CR
Semester 1		
CSCI 2241	Introduction to the Mainframe Z/OS Basics	3
TOTAL CREDIT HOURS		3
Semester 2		
CSCI 2251	Intro to Mainframe-Large Scale Commercial Computing	2
CSCI 2261	Introduction to Mainframe Networking	2
CSCI 2271	Introduction to Mainframe Security	3
TOTAL CREDIT HOURS		7
TOTAL CERTIFICATE CREDIT HOURS		10

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	Networking for Home and Small Businesses	3
CSCI 2752	Working Small to Medium Business or ISP	3
TOTAL CREDIT HOURS		6
Semester 2		
CSCI 2754	Intro Routing & Switching in Enterprise	3
CSCI 2756	Designing & Supporting Computer Networks	3
CSCI 2776	Network & Cybersecurity	3
TOTAL CREDIT HOURS		9
Summer Semester		
CSCI 2786	Security Practice & Management	3
CSCI 2790	Linux Administration	3
CSCI XXXX	Technical Elective	3
TOTAL CREDIT HOURS		9
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

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 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

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	5
TOTAL CREDIT HOURS		**11**
Semester 3		
CMGT 2251	Cost Control	3
CMGT 2221	Construction Company Management	3
CMGT 2231	Commercial Computer Estimating **or**	
CMGT 2281	Residential Computer Estimating	3
SURV 1410	Introduction to Surveying	3
MATH 1075	Intermediate Algebra	4
TOTAL CREDIT HOURS		**16**
Semester 4		
CMGT 2699	Project Management	3
STAT 1350	Elementary Statistics **or**	
ACCT 1211	Financial Accounting	3

Continued next page

Construction Management Associate Degree (continued)

PSY 1100	Introduction to Psychology **or**	
SOC 1101	Introduction to Sociology	3
ECON 2200	Principles of Microeconomics **or**	
BMGT 1111	Management	3
HUM XXXX	Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS		**15**
TOTAL DEGREE CREDIT HOURS		**73**

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 1106	Field Supervision	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 2252	Construction Law	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
TOTAL CREDIT HOURS		**3**
Semester 2		
ARCH 1274	Revit Architecture I	2
SURV 1460	Computer Applications in Construction Sciences	2
TOTAL CREDIT HOURS		**4**
Semester 3		
CMGT 2216	BIM Applications	3
TOTAL CREDIT HOURS		**3**
TOTAL CERTIFICATE CREDIT HOURS		**10**

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**

Estimating/Bidding Certificate

COURSE		**CR**
Semester 1		
CMGT 1105	Construction Documents	3
CMGT 1121	Construction Drawings	3
ACCT 1211	Financial Accounting	3
SURV 1410	Introduction to Surveying	3
CMGT 1115	Construction Methods	3
TOTAL CREDIT HOURS		**15**
Semester 2		
CMGT 1106	Field Supervision	3
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		**13**
Semester 3		
CMGT 1141	Estimating	3
CMGT 2231	Commercial Computer Estimating	3
CMGT 2241	Planning & Scheduling	3
CIVL 1230	Heavy Construction Estimating	3
TOTAL CREDIT HOURS		**12**
TOTAL CERTIFICATE CREDIT HOURS		**40**

Field Supervision Certificate

COURSE		CR
Semester 1		
CMGT 1105	Construction Documents	3
CMGT 1121	Construction Drawings	3
ACCT 1211	Financial Accounting	3
SURV 1410	Introduction to Surveying	3
TOTAL CREDIT HOURS		**12**
Semester 2		
CMGT 1115	Construction Methods	3
CMGT 1131	Quantity Survey	3
ENGL 1100	Composition I	3
CMGT 1135	Safety & Loss Prevention	2
ESSH 1650	OSHA 30-Hr Construction Safety & Health	2
TOTAL CREDIT HOURS		**13**
Semester 3		
CMGT 2221	Managing Construction	3
CMGT 2241	Planning & Scheduling	3
PSY 1100	Introduction to Psychology	3
CMGT 1106	Field Supervision	3
TOTAL CREDIT HOURS		**12**
TOTAL CERTIFICATE CREDIT HOURS		**37**

Residential Construction Management Certificate

COURSE		CR
Semester 1		
CMGT 1105	Construction Documents	3
CMGT 1121	Construction Drawings	3
ACCT 1211	Financial Accounting	3
CMGT 1115	Construction Methods	3
SURV 1410	Introduction to Surveying	3
CMGT 1153	Residential Construction	3
TOTAL CREDIT HOURS		**18**
Semester 2		
CMGT 1106	Field Supervision	3
CMGT 1131	Quantity Survey	3
CMGT 1135	Safety & Loss Prevention	2
ESSH 1650	OSHA 30-Hr Construction Safety & Health	2
ENGL 1100	Composition I	3
TOTAL CREDIT HOURS		**13**
Semester 3		
CMGT 2221	Managing Construction	3
CMGT 1141	Estimating	3
CMGT 2241	Planning & Scheduling	3
BMGT 1111	Management **or**	
ECON 2200	Principles of Microeconomics	3
CMGT 2281	Residential Computer Estimating	3
TOTAL CREDIT HOURS		**15**
TOTAL CERTIFICATE CREDIT HOURS		**46**

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 Corrections Major
Law Enforcement Academy Track Major
Law Enforcement Professional Track Major
Crime Scene Investigations Certificate
Homeland Security Certificate
Victim-Witness Advocacy 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 Corrections Major 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 23 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 Investigations Certificate

The Crime Scene Investigations 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 offering focus on a variety of related aspects including intelligence analysis and transportation/border security.

Victim-Witness Advocacy Certificate

The Victim-Witness Advocacy Certificate is designed for individuals seeking entry-level positions within the specific field of victim-witness advocacy. Most related positions require additional training and education which is strongly recommended upon completion of this certificate offering. This certificate is

also designed to provide current professionals within the criminal justice field a greater level of education and understanding of the multiple aspects related to victim-witness advocacy.

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-

Criminal Justice Major AAS

COURSE		CR
Semester 1		
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
CSCI 1101	Computer Concepts and Applications	3
MATH 1050	Elementary Algebra (5) or	
STAT 1350	Elementary Statistics (3)	3-5
CRJ 1001	Introduction Criminal Justice	3
CRJ 1016	Government and the Law	3
TOTAL CREDIT HOURS		**16-18**
Semester 2		
ENGL 2367	Composition II	3
CRJ 1015	Criminal Procedure	4
NAT XXXX	Refer to approved GE - NAT list	4
SPAN 1120	Spanish for Law Enforcement	2
CRJ 1025	Criminology	3
TOTAL CREDIT HOURS		**16**
Summer Semester		
SOC 1101	Introduction to Sociology	3
COMM 1105	Oral Communications	3
CRJ XXXX	Technical Elective	3
HUM XXXX	Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS		**12**
Semester 3		
CRJ 2030	Criminal Investigation I	3
CRJ 2017	Criminal Law	3
CRJ 1010	Policing	3
CRJ XXXX	Technical Elective	2
CRJ XXXX	Technical Elective	3
TOTAL CREDIT HOURS		**14**
Semester 4		
CRJ 2020	Constitutional Law	3
CRJ XXXX	Technical Elective	3
CRJ 2901	CRJ Practicum/Seminar	3
PSY 1100	Introduction to Psychology	3
TOTAL CREDIT HOURS		**12**
TOTAL DEGREE CREDIT HOURS		**70**

Technical Electives:

Crime Prevention:

CRJ 2026	Crime Prevention	2
CRJ 2027	Public Relations	2
CRJ 2024	Community Relations	2

Victim Witness Advocacy:

CRJ 2011	Crisis Intervention	2
CRJ 2012	Victimology	2
CRJ 1045	Juveniles & the CRJ System	2

Crime Scene Investigations:

CRJ 2001	Crime Scene Investigations I	3
CRJ 2002	Crime Scene Investigations II	3
CRJ 2003	Crime Scene Investigations III	3

Emerging Trends:

CRJ 2021	Introduction to Cyberlaw	3
CRJ 1035	Terrorism	3
CRJ 2094	**Special Topics in Law Enforcement**	**3**

Homeland Security:

CRJ 1050	Introduction to Homeland Security	3
CRJ 1051	Intelligence Analysis & Security Mgmt	3
CRJ 1052	Transportation & Border Security	3

Approved General Education/Natural Sciences (NAT) List - Criminal Justice Major ONLY

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 I	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 1106	Physics by Inquiry: Properties & Motion	5
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

workings of the Criminal Justice System depend on limited resources, a diverse societal dynamic, and variations on the social-economic stratum.

Corrections Major

In addition to the general Criminal Justice competencies, a graduate majoring in Corrections 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.

Crime Scene Investigations 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

Criminal Justice Corrections Major AAS

COURSE		CR
Semester 1		
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
CSCI 1101	Computer Concepts and Applications	3
MATH 1050	Elementary Algebra (5) **or**	
STAT 1350	Elementary Statistics (3)	3-5
CRJ 1001	Introduction to Criminal Justice	3
TOTAL CREDIT HOURS		**13-15**
Semester 2		
ENGL 2367	Composition II	3
HUM XXXX	Refer to approved GE - HUM list	3
XXX XXXX	Natural Science Elective	4
CRJ 1040	Corrections	3
TOTAL CREDIT HOURS		**13**
Summer Semester		
CRJ XXXX	Technical Elective	2
SOC 1101	Introduction to Sociology	3
COMM 1105	Oral Communications	3
PSY 1100	Introduction to Psychology	3
SPAN 1120	Spanish for Law Enforcement	2
TOTAL CREDIT HOURS		**13**
Semester 3		
CRJ 1016	Government and the Law	3
CRJ 2017	Criminal Law	3
CRJ 2030	Criminal Investigation I	3
CRJ 2043	Institutional Corrections	3
TOTAL CREDIT HOURS		**12**
Semester 4		
CRJ 1025	Criminology	3
CRJ 2041	Special Category Offender	3
CRJ 2042	Community Based Corrections	3
CRJ 2901	Criminal Justice Practicum & Seminar	3
CRJ XXXX	Technical Elective	2
TOTAL CREDIT HOURS		**14**
TOTAL DEGREE CREDIT HOURS		**65-68**

Technical Electives:

CRJ 1044	Correctional Law	2
CRJ 2040	Correctional Administration	2
CRJ 2011	Crisis Intervention	2
CRJ 1045	Juveniles CRJ System	2

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
- Lean 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.

Victim-Witness Advocacy 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
- Recognize the characteristics of persons in crisis
- Demonstrate effective communication techniques when dealing with persons in crisis
- Identify the role and duties of the victim advocate in the criminal justice system
- Recognize the general impact of crime by how the victim experiences physical and mental traumatic consequences
- Describe the methods and methodology used to track juvenile victimization
- Participate in an internship program sponsored by an entity related to the field of victimology or crisis intervention.

Criminal Justice – Law Enforcement Major Academy Track

COURSE		CR
Semester 1		
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
CSCI 1101	Computer Concepts and Applications	3
MATH 1050	Elementary Algebra (5) or	
STAT 1350	Elementary Statistics (3)	3-5
CRJ 1001	Introduction to Criminal Justice	3
CRJ 1016	Government and the Law	3
TOTAL CREDIT HOURS		**16-18**
Semester 2		
ENGL 2367	Composition II	3
HUM XXXX	Refer to approved list	3
XXXX XXXX	Natural Science Elective	4
CRJ 1015	Criminal Procedure	3
SPAN 1120	Spanish for Law Enforcement	2
TOTAL CREDIT HOURS		**15**
Summer Semester		
CRJ 1025	Criminology	3
SOC 1101	Introduction to Sociology	3
COMM 1105	Oral Communications	3
PSY 1100	Introduction to Psychology	3
TOTAL CREDIT HOURS		**12**
Semester 3		
CRJ 2075	Peace Officer Academy I	6
CRJ 2076	Peace Officer Academy II	5
CRJ XXXX	Technical Elective	2
TOTAL CREDIT HOURS		**13**
Semester 4		
CRJ 2077	Peace Officer Academy III	6
CRJ 2078	Peace Officer Academy IV	6
TOTAL CREDIT HOURS		**12**
TOTAL DEGREE CREDIT HOURS		**68-70**

Technical Electives:
See entire list under Criminal Justice Major.AAS

Law Enforcement Major - Professional Track*

COURSE		CR
Semester 1		
CRJ 2075	Peace Officer Academy I*	6
CRJ 2076	Peace Officer Academy II*	5
TOTAL CREDIT HOURS		**11**
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
ENGL 1100	Composition I	3
CSCI 1101	Computer Concepts and Applications	3
XXX XXXX	Natural Science Elective	4
CRJ 2006	Ethics in Law Enforcement	3
FIRE 1101	Legal Issues for Emergency Serv.	3
TOTAL CREDIT HOURS		**17**
Semester 3		
PSY 1100	Introduction to Psychology	3
MATH 1050	Elementary Algebra (5) or	
STAT 1350	Elementary Statistics (3)	3-5
CRJ 2007	Law Enforcement Promotion	3
COMM 1105	Oral Communications	3
CRJ 2031	Interviewing Techniques	3
TOTAL CREDIT HOURS		**15-17**
Semester 4		
ENGL 2367	Composition II	3
HUM XXXX	Refer to approved GE - HUM list	3
CRJ 2008	Applied Leadership CRJ Professions	3
CRJ 2009	Teaching/Learning Public Safety Professions	3
SOC 1101	Introduction to Sociology	3
TOTAL CREDIT HOURS		**15**
TOTAL DEGREE CREDIT HOURS		**70-72**

***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)		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

Crime Scene Investigation Certificate

Semester 1		
CRJ 1001	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**

Homeland Security Certificate

Semester 1		
CRJ 1001	Introduction to Criminal Justice	3
CRJ 1050	Introduction to Homeland Security	3
TOTAL CREDIT HOURS		**6**
Semester 2		
CRJ 1051	Intelligence Analysis	3
TOTAL CREDIT HOURS		**3**
Summer Semester		
CRJ 1052	Transportation and Border Security	3
TOTAL CREDIT HOURS		**3**
TOTAL DEGREE CREDIT HOURS		**12**

Victim-Witness Advocacy Certificate

Semester 1		
CRJ 1001	Introduction to Criminal Justice	3
CRJ 2011	Crisis Intervention	2
CRJ 2012	Victimology	2
CRJ 1045	Juveniles & the CRJ System	2
CRJ 2901	Criminal Justice Practicum & Seminar	3
TOTAL CREDIT HOURS		**12**
TOTAL DEGREE CREDIT HOURS		**12**

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 Requirements
All basic and technical courses must be completed with a grade of "C" or higher.

Specific Program Admissions 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.cscc.edu/dentalhygiene** or by contacting Donald Durst, (614) 287-3655, or **ddurst@cscc.edu.**

Admissions Requirements

- Attend one mandatory Dental Hygiene Information Session within 12 months before applying to the program to obtain current admission information and application.
- Achievement of a minimum overall GPA of 2.95 on a 4-point scale at Columbus State Community College or based upon the completion of the last 12 credit hours of courses at the college most recently attended.
- Placement into MATH 1148
- Completion of the Health Occupation Basic Entrance Test (HOBET)
- Placement into ENGL 1100
- Placement into "No Reading Required" or completion of DEV 0145
- BIO 2300 Human Anatomy with grade of "C" or better
- BIO 2232 Human Physiology with grade of "C" or better
- CHEM 1113 Elements of Organic and Biochemistry with a grade of "C" of better
- Mandatory observation (20 hours) of a dental hygienist working in a dental office. Detailed specific information is given during the information sessions.
- 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.
- 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.
- 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

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 1140	Dental Anatomy & Histology	3
DHY 1260	Periodontology I	1
DHY 1210	Preventive Concepts	1
TOTAL CREDIT HOURS		**15**
Semester 2		
BIO 2215	Introduction to Microbiology	4
ENGL 1100	Composition I	3
DHY 1161	Techniques I	1
DHY 1130	Dental Radiography	3
DHY 1861	Clinic I	3
DHY 1250	Oral Pathology	1
DHY 1261	Periodontology II	1
DHY 1300	Community Health Concepts	1
TOTAL CREDIT HOURS		**17**
Summer Semester		
SOC 1101	Introduction to Sociology	3
HOSP 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**	
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**

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

Note: This program no longer accepting applicants as of August 2013

Dental Laboratory Technology

Dental Laboratory Technology/Small Business Management (Associate of Technical Studies Degree)
Dental Laboratory Technology Certificate

Dental laboratory technicians are skilled artisans and small business managers. They create the appliances that restore or replace oral tissues or structures. They fabricate complete dentures, removable partial dentures, crowns, and bridges and may become owners and/or managers of a dental laboratory facility.

The Dental Laboratory Technology three-semester (one year) Certificate program provides students with experience in fabricating a wide variety of dental appliances using state-of-the-art materials and equipment. The program develops skill, not only in proper construction, but also in attractive appearance and accuracy of fit for patient comfort. Because workers in the dental lab area may be exposed to infectious materials and communicable diseases, the program emphasizes safety and infection control. The Dental Laboratory Technology/Small Business Management five-semester Associate of Technical Studies degree program provides knowledge and skills of small business management that will enable a graduate to own and/or manage a dental laboratory, as well as providing all the competencies of the certificate program.

Prospective students are encouraged to attend one of the Dental Laboratory Information Sessions. Please visit www.cscc.edu/dentlab for more information about the sessions.

Upon completion of the Certificate in Dental Laboratory Technology, the graduate will be able to:

- Design and fabricate complete dentures, removable partial dentures, crowns and bridges to a clinically acceptable degree
- Apply learned theories to problem cases involving all dental laboratory procedures
- Identify acceptable dental impressions submitted from clients
- Read and accurately interpret dental laboratory prescriptions
- Select and safely use the proper materials and equipment for a given case
- Recognize specific landmarks of the oral cavity associated with a given case
- Install, adjust, and store equipment and supplies
- Demonstrate the attitude, abilities, and professionalism essential for the welfare of the patient
- Practice safety and health regulations as established by the state and federal government.

Continued next page

Dental Laboratory Technology/Small Business Management (Associate of Technical Studies)

COURSE		CR
Semester 1		
DENT 1111	Anatomy & Occlusion	3
COLS 1100	First Year Experience Seminar	1
DENT 1142	Removable Partials	4
DENT 1153	Fixed Partials	4
TOTAL CREDIT HOURS		**12**
Semester 2		
DENT 1223	Complete Dentures	4
DENT 1275	Ceramics	4
DENT 1285	Orthodontics	2
MATH 1148	College Algebra	4
ENGL 1100	Composition I	3
TOTAL CREDIT HOURS		**17**
Summer Semester		
DENT 2364	History/Ethics	2
DENT 2397	Applied Laboratory	6
BMGT 1101	Principles of Business	3
BOA 1111	Bookkeeping I	3
TOTAL CREDIT HOURS		**14**
Semester 3		
SOC 1101	Introduction to Sociology	3
ACCT 1211	Financial Accounting	3
BMGT 2231	Fundamentals of Entrepreneurship	3
CHEM 1111	Elementary Chemistry I	4
HIST XXXX	1111, 1112, 1151, **or** 1152	3
TOTAL CREDIT HOURS		**16**
Semester 4		
BMGT 2232	Entrepreneurship: Business Plan Development	3
MKTG 1110	Marketing Principles	3
BMGT 1102	Interpersonal Skills	2
CSCI 1101	Computer Concepts & Applications	3
TOTAL CREDIT HOURS		**11**
TOTAL DEGREE CREDIT HOURS		**70**

In addition to the Certificate program competencies, the graduate of the Dental Laboratory Technology/Small Business Management A.T.S. program will be able to:

- Identify the fundamentals in planning and executing the start up of a new small business
- Describe the necessary competence in managing a small business enterprise, including effective operation of an established business, strategic planning, market analysis, pricing, inventory control, and credit collection
- Demonstrate knowledge of basic accounting principles used to operate a small business
- Describe marketing principles as they apply to small business.

Specific Program Admissions Information

An additional admission requirement for the Dental Laboratory Technology Certificate and A.T.S. programs is that the student be a high school graduate or have GED equivalency.

Contact the Dental Laboratory Technology Department, at **(614) 287-2457 or (614) 287-3655, to obtain an information packet or to schedule an interview.**

Dental Laboratory Technology Certificate

COURSE		CR
Semester 1		
DENT 1111	Anatomy & Occlusion	3
DENT 1142	Removable Partials	4
DENT 1153	Fixed Partials	4
TOTAL CREDIT HOURS		**11**
Semester 2		
DENT 1223	Complete Dentures	4
DENT 1275	Ceramics	4
DENT 1285	Orthodontics	2
TOTAL CREDIT HOURS		**10**
Summer Semester		
DENT 2364	History/Ethics	2
DENT 2397	Applied Laboratory	6
TOTAL CREDIT HOURS		**8**
TOTAL CERTIFICATE CREDIT HOURS		**29**

Note: All Dental Lab classes are held in the mornings from 8:00 a.m. until 1:00 p.m. New classes start each Autumn Semester.

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 1000	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	3
IMM 2370	Flash I & II	3
TOTAL CREDIT HOURS		13
TOTAL DEGREE CREDIT HOURS		73

Students should request a program plan of study from their faculty advisor.

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVORIAL 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
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 I	4
BIO 1112	Introduction to Biology I	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 1106	Physics by Inquiry: Properties & Motion	5
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	3
DDG 1545	Effective Visual Communications	2
DDG 2650	Digital Painting	3
TOTAL CREDIT HOURS		8

Semester 2		
DDG 1535	Advertising Design I	3
DDG 1555	Adobe Photoshop I/A	3
DDG 1565	Interactive Adobe InDesign	3
TOTAL CREDIT HOURS		9

Summer Semester		
DDG 2550	Typography for Advertising & Design	3
DDG 2750	Adobe Illustrator I/A	3
DDG 2975	Ad Agency/Portfolio Development	3
TOTAL CREDIT HOURS		9
TOTAL CERTIFICATE CREDIT HOURS		26

Adobe Illustrator Certificate

Semester 1		
DDG 1100	Introduction to Computer Design**	3
DDG 1555	Adobe Photoshop I/A	3
DDG 2750	Adobe Illustrator I/A	3
TOTAL CREDIT HOURS		9
TOTAL CERTIFICATE CREDIT HOURS		9

** May be waived after review of Professional Portfolio

Adobe InDesign Advanced Certificate

Semester 1		
DDG 1100	Introduction to Computer Design**	3
DDG 1565	Interactive Adobe InDesign	3
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**	3
DDG 1555	Adobe Photoshop I/A	3
IMM 1160	Media Graphics and Optimization	3
FOTO 2120	Advanced Photoshop for Photographers	3
TOTAL CREDIT HOURS		12
TOTAL CERTIFICATE CREDIT HOURS		12

** May be waived after review of Professional Portfolio

Digital Painting Certificate

Semester 1		
DDG 2650	Digital Painting	3
TOTAL CREDIT HOURS		3
TOTAL CERTIFICATE CREDIT HOURS		3

Digital Photography

Digital Photography Associate Degree
Basic Digital Photography Certificate
Advanced Digital Photography Certificate
Photoshop for Photographers Certificate
Business of Photography Certificate
Black and White Film 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 1990 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
FOTO 1990	Advanced Digital Photography	3
SBS XXXX	Refer to approved GE - SBS list	3
TOTAL CREDIT HOURS		16
Summer Semester		
NAT XXXX	Refer to approved GE - NAT list	4
FOTO 2994	Current Topics in Digital Photography	1 to 3
HUM XXXX	Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS		8 - 10
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
FOTO 2500	View Camera	3
TOTAL CREDIT HOURS		16
Semester 4		
FOTO 2200	Studio Lighting	3
FOTO 2960	Business of Photography	2
FOTO 2975	Digital Portfolio Development	3
FOTO 2802	Digital Photography Seminar	1
FOTO 2902	Digital Photography Practicum	3
FOTO XXXX	Technical Elective	2
TOTAL CREDIT HOURS		14
TOTAL DEGREE CREDIT HOURS		70-72

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 1780*	Photo Lab	1
FOTO 2130	Photoshop for Retouching	3
FOTO 2650	Photojournalism	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 BEHAVORIAL 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
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 I	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 1106	Physics by Inquiry: Properties & Motion	5
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

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
TOTAL CERTIFICATE CREDIT HOURS		9

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
Semester 2		
FOTO 1150	Digital Photography and Design	3
FOTO XXXX	Technical Elective	3
TOTAL CREDIT HOURS		6
TOTAL CERTIFICATE CREDIT HOURS		12

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 1780	Photo Lab	1
FOTO 2130	Photoshop for Retouching	3
FOTO 2650	Photojournalism	3
FOTO 2970	FOTO Field Studies	1-4

Advanced Digital Photography Certificate

COURSE		CR
Semester 1		
FOTO 1140	Introduction to Digital Photography	3
FOTO 1120	Photoshop for Photographers	3
TOTAL CREDIT HOURS		6
Semester 2		
FOTO 1150	Digital Photography and Design	3
FOTO 2130	Photoshop for Retouching	3
FOTO 1990	Advanced Digital Photography	3
TOTAL CREDIT HOURS		9
Summer Semester		
FOTO 2994	Current Topics in Digital Photography	1 - 3
FOTO 2200	Studio Lighting	3
FOTO 2600	Studio & Environmental Portraiture	4
TOTAL CREDIT HOURS		8-10
TOTAL CERTIFICATE CREDIT HOURS		23-25

Business of Photography Certificate

COURSE		CR
Semester 1		
FOTO 2960	Business of Photography	2
MKTG 1020	Branding	3
STAT 1350	Elementary Statistics	3
TOTAL CREDIT HOURS		8
TOTAL CERTIFICATE CREDIT HOURS		8

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

Early Childhood Development and Education

Early Childhood Development and Education Associate Degree
Basic Early Childhood Administrators Certificate
Infant/Toddler Education 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

Early Childhood Development and Education Associate Degree

COURSE		CR
Semester 1		
ECDE 1001	Early Childhood Guidance & Curriculum	3
ECDE 1002	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 1005	Social Emotional Development & Curriculum	3
ECDE 1008	Creative Curriculum	3
ECDE 1009	Language & Literacy Experiences	3
ENGL 2367	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 2931 **or** ECDE 2932	1 - 2
ECDE 2830*	Seminar III: Preschool **or** ECDE 2831 **or** ECDE 2832	1 - 2
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 - 17**
TOTAL DEGREE CREDIT HOURS		**73**

***Students choosing ECDE 2931/2831 (Student Teaching) instead of ECDE 2930/2803 (Practicum III: Preschool) are NOT required to complete ECDE 2021.**

Technical Electives

The following courses are approved for technical elective requirements:

ECDE 2101	Experiences with Infants	1
ECDE 2103	Experiences with Toddlers	1
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

- 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):

1) High school graduate or GED equivalency
2) Placement into ENGL 1100 Composition I or completion of ENGL 1099 Composition Workshop
3) Completion of the following 6 courses with grade of "C" or above:
   - ECDE 1001 Early Childhood Guidance & Curriculum
   - ECDE 1002 Observing, Recording, and Assessment
   - ECDE 1005 Social Emotional Development & Curriculum
   - ECDE 1008 Creative Curriculum
   - ECDE 1009 Language & Literacy
   - PSY 2261 Child Development
4) 2.0 or higher Non-Tech GPA and 2.0 or higher Tech GPA

Approved General Education (GE) List

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)		CR
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

GE-NATURAL/PHYSICAL SCIENCES REQUIREMENT (SELECT ONE)		CR
BIO 1111	Introduction to Biology I	4
ANTH 2200	Introduction to Biological Anthropology	3
GEOG 1900	Weather and Climate	4
GEOG 2300	Physical Geography	3
GEOL 1101	Introduction to Earth Science	4
GEOL 1105	Geology and the National Parks	3
GEOL 1151	Natural Disasters	3

Basic Early Childhood Administrators Certificate*

COURSE		CR
Semester 1		
ECDE 1001	Early Childhood & Guidance & Curriculum	3
ECDE 1002	Observing, Recording & Assessment	2
TOTAL CREDIT HOURS		**5**
Semester 2		
ECDE 1005	Social Emotional Development Curriculum	3
ECDE 1008	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.**

Infant/Toddler Education Certificate

COURSE		CR
Semester 1		
ECDE 1001	Early Childhood Guidance & Curriculum	3
ECDE 1002	Observing, Recording & Assessment	2
PSY 1100	Introduction to Psychology	3
COLS 1100	First Year Experience Seminar	1
TOTAL CREDIT HOURS		**9**
Semester 2		
ECDE 1005	Social Emotional Development & Curriculum	3
PSY 2261	Child Development	3
ECDE 2012	Families, Communities & Schools	3
ECDE 1009	Language & Literacy Experiences	3
TOTAL CREDIT HOURS		**12**
Summer Semester		
ECDE 2910	Practicum I: Infants & Toddlers	1
ECDE 2810	Seminar I: Infants and Toddlers	1
ECDE 2010	Infant Toddler Curriculum	3
ECDE 2105	Best Practices in Inclusive Early Childhood Classrooms	1
TOTAL CREDIT HOURS		**6**
Semester 3		
ECDE 2101	Experiences with Infants	1
ECDE 2103	Experience with Toddlers	1
TOTAL CREDIT HOURS		**2**
TOTAL CERTIFICATE CREDIT HOURS		**29**

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

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
Summer Semester		
SBS XXXX	Refer to approved GE - SBS list	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
TOTAL CREDIT HOURS		17
Semester 3		
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
XXXX XXXX	Basic Elective	3
TOTAL CREDIT HOURS		16
TOTAL DEGREE CREDIT HOURS		68

Basic Electives
The following courses are approved for basic elective requirements:

MECH 2215	CAD II	3
MECH 2270	Engineering Statistics	3
ESSH 1101	Introduction to Environmental Science, Safety& Health	3
PHYS 1201	Algebra-Based Physics II	5

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.

Information Technology Support Technician Major

COURSE		CR
Semester 1		
MATH 1030	Beginning Algebra II or	
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	5
XXXX XXXX	Basic Elective	3
TOTAL CREDIT HOURS		17
Semester 3		
ITST 2143	PC Tech Essentials II	3
ITST 2246	Introduction to Open Source	3
CSCI 2750	Networking for Home & Small Businesses	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		66

Basic Electives

The following courses are approved for basic elective requirements:

ACCT 1211	Financial Accounting	3
BMGT 1101	Principles of Business	3
BMGT 1102	Interpersonal Skills	2
BMGT 1108	21st Century Skills	2
BMGT 1111	Management or	
BMGT 2231	Fundamentals of Entrepreneurship	3
BMGT 2250	Project Management Principles	3
BMGT 2280	Professional Development	1
CSCI 2752	Working Small to Medium Business or ISP	3
CSCI 2754	Intro Routing & Switching in Enterprise	3
CSCI 2756	Designing & Supporting Computer Network	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 BEHAVORIAL 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
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, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, (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**	
MATH 1148	College Algebra*	4
TOTAL CREDIT HOURS		**13**
Summer Semester		
EET 1145	Data Communications Systems	3
EET 2205	PCB Design, Assembly and Testing	3
EET 2215	Advanced Digital (FPGA) Systems	3
PHIL 1130	Ethics	3
TOTAL CREDIT HOURS		**12**
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		**65**

***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
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:

1) High school graduate or GED equivalency
2) 18 years of age or older
3) Completed health record required PRIOR TO registration
4) COMPASS placement into ENGL 0190 or completion of equivalent course as verified on CSCC transcript.

E-mail **ems@cscc.edu** for Information Session dates or to make an appointment with department advisors.

Emergency Medical Services Technology Associate Degree

COURSE		CR
Semester 1		
COLS 1100	First Year Experience Seminar	1
BIO 1101	Fundamentals of Human Anatomy & Physiology	3
EMS 1861	Paramedic I	11
TOTAL CREDIT HOURS		**15**
Semester 2		
EMS 1862	Paramedic II	11
MATH 1030	Beginning Algebra II	3
FIRE 1101	Legal Issues for Emergency Services	3
TOTAL CREDIT HOURS		**17**
Summer Semester		
EMS 1863	Paramedic III	8
ENGL 1100	Composition I	3
EMS XXXX	Technical Elective	2
TOTAL CREDIT HOURS		**13**
Semester 3		
BMGT 1102	Interpersonal Skills	2
HUM XXXX	Refer to approved GE - HUM list	3
SPAN 1120	Spanish for Law Enforcement (2) **or**	
IEP 1101	Beginning ASL	4
CSCI 1101	Computer Concepts & Applications	3
TOTAL CREDIT HOURS		**12**
Semester 4		
EMS 2000	EMS Management	3
EMS 2001	Disaster Planning & ICS	2
PSY 1100	Introduction to Psychology	3
CHEM 1111	Elementary Chemistry I	4
TOTAL CREDIT HOURS		**12**
TOTAL DEGREE CREDIT HOURS		**69**

Technical Electives

The following courses are approved for technical elective requirements:

EMS 1003	Introduction to Rescue	2
EMS 1004	River Rescue	2
EMS 1005	Ice & Cold Water Rescue	2
EMS 1006	Vertical Rescue	3
EMS 1007	Search and Rescue Certificate	5
EMS 1008	WMD for Emergency Services	2
EMS 1009	Emergency Psychiatric Intervention	2
EMS 2002	12 Lead EKG Interpret. & Advanced Cardiac Treatment	3
EMS 2004	EMT Refresher	1
EMS 2005	Paramedic Refresher	2
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
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

EMT Certificate

COURSE		CR
Semester 1		
EMS 1860	EMT	7
TOTAL CERTIFICATE CREDIT HOURS		**7**

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.

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@cscc.edu or fire@cscc.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
CHEM 1111	Elementary Chemistry I or	
BIO 1111	Introduction to Biology I	4
EMS 1861	Paramedic I	11
TOTAL CREDIT HOURS		**16**
Semester 2		
EMS 1862	Paramedic II	11
FIRE 1000	Principles Emergency Services	3
TOTAL CREDIT HOURS		**14**
Summer Semester		
EMS 1863	Paramedic III	8
ENGL 1100	Composition I	3
EMS XXXX	EMS Rescue Courses (choose 2)	4
TOTAL CREDIT HOURS		**15**
Semester 3		
FIRE 1003	Fire Behavior & Combustion	3
FIRE 1005	Basic Building Construction for the Fire Service	3
HUM XXXX	Refer to approved list	3
MATH 1030	Beginning Algebra II	3
TOTAL CREDIT HOURS		**12**
Semester 4		
FIRE 1007	Fire Hydraulics/Water Supply	2
FIRE 1009	Fire Prevention/Protection Systems	3
PSY 1100	Introduction to Psychology or	
SOC 1101	Introduction to Sociology	3
FIRE 1105	Strategies/Tactics of Firefighting	3
XXXX XXXX	Basic Elective	2
TOTAL CREDIT HOURS		**13**
TOTAL DEGREE CREDIT HOURS		**70**

Basic Electives

The following courses are approved for Basic elective requirements:

CRJ 1016	Government and the Law	3
EMS 1008	WMD for Emergency Services	2
EMS 1009	Emergency Psychiatric Intervention	2
EMS 2000	EMS Management	3
EMS 2001	Disaster Planning & ICS	2
EMS 2002	12 Lead EKG Interpretation & Adv. Cardiac Treatment	3
EMS 2005	Paramedic Refresher	2
EMS 2101	Critical Care Transport	6
EMS 2102	Public Safety Service Instructor	5
FIRE 1101	Legal Issues for the Emergency Services	3

EMS Rescue Electives

The following courses are approved for Rescue elective requirements:

EMS 1003	Introduction to Rescue for the EMS Provider	2
EMS 1004	River Rescue	2
EMS 1005	Ice & Cold Water Rescue	2
EMS 1006	Vertical Rescue	3
EMS 1007	Search and Rescue Certificate	5

Approved General Education (GE) List

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/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

NOTE:

Prerequisite for FIRE courses in this degree: Firefighter II certificate (FIRE 1002) OR 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 Associate of Applied Science degrees in AMT, EET, EMEC, MECH and QUAL)

Computer Aided Drafting Technician
Engineering Assembly Technician
Engineering Technician
Manufacturing Maintenance Technician

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.

Computer Aided Drafting Technician Certificate

COURSE		CR
Semester 1		
EET 1115	Basic Digital Systems	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

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.

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	Modern Quality Systems	4
EET 2205	PCB Design, Assembly and Testing	3
TOTAL CREDIT HOURS		10
TOTAL CERTIFICATE CREDIT HOURS		20

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.

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.

Engineering 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
MECH 1150	Manufacturing Materials & Processes	3
EET 1115	Basic Digital Systems	3
TOTAL CREDIT HOURS		16
Semester 2		
MECH 1240	Machine Tools	3
EET 2205	PCB Design, Assembly and Testing	3
MATH 1113	Technical Mathematics	5
TOTAL CREDIT HOURS		11
TOTAL CERTIFICATE CREDIT HOURS		27

Manufacturing Maintenance Technician Certificate

COURSE		CR
Semester 1		
EMEC 1250	Motors & Control Logic	4
ITST 1101	Computer Applications for CSET I	2
ENGT 1100	Introduction to Engineering Technology	2
EET 1105	Basic DC Electronic Systems	3
EET 1115	Basic Digital Systems	3
TOTAL CREDIT HOURS		14
Semester 2		
EMEC 1251	Control Logic and PLCs	4
EET 2205	PCB Design, Assembly and Testing	3
MATH 1113	Technical Mathematics	5
EET 1125	Basic AC Electronic Systems	3
MECH 2243	Robotics	2
TOTAL CREDIT HOURS		17
TOTAL CERTIFICATE CREDIT HOURS		31

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 Technol ogy 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	
MATH 1148	College Algebra	4
BIO 1111	Introduction to Biology 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
Semester 2		
CHEM 1111	Elementary Chemistry I	4
GEOL 1101	Introduction to Earth Science or	
GEOL 1121	Physical Geology	4
ESSH 2120	Environmental Aspects of Soils	3
ESSH 1580	Environmental Site Assessment	2
ESSH 1140	Industrial/Municipal Pollution Control	2
TOTAL CREDIT HOURS		15
Summer Semester		
ESSH 2520	Health & Safety Training for Hazardous Waste Operation	2
ESSH 2220	Drinking Water Treatment or	
ESSH 2230	Wastewater Treatment (Autumn Semester only)	2
ITST 1101	Computer Applications in CSET I	2
COMM 2204	Technical Writing	3
TOTAL CREDIT HOURS		9
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	
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 2540	Environmental Restoration	3
ESSH 2550	Air Pollution & Monitoring	3
XXX XXXX	Technical Elective	2
TOTAL CREDIT HOURS		15
TOTAL DEGREE CREDIT HOURS		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 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	3
CIVL 2230	Public Utility Systems	3
GIS 1100	Introduction to Geographic Information Systems	3

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVORIAL 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
ENGL 1100	Composition I	3
CHEM 0100	Introduction to Chemistry	4
MATH 1020	Beginning Algebra I	3
ESSH 1140	Industrial/Municipal Pollution	2
TOTAL CREDIT HOURS		15
Semester 2		
ESSH 2530	Applied Environmental Engineering	2
CIVL 2210	Principles of Hydraulics	3
ESSH 2240	Environmental Hydrology	3
ESSH 1650	OSHA 30-Hr Construction Safety & Health or	
ESSH 1700	OSHA 30-Hr General Industry Safety & Health or	
ESSH 2520	Health & Safety Training for Hazardous Waste Operations	2
ESSH 2230	Wastewater Treatment	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	
CSCI 1101	Computer Concepts and Applications	2
TOTAL CREDIT HOURS		7
TOTAL CERTIFICATE CREDIT HOURS		34

Finance

Associate of Applied Science Degree

Today's banking, investment, corporate finance, consumer credit, and commercial credit 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, government agencies, and departments of banks, savings and loans, mortgage and insurance companies. Examples of these positions include loan processor, financial planner, loan officer, financial analyst, mortgage banking trainee, foreign currency trader, credit analyst, insurance analyst, stockbroker trainee and collections manager.

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

- Explain the key concepts of the role of finance in the global macro-economy
- 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 stocks, bonds, mutual funds, real estate, insurance and other financial instruments and the interrelationship among them, and their appropriate application including 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 and risk/return techniques for valuing investments and capital budgeting decisions
- Understand the role of ethics and personal integrity in business and finance
- Demonstrate a basic understanding of the elements of international finance
- Demonstrate an understanding of corporate finance and analysis, including cash budgets and ratio analysis.

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 class room experience continues to provide students with high quality instruction in a small classroom setting, on Columbus State's 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.

Finance Associate Degree

COURSE		CR
Semester 1		
CSCI 1101	Computer Concepts & Applications	3
FMGT 1101	Personal Finance	3
ACCT 1211	Financial Accounting	3
ENGL 1100	Composition I	3
BOA 1200	Business Language	2
COLS 1100	First Year Experience Seminar	1
TOTAL CREDIT HOURS		**15**
Semester 2		
BOA 1300	Business Applications	2
FMGT 1211	Investments	3
STAT 1350	Elementary Statistics	3
ACCT 1212	Managerial Accounting	3
BMGT 1111	Management	3
SBS XXXX	Refer to approved GE - SBS list	3
TOTAL CREDIT HOURS		**17**
Summer Semester		
HUM XXXX	Refer to approved GE - HUM list	3
NAT XXXX	Refer to approved GE - NAT list	4
ECON 2200	Principles of Microeconomics	3
FMGT 2201	Corporate Finance	3
TOTAL CREDIT HOURS		**13**
Semester 3		
ECON 2201	Principles of Macroeconomics	3
LEGL 2064	Legal Environment of Business	3
XXXX XXXX	Technical Elective	3
FMGT 2202	Money and Banking	3
FMGT 2242	International Finance	3
TOTAL CREDIT HOURS		**15**
Semester 4		
FMGT 2299	Finance Capstone	3
FMGT 2901	Finance Practicum/Seminar	3
XXXX XXXX	Technical Elective	3
MKTG 1110	Marketing Principles	3
TOTAL CREDIT HOURS		**12**
TOTAL DEGREE CREDIT HOURS		**72**

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
SCM 1190	International 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

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVORIAL 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

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

Continued next page

Approved General Education (GE) List (continued)

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 I	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 1106	Physics by Inquiry: Properties & Motion	5
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

Fire Science

Fire Science Associate Degree - Professional Track

Technological advancements and increasing sophistication in fire fighting 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 fire fighting 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

COURSE		CR
Semester 1		
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
FIRE 1001	Firefighter I	5
FIRE 1002	Firefighter II	5
TOTAL CREDIT HOURS		**14**
Semester 2		
EMS 1860	Emergency Medical Technician	7
CHEM 1111	Elementary Chemistry I	4
FIRE 1101	Legal Issues for the Emergency Services	3
TOTAL CREDIT HOURS		**14**
Summer Semester		
CSCI 1101	Computer Concepts & Applications	3
FIRE 1103	Hazardous Materials Technician Level	3
FIRE 1105	Strategies/Tactics of Firefighting	3
FIRE 2001	Fire Service Company Officer	3
FIRE XXXX	Technical Elective	2
TOTAL CREDIT HOURS		**14**
Semester 3		
PSY 1100	Introduction to Psychology	3
FIRE 2105	Advanced Building Construction/Collapse	3
HUM XXXX	Refer to approved GE - HUM list	3
EMS XXXX	Rescue Electives (select 2 from list)	4
FIRE XXXX	Technical Elective	2
TOTAL CREDIT HOURS		**15**
Semester 4		
MATH 1030	Beginning Algebra II	3
FIRE 2003	Fire Arson Investigation	3
FIRE 2005	Principles of Fire Scene Command	3
FIRE XXXX	Technical Elective	3
TOTAL CREDIT HOURS		**12**
TOTAL DEGREE CREDIT HOURS		**69**

Technical Electives:

FIRE 1007	Fire Hydraulics/Water Supply	2
FIRE 1009	Fire Prevention/Protection Systems	3
EMS 2102	Public Safety Service Instructor	5

Rescue Electives:

EMS 1004	River Rescue	2
EMS 1005	Ice & Cold Water Rescue	2
EMS 1006	Vertical Rescue	3

NOTE 1: Prior to enrolling in any Fire Science courses, student must complete one of the following: FIRE 1001 and FIRE 1002, or have documented Firefighter I and II certification.

NOTE 2: Students with EMT, Firefighter I and II, and/or apprenticeship certification may qualify for other nontraditional credit **(***"N")* which may apply toward the degree. Contact the Fire Science Technology coordinator at **fire@cscc.edu** for an advising appointment.

NOTE 3: FIRE 2105 Construction/Collapse for Experienced Firefighters is not open to students with credit for FIRE 1005. FIRE 2005 Incident Command is for Experienced Firefighters only. Contact the Fire Science Technology coordinator at **fire@cscc.edu** for an advising appointment.

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-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

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.

Geographic Information Systems 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
ITST 1102	Computer Applications in CSET II	2
GIS 1100	Introduction to GIS	3
GIS 1101	Acquiring GIS Data	2
GIS 1102	GIS in Industry	2
TOTAL CREDIT HOURS		**15**
Semester 2		
NAT XXXX	Refer to approved GE - NAT list	3
STAT 1350	Elementary Statistics **or**	
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 2850	GIS Seminar **and**	1
GIS 2900	GIS Practicum	3
GIS XXXX	Technical Elective	2
TOTAL CREDIT HOURS		**6**
Semester 3		
HUM XXXX	Refer to approved GE- HUM list	3
XXXX XXXX	Basic Elective	2
GIS 2100	Introduction to GIS Databases	3
GIS 2110	Introduction to Spatial Analysis	3
GIS 2120	Introduction to GIS Programming	3
GIS 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	2
TOTAL CREDIT HOURS		**15**
TOTAL DEGREE CREDIT HOURS		**69**

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

Continued next page

GIS Associate Degree (continued)

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

Technical Electives

The following courses are approved for technical elective requirements:

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

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVORIAL 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
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 I	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 1106	Physics by Inquiry: Properties & Motion	5
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

Geographic Information Systems Certificate

COURSE		CR
Semester 1		
GIS 1100	Introduction to GIS	3
GIS 1101	Acquiring GIS Data	2
GIS 1102	GIS in Industry	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 2850	GIS Seminar **and**	1
GIS 2900	GIS Practicum	3
TOTAL CREDIT HOURS		**6**
TOTAL CERTIFICATE CREDIT HOURS		**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
Medical Coding Certificate
Health Data Analyst Certificate
Health IT Certificates

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 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 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 IT Certificates program prepares students to support electronic health record systems. A health IT professional is qualified to support the adoption and implementation of Electronic Health Records (EHRs), information exchange across health care providers and public health authorities, and the redesign of workflows within health care settings to gain the quality and efficiency benefits of EHRs. The program is offered in distance learning format designed to be completed within two semesters.

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 Technology degree program, the Medical Coding Certificate program, the Health IT Certificates, and the Health Data Analyst Certificate 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.

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.
-

Health Data Analyst

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 healthcare 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 IT Certificates

Workflow and Information Management Certificate

Upon completion of this certificate, the student will be able to:

- Conduct user requirements analysis to facilitate workflow design.
- Integrate information technology functions into workflow.
- Document health information exchange needs.
- Design processes and information flows that accommodate quality improvement and reporting.
- Work with provider personnel to implement revised workflows.
- Evaluate process workflows to validate or improve practice's systems.
- Suggest solutions for health IT implementation problems in clinical and public health settings.
- Address workflow and data collection issues from a clinical perspective, including quality measurement and improvement.
- Assist in selection of vendors and software.
- Advocate for users' needs, acting as a liaison between users, IT staff, and vendors.

Implementation/Technical Software Support Certificate

Upon completion of this certificate, the student will be able to:

- Execute implementation project plans, by installing hardware (as needed) and configuring software to meet practice needs.
- Incorporate usability principles into design and implementation.
- Test the software against performance specifications.
- Interact with the vendors as needed to rectify problems that occur during the deployment process.
- Interact with end users to diagnose IT problems and implement solutions.
- Document IT problems and evaluate the effectiveness of problem resolution.
- Support systems security and standards.

Project Management for Health IT Certificate

Upon completion of this certificate, the student will be able to:

- Apply project management and change management principles to create implementation project plans to achieve the project goals.
- Interact with office/hospital personnel to ensure open communication with the support team.
- Lead implementation teams consisting of workers in the roles described above.
- Manage vendor relations, providing feedback to health IT vendors for product improvement.

Specific Program Admissions Information for HIMT Degree, Health Data Analyst Certificate, Medical Coding Certificate, and Health IT Certificates

Listed below are requirements for admission to the Health Information Management Technology, the Medical Coding Certificate, and Health IT Certificates. *These requirements must be completed prior to acceptance into the HIMT Degree program, the Health Data Analyst Certificate, the Medical Coding Certificate, and Health IT Certificates.*

1) High school graduate or GED equivalency
2) Placement into ENGL 1100 Beginning Composition
3) Placement into MATH 1030 Beginning Algebra II
4) Completion of CSCI 1001 Computer Fundamentals
5) Completion of CSCI 1101 Computer Concepts & Applications
6) Students must pass a drug screen and background check before they can be accepted into the HIMT Degree, the Medical Coding Certificate, the Health IT Certificates, or the Health Data Analyst Certificate.

After earning a "C" or higher in HIMT 1111, the student will be accepted into the HIMT Degree program, the Medical Coding Certificate program, the Health IT Certificate program, or the Health Data Analyst Certificate program.

The HIMT Degree, the Health Data Analyst Certificate, the Medical Coding Certificate, and Health IT plans of study begin with Autumn 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 Medical Coding Certificate, or to complete the Health IT Certificates

Health Information Management Technology Associate Degree

COURSE		CR
Semester 1		
BIO 1101	Fundamentals of Human Anatomy & Physiology	3
CSCI 1102	Intermediate Excel & Access	3
COLS 1100	First Year Experience Seminar	1
HIMT 1111	Introduction to HIM	3
HIMT 1121	Advanced Medical Terminology	2
HIMT 1135	Health Data Management	3
HIMT 1256	Clinical Documentation & Disease	2
TOTAL CREDIT HOURS		**16**
Semester 2		
BIO 2300	Human Anatomy	4
CSCI 2330	Project Mgmt Fundamentals & Case Studies	4
HIMT 1141	Pharmacology	2
HIMT 1245	Clinical Class I	3
HIMT 1255	Clinical Class II	3
HIMT 1265	Medical Reimbursement	3
TOTAL CREDIT HOURS		**19**
Summer Semester		
ENGL 1100	Composition I	3
MATH 1030	Beginning Algebra II	3
TOTAL CREDIT HOURS		**6**
Semester 3		
SBS XXXX	Refer to approved GE -SBX list	3
CSCI 2325	Expert Access	3
HIMT 2133	Legal Aspects of Health Information	2
HIMT 2860	PPE Medical Coding App	4
HIMT 2267	Principles of Management	2
TOTAL CREDIT HOURS		**14**
Semester 4		
HUM XXXX	Refer to approved GE - HUM list	3
HIMT 2294	Special Topics	2
HIMT 2257	Introduction to Health Statistics	2
HIMT 2870	PPE HIM Application	4
HIMT 2259	Quality & Resource Management	3
TOTAL CREDIT HOURS		**14**
TOTAL DEGREE CREDIT HOURS		**70**

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)

COURSE		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 BEHAVORIAL SCIENCE REQUIREMENT (SELECT ONE)

		CR
SOC 1101	Introduction to Sociology	3
SOC 2309	Law and Society	3
GEOG 2400	Economic and Social Geography	3

Medical Coding Certificate

Semester 1		CR
BIO 1101	Fundamentals of Human Anatomy & Physiology	3
HIMT 1111	Introduction to HIM	3
HIMT 1121	Advanced Medical Terminology	2
HIMT 1135	Health Data Management	3
HIMT 1256	Clinical Documentation & Disease	2
TOTAL CREDIT HOURS		**13**
Semester 2		
BIO 2300	Human Anatomy	4
HIMT 1141	Pharmacology	2
HIMT 1245	Clinical Class I	3
HIMT 1255	Clinical Class II	3
HIMT 1265	Medical Reimbursement	3
TOTAL CREDIT HOURS		**15**
Semester 3		
HIMT 2860	PPE Med Cod App	4
TOTAL CREDIT HOURS		**4**
TOTAL CERTIFICATE CREDIT HOURS		**32**

Health IT Certificates Workflow/Information Management Certificate

Semester 1		CR
HIMT 1135	Health Data Management	3
HIMT 1111	Introduction to Health Information Management	3
HIMT 2294	Special Topics in Health Information Mgmt	2
HIMT 1121	Advanced Medical Terminology	2
TOTAL CREDIT HOURS		**10**
Semester 2		
HIMT 2259	Quality and Resource Management	3
HIMT 2870B	PPE HIM Applications HIT	2
CSCI 1052	Networking Terminology	1
TOTAL CREDIT HOURS		**6**
TOTAL CERTIFICATE CREDIT HOURS		**16**

Health Data Analyst Certificate

Semester 1		CR
HIMT 1135	Health Data Management	3
HIMT 1111	Introduction to Health Information Management	3
HIMT 1274	Introduction to Medical Coding & Reimbursement	2
CSCI 1102	Intermediate Excel & Access	3
HIMT 1121	Advanced Medical Terminology	2
TOTAL CREDIT HOURS		**13**
Semester 2		
HIMT 2258	Intro to Health Statistics	2
HIMT 2294	Special Topics	3
HIMT 2870B	PPE HIM Applications HIT	2
CSCI 2325	Expert Access	3
CSCI 2294	Database Administration & Data Mining for HIT	3
TOTAL CREDIT HOURS		**13**
TOTAL CERTIFICATE CREDIT HOURS		**26**

Health IT Certificates Implementation/Technical Software Support Certificate

Semester 1		CR
HIMT 1135	Health Data Management	3
HIMT 1111	Introduction to Health Information Management	3
HIMT 2294	Special Topics in Health Information Technology	2
CSCI 1152	Networking Concepts	3
HIMT 1121	Advanced Medical Terminology	2
TOTAL CREDIT HOURS		**13**
Semester 2		
CSCI 2994	SPT: Wireless, Voice, & Mobile Communications	3
HIMT 2870B	PPE HIM Applications HIT	2
CSCI 2994	SPT: Database Admin & Data Mining	3
TOTAL CREDIT HOURS		**8**
TOTAL CERTIFICATE CREDIT HOURS		**21**

Health IT Certificates Project Management for Health IT Certificate

Semester 1		CR
CSCI 2330	Project Management Fundamentals & Case Studies	4
HIMT 1135	Health Data Management	3
HIMT 1111	Introduction to Health Information Management	3
HIMT 1121	Advanced Medical Terminology	2
TOTAL CREDIT HOURS		**12**
Semester 2		
HIMT 2259	Quality and Resource Management	3
HIMT 2870B	PPE HIM Applications HIT	2
CSCI 1052	Networking Terminology	1
TOTAL CREDIT HOURS		**6**
TOTAL CERTIFICATE CREDIT HOURS		**18**

Heating, Ventilating and Air Conditioning Technology

Heating, Ventilating and Air Conditioning Technology Associate Degree
High Pressure Boiler License Training Program Certificate
Large Commercial Certificate
Residential/Light Commercial 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

Heating, Ventilating and Air Conditioning Technology Associate Degree

COURSE		CR
Semester 1		
ARCH 1110	Basic Manual Drafting	1
ARCH 1112	Basic CAD 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		**17**
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	4
HUM XXXX	Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS		**19**
Semester 3		
HVAC 2110	Piping Systems	2
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		**16**
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		**68**

Technical Electives

The following courses are approved for technical elective requirements:

HVAC 2094	Special Topics in HVAC	1-5
HVAC 2170	Commercial A/C Systems	3
HVAC 2180	Advanced Controls	5
HVAC 2190	Boiler Systems	4
HVAC 2950	Field Experience	3

- 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
- 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.cscc.edu/HVAC** and/or contact HVAC Program Coordinator Bill Highley at (614) 287-2657.

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVORIAL SCIENCE REQUIREMENT

(SELECT ONE)		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)		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

High Pressure Boiler License Training Program Certificate

COURSE		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		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		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	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**

Hospitality Management Technology

Culinary Apprenticeship Major
Dietetic Technician 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
Dietary Manager Certificate
Meeting and Event Management Certificate
School Foodservice Manager 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, Dietetic Technician, 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). In addition, Dietary Manager, Baking, Casino Management, Meeting and Event Management and School Foodservice Manager 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 Dietetic Technician 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.

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 17-credit Dietary Manager Certificate is approved by the Association of Nutrition & Foodservice Professionals. It is open to persons working in the foodservice operation of a health care facility that employs a Registered Dietitian, who serves as the preceptor to the student. Persons completing the program are eligible to take the national certification exam to become a Certified Dietary Manager (CDM). Credit hours earned may be applied to an Associate of Applied Science Degree in the Dietetic Technician major.

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.

The School Foodservice Manager Certificate program includes six courses. The completion of these six courses will prepare the student to meet the education requirements for the third level of certification established by the School Nutrition Association.

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.

Dietetic Technician Major

In addition to the general Hospitality Management competencies, a graduate majoring in the Dietetic Technician program 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 Dietetic Technician 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, HOSP 1153, HOSP 1109, ENGL 1100, GEOL 1101

Dietetic Technician 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		
HOSP 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 1002	Total Body Conditioning	1
SES 1004	Yoga	1
SES 1005	Intro Strength & Resistance Training	1
SES 1006	Golf	1
SES 1008	Women's Self Defense	1
SES 1009	Bowling	1
SES 1010	Fitness Kick Boxing	1

Dietetic Technician Major

COURSE		CR
Semester 1		
ENGL 1100	Composition I	3
STAT 1350	Elementary Statistics	3
DIET 1901	Dietetic Practicum I	1.5
MULT 1010	Medical Terminology	2
HOSP 1122	Hospitality Facilities & Sanitation	2
HOSP 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
DIET 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
DIET 2275	Medical Nutrition Therapy I	3
HOSP 2224	Hospitality Supervision & Quality Management	3
HOSP 2207	Hospitality Financial Analysis	3
DIET 2901	Dietetic Practicum III	2
TOTAL CREDIT HOURS		14
Semester 4		
HOSP 2219	Food Production & Menu Management	5
DIET 2276	Medical Nutrition Therapy II	3
DIET 2277	DTR Exam Review	1
DIET 2902	Dietetic Practicum IV	2.5
DIET 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		
ENGL 1100	Composition I	3
MATH 1010	Mathematics for Business Applications	4
HOSP 1101	Researching the Hospitality & Tourism Industry	2
HOSP 1154	Tourism Geography	3
HOSP 1145	Lodging Operations	3
COLS 1100	First Year Experience Seminar	1
TOTAL CREDIT HOURS		16
Semester 2		
HOSP 1155	Tourism Operations	4
HOSP 1143	Hospitality Tourism Law	2
ENGL 2367	Composition II	3
HOSP 1122	Hospitality Facilities & Sanitation	2
MKTG 1230	Customer Service & Sales	3
TOTAL CREDIT HOURS		14
Summer Semester		
COMM 2200	Business Communications	3
PSY 1100	Introduction to Psychology	3
HOSP 2246	Hospitality Sales & Marketing	3
HOSP 2207	Hospitality Financial Analysis	3
TOTAL CREDIT HOURS		12
Semester 3		
BMGT 2216	Business Ethics	3
GEOL 1101	Introduction to Earth Science	4
SES 2529	Sport & Event Management	3
HOSP 2273	Casino & Gaming Operations	2
HOSP 2226	Event Menu Planning	2
HOSP 2294	Special Topics in Hospitality	2
TOTAL CREDIT HOURS		16
Semester 4		
HOSP 2224	Hospitality Supervision & Quality Management **	3
SBS XXXX	Refer to approved GE - SBS list	3
HOSP 2901	Hospitality Cooperative Work Experience I	3
HUM XXXX	Refer to approved GE - HUM list	3
HOSP 2271	Catering & Event Services	3
TOTAL CREDIT HOURS		15
TOTAL DEGREE CREDIT HOURS		73

**A grade of "C" or higher is required.

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
HOSP 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 2367	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 Mgmt. **	5
HOSP 2224	Hospitality Supervision & Quality Mgmt. **	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
HOSP 1153	Nutrition for a Healthy Lifestyle	3
TOTAL CREDIT HOURS		17
Summer Semester		
HOSP 1113	Pastries I	4
BMGT 2216	Business Ethics	3
ENGL 2367	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 BEHAVORIAL 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 for Dietetic Major only

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-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		17

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 Mgt**	3
HOSP 2273	Gaming Operations	2
TOTAL CREDIT HOURS		8
Summer Semester		
HOSP 2294	Special Topic in Hospitality	2
HOSP 2294	Special Topic in Hospitality	2
HOSP 1143	Hospitality & Tourism Law	2
TOTAL CREDIT HOURS		6
TOTAL CERTIFICATE CREDIT HOURS		22

**A minimum grade of "C" is required.

Dietary Manager Certificate

COURSE		CR
Semester 1		
HOSP 1153	Nutrition for a Healthy Lifestyle	3
HOSP 1122	Hospitality Facilities & Sanitation	2
HOSP 2901	Hospitality Co-op Work Experience I: DIETMG	3
TOTAL CREDIT HOURS		8
Semester 2		
HOSP 2224	Hospitality Supervision & Quality Management**	3
HOSP 2207	Hospitality Financial Analysis	3
HOSP 2902	Hospitality Cooperative Work Experience II: DIETMG	3
TOTAL CREDIT HOURS		9
TOTAL CERTIFICATE CREDIT HOURS		17

** A minimum grade of "C" is required.

School Foodservice Manager Certificate

COURSE		CR
Semester 1		
HOSP 1122	Hospitality Facilities & Sanitation	2
HOSP 1153	Nutrition for a Healthy Lifestyle	3
HOSP 2901	Hospitality Cooperative Work Experience I: FDSRV	3
TOTAL CREDIT HOURS		8
Semester 2		
HOSP 2207	Hospitality Financial Analysis	3
HOSP 2224	Hospitality Supervision & Quality Mgt**	3
HOSP 2902	Hospitality Cooperative Work Experience II: FDSRV	3
TOTAL CREDIT HOURS		9
TOTAL CERTIFICATE CREDIT HOURS		17

**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 Technology

Associate of Applied Science Degree

Note: The Human Resources program is closed to new students. Human Resources courses or substitutions will continue to be offered for students who are finishing their degrees.

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 Technology 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 Technology, 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
- Develop/administer a monetary compensation system
- Develop/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 Technology 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 Technology 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 (Hybrid), and HRM 2224 Human Resource Records Management

ACBSP ACCREDITED

The Human Resources Management Technology 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	First Year Experience Seminar	1
ENGL 1100	Composition I	3
BOA 1200	Business Language	2
CSCI 1101	Computer Concepts & Applications	3
BMGT 1111	Management	3
BOA 1300	Business Applications	2
HRM 1121	Human Resources Management	3
TOTAL CREDIT HOURS		**17**
Semester 2		
LEGL 2064	Legal Environment of Business	3
HRM 1222	Personnel Interviewing	2
HRM 1223	HR Policy & Procedure Writing	3
HRM 1224	Employee Training	3
HRM 1225	Labor Relations	3
STAT 1350	Elementary Statistics	3
TOTAL CREDIT HOURS		**17**
Summer Semester		
HRM 1825	Monetary Compensation	3
HRM 1826	Mandatory Benefits	3
HRM 1827	Voluntary Benefits	2
COMM 2268	Intercultural Communication	3
BOA 1117	Payroll	1
TOTAL CREDIT HOURS		**12**
Semester 3		
HRM 2221	Staffing Under the Law	3
HRM 2223	Workplace Safety	3
HRM 2224	HR Records Mgt	2
ECON 2200	Principles of Microeconomics	3
HUM XXXX	Refer to Approved List	3
TOTAL CREDIT HOURS		**14**
Semester 4		
HRM 2240	Administration of Human Resources	3
HRM 2901	HRM Practicum/Seminar	3
XXXX XXXX	Natural Science – Refer to approved list	4
POLS 1100	Introduction to American Government	3
TOTAL CREDIT HOURS		**13**
TOTAL DEGREE CREDIT HOURS		**73**

Approved General Education (GE) List

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

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 I	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 1	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
GEOL1122	Historical Geology	4
GEOL 1151	Natural Disasters	3
PHYS 1103	World of Energy	3
PHYS 1106	Physics by Inquiry: Properties & Motion	5
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

Information Technology Support Technician (ITST) see Electro-Mechanical for ITST plan of study

Interactive Media

Interactive Media Associate Degree
Digital Video and Sound Major
Video Game Art and Animation Track
3D Content Creation Certificate
Game Development Certificate
Rich Media Communication Certificate
Visual Communication Certificate
Web Communication 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 Photoshop, Fireworks, ProtoolsPremiere, AfterEffects, Flash, Dreamweaver, Illustrator, Maya, 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 Digital Video and Sound major is designed to address the need for professionally trained graphic design and interactive media professionals who have the skill set to utilize audio and video assets (typically called "rich media") in the production of new media for interactive websites or other delivery systems.

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 multimedia technician, multimedia specialist, 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 with a 30-week course sequence)
- 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 Digital Video and Sound major will be able to:

- Understand the role of audio/visual production in an integrated marketing communications plan
- Use software tools to capture audio and video from various sources
- Use sound and sound editing channels to enhance video productions
- Understand copyright and fair use laws as they relate to audio/video production
- Stream and import video for web production.
- Identify ways to incorporate text and character animation into video productions
- Demonstrate an ability to record voice, music, and effect for multimedia products
- Demonstrate an understanding of the processes involved in

planning, scripting, recording, and editing a digital audio/video production.

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:
Rich Media Communication Certificate
Visual Communication Certificate
Web Communication Certificate

A series of online certificate 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, Rich Media Communication or Visual Communication. These tests are 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 tests, the courses are a very 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 1010	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 XXXX	Technical Elective	2-3
IMM 2370	Flash I & II	3
SBS XXXX	Refer to approved GE - SBS list	3
CSCI 2447	Javascript Fundamentals	3
CSCI 1445	Content Management & Integration	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	3
IMM 2802	IMM Seminar	1
CSCI 2412	Web Database Development	4
TOTAL CREDIT HOURS		**17**
TOTAL DEGREE CREDIT HOURS		**72-73**

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 1520	Single Camera Video Production	3
IMM 1510	Audio Production	3
IMM 1580	Motion Graphics (AfterEffects)	2
IMM 2550	Foley Sound Creation	3
IMM 2600	DVD Creation (Encore)	3
IMM 1201	3D Modeling 1	4
IMM 2755	Rich Media Communications	2
IMM 2760	Web Communication	2
IMM 2765	Visual Communications	2

Digital Video and Sound Major

COURSE		CR
Semester 1		
ENGL 1100	Composition I	3
IMM 1010	Principles of Interactive Design	3
IMM 1500	Basics of Video and Sound	3
STAT 1350	Elementary Statistics	3
COLS 1100	First Year Experience Seminar	1
IMM 1530	Screenwriting	3
TOTAL CREDIT HOURS		**16**
Semester 2		
DDG 1100	Introduction to Computer Design	3
IMM 1520	Single Camera Video Production	3
IMM 1510	Audio Production	3
IMM 1580	Motion Graphics (AfterEffects)	2
IMM 1160	Media Graphics and Optimization	3
TOTAL CREDIT HOURS		**14**
Summer Semester		
NAT XXXX	Refer to approved GE - NAT list	4
HUM XXXX	Refer to approved GE - HUM list	3
DDG 1525	Storyboarding	3
TOTAL CREDIT HOURS		**10**
Semester 3		
IMM 2370	Flash I & II	3
IMM 2550	Foley Sound Creation	3
IMM 2520	Advanced Video Production	3
DDG 1555	Adobe Photoshop I/A	3
MKTG 1020	Branding	3
TOTAL CREDIT HOURS		**15**
Semester 4		
IMM 2620	Website Design/Creation	3
SBS XXXX	Refer to approved GE - SBS list	3
FOTO 1140	Introduction to Digital Photography	3
IMM 2902	IMM Practicum	3
IMM 2802	IMM Seminar	1
IMM 2600	DVD Creation (Encore)	3
TOTAL CREDIT HOURS		**16**
TOTAL DEGREE CREDIT HOURS		**71**

Video Game Art and Animation Track

COURSE		CR
Semester 1		
ENGL 1100	Composition I	3
STAT 1350	Elementary Statistics	3
DDG 1525	Storyboarding	3
IMM 1201	3D Modeling 1	4
IMM 1115	Survey of Gaming Industry	3
COLS 1100	First Year Experience Seminar	1
TOTAL CREDIT HOURS		**17**
Semester 2		
IMM 1116	Storytelling for Games	3
IMM 1202	3D Modeling 2	3
DDG 2650	Digital Painting	3
DDG 1860	2D Animation	3
DDG 1870	Fundamentals of Design for Animation	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 2601	Game Development 1	2
IMM 2370	Flash I & II	3
IMM 2201	3D Modeling 3	3
IMM 2550	Foley Sound Creation	3
MKTG 1020	Branding	3
TOTAL CREDIT HOURS		**14**
Semester 4		
IMM 2602	Game Development 2	2
IMM 2390	Advanced Flash III (Games)	3
IMM 2710	Interactive Portfolio	3
IMM 2902	IMM Practicum	3
IMM 2802	IMM Seminar	1
IMM 2603	Collaborative Project	2
TOTAL CREDIT HOURS		**14**
TOTAL DEGREE CREDIT HOURS		**70**

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

Continued next page

Approved General Education (GE) List (continued)

ASTR 1162	Stars and Galaxies	3
ASTR 1400	Astronomy Laboratory	1
BIO 1111	Introduction to Biology I	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 1	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 1106	Physics by Inquiry: Properties & Motion	5
PHYS 1200	Algebra-Based Physics I	5
PHYS 1201	Algebra-Based Physics II	5
PHYS 1250	Calculus-Based Physics I	5
PHYS 1251	Calculus-Based Phys II	5

SBS

GE-SOCIAL BEHAVORIAL 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.

Game Development Certificate

COURSE		**CR**
Semester 1		
IMM 2601	Game Development 1	2
TOTAL CREDIT HOURS		**2**
Semester 2		
IMM 2602	Game Development 2	2
IMM 2603	Collaborative Project	2
TOTAL CREDIT HOURS		**4**
TOTAL CERTIFICATE CREDIT HOURS		**6**

3D Content Creation Certificate

COURSE		**CR**
Semester 1		
IMM 1201	3D Modeling 1	4
TOTAL CREDIT HOURS		**4**
Semester 2		
IMM 1202	3D Modeling 2	3
TOTAL CREDIT HOURS		**3**
Summer Semester		
IMM 2201	3D Modeling 3	3
TOTAL CREDIT HOURS		**3**
TOTAL CERTIFICATE CREDIT HOURS		**10**

Rich Media Communication Certificate

COURSE		**CR**
Semester 1		
IMM 1120	Fundamentals of Interactive Media	4
TOTAL CREDIT HOURS		**4**
Semester 2		
DDG 2750	Adobe Illustrator I/A	3
TOTAL CREDIT HOURS		**3**
Summer Semester		
IMM 2755	Rich Media Communications	2
TOTAL CREDIT HOURS		**2**
TOTAL CERTIFICATE HOURS		**9**

Visual Communication Certificate

COURSE		**CR**
Semester 1		
IMM 1120	Fundamentals of Interactive Media	4
TOTAL CREDIT HOURS		**4**
Semester 2		
IMM 1160	Media Graphics and Optimization	3
TOTAL CREDIT HOURS		**3**
Summer Semester		
IMM 2765	Visual Communications	2
TOTAL CREDIT HOURS		**2**
TOTAL CERTIFICATE CREDIT HOURS		**9**

Web Communication Certificate

COURSE		**CR**
Semester 1		
CSCI 1145	HTML	3
TOTAL CREDIT HOURS		**3**
Semester 2		
IMM 1120	Fundamentals of Interactive Media	4
IMM 1140	Cascading Style Sheets	3
TOTAL CREDIT HOURS		**7**
Summer Semester		
IMM 2760	Web Communications	2
TOTAL CREDIT HOURS		**2**
TOTAL CERTIFICATE CREDIT HOURS		**12**

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 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.

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 state licensing.

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@cscc.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, Chris Evenson, (614) 287-5616 or cevenson@cscc.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 and IEP 2902 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	Interpreting Practicum I*	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*	3.5
COMM 2200	Business Communication	3
BIO 1111	Introduction to Biology I	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

*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@cscc.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.cscc.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

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 2200	Business Communications	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 BEHAVORIAL 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 I	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 1106	Physics by Inquiry: Properties & Motion	5
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

Marketing

Marketing Associate Degree
Direct Marketing Major
Retail Management Major
Direct Marketing Certificate
Electronic Marketing Certificate
Pre-MBA 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 campues 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 Direct Marketing and Retail Management majors build on a solid foundation in marketing to provide advanced skills in these specialized areas. The Direct 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.

Direct Marketing Major

In addition to the Marketing competencies, a graduate with a Direct 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 1010	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
ACCT 1211	Financial Accounting	3
SCM 1001	Supply Chain Management Principles	3
MKTG 1020	Branding	3
MKTG 1230	Customer Service & Sales	3
TOTAL CREDIT HOURS		**15**
Summer Semester		
HIST XXXX	1111, 1112, 1151, (or) 1152	3
XXXX XXXX	Natural Science – Refer to approved list	4
TOTAL CREDIT HOURS		**7**
Semester 3		
MKTG 2200	Web & Electronic Marketing	3
MKTG 2400	Advertising & Promotion	3
MKTG 2290	Business-to-Business Marketing	3
MKTG 2550	Marketing Info & Consumer Analysis	3
ACCT 1212	Managerial Accounting	3
TOTAL CREDIT HOURS		**15**
Semester 4		
MKTG 2750	Global Marketing	3
BMGT 2250	Project Management Principles	3
MKTG 2360	Direct & Database Marketing	3
MKTG 2802	Marketing Seminar	1
MKTG 2902	Marketing Practicum	3
XXXX XXXX	Technical Elective – Refer to approved list	3
TOTAL CREDIT HOURS		**16**
TOTAL DEGREE CREDIT HOURS		**68**

Technical Electives

The following courses are approved for technical elective requirements:

DDG 1100	Introduction to Computer Design	3
IMM 1120	Fundamentals of Interactive Media	4
MKTG 1285	Advertising & Promotion on the Web	1
MKTG 1286	Customer Service on the Web	1
MKTG 1287	Public Relations on the Web	1
MKTG 1288	Marketing Research on the Web	1
MKTG 1289	Direct Marketing on the Web	1
MKTG 1290	Government Marketing on the Web	1
MKTG 1292	Non-Profit Marketing Using Web	1
MKTG 2994	Marketing Current Topics	1 - 3
SCM 1101	Transportation & Traffic Management	3

Direct Marketing Certificate

Semester 1		
MKTG 2200	Web & Electronic Marketing	3
MKTG 2360	Direct & Database Marketing	3
MKTG 2290	Business-to-Business Marketing	3
MKTG 2550	Marketing Information & Consumer Analysis	3
TOTAL CREDIT HOURS		**12**
TOTAL CERTIFICATE CREDIT HOURS		**12**

Electronic Marketing Certificate

Semester 1		
MKTG 2200	Web & Electronic 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**

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**

**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		
Semester 1		**CR**
ENGL 1100	Composition I	3
STAT 1350	Elementary Statistics	3
MKTG 1010	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
ACCT 1211	Financial Accounting	3
SCM 1001	Supply Chain Management Principles	3
MKTG 1020	Branding	3
MKTG 1230	Customer Service & Sales	3
TOTAL CREDIT HOURS		**15**
Summer Semester		
HIST XXXX	1111, 1112, 1151, **or** 1152	3
NAT XXXX	Refer to approved GE - NAT list	4
TOTAL CREDIT HOURS		**7**
Semester 3		
MKTG 2200	Web & Electronic Marketing	3
MKTG 2400	Advertising & Promotion	3
MKTG 2290	Business-to-Business Marketing	3
MKTG 2550	Marketing Info & Consumer Analysis	3
MKTG 2450	Services & Non-Profit Marketing	3
ACCT 1212	Managerial Accounting	3
TOTAL CREDIT HOURS		**18**
Semester 4		
MKTG 2750	Global Marketing	3
BMGT 2250	Project Management Principles	3
MKTG 2360	Direct & Database Marketing	3
MKTG 2802	Marketing Seminar	1
MKTG 2902	Marketing Practicum	3
XXXX XXXX	Technical Elective	3
TOTAL CREDIT HOURS		**16**
TOTAL DEGREE CREDIT HOURS		**71**

Technical Electives

The following courses are approved for technical elective requirements:

DDG 1100	Introduction to Computer Design	3
IMM 1120	Fundamentals of Interactive Media	4
MKTG 1285	Advertising & Promotion on the Web	1
MKTG 1286	Customer Service on the Web	1
MKTG 1287	Public Relations on the Web	1
MKTG 1288	Marketing Research on the Web	1
MKTG 1289	Direct Marketing on the Web	1
MKTG 1290	Government Marketing on the Web	1
MKTG 1292	Non-Profit Marketing Using Web	1
MKTG 2994	Marketing Current Topics	1 - 3
SCM 1101	Transportation & Traffic Management	3

Retail Management Major

COURSE		CR
Semester 1		
ENGL 1100	Composition I	3
STAT 1350	Elementary Statistics	3
MKTG 1010	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
ACCT 1211	Financial Accounting	3
SCM 1001	Supply Chain Management Principles	3
MKTG 1020	Branding	3
MKTG 1230	Customer Service & Sales	3
TOTAL CREDIT HOURS		**15**
Summer Semester		
HIST XXXX	1111, 1112, 1151, **or** 1152	3
NAT XXXX	Refer to approved GE - NAT list	4
TOTAL CREDIT HOURS		**7**
Semester 3		
MKTG 2200	Web & Electronic Marketing	3
MKTG 2400	Advertising & Promotion	3
MKTG 2650	Merchandise Buying & Retail Mathematics	3
MKTG 2550	Marketing Info & Consumer Analysis	3
ACCT 1212	Managerial Accounting	3
TOTAL CREDIT HOURS		**15**
Semester 4		
MKTG 2750	Global Marketing	3
BMGT 2250	Project Management Principles	3
MKTG 2802	Marketing Seminar	1
MKTG 2902	Marketing Practicum	3
XXXX XXXX	Technical Elective	6
TOTAL CREDIT HOURS		**16**
TOTAL DEGREE CREDIT HOURS		**68**

Technical Electives

The following courses are approved for technical elective requirements:

FOTO 1140	Introduction to Digital Photography	3
IMM 1120	Fundamentals of Interactive Media	4
MKTG 1285	Advertising & Promotion on the Web	1
MKTG 1286	Customer Service on the Web	1
MKTG 1287	Public Relations on the Web	1
MKTG 1288	Marketing Research on the Web	1
MKTG 1289	Direct Marketing on the Web	1
MKTG 1290	Government Marketing on the Web	1
MKTG 1292	Non-Profit Marketing Using Web	1
MKTG 2994	Marketing Current Topics	1 - 3
SCM 1101	Transportation & Traffic Management	3

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 I	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 1	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 1106	Physics by Inquiry: Properties & Motion	5
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

Massage Therapy/Entrepreneurship

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		
MULT 1010	Medical Terminology	2
BIO 2300	Human Anatomy	4
COLS 1100	First Year Experience Seminar	1
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 2891	Massage Clinical	4
MASS 1273	Massage Pathophysiology	4
BOA 1111	Bookkeeping I	3
BMGT 2231	Fundamentals of Entrepreneurship	3
TOTAL CREDIT HOURS		**14**
Summer Semester		
MASS 228X	Technical Elective	2
MASS 228X	Technical Elective	2
MASS 2296	Massage Therapy Board Review	2
BOA 1113	QuickBooks I	1
SOC 1101	Introduction to Sociology	3
ENGL 1100	Composition I	3
TOTAL CREDIT HOURS		**13**
Semester 3		
BMGT 2232	Entrepreneurship: Business Plan Development	3
HUM XXXX	Refer to approved GE - HUM list	3
MKTG 1110	Marketing Principles	3
LEGL 2064	Legal Environment of Business	3
BMGT 1102	Interpersonal Skills	2
BOA 1114	QuickBooks II	1
TOTAL CREDIT HOURS		**15**
TOTAL DEGREE CREDIT HOURS		**64**

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 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
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

Massage Therapy Certificate Program

COURSE		CR
Summer Semester		
MULT 1010	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
BIO 2232	Human Physiology	4
MASS 1236	Massage Therapy Law & Ethics	2
TOTAL CREDIT HOURS		**10**
Semester 2		
MASS 2891	Massage Clinical	4
MASS 1273	Massage Pathophysiology	4
TOTAL CREDIT HOURS		**8**
Summer Semester		
BMGT 2231	Fundamentals of Entrepreneurship	3
MASS 228X	Technical Elective	2
MASS 228X	Technical Elective	2
MASS 2296	Massage Therapy Board Review	2
TOTAL CREDIT HOURS		**9**
TOTAL CERTIFICATE CREDIT HOURS		**35**

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 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 and 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 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.

Massage Therapy Advanced Techniques Certificate

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. Students get their hands on the college's Solar Car and can be part of the team that designs the next winner of the Society of Automotive Engineers MiniBaja® competition.

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:

- Apply basic knowledge of manufacturing and engineering technology, procedures, symbols, and graphics skills to the reading and production of sketches, drawings, blueprints and specifications.
- Assist in establishing tolerances related to production, by utilizing manual and/or computerized methods.

- Make significant contributions to the production of manufactured goods by utilizing skills and knowledge of: drafting, computers and automation technology, sound manufacturing practices, quality measures, machine capabilities/limitations, and assist in the selection of product equipment.
- Contribute to the solution of engineering and design problems involving mechanical systems, by utilizing knowledge and skills in electrical and mechanical principles, material performance and selection, basic machine elements, sound design and engineering practices. Apply computers and computer language to the solution of engineering problems.
- Utilize various quality tools and techniques such as SPC and TQM to support production in manufacturing area and other applicable work situations to improve any and all quality measures.

Mechanical Engineering Technology Associate Degree

COURSE		CR
Semester 1		
ENGT 1115	Engineering Graphics	3
ITST 1101	Computer Apps in Construction/Engineering Tech I	2
ENGT 1100	Introduction to Engineering Technology	2
MECH 1150	Manufacturing Materials & Processes	3
MATH 1113	Technical Mathematics	5
COLS 1100	First Year Experience Seminar	1
TOTAL CREDIT HOURS		**16**
Semester 2		
MECH 1145	CAD I	3
MECH 1240	Machine Tools	3
MECH 1130	Statics	3
PHYS 1200	Algebra-Based Physics I	5
ENGL 1100	Composition I	3
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**	
COMM 1110	Small Group Communication	3
XXXX XXXX	Basic Elective	2
TOTAL CREDIT HOURS		**18**
Semester 4		
MECH 2299	Machine Design/CAM	3
MECH 2270	Engineering Statistics	3
MECH 2243	Robotics	2
MECH 2253	Computer Numerical Control	2
HUM XXXX	Refer to approved GE - HUM list	3
COMM 2204	Technical Writing	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 Ind Safety & Health	2
ITST 1102	Computer Apps Construction/Eng 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 BEHAVORIAL 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 handle scheduling and receiving patients, establishing and maintaining medical records, managing telephone calls, completing varied correspondence, processing insurance claims, billing, coding and monitoring finances. Clinical duties include patient preparation, assisting in minor surgery and outpatient treatments, taking vital signs, venipuncture, 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). 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 successful 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

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	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**
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	Clinical Classification I	3
LEGL 2064	Legal Environment of Business	3
BMGT 2253	Conflict Management	3
HIMT 1255	Clinical Classification II	3
HIMT 1265	Medical Reimbursement	3
TOTAL CREDIT HOURS		**18**
TOTAL DEGREE CREDIT HOURS		**72**

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:

1) High school graduate or GED equivalency
2) Placement into MATH 1020 Beginning Algebra I or completion of DEV 0115 with grade of "C" or higher
3) Placement into ENGL 1100 Beginning Composition or completion of ENGL 0190 with grade of "C" or higher
4) Placement OUT of reading requirements or completion of DEV 0145
5) Attend a Medical Assisting program information session (Program applications are available *only* at the information sessions.)
6) Completion of MULT 1010 or HIMT 1121 with grade of "C" or higher
7) Completion of CSCI 1101 with grade of "C" or higher
8) Current American Heart Association or American Red Cross Health Care Provider CPR with AED certification or completion of MULT 1030 with grade of "C" or higher and CPR certification
9) Current American Heart Association or American Red Cross First Aid certification or completion of MULT 1030 with grade of "C" or higher and First Aid certification
10) BIO 1121 and 1122 require completion of high school biology within the last five years and chemistry within the last three years or BIO 1101 and CHEM 0100. Contact the Biology Department (Nestor Hall, 4th Floor) for the most current information, (614) 287-2522 or 5107.
11) Students are required to maintain a grade of "C" or higher in all basic and technical studies.
12) Drug screening and a background check may be 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.

Statement Concerning Students Who Plan to Follow the GXMO Radiography Licensing Path

It is required that RAD 1190 (Radiation Protection for General Machine Operators), RAD 1101 (Introduction to Radiography Equipment and Patient Care), plus one positioning course from the selection of: RAD 1102, RAD 1103, RAD 1104, or RAD 1105, must be completed. This optional elective is only for those affected students and is not a requirement of the general Medical Assisting Program Certificate.

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

Medical Assisting Certificate Program

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	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**
TOTAL CERTIFICATE CREDIT HOURS		**37**

Medical Laboratory Technology

Medical Laboratory Technology Associate Degree
Clinical Lab 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:

1) Place into NO READING REQUIRED or completion of DEV 0145
2) 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
3) Completion of ENGL 0190 with grade of "C" or higher or placement into ENGL 1100
4) Completion of MATH 1030 or MATH 1050 or placement into STAT 1350
5) Completion of CHEM 1113 with "C" or higher, or equivalent college credit
6) Completion of MLT 1100 with grade of "C" or higher
7) Completed health record on file in Health Records Office
8) GPA of 2.500 or higher through most recently completed course work
9) Acceptance is conditional on submission and clearance of student background check and drug screening
10) 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.

Continued at bottom of next page

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	1
MULT 2072	Health Care Resource Mgmt	4
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 BEHAVORIAL 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
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

Specific Program Admission Information

Listed below are requirements for admission to the Clinical Laboratory Assisting Certificate:

1) Placement into NO READING REQUIRED or completion of DEV 0145 with a grade of "C" or higher
2) High school biology with grade of "C" or higher and completed within the last 5 years, or completion of BIO 0100 with grade of "C" or higher or equivalent college credit
3) Placement into ENGL 1100.

Clinical Laboratory Assisting Certificate

COURSE		CR
Semester 1		
MLT 1100	Introduction to 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**

Mental Health/Addiction Studies/ Developmental Disabilities

Associate Degree – Mental Health/ Addiction Studies/ Developmental Disabilities
Advanced Mental Health Certificate
Advanced Addiction Studies Certificate
Advanced Developmental Disabilities Certificate
Community/Habilitation Assistant Certificate
Peer Support 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 four 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, limited availability for practicum hours or locations.

Students completing MHAD 1114 Introduction to Addiction Studies are eligible to apply for the Chemical Dependency Counselor Assistant (CDCA) certification. 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 Mental Health/Addiction Studies and Developmental Disabilities Program is accredited by the Council for Standards in Human Service Education.

The program also offers the certificate programs listed below.

Advanced Mental Health Certificate

This 29-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 29-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 29-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 DD field. Students participate in two clinical practicum experiences in a variety of human service agencies.

Peer Support Specialist Certificate

This certificate program addresses a variety of identified emerging workforce needs. Students participate in 28 credit hours of coursework which includes 210 hours in a supervised community-based practicum experience in diverse settings. Students who have experienced similar issues/concerns themselves, are prepared to work as peer 'mentors' or support persons with individuals with a variety of concerns/issues. Engagement skills, community resources, appropriate use of self-disclosure and professionalism are included throughout this certificate program. An interview with the certificate coordinator is required prior to acceptance into the certificate program.

Courses for licensure and certification:
Courses MHAD 1112, MHAD 1115, MHAD 1135, MHAD 2861, MHAD 2862, and MHAD 2933 are approved by the Ohio Department of Developmental Disabilities in obtaining adult service certification.

All MHAD courses are accepted by Ohio Chemical Dependency Professionals Board and the Ohio Counselor, Social Worker, Marriage & Family Therapist Boards for licensure renewal hours.

Program Outcomes:
Upon completion of the Associate Degree in Mental Health/ Addiction Studies/Developmental Disabilities, 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
- 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 MH/AS/DD Program has, or is in the process of negotiating, articulation agreements and/or transfer relationships with the following four-year colleges/universities: Capital University,

Mental Health, Addiction Studies and Developmental Disabilities

COURSE		CR
Semester 1		
MHAD 1111	Introduction to Social Work/Mental Health	3
MHAD 1112	Introduction to Developmental Disabilities	3
MHAD 1114	Introduction to Addiction Studies	3
MHAD 1115	Introductory Helping Skills	3
ENGL 1100	Composition I	3
COLS 1100	First Year Experience Seminar	1
TOTAL CREDIT HOURS		**16**
Semester 2		
MHAD 1120	Service Delivery & Ethics in Human Services/Social Work	2
MHAD 1135	Intervention Strategies - Module A&B	3
MHAD 1140	Family & Aging Services	2
CSCI 1101	Computer Concepts & Applications	3
PSY 1100	Introduction to Psychology	3
TOTAL CREDIT HOURS		**13**
Summer Semester		
MATH 1030	Beginning Algebra II **or**	
MATH 1050	Elementary Algebra (Preferred course)	3-5
SOC 1101	Introduction to Sociology	3
PSY 2331	Abnormal Psychology	3
XXXX XXXX	Basic Elective - See advisor for transfer course options	4
MHAD XXXX	Technical Elective	1-4
TOTAL CREDIT HOURS		**14-19**
Semester 3		
MHAD 2861	Fundamentals of MH/AS/DD	4
MHAD 2901	MHAD Practicum & Seminar I in MH/AS/DD	4
MHAD 2241	Advanced Helping Skills	3
BIO 1111	Introduction to Biology I	4
TOTAL CREDIT HOURS		**15**
Semester 4		
MHAD 2862	Treatment Approaches in MH/AS/DD	4
MHAD 2922	MHAD Practicum & Seminar I in MH/AS/DD	4
MHAD 2251	Social Welfare & Policy	3
HIST XXXX	History elective - see advisor for transfer course options	3
TOTAL CREDIT HOURS		**14**
TOTAL DEGREE CREDIT HOURS		**72-77**

Technical Electives

The following courses are approved for technical elective requirements:

MHAD 2234	Therapeutic Laughter	2
MHAD 2194	Special Topics in MH/AS/DD	1 to 4
MHAD 2933	MHAD Special Practicum & Seminar in MH/AS/or DD	3 to 4

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 Mental Health/Addiction Studies/Developmental Disabilities 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 MH/AS/DD program information session
3) Completion of ENGL 1100 and PSY 1100 with grade of "C" or higher
4) Completion of DEV 0115 or placement into MATH 1020
5) Completion of the following four MHAD courses with grade of "C" or higher:
   MHAD 1111 Introduction to Social Work/Mental Health
   MHAD 1112 Introduction to Dev. Disabilities
   MHAD 1114 Introduction to Addiction Studies
   MHAD 1115 Introductory Helping Skills
6) Compliance with and completion of all additional program requirements outlined in the program's admission policy
7) Mandatory attendance at both a program information session and a group admissions interview
8) Completion of Criminal Background Check Packet/Process.

All MHAD courses must be completed with grade of "C" or higher.

Advanced Mental Health Certificate *

COURSE		CR
Semester 1		
MHAD 1111	Introduction to Social Work/Mental Health	3
MHAD 1115	Introductory Helping Skills	3
MHAD 1120	Service Delivery & Ethics in Human Serv/Social Work	2
MHAD 1135	Intervention Strategies – Module A&B	3
TOTAL CREDIT HOURS		**11**
Semester 2		
MHAD 2861	Fundamentals MH/AS/DD	4
MHAD 2933	Special Practicum & Seminar in MH/AS/DD (minimum 3.5 hrs)	3- 4
MHAD 2241	Advanced Helping Skills	3
TOTAL CREDIT HOURS		**10.5**
Semester 3		
MHAD 2862	Treatment Approaches in MH/AS/DD	4
MHAD 2933	Special Practicum & Seminar in MH/AS/DD (minimum 3.5 hrs)	3 - 4
TOTAL CREDIT HOURS		**7.5**
TOTAL CERTIFICATE CREDIT HOURS		**29**

***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		
MHAD 1114	Introduction to Addiction Studies	3
MHAD 1115	Introductory Helping Skills	3
MHAD 1120	Service Delivery & Ethics in Human Serv/Social Work	2
MHAD 1135	Intervention Strategies – Module A&B	3
TOTAL CREDIT HOURS		**11**
Semester 2		
MHAD 2861	Fundamentals MH/AS/DD	4
MHAD 2933	Special Practicum & Seminar in MH/AS/DD (minimum 3.5hrs)	3 - 4
MHAD 2241	Advanced Helping Skills	3
TOTAL CREDIT HOURS		**10.5**
Semester 3		
MHAD 2862	Treatment Approaches in MH/AS/DD	4
MHAD 2933	Special Practicum & Seminar in MH/AS/DD (minimum 3.5 hrs)	3 - 4
TOTAL CREDIT HOURS		**7.5**
TOTAL CERTIFICATE CREDIT HOURS		**29**

***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		
MHAD 1112	Introduction to Developmental Disabilities	3
MHAD 1115	Introductory Helping Skills	3
MHAD 1120	Service Delivery & Ethics in Human Serv/Social Work	2
MHAD 1135	Intervention Strategies – Module A&B	3
TOTAL CREDIT HOURS		**11**
Semester 2		
MHAD 2861	Fundamentals MH/AS/DD	4
MHAD 2933	Special Practicum & Seminar in MH/AS/DD (minimum 3.5 hrs)	3 - 4
MHAD 2241	Advanced Helping Skills	3
TOTAL CREDIT HOURS		**10.5**
Semester 3		
MHAD 2862	Treatment Approaches in MH/AS/DD	4
MHAD 2933	Special Practicum & Seminar in MH/AS/DD (minimum 3.5 hrs)	3 - 4
TOTAL CREDIT HOURS		**7.5**
TOTAL CERTIFICATE CREDIT HOURS		**29**

***An associate degree in a related field or a bachelor's or master's degree in any field of study is required.**

Community/Habilitation Assistant Certificate

COURSE		CR
Summer Semester		
COLS 1100	First Year Experience Seminar	1
MHAD 1120	Service Delivery & Ethics in Human Serv/Social Work	2
TOTAL CREDIT HOURS		**3**
Semester 1		
MHAD 1112	Introduction to Developmental Disabilities	3
MHAD 2933	Special Practicum & Seminar in DD*	4
TOTAL CREDIT HOURS		**7**
Semester 2		
MHAD 1135A	Intervention Strategies Module A	2
MHAD 2933	Special Practicum & Seminar in Intervention Strategies	*4
TOTAL CREDIT HOURS		**6**
TOTAL CERTIFICATE CREDIT HOURS		**16**

*** Optional additional practicum is contingent upon individualized student learning plan**

Peer Support Specialist Certificate

COURSE		CR
Semester 1		
MHAD 1111	Introduction to Social Work/Mental Health	3
MHAD 1114	Introduction to Addiction Studies	3
MHAD 1115	Introductory Helping Skills	3
ENGL 1100	Composition I	3
TOTAL CREDIT HOURS		**12**
Semester 2		
MHAD 1120	Service Delivery & Ethics in Human Serv/Social Work	2
MHAD 1135	Intervention Strategies –Module A & B	3
PSY 1100	Introduction to Psychology	3
TOTAL CREDIT HOURS		**8**
Semester 3		
MHAD 2861	Fundamentals of MH/AS/DD	4
MHAD 2901	Practicum & Seminar I in MH/AS/DD*	4
TOTAL CREDIT HOURS		**8**
TOTAL CERTIFICATE CREDIT HOURS		**28**

***Optional additional practicum is contingent upon individualized student learning plan.**

Multi-Competency Health

Associate of Applied Science Degree or
Associate of Technical Studies Degree
Basic Electrocardiography Certificate
Health Care Manager Certificate
Phlebotomy Certificate (Approved by NAACLS)
ASL/Deaf Studies Certificate (IEP)
Clinical Laboratory Assisting Certificate (CLA)
Nursing Certificate Programs (NURC)

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-Competency 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-Competency 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-Competency 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-Competency 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-Competency 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-Competency 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.

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 criteria for admission to the Phlebotomy Certificate Program:
Academic Standards
1) Medical Terminology, MULT 1010 or HIMT 1121 with grade of 'C' or higher.
2) Placement into ENGL 1100

Non-Academic Standards
1) Completion of current health record requirements (For most current information, contact the Health Records Office, Union 134A, [614] 287-2450.)
2) Background check: Access the instructions for completing the background check by going to www.cscc.edu/phlebotomy. You should select "MULT" as your program when prompted.
3) Drug Screening: Access the instructions for completing the drug screening by going to www.cscc.edu/phlebotomy. You should select "Phlebotomy" as your program when prompted. The drug screening must be completed within 7 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, 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.

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 and 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.**

Phlebotomy Certificate

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.**

- 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.

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

Multi-Competency 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, CLA, IEP or NURC, and at least six hours of Technical Options courses for a minimum of 30.5 technical hours. The following is a suggested curriculum plan.

COURSE		CR
Semester 1		
ENGL 1100	Composition I	3
MATH 1050	Elementary Algebra	5
MULT 1010	Medical Terminology **or**	
HIMT 1121	Advanced Medical Terminology	2
MULT	Technical Certificate	1 - 3.5
COLS 1100	First Year Experience Seminar	1
TOTAL CREDIT HOURS		**12 to 14.5**
Semester 2		
HUM XXXX	Refer to approved GE - HUM list	3
MULT	Technical Certificate	1 - 3.5
MULT	Technical Certificate	1 - 3.5
MULT XXXX	Technical Elective	1 - 3.5
TOTAL CREDIT HOURS		**6 - 13.5**
Summer Semester		
BIO 1121	Anatomy & Physiology I **or**	
BIO 2300	Human Anatomy	4
MULT	Technical Certificate	1 - 3.5
SBS XXXX	Refer to approved GE - SBS list	3
MULT	Technical Certificate	1 - 3.5
TOTAL CREDIT HOURS		**9 - 14**
Semester 3		
BIO 1122	Anatomy & Physiology II **or**	
BIO 2232	Human Physiology	4
MULT XXXX	Technical Elective	1 - 3.5
MULT	Technical Certificate	1 - 3.5
COMM 1105	Oral Communication **or**	
COMM 1110	Small Group Communication	3
MULT	Technical Certificate	1 - 3.5
TOTAL CREDIT HOURS		**10 - 17.5**
Semester 4		
BIO 2215	Introduction to Microbiology	4
MULT XXXX	Technical Elective	1 - 3.5
MULT	Technical Certificate	1 - 3.5
MULT 1020	CPR	0.5
CHEM 1113	Elements of Organic & Biochemistry	4
TOTAL CREDIT HOURS		**10.5 - 15.5**
TOTAL DEGREE CREDIT HOURS		**64.5 -71.5**

Technical Electives:

MULT 1030	Responding to Emergencies	2
MULT 1050	Exploring Health Care Professions	1
MULT 1910	Basic EKG	3
MULT 1950	Phlebotomy	3.5
MULT 2950	Phlebotomy Practicum II	1
MULT 1170	Current Issues: HIV Infection	1
MULT 2070	Human Resources Mgmt for Health Services	2
MULT 2072	Health Care Resource Mgmt.	2
MULT 2074	TQM/UM/Accreditation	2
MULT 2076	Legal Aspects & Risk Management	2

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVORIAL 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
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-Amersince 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

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.

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.

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.

Pranic Healing Certificate Level I
(See NURS/NURC)

A student completing the Pranic Healing Certificate Level I will be able to:
- Identify basic concepts and principles of Pranic Healing.
- Demonstrate basic Pranic Healing techniques on three or more ailments.
- Identify the eleven major energy centers and their corresponding internal organs.
- Describe important things to avoid when healing.
- Demonstrate self-decontamination techniques and self-recharging techniques.
- Practice self-healing and distant healing.

Pranic Healing Certificate Level II – Advanced Pranic Healing

A student completing the Pranic Healing Certificate Level II will be able to:
- Demonstrate proper advanced energizing techniques and color prana production.
- Describe the properties of the seven color pranas.
- Identify the eleven major energy centers and organs controlled by each center.
- Demonstrate advanced scanning and cleansing techniques.
- Use advanced pranic healing knowledge and skill to accurately identify and safely apply protocols.

Pranic Healing Certificate Level III – Mental and Emotional Well-Being

A student completing the Pranic Healing Certificate Level III will be able to:
- Identify fundamental principles of pranic healing for mental and emotional well-being
- Describe psychological functions of the eleven major energy centers
- Demonstrate the advanced general and local sweeping techniques for Level III
- Demonstrate knowledge of advanced chakral scanning and auric shielding
- Demonstrate application of Level III techniques for various issues related to mental and emotional well-being.

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.

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.

Nuclear Medicine Technology

Associate of Applied Science in Nuclear Medicine Technology

Nuclear Medicine Technology is the medical specialty that uses the physiologic properties of radioactive material to evaluate conditions of the body and to provide therapy. The skills of the nuclear medicine technologist complement those of the nuclear medicine physician and other professionals in the field. Nuclear medicine technologists perform a number of tasks in the areas of patient care, technical skills, and radiopharmaceutical administration. They apply their knowledge of radiation physics, instrumentation and safety regulations: 1) to limit radiation exposure, 2) to prepare and administer radiopharmaceuticals, and 3) to utilize radiation detection devices to measure/image the quantity and distribution of radionuclides deposited in the patient. They also perform in-vivo and in-vitro diagnostic procedures, use quality control techniques as part of a quality assurance program covering all procedures and products in the laboratory, and may participate in research activities.

Applications to the program are to be completed by January 31st in order to be considered for Autumn Semester admission of each academic year. Admission is competitive, so it important that each interested student attend an information session as soon as possible.

Because students and employees in the health care field may be exposed to infectious materials and communicable diseases, the program emphasizes safety and prevention.

Upon completion of the Associate of Applied Science in Nuclear Medicine Technology degree, the graduate will be able to:

- Apply knowledge of anatomy, physiology and positioning techniques to accurately acquire/process/display functional and anatomical structures on a nuclear medicine image.
- Develop the necessary skills to apply effective communication, critical thinking, and problem solving in a nuclear medicine setting.
- Provide patient care and comfort in a compassionate, ethical, and professional manner.
- Act as an agent through observation and communication to obtain pertinent information for the physician to aid in the diagnosis and treatment of the patient.
- Evaluate nuclear medicine images for appropriate positioning and image quality.
- Apply the principles of radiation protection for the patient, staff, and general public.
- Recognize emergency patient conditions and, if necessary, initiate lifesaving first aid and basic life-support procedures.
- Evaluate the quality control performance of nuclear medicine equipment systems, including the safe limits of equipment operation, and report malfunctions to the proper authority.
- Exercise independent judgment and discretion while performing nuclear medicine imaging procedures.
- Participate in nuclear medicine quality assurance programs.
- Meet or exceed the entry level expectations of employers.
- Successfully complete the ARRT and/or NMTCB national certification exams.

After graduating from the Nuclear Medicine Technology Program and successfully completing the ARRT or NMTCB national certification exam, graduates are required to apply for a license from the Ohio Department of Health in order to practice as a Nuclear Medicine technologist in the State of Ohio.

Specific Program Admissions Information
Prospective students are required to attend an informational and advising session to learn detailed program requirements and career opportunities. These sessions are held in the Autumn and Spring semesters and are extremely helpful in answering students' questions.

A program application is available in each information packet distributed at the Autumn and Spring Semester informational/ advising sessions. Interested persons can obtain session dates and general information by contacting the Nuclear Medicine Technology Office, (614) 287-5215, or at **nuclearmedicine@cscc.edu.** For the most current admissions requirements, consult the CSCC Nuclear Medicine web link at **www.cscc.edu/NucMed/.**

Listed below are additional requirements for admission to the Nuclear Medicine Technology program:

1) High school graduate or GED equivalency
2) Required high school (or equivalent) courses in biology, chemistry and physics (grade of "C" or better) or completion of BIO 0100 (grade of "C" or better), or completion of CHEM 0100 (grade of "C" or better), or completion of PHYS 0100
3) Placement into ENGL 1100 Composition I
4) Placement into or completion of MATH 1148 College Algebra
5) Completion of BIO 2300 Human Anatomy, MULT 1010 Medical Terminology and MULT 1020 Cardiopulmonary Resuscitation
6) Completion of the Health Occupation Basic Entrance Test (HOBET)
7) Submission of a written statement of the student's intent and interest in the Nuclear Medicine Technology program
8) Completion of 16 observation hours in a hospital-based Nuclear Medicine department
9) Attendance at a Nuclear Medicine Technology information and advising session.

Upon admission to the Nuclear Medicine Technology program, each student shall complete the following requirements:

- Completion of the applicant's student health record in the Health Records Office at CSCC. This health record documents the student's immunization and health history that is required

for clinical practicum course placement.

- Completion of a background check that documents no felony or misdemeanor convictions that would deny participation in clinical practicum courses held in area hospitals or medical offices/clinics
- Completion of a drug test screen that documents existence of drug or chemical substances that are prohibited by section 4729.01 of the Ohio Revised Code without documentation of a legal/valid prescription written by a licensed physician. Documentation of the use of any unauthorized drug or chemical substance will result in dismissal from the program.
- Validation of current certification in Basic Life Support (BLS) CPR from the American Heart Association

NOTE: Individuals who have been convicted of, plead guilty to, or plead nolo contendere to a crime may be ineligible to take the credentialing exams. For additional information, contact the Nuclear Medicine Technology office at (614) 287-5215, or the American Registry of Radiologic Technologists (ARRT) Code of Ethics, Section B.3, Rules of Ethics, at www.arrt.org.

Associate of Applied Science in Nuclear Medicine Technology

COURSE		CR
Semester 1		
NUC 1200	Introduction to Nuclear Medicine	4
CHEM 1113	Elements of Organic/Biochemistry	4
MATH 1148	College Algebra	4
BIO 2232	Human Physiology	4
NUC 1149	Intro Clinical Nuc Med & Patient Care	2
COLS 1100	First Year Experience Seminar	1
TOTAL CREDIT HOURS		**19**
Semester 2		
NUC 1213	Physics & Instrumentation I	4
NUC 1234	Radiopharmacy (Lecture and Lab)	4
NUC 1251	Clinical Theory & Procedures I	5
RAD 2126	Radiation Biology & Protection	2
TOTAL CREDIT HOURS		**15**
Summer Semester		
NUC 2215	Physics & Instrumentation II	4
NUC 2252	Clinical Theory & Procedures II	4.5
NUC 2960	Nuclear Med Practicum/Seminar I	3
BIO 2263	Human Pathophysiology	3
TOTAL CREDIT HOURS		**14.5**
Semester 3		
NUC 2961	Nuclear Med Practicum/Seminar II	4
RAD 2212	Sectional Anatomy	2
HUM XXXX	Refer to approved GE - HUM list	3
ENGL 1100	Composition I	3
TOTAL CREDIT HOURS		**12**
Semester 4		
NUC 2280	Cross Modality Directed Practice	1.5
NUC 2962	Nuclear Med Practicum/Seminar III	5
COMM 1105	Oral Communication **or**	
COMM 2200	Business Communication	3
SBS XXXX	Refer to approved GE - SBS list	3
TOTAL CREDIT HOURS		**12.5**
TOTAL DEGREE CREDIT HOURS		**73**

Student should request a program plan of study from a faculty advisor.

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVORIAL SCIENCE REQUIREMENT
(SELECT ONE)
ANTH 2200, SOC 1101, SOC 2380 OR PSY 1100 are recommended

		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
SOC 2380	American Race & Ethnic Relations	3
PSY 1100	Introduction to Psychology	3

HUM

GE-ART/HUMANITIES REQUIREMENT
(SELECT ONE) HIST 1152, HUM 1100, MUS 1251 OR PHIL 1130 are recommended

		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

Student should request a program plan of study from a faculty advisor.

Nursing

Nursing Associate Degree
Practical Nursing Certificate (PNUR)
Nursing Certificate Programs (NURC)
Nursing Associate Degree

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 online track. In the traditional track, lecture and seminar activities take place on campus in the classroom. In the online 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. Each semester 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 National League for Nursing Accrediting Commission, Inc. 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) 287-2668. There are two tracks available for the Nursing program: 1) the online track is available for those who have a bachelor's degree in another field of study; 2) the traditional track is available for those with or without a previous degree. 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.cscc.edu/nursing**.

Achievement of a minimum GPA of 2.6 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 2.6 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 2.6 for admission to the Nursing program. The minimum 2.60 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 1101 (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.cscc.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 $45 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 Testing and Talent Assessment Center 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 Nursing program will maintain scores for a period of 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.cscc.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 criminal records check of the applicant that is completed by the Bureau of Criminal Identification & Investigation and includes a check of Federal Bureau of Investigation records and that bureau submits to the board indicated that the applicant has not been convicted of, has not pleaded guilty to, and has not had a judicial finding of guilt for violating section 2903.01, 2903.02, 2903.03, 2903.11, 2905.01, 2907.02, 2907.03, 2907.05, 2909.02, 2911.01, or 2911.11 of the Revised Code or a substantially similar law of another state, the United States, or another country;

(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 habitual or excessive use of drugs, alcohol, or other chemical substances that impair the ability to practice.
(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 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) 287-2668.

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 22 hours of Practical Nursing courses and 14 hours in arts and sciences for a total of 36 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.

1. Completion of the Practical Nurse Certificate program application
2. High school biology, with grade of "C" or better, within the past 5 years or BIO 0100 Introduction to Biological Sciences, or a college-level biology
3. Placement into ENGL 1100 Composition I
4. Completion of DEV 0115 Pre Algebra (or higher placement)
5. Completion of the following college courses with a grade of "C" or better: NURC 1101 Nurse Aide Training Program or STNA and MULT 1010 Medical Terminology
6. Completion of Test of Essential Academic Skills (TEAS) with scores of 75% in Reading, 63% in English, and 60% in Math or completion of the HESI A2 Test with a minimum average score of 75%
7. Grade point average of 2.4 or better in most recently completed college course work.
8. 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

COURSE (Autumn enrollment; see department for Spring enrollment)

Semester 1		**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	Concepts of 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:

HOSP 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

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

Practical Nursing Certificate Program

COURSE		CR
Semester 1		
PNUR 1100	Practical Nursing Fundamentals	2
BIO 2300	Human Anatomy	4
NURC 1102	Patient Care Skills	3
TOTAL CREDIT HOURS		**9**
Semester 2		
BIO 2232	Human Physiology	4
ENGL 1100	Composition I	3
PNUR 1765	PN Maternal & Child Care1	
PNUR 1865	PN Maternal & Child Care Clinical	1
TOTAL CREDIT HOURS		**9**
Summer Semester		
PNUR 1766	PN Concepts Related to Health Promo & Rest I	1
PNUR 1200	Mental Health Concepts for the Practical Nurse	1
PNUR 1300	Pharmacology I for the Practical Nurse	2
PNUR 1866	PN Concepts Related to Health Promo & Rest I Clinical	1
TOTAL CREDIT HOURS		**5**
Semester 3		
PNUR 1767	PN Concepts Related to Health Promo & Rest II	2
PNUR 1867	PN Concepts Related to Health Promo & Rest II Clinical	2
PNUR 1400	Pharmacology II for the Practical Nurse	2
TOTAL CREDIT HOURS		**6**
Semester 4		
PNUR 1900	PN Transition to Practice	2
PNUR XXXX	Technical Elective	1
SBS XXXX	Refer to approved GE - SBS list **or**	
HUM XXXX	Refer to approved GE - HUM list	3
PNUR 1906	PN Transition to Practice Practicum	1
TOTAL CREDIT HOURS		**7**
TOTAL CERTIFICATE CREDIT HOURS		**36**

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

Approved General Education (GE) List for Practical Nursing Certificate Program

SBS

GE-SOCIAL/BEHAVIORAL SCIENCE OR ART/HUMANITIES 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 1200	American Government	3
PSY 1100	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	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 2224	African-American History II: 1877-present	3

- Discuss and demonstrate basic nursing care skills commonly performed in the acute care setting.

Pranic Healing Certificate Level I

A student completing the Pranic Healing Certificate Level I will be able to:

- Identify basic concepts and principles of Pranic Healing
- Demonstrate basic Pranic Healing techniques on three or more ailments
- Identify the eleven major energy centers and their corresponding internal organs
- Describe important things to avoid when healing
- Demonstrate self-decontamination techniques and self-recharging techniques
- Practice self-healing and distant healing.

Pranic Healing Certificate Level II – Advanced Pranic Healing

A student completing the Pranic Healing Certificate Level II will be able to:

- Demonstrate proper advanced energizing techniques and color prana production
- Describe the properties of the seven color pranas
- Identify the eleven major energy centers and organs controlled by each center
- Demonstrate advanced scanning and cleansing techniques
- Use Advanced Pranic Healing knowledge and skill to accurately identify and safely apply protocols.

Pranic Healing Certificate Level III – Mental and Emotional Well-Being

A student completing the Pranic Healing Certificate Level III will be able to:

- Identify fundamental principles of pranic healing for mental and emotional well-being
- Describe psychological functions of the eleven major energy centers
- Demonstrate the advanced general and local sweeping techniques for Level III
- Demonstrate knowledge of advanced chakral scanning and auric shielding
- Demonstrate application of Level III techniques for various issues related to mental and emotional well-being.

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.

Complementary Care Certificate

COURSE		
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
NURC 1160	Pranic Healing Level I **or**	1
PNUR 1201	Relaxation Techniques	1
TOTAL CREDIT HOURS		**1 - 3**
TOTAL CERTIFICATE CREDIT HOURS		**7-10**

Nurse Aide Training Program Certificate

COURSE		CR
Semester 1		
NURC 1101	Nurses 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**

Pranic Healing Certificate Level I

COURSE		CR
Semester 1		
NURC 1160	Pranic Healing Level I	1
TOTAL CREDIT HOURS		**1**
TOTAL CERTIFICATE CREDIT HOURS		**1**

Pranic Healing Certificate Level II - Advanced Pranic Healing

COURSE		CR
Semester 1		
NURC 1160	Pranic Healing I	1
TOTAL CREDIT HOURS		**1**
Semester 2		
NURC 1161	Pranic Healing Level II – Advanced Pranic Healing	2
TOTAL CREDIT HOURS		**2**
TOTAL CERTIFICATE CREDIT HOURS		**3**

Pranic Healing Certificate Level III – Mental and Emotional Well-Being

COURSE		CR
Semester 1		
NURC 1160	Pranic Healing Level I	1
TOTAL CREDIT HOURS		**1**
Semester 2		
NURC 1161	Pranic Healing Level II – Advanced Pranic Healing	2
TOTAL CREDIT HOURS		**2**
Semester 3		
NURC 1162	Pranic Healing Level III-Mental/Emotional Well-Being	1
TOTAL CREDIT HOURS		**1**
TOTAL CERTIFICATE CREDIT HOURS		**4**

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**

Train the Trainer Certificate

COURSE		CR
Semester 1		
NURC 1250	Train the Trainer Program	2
TOTAL CREDIT HOURS		**2**
TOTAL CERTIFICATE CREDIT HOURS		**2**

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 1050	Elementary Algebra **or**	5
STAT 1350	Elementary Statistics	3
LEGL 1001	Introduction to Paralegal Studies & Ethics	3
LEGL 1002	Law Office Technology	3
COLS 1100	First Year Experience Seminar	1
TOTAL CREDIT HOURS		**13-15**
Semester 2		
ENGL 2367	Composition II	3
CSCI 1101	Computer Concepts & Applications	3
LEGL 1005	Torts & Contracts	3
LEGL 1011	Legal Research & Writing	3
TOTAL CREDIT HOURS		**12**
Summer Semester		
BIO 1127	Introduction to Environmental Science	3
SOC 1101	Introduction to Sociology **or**	
SOC 2380	American Race & Ethnic Relations	3
LEGL 2026	Administrative Law	3
LEGL 2024	Business Organizations	3
TOTAL CREDIT HOURS		**12**
Semester 3		
COMM 1105	Oral Communication **or**	
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		**63-65**

Technical Electives

The following courses are approved for technical elective requirements:

Litigation:		
LEGL 2038	Insurance Law	2
LEGL 2043	Alternative Dispute Resolution	2
LEGL 2010	Criminal Law & Procedure	2
Technology:		
LEGL 2051	Computer Assisted Legal Research	2
LEGL 2050	Intellectual Property	3
CRJ 2021	Introduction to Cyberlaw	3
General Practice:		
LEGL 2018	Probate	2
LEGL 2019	Real Estate	2
LEGL 2044	Debtor/Creditor Relations	2
LEGL 2023	Immigration Law	3
Alternative Dispute Resolution:		
LEGL 2072	Mediation	2
LEGL 2043	Alternative Dispute Resolution	2
Electives owned by other Degrees:*		
LEGL 2064	Legal Environment of Business	3
LEGL 2061	Business Law I	3

***These cannot be used as electives in the Paralegal program.**

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**
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

Paralegal Studies Certificate (Post Baccalaureate Option)

COURSE		**CR**
Semester 1		
LEGL 1011	Legal Research & Writing	3
LEGL 1005	Torts & Contracts	3
LEGL 1001	Introduction to Paralegal Studies & Ethics	3
LEGL 1002	Law Office Technology	3
COLS 1100	First Year Experience Seminar	1
TOTAL CREDIT HOURS		**13**
Semester 2		
LEGL 2026	Administrative Law	3
LEGL 2024	Business Organizations	3
LEGL 2012	Advanced Legal Research	3
TOTAL CREDIT HOURS		**9**
Semester 3		
LEGL 2005	Civil Practice & Procedure	3
LEGL 2014	Family Law	3
LEGL 2XXX	Technical Elective	2 - 3
TOTAL CREDIT HOURS		**8 - 9**
Semester 4		
LEGL 2XXX	Technical Elective	2 - 3
LEGL 2815	Legal Practicum/Seminar	2
LEGL 2XXX	Technical Elective	2 - 3
TOTAL CREDIT HOURS		**6 - 8**
TOTAL CERTIFICATE CREDIT HOURS		**36 - 39**

Technical Electives

The following courses are approved for technical elective requirements:

LEGL 2010	Criminal Law & Procedure	2
CRJ 2021	Intro to Cyberlaw	3
LEGL 2018	Probate	2
LEGL 2019	Real Estate	2
LEGL 2023	Immigration Law	3
LEGL 2038	Insurance Law	2
LEGL 2043	Alternative Dispute Resolution	2
LEGL 2050	Intellectual Property	3
LEGL 2072	Mediation	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	Modern Quality Systems	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 1108	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
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 BEHAVORIAL 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 1108	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
QUAL 2900	Field Experience: Quality Assurance	2
TOTAL CREDIT HOURS		**9**
TOTAL CERTIFICATE CREDIT HOURS		**15**

Radiography

Radiography Associate Degree
GXMO Radiography Certificate

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. These valuable professionals work in hospitals, clinics, medical laboratories, nursing homes, and in private practice.

Columbus State offers two programs designed to meet accreditation, certification, and licensing needs for medical imaging.

The Radiography Associate Degree graduate is eligible for accreditation through the American Registry of Radiologic Technologists. This accreditation is recognized for licensure in all 50 states. The practice of Radiography includes the following modalities (or specialties):

- Diagnostic Radiography which "looks at" internal organs, bones, cavities and foreign objects; DR includes cardiovascular imaging and interventional radiography,. Fluoroscopy, which is live-motion radiography (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.).
- CT (computed tomography), which provides cross-sectional views (slices) of the body and can reconstruct additional images from those taken to provide more information in either 2D or 3D.
- MRI (magnetic resonance imaging), which builds a 2D- or 3D-map of different tissue types within the body.
- Mammography, which uses e-ray to image breast tissues.
- Vascular, Interventional Radiography, which is a medical imaging technique used to visualize blood vessels and organs of the body with particular interest in the arteries, veins, and chambers of the heart.

The General X-ray Machine Operator (GXMO) Radiography 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 radiography, 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 completed applications 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 and Goals
The mission of the Columbus State Community College Radiography 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
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. Recognition of the need for lifelong learning in their chosen profession
2. The ability to behave in a compassionate, ethical, and professional manner
3. Completion of all program requirements, competence to meet entry-level expectations of employers, and successfully completion of the ARRT national certification exam
4. The ability to apply skills in 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.cscc.edu/academics/departments/radiography/admissions.shtml.** Information can also be found on the department webpage: **http://**

www.cscc.edu/academics/departments/radiography/ or by contacting The Radiography Department at (614)-287-5215. The yearly deadline for applications to be submitted to the Radiography 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 2014, Admissions Year 2015).

Listed below are additional requirements for admission to the Radiography degree program:

- High school graduate, GED, or equivalent
- 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)
- PHYS 0100 Introduction to Physics
- Completion of CHEM 1111 and CHEM 1112 OR CHEM 1113, MULT 1030
- Placement into ENGL 1100 Composition I
- Placement into MATH 1148 College Algebra
- Placement into "No Reading Required" on COMPASS Test
- Completion of the HOBET assessment test
- Submission of a written statement relevant to interest and intent in Radiography
- Health care experience or observation hours (16)
- Attend radiography mandatory information session.

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.arrt.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.

Radiography Associate Degree

COURSE		CR
Semester 1		
RAD 1111	Introduction to RAD Tech	1
RAD 1141	Radiographic Processes I	3
RAD 1901	RAD Practicum I	2
RAD 1801	RAD Seminar I	1
MATH 1148	College Algebra	4
BIO 2300	Human Anatomy	4
MULT 1010	Medical Terminology	2
COLS 1100	First Year Experience Seminar	1
TOTAL CREDIT HOURS		**18**
Semester 2		
RAD 1113	RAD Science	3
RAD 1142	Radiographic Processes II	3
RAD 1902	RAD Practicum II	2
RAD 1802	RAD Seminar II	1
BIO 2232	Human Physiology	4
TOTAL CREDIT HOURS		**13**
Summer Semester		
RAD 1118	Radiographic Exposure & Processes	2
RAD 1143	Special Procedures	2
RAD 1903	RAD Practicum III	2
RAD 1803	RAD Seminar III	1
CSCI 1101	Computer Concepts & Applications	3
BIO 2263	Human Pathophysiology	3
TOTAL CREDIT HOURS		**13**
Semester 3		
RAD 2222	Digital Imaging	2
RAD 2904	RAD Practicum IV	3
RAD 2212	Sectional Anatomy	2
RAD 2804	RAD Seminar IV	1
ENGL 1100	Composition I	3
SBS XXXX	Refer to approved GE - SBS list	3
TOTAL CREDIT HOURS		**14**
Semester 4		
RAD 2126	RAD Biology and Protection	2
RAD 2905	RAD Practicum V	3
RAD 2805	RAD Seminar V	1
RAD 2620	Radiographic Pathology	2
RAD XXXX	Technical Elective	2
HUM XXXX	Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS		**13**
TOTAL DEGREE CREDIT HOURS		**71**

TECHNICAL ELECTIVES		CR
RAD 1101	Introduction Equipment/Patient Care	0.5
RAD 1102	RAD Positioning of Upper Extremities	0.5
RAD 1103	Radiographic Processes II	0.5
RAD 1104	RAD Positioning Chest & Abdomen	0.5
RAD 1105	RAD Positioning Spine, Skull & Sinuses	0.5
RAD 1190	Rad Protection General Machine Operators	1.5
MULT 1916	Venipuncture for Health Care Providers	2

Approved General Education (GE) List

HUM

GE-ART/HUMANITIES REQUIREMENT (SELECT ONE)		CR
HIST 1111	European History to 1648	3
HIST 1112	European History Since 1648	3
PHIL 1130	Ethics	3

SBS

GE-SOCIAL BEHAVORIAL SCIENCE REQUIREMENT (SELECT ONE)		CR
ANTH 2202	Introduction to Cultural Anthropology	3
SOC 2380	American Race & Ethnic Relations	3
PSY 2340	Human Growth and Development	3

Candidates pursuing primary pathway certification in Radiography, Nuclear Medicine Technology, 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.arrt.org/Educators-Students.

GXMO Radiography Certificate

The GXMO Radiography 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 radiography, 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 Radiography Certificate

COURSE		CR
Semester 1		
RAD 1190	RAD Protection General Machine Operators	1.5
ENGL 1100	Composition I	3
MATH 1030	Beginning Algebra II	3
RAD 1111	Introduction to RAD Tech	1
BIO 1101	Fundamentals of Human Anatomy & Physiology	3
TOTAL CREDIT HOURS		**11.5**
Semester 2		
RAD 1101	Introduction Equipment/Patient Care	0.5
RAD 1102	RAD Positioning of Upper Extremities	0.5
RAD 1103	Radiographic Processes II	0.5
RAD 1104	RAD Positioning Chest & Abdomen	0.5
RAD 1105	RAD Positioning Spine, Skull & Sinuses	0.5
TOTAL CREDIT HOURS		**2.5**
Summer Semester		
CSCI 1101	Computer Concepts & Applications	3
MULT 1010	Medical Terminology	2
PHIL 1130	Ethics	3
TOTAL CREDIT HOURS		**8**
TOTAL CERTIFICATE CREDIT HOURS		**22**

Real Estate

Real Estate Associate Degree
Appraisal Certificate
Real Estate Pre-Licensure 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 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 I or	
GEOL 1101	Introduction to Earth Science	4
BMGT 1111	Management	3
ECON 2200	Principles of Microeconomics	3
HRM 1121	Human Resources Management	3
MKTG 1230	Customer Service & Sales	3
REAL 2950	Real Estate Practicum/Seminar	2
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	Real Estate Investing	2
REAL 2275	Repair, Restore, Remodel	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
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 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.

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, 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.

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

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

Respiratory Care

Repiratory 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 and other members of the health care team to help develop and modify patient care plans.

The complexity of the respiratory therapist's responsibility requires extensive training, dedication and professionalism. 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.

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 Committee on Accreditation for Respiratory Care.

Graduates are eligible to sit for the Certification Examination for Entry Level Respiratory Therapists (CRT) and the Registry Examination for Advanced Respiratory Care Practitioners (RRT) 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 (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 therapeutic procedures and recommend modifications based on patient response
- Demonstrate personal and professional behaviors required for successful employment.

Specific Respiratory Care Program Admissions 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 Respiratory Care program:

- Placement into MATH 1148 Elementary Statistics
- Placement into ENGL 1100 Composition I
- Placement into "No Reading Required" or completion of previous degree
- NURC 1101 with grade of "C" or above
- Minimum Total GPA of 2.50 or above
- Attendance at a mandatory information session
- Completion of the Health Occupation Basic Entrance Test (HOBET)
- Completed health record on file in the Health Records Office
- 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.

All admission criteria MUST be met by the first day of Spring Semester of the application year. Prospective students may obtain additional information at regularly held program information sessions. Contact Don Durst for information on session dates at ddurst@cscc.edu.

For additional information, please see the website at **www.cscc.edu/Respiratory**.

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 2300	Human Anatomy	4
MULT 1010	Medical Terminology	2
RESP 1110	Introduction to Respiratory Care	3
TOTAL CREDIT HOURS		**17**
Semester 2		
BIO 2232	Human Physiology	4
CHEM 1113	Elements of Organic & Biochemistry	4
RESP 1220	Cardiopulmonary Anatomy & Physiology	3
RESP 1230	Respiratory Pharmacology	2
RESP 1370	Respiratory Equipment I	1
RESP 1861	Introduction to the Clinical Experience	1
TOTAL CREDIT HOURS		**15**
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		**69**

Skilled Trades Technology

Apprenticeship Partnership Degree Programs
Associate of Technical Studies Degree in Construction Trades
Facilities Maintenance Associate Degree
Facilities Maintenance Certificate
Facilities Module Certificates
Intermediate Welder Certificate
Introduction to the Construction Industry 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@cscc.edu; or contact J.D. White, Apprenticeship Programs Coordinator, (614) 287-5211, jwhite02@cscc.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.cscc.edu/skilledtrades and/or contact Skilled Trades Program Coordinator J.D. White, (614) 287-5211, jwhite02@cscc.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 technical 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 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.

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
ENGL 1100	Composition I	3
COLS 1100	First Year Experience Seminar	1
CSCI 1101	Computer Concepts & Applications	3
CMGT 1135	Safety & Loss Prevention	2
TOTAL CREDIT HOURS		**17**
Semester 2		
SKTR 1310	Electrical: Wiring I	2
SKTR 1320	Carpentry: Structural Framing I	2
SKTR 1340	Plumbing: Introduction to DWV	2
SKTR 1380	Welding: Introduction to MIG	2
HVAC 1140	Principles of Refrigeration	3
CMGT 1121	Construction Drawings	3
PHYS 1103	World of Energy	3
TOTAL CREDIT HOURS		**17**
Summer Semester		
MULT 1040	Adult & Pediatric CPR	0.5
COMM 2204	Technical Writing	3
ARCH 1110	Basic Manual Drafting	1
TOTAL CREDIT HOURS		**4.5**
Semester 3		
SKTR 2010	Electrical: Wiring II	2
SKTR 2020	Carpentry: Structural Framing II	2
SKTR 2040	Plumbing: Intermediate Supply & DWV	2
SKTR 2080	Welding: Intermediate Stick & MIG	2
HVAC 1150	Instrumentation/Combustion Process	3
HUM XXXX	Refer to approved GE - HUM list	3
COMM 1105	Oral Communication **or**	
COMM 1110	Small Group Communication	3
TOTAL CREDIT HOURS		**17**
Semester 4		
XXXX XXXX	Technical Elective	2
XXXX XXXX	Technical Elective	2
XXXX XXXX	Technical Elective	2
XXXX XXXX	Technical Elective	2
SBS XXXX	Refer to approved GE - SBS list	3
MATH 1110	Mathematics for the Skilled Trades	3
ARCH 1112	Basic CAD Drafting	1
TOTAL CREDIT HOURS		**15**
TOTAL DEGREE CREDIT HOURS		**70.5**

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 1000	Survey of the Construction Industry	2
SKTR 1100	Basic Skills for the Construction Industry	2
SKTR 1300	Construction Industry Employability Skills	2
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 2120	Carpentry: Interior/Exterior Finish Systems	2
SKTR 1520	Carpentry: Steel Framing Construction	2
ELECTRICAL:		
SKTR 2110	Electrical: Repair & Service Practices	2
SKTR 2210	Electrical: Photovoltaic System	3
SKTR 1510	Electrical: Low Volt Systems I	2
SKTR 2710	Electrical: NEC & Electrical Contracting	4
HVAC:		
HVAC 1280	Wiring Circuits II	3
HVAC 2150	Heating Systems	3
PLUMBING:		
SKTR 2140	Plumbing: Repair & Service Practices	2
WELDING:		
SKTR 1280	Welding: OxyFuel Methods & Plasma Cutting	2
SKTR 1480	Welding: Specifications & Drawings	2
SKTR 1580	Welding: Introduction to TIG Processes	3
SKTR 2180	Welding: Intermediate Applications I	2
SKTR 2185	Welding: Intermediate Applications II	2
SKTR 2280	Welding: Intermediate "V" Groove & Pipe	3
SKTR 2780	Welding: Certification Preparation I	1

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVORIAL 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
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

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 1040	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

SKTR 1000	Survey of the Construction Industry	2
SKTR 1300	Construction Industry Employability Skills	2
SKTR 1120	Carpentry: Fundamentals	2
SKTR 1320	Carpentry: Structural Framing I	2
SKTR 2020	Carpentry: Structural Framing II	2
SKTR 2120	Carpentry: Interior/Exterior Finish Systems	2
CMGT 1135	Safety & Loss Prevent	2
TOTAL CREDIT HOURS		**14**
TOTAL CERTIFICATE CREDIT HOURS		**14**

Electrician Module Certificate

SKTR 1000	Survey of the Construction Industry	2
SKTR 1300	Construction Industry Employability Skills	2
SKTR 1110	Electric: Fundamentals	2
SKTR 1310	Electric: Wiring I	2
SKTR 2010	Electric: Wiring II	2
SKTR 2110	Electric: Repair & Service Practices	2
CMGT 1135	Safety & Loss Prevention	2
TOTAL CREDIT HOURS		**14**
TOTAL CERTIFICATE CREDIT HOURS		**14**

HVAC Module Certificate

SKTR 1000	Survey of the Construction Industry	2
SKTR 1300	Construction Industry Employability Skills	2
HVAC 1140	Principles of Refrigeration	3
HVAC 1150	Instrument/Combustion Process	3
HVAC 1280	HVAC Wiring Circuits II	3
CMGT 1135	Safety & Loss Prevention	2
TOTAL CREDIT HOURS		**15**
TOTAL CERTIFICATE CREDIT HOURS		**15**

Plumbing Module Certificate

SKTR 1000	Survey of the Construction Industry	2
SKTR 1300	Construction Industry Employability Skills	2
SKTR 1140	Plumbing: Introduction to Supply Systems	2
SKTR 1340	Plumbing: Introduction to DWV Systems	2
SKTR 2040	Plumbing: Intermediate Supply & DWV Systems	2
SKTR 2140	Plumbing: Repair & Service Practices	2
CMGT 1135	Safety & Loss Prevention	2
TOTAL CREDIT HOURS		**14**
TOTAL CERTIFICATE CREDIT HOURS		**14**

Welding Module Certificate

SKTR 1000	Survey of the Construction Industry	2
SKTR 1300	Construction Industry Employability Skills	2
SKTR 1180	Welding: Introduction to Stick	2
SKTR 1380	Welding: Introduction to MIG	2
SKTR 2080	Welding: Intermediate Stick & MIG	2
SKTR 2180	Welding: Intermediate Applications I	2
CMGT 1135	Safety & Loss Prevention	2
TOTAL CREDIT HOURS		**14**
TOTAL CERTIFICATE CREDIT HOURS		**14**

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.

Intermediate Welder Certificate

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
SKTR 1110	Electric: Fundamentals	2
TOTAL CREDIT HOURS		**8**
Semester 2		
ENGT 1115	Engineering Graphics	3
SKTR 1480	Welding: Specifications & Drawings	2
SKTR 1580	Welding: Introduction to TIG Processes	3
TOTAL CREDIT HOURS		**8**
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		**29**

Introduction to the Construction Industry

Skilled Trades has developed a certificate to provide foundational information about the construction industry. These courses are intended to address the needs of everyone from the casual observer who simply wants to gain a better understanding of the construction industry to those who are seriously considering a career in construction. These courses provide information about career opportunities in the construction industry, ranging from skilled trades to architecture, design, and management. They explore the skills and knowledge needed to be successful in each of these career paths. Finally, they help students who are interested in a career in construction to prepare to be better candidates entering into a formal program of study to attain their career goals.

NOTE: Students must place into MATH 1020 or higher MATH before beginning any of the Skilled Trades technical courses, with the exception of SKTR 1000, SKTR 1100, and SKTR 1300.

Introduction to the Construction Industry Certificate

SKTR 1000	Survey of the Construction Industry	2
SKTR 1100	Basic Skills for the Construction Industry	2
SKTR 1300	Construction Industry Employability Skills	2
CMGT 1135	Safety & Loss Prevention	2
TOTAL CREDIT HOURS		**8**
TOTAL CERTIFICATE CREDIT HOURS		**8**

Sport and Exercise Studies

Associate Degree – Exercise Science Major
Associate Degree – Physical Education Major
Associate Degree – Sport Management Major
Exercise Specialist 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 three 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 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.

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
HOSP 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) 1002, 1004, 1005, 1006, 1008, 1009, **or** 1010	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 2367	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	2
TOTAL CREDIT HOURS		**12**
TOTAL DEGREE CREDIT HOURS		**71**

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) 1002, 1004, 1005, 1006, 1008, 1009, **or** 1010	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		
HOSP 1153	Nutrition for a Healthy Lifestyle	3
SES 2544	Recreational Administration & Programming in Sports	3
SES 2426	Athletic Injury Control & First Aid	3
ENGL 2367	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.

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 2300	Human Anatomy	4
SES 1101	Introduction to Sport & Exercise Studies	3
HOSP 1153	Nutrition for a Healthy Lifestyle	3
SES XXXX	Physical Education Requirement: (Select one) 1002, 1004, 1005, 1006, 1008, 1009, **or** 1010	1
PSY 1100	Introduction to Psychology	3
TOTAL CREDIT HOURS		**14**
Summer Semester		
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	Practicum/Seminar	2
SES 2440	Exercise Physiology	4
SES 2544	Recreational Administration & Programming in Sports	3
ENGL 2367	Composition II	3
SES XXXX	Technical Elective	2 - 3
TOTAL CREDIT HOURS		**14-15**
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.

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	Adv 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

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVORIAL 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
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 1030	Responding to Emergencies	2
TOTAL CREDIT HOURS		**7**
TOTAL CERTIFICATE CREDIT HOURS		**28**

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.

- College Placement Testing
- Placement testing into or completion of MATH 1030. 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 1100. 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) Completion of high school physics within the last three years or PHYS 0100 Introduction to Physics
  3) High school biology (grade of "C" or better) within the past five years or BIO 0100 or BIO 1101 (with a grade of "C" or better).
- College Course Completion (or successful completion of equivalent approved training):
  1) CHEM 1113 with grade of "C" or better
  2) NURC 1101 Nurse-Aide Training Program
  3) NURC 1102 Patient Care Skills
  4) HIMT 1121 Advanced Medical Terminology
- Grade Point Average of 2.5 or better in courses related to the Surgical Technology plan of study.

Upon acceptance into the Surgical Technology degree program, the following additional items are required to be completed by the student *before* registration for autumn semester will be allowed:

- MULT 1020 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 or ddurst@cscc.edu. Interested persons also can visit the Sterile Processing Technology website at ***www.cscc.edu/Sterile Processing****.*

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
Semester 1		
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
TOTAL CREDIT HOURS		**17**
Semester 2		
SBS XXXX	Refer to approved GE - SBS list	3
BIO 2300	Human Anatomy*	4
SPT 1862	Sterile Processing Tech II*	9
TOTAL CREDIT HOURS		**16**
Semester 3		
HUM XXXX	Refer to approved GE - HUM list	3
BIO 2232	Human Physiology*	4
SURG 1861	Surgery Tech I*	6
TOTAL CREDIT HOURS		**13**
Semester 4		
STAT 1350	Elementary Statistics	3
BIO 2263	Human Pathophysiology*	3
SURG 1862	Surgery Tech II*	6
TOTAL CREDIT HOURS		**12**
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

Sterile Processing Technology Certificate

COURSE		CR
Semester 1		
ENGL 1100	Composition I	3
BIO 2215	Introduction to Microbiology*	4
SPT 1861	Sterile Processing Technology I*	9
TOTAL CREDIT HOURS		**16**
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		**32**

*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 BEHAVORIAL 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

Supply Chain Management

Supply Chain Management Associate Degree
International Commerce Major
Strategic Procurement Major
International Business Certificate
International Commerce Certificate
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		
ENGL 1100	Composition I	3
ACCT 1211	Financial Accounting	3
ECON 2200	Principles of Microeconomics	3
COLS 1100	First Year Experience Seminar	1
SCM 1001	Supply Chain Management Principles	3
TOTAL CREDIT HOURS		**13**
Semester 2		
SCM 1101	Transportation & Traffic Management	3
SCM 1510	Strategic Procurement	4
SCM 1501	Information Technology in Logistics	3
SCM XXXX	Technical Elective	3
MKTG 1230	Customer Service & Sales	3
MKTG 1110	Marketing Principles	3
TOTAL CREDIT HOURS		**19**
Summer Semester		
STAT 1350	Elementary Statistics	3
HUM XXXX	Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS		**6**
Semester 3		
SCM 2110	Warehouse Management	4
SCM 2111	Inventory Management	3
SCM 1190	International Business	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
CSCI 2330	Project Management Fund & Case Studies	4
SCM 2802	Supply Chain Management Seminar	1
SCM 2902	Supply Chain Management Practicum	3
NAT XXXX	Refer to approved GE - NAT list	4
TOTAL CREDIT HOURS		**15**
TOTAL DEGREE CREDIT HOURS		**70**

Technical Electives

The following courses are approved for technical elective requirements:

SCM 1301	International Management	2
SCM 2250	International Shipping	3
SCM 2450	Transportation Rates & Claims	3
SCM 2910	CLA Certification	1
SCM 2911	CLT Certification	1

International Commerce Major

COURSE		CR
Semester 1		
ENGL 1100	Composition I	3
STAT 1350	Elementary Statistics	3
GEOG 2750	World Regional Geography	3
ECON 2200	Principles of Microeconomics	3
COLS 1100	First Year Experience Seminar	1
SCM 1001	Supply Chain Management Principles	3
TOTAL CREDIT HOURS		**16**
Semester 2		
SCM 1101	Transportation & Traffic Management	3
MKTG 1110	Marketing Principles	3
SCM 1190	International Business	3
SCM 1501	Information Technology in Logistics	3
SCM 1301	International Management	2
SPAN 1101	Beginning Spanish I **or**	
CHIN 1101	Beginning Chinese I	4
TOTAL CREDIT HOURS		**18**
Summer Semester		
HUM XXXX	Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS		**3**
Semester 3		
SCM 2111	Inventory Management	3
SCM 2250	International Shipping	3
SCM 2290	Intro to Import/Export Regulations & Compliance	4
SPAN 1102	Beginning Spanish II **or**	
CHIN 1102	Beginning Chinese II	4
SCM 2450	Transportation Rates & Claims	3
TOTAL CREDIT HOURS		**17**
Semester 4		
MKTG 2750	Global Marketing	3
SCM 2601	Performance Management for SCM Managers	3
SCM 2802	Supply Chain Management Seminar	1
SCM 2902	Supply Chain Management Practicum	3
SPAN 1103	Intermediate Spanish **or**	
CHIN 1103	Intermediate Chinese	4
NAT XXXX	Refer to approved GE - NAT list	4
TOTAL CREDIT HOURS		**18**
TOTAL DEGREE CREDIT HOURS		**72**

Strategic Procurement Major

COURSE		CR
Semester 1		
ENGL 1100	Composition I	3
STAT 1350	Elementary Statistics	3
ECON 2200	Principles of Microeconomics	3
SOC 1101	Introduction to Sociology	3
COLS 1100	First Year Experience Seminar	1
SCM 1001	Supply Chain Management Principles	3
TOTAL CREDIT HOURS		**16**
Semester 2		
SCM 1101	Transportation & Traffic Management	3
SCM 1510	Strategic Procurement	4
SCM 1501	Information Technology in Logistics	3
MKTG 1230	Customer Service & Sales	3
MKTG 1110	Marketing Principles	3
TOTAL CREDIT HOURS		**16**
Summer Semester		
FMGT 2201	Corporate Finance	3
NAT XXXX	Refer to approved GE - NAT list	4
HUM XXXX	Refer to approved GE - HUM list	3
TOTAL CREDIT HOURS		**10**
Semester 3		
SCM 2110	Warehouse Management	4
SCM 2111	Inventory Management	3
SCM 2460	Procurement Planning & Negotiation	3
SCM 2450	Transportation Rates & Claims	3
ACCT 1211	Financial Accounting	3
TOTAL CREDIT HOURS		**16**
Semester 4		
SCM 2601	Performance Management for SCM Managers	3
SCM 2290	Intro to Import/Export Regulations & Compliance	4
SCM 2802	Supply Chain Management Seminar	1
SCM 2902	Supply Chain Management Practicum	3
ACCT 1212	Managerial Accounting	3
TOTAL CREDIT HOURS		**14**
TOTAL DEGREE CREDIT HOURS		**72**

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 I	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 1	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 1106	Physics by Inquiry: Properties & Motion	5
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

International Business Certificate

COURSE		CR
Semester 1		
SCM 2250	International Shipping	3
SCM 1190	International Business	3
SCM 1301	International Management	2
TOTAL CREDIT HOURS		**8**
Semester 2		
SCM 2290	Intro to Import/Export Regulations & Compliances	4
MKTG 2750	Global Marketing	3
FMGT 2242	International Finance	3
TOTAL CREDIT HOURS		**10**
TOTAL CERTIFICATE CREDIT HOURS		**18**

International Commerce Certificate

COURSE		CR
Semester 1		
SCM 2250	International Shipping	3
SCM 1190	International Business	3
SCM 1501	Information Technology in Logistics	3
TOTAL CREDIT HOURS		**9**
Semester 2		
SCM 1301	International Management	2
SCM 2290	Intro to Import/Export Regulations & Compliance	4
MKTG 2750	Global Marketing	3
TOTAL CREDIT HOURS		**9**
TOTAL CERTIFICATE CREDIT HOURS		**18**

Strategic Procurement Certificate

COURSE		CR
Semester 1		
SCM 1510	Strategic Procurement	4
SCM 2110	Warehouse Management	4
SCM 1501	Information Technology in Logistics	3
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 1510	Strategic Procurement	4
SCM 2110	Warehouse Management	4
SCM 1101	Transportation & Traffic Management	3
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**

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:

College Placement Testing

- Placement testing into or completion of MATH 1030. 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 1100. Student who has college transfer credit for ENGL 1100 is not required to take the placement test.

Course completion of the following:

- High school graduate or GED equivalency
- High school physics within the last three years or PHYS 0100
- High school biology (grade of "C" or better) within the past five years or BIO 0100 or BIO 1101 (with a grade of "C" or better)

College Course Completion (or successful completion of equivalent approved training)

- CHEM 1113 with grade of "C" or better
- NURC 1101
- NURC 1102
- HIMT 1121

Grade Point Average of 2.5 or better in courses related to the Surgical Technology plan of study.

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 1020 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 or ddurst@cscc.edu. Interested persons also can visit the Surgical Technology website, **www.cscc.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, tuberculosos, 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
Semester 1		
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
BIO 2300	Human Anatomy	4
SURG 1861	Surgical Technology I	6
TOTAL CREDIT HOURS		**14**
Semester 2		
SBS XXXX	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**
Semester 3		
HUM XXXX	Refer to approved GE - HUM list	3
BIO 2263	Human Pathophysiology	3
SURG 2864	Surgical Technology IV	6
TOTAL CREDIT HOURS		**12**
Semester 4		
STAT 1350	Elementary Statistics	3
BIO 2215	Introduction to Microbiology	4
SURG 2865	Surgical Technology V	9
TOTAL CREDIT HOURS		**16**
TOTAL DEGREE CREDIT HOURS		**65**

Surgical Technology Certificate

COURSE		CR
Semester 1		
COLS 1100	First Year Experience Seminar	1
ENGL 1100	Composition I	3
BIO 2300	Human Anatomy	4
SURG 1861	Surgical Technology I	6
TOTAL CREDIT HOURS		**14**
Semester 2		
SBS XXXX	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		**37**

Approved General Education (GE) List

SBS

GE-SOCIAL BEHAVORIAL 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
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

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 Teaching Hospital. 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. Maria Calderone**, mcalderone@ 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@cscc.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 by Columbus State Community College's Public Safety Department and drug screening clearance by the Columbus State Community College's Health Records Office. 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

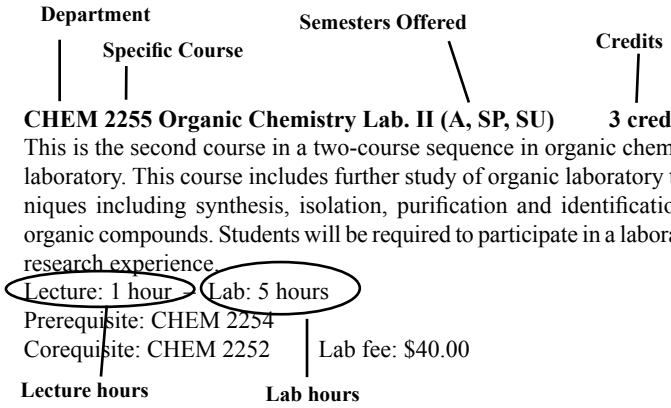
SBS

GE-SOCIAL BEHAVORIAL 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



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
Anthropology ..... ANTH
Appraisal ..... APPR
Arabic ..... ARAB
Architecture ..... ARCH
Art ..... ART
Arts and Sciences ..... ASC
Astronomy ..... ASTR
Automotive Technology ..... AUTO
Aviation Maintenance Tech. ..... AMT
Biology ..... BIO
Bioscience Technology ..... BISI
Business Management ..... BMGT
Business Office Applications ..... BOA
Chemistry ..... CHEM
Chinese ..... CHIN
Civil Engineering Tech. CIVL
Classics ..... CLAS
Clinical Laboratory Assisting. ..... CLA
College Success ..... COLS
Communication ..... COMM
Computer Science ..... CSCI
Construction Management ..... CMGT
Criminal Justice ..... CRJ
Dance ..... DANC
Dental Hygiene ..... DHY
Developmental Education ..... DEV
Dietetic Technician ..... DIET
(See Hospitality Management)
Digital Design and Graphics ..... DDG
Digital Photography ..... FOTO
Early Childhood Dev. & Ed. ..... ECDE
Economics ..... ECON
Education ..... EDUC
Elec. Mech. Eng. Tech. ..... EMEC
Electronic Eng. Technology ..... EET
Emerg. Med. Services Tech. ..... EMS
Engineering ..... ENGR
Engineering Technologies ..... ENGT
English ..... ENGL
English as a Second Language ..... ESL
Envir. Sci, Safety & Health ..... ESSH
Finance ..... FMGT
Fire Science ..... FIRE
Ford ASSET ..... FORD
French ..... FREN
Geographic Info. Systems ..... GIS
Geography ..... GEOG
Geology ..... GEOL
German ..... GERM
Health Info. Mgmt. Tech. ..... HIMT
Heating/Vent./AC Tech. ..... HVAC
History ..... HIST
History of Art ..... HART
Horticulture ..... HORT
Hospitality Management ..... HOSP
Human Resources Mgmt. ..... HRM
Humanities ..... HUM
Info. Tech. Supt. Technician ..... ITST
Interactive Media ..... IMM
Interpreter Education Program ..... IEP
Italian ..... ITAL
Japanese ..... JAPN
Landscape Design & Mgmt ..... LAND
Latin ..... LATN
Marketing ..... MKTG
Massage Therapy ..... MASS
Mathematics ..... MATH
Mech. Engineering Tech. ..... MECH
Medical Assisting ..... MAT
Med. Laboratory Tech. ..... MLT
Ment. Hlth/Add. Studies/Dev. Disabilities ..... MHAD
Multi-Competency Health ..... MULT
Music ..... MUS
Nuclear Medicine Tech ..... NUC
Nursing ..... NURS
Nursing Certificate Progms. ..... NURC
Nutrition ..... NUTR
Paralegal Studies ..... LEGL
Philosophy ..... PHIL
Physics ..... PHYS
Political Science ..... POLS
Practical Nursing ..... PNUR
Psychology ..... PSY
Quality Assurance Tech. ..... QUAL
Radiography ..... RAD
Real Estate ..... REAL
Respiratory Care ..... RESP
Skilled Trades ..... SKTR
Social Sciences ..... SSCI
Sociology ..... SOC
Spanish ..... SPAN
Speech and Hearing Science ..... SHS
Sport and Exercise Studies ..... SES
Statistics ..... STAT
Sterile Processing Technology ..... SPT
Supply Chain Management ..... SCM
Surgical Technology ..... SURG
Surveying ..... SURV
Theatre ..... THEA
Veterinary Technology ..... VET

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: 3 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 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: $2.00

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 (A) 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 also covers research techniques and understanding the structure of the Federal tax system. Also discussed are the requirements and processes to become a professional tax preparer.
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 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 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 2231 Modern Human Physical Variation (A, SP, SU) 3 credits

This course provides a survey of modern human biological diversity. It presents an examination of the underlying evolutionary and adaptive mechanisms responsible for diversity and an exploration of the interplay

between biology and behavior in adaptation.
Lecture: 3 hours
Prerequisites: Placement into ENGL 1100; completion of ANTH 2200
Lab fee: $3.00

ANTH 2235 Introduction to Forensic Anthropology (A 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: $3.00

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
Prerequisite: APPR 1101 Lab fee: $3.00

APPR 1103 USPAP & Fair Housing (A, SP) 1.5 credit
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 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: $3.00

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 (A, SP, SU) 3 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: 2 hours – Lab: 2 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 or CIVL 120 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 (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 (A) 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 (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) 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 (On Demand) 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 (On Demand) 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 (A, SP, SU) 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 (On Demand) 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
The Freshman Seminar 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: ENGL 1100 or higher 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 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 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
Corequisite: ASTR 1161 or ASTR 1162 Lab fee: $6.00

Automotive Technology (AUTO)

AUTO 1001 Autocare (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 AUT0 1106 the same semester. Students may also enroll in AUTO 1140, AUTO 1150, AUTO 1160, or AUTO 1170 the same semester. See plan of study for recommended course sequence.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisites: DEV 0105 or placement into DEV 0115 or MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher.
Corequisite: AUTO 1106 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 and power tools, and basic maintenance operations on cars and light trucks. Must have credit for or be concurrently enrolled in AUTO 1101. Students may also enroll in AUTO 1140, AUTO 1150, AUTO 1160, or AUTO 1170 the same semester. See plan of study for recommended course sequence.
Lecture: 1 hour - Lab: 2 hours
Prerequisites: DEV 0105 or placement into DEV 0115 or MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher.
Lab fee: $30.00

AUTO 1110 Engines: Theory & Operations (SP) 2 credits
This course presents automotive engines and the theory of their operation to students beginning their study of automotive service and repair. All engine mechanical systems are explored during teardown and reassembly of an automotive engine. Students are expected to acquire a variety of skills and explain operation of these components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisites: AUTO 1101, AUTO 1106, DEV 0115 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) 2 credits
This course presents automotive suspension and steering systems to students beginning their study of automotive service and repair. This class examines the theory, operation, and basic procedures needed to service and repair wheels, tires, wheel bearings, suspension components, steering components. They also explore basic alignment theory and suspension angles. Students are expected to acquire a variety of skills and explain operation of these components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities. Must have credit for, or be concurrently enrolled in, AUTO 1101, 1106, 1150, 1160, and 1170. See plan of study for recommended course sequence.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisites: DEV 0115 or placement into MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher
Corequisites: AUTO 1101, AUTO 1106, AUTO 1150, AUTO 1160, AUTO 1170 Lab fee: $40.00

AUTO 1150 Brake Systems: Theory & Operations (A) 2 credits
This course presents automotive brake systems to students beginning their study of automotive service and repair. Drum brakes, disc brakes, hydraulic principles, master cylinders, brake lines, power brakes, and the theory behind their operation and servicing are presented in lecture and lab activities involving teardown and reassembly. Students are expected to acquire a variety of skills and explain operation of these components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities. Must have credit for, or be concurrently enrolled in, AUTO 1101, 1106, 1140, 1160, and 1170. See plan of study for recommended course sequence.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisites: DEV 0115 or placement into MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher
Corequisites: AUTO 1101, AUTO 1106, AUTO 1140, AUTO 1160, AUTO 1170 Lab fee: $35.00

AUTO 1160 Electrical Systems: Theory & Operation I (A) 2 credits
This course presents automotive electrical systems to students beginning their study of automotive service and repair. Emphasis is placed on basic circuit theory, meter usage and interpreting wiring diagrams. Basic circuit troubleshooting is also explored during this course. Students are expected to acquire a variety of skills and explain operation of these components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities. Must have credit for, or be concurrently enrolled in, AUTO 1101, 1106 1140, 1150, and 1170. See plan of study for recommended course sequence.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisites: DEV 0115 or placement into MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher
Corequisites: AUTO 1101, AUTO 1106, AUTO 1140, AUTO 1150, AUTO 1170 Lab fee: $25.00

AUTO 1170 Heating & Air Conditioning: Theory & Operations (A) 2 credits
This course presents automotive climate control systems to students beginning their study of automotive service and repair. Theories of operation and service procedures of refrigeration, air distribution, engine cooling, and heating are presented in lecture and lab. Students learn proper use of hand tools, recovery, recycling, charging, testing, and component evaluation equipment. Students are expected to acquire a variety of skills and explain operation of these systems and components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities. Must have credit for, or be concurrently enrolled in, AUTO 1101and AUTO 1106. See plan of study for recommended course sequence.
Lecture: 1.5 hours - Lab: 1.5 hours

Prerequisites: DEV 0115 or placement into MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher
Corequisites: AUTO 1101, AUTO 1106, AUTO 1140, AUTO 1150, AUTO 1160 Lab fee: $40.00

AUTO 1180 Engine Performance: Theory & Operation I (SP) 2 credits
This course presents automotive engine performance systems to students beginning their study of automotive service and repair. This course covers the fundamentals of engine performance. It includes testing and component replacement of the ignition and fuel systems. Basic engine mechanical testing is also covered. Students are expected to acquire a variety of skills and explain operation of these components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisites: AUTO 1101, AUTO 1106, AUTO 1160
Corequisite: AUTO 1110 Lab fee: $25.00

AUTO 1210 Powertrain System Service (SP, SU) 2 credits
This course presents automotive powertrain system service to students beginning their study of automotive service and repair. This course will explore the procedures for the removal and replacement of various components of the powertrain system as commonly required in the automotive industry. Students are expected to acquire a variety of skills and explain operation of these components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities.
Lecture: 1 hour - Lab: 2 hours
Prerequisites: DEV 0115 or placement into MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher, AUTO 1101, AUTO 1106 Lab fee: $40.00

AUTO 1240 Suspension & Steering: Diagnosis & Repair (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. Students are expected to acquire a variety of skills and explain operation of these components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities. Must have credit for AUTO 1101, 1106, and 1140. Must have credit for, or be concurrently enrolled in, AUTO 1160.
Lecture: 1 hour - Lab: 2 hours
Prerequisite: AUTO 1101, AUTO 1106, 1140
Corequisite: AUTO 1160 Lab fee: $45.00

AUTO 1250 Brake Systems: Diagnosis & Repair (SP) 2 credits
This course continues the study of automotive brake systems building on information and skills from the AUTO 1150 course. The topics of system diagnosis, live-car servicing, power booster service, antilock brake systems, associated electrical systems, and bench and on-car lathe operation are explored through lecture and lab activities. Students are expected to acquire a variety of skills and explain operation of these components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities. Student must have completed AUTO 1101, 1106, 1150, and 1160.
Lecture: 1 hour - Lab: 2 hours
Prerequisites: AUTO 1101, 1106, 1150 and 1160
Lab fee: $40.00

AUTO 1260 Electrical System: Theory & Operation II (SP) 2 credits
This course continues the study of automotive electrical systems. The electrical systems covered include the battery, starting, charging, lighting systems and accessory circuits. Students are expected to acquire a variety of skills and explain operation of these components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities. Student must have completed AUTO 1101, 1106, and 1160.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisites: AUTO 1101, AUTO 1106, and 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 (SP) 2 credits
This course presents automatic transmissions/transaxles and theories of operation to students beginning their study of automotive service and repair. Automotive automatic transmission/transaxle hydraulic, mechanical and electrical systems are explored during teardown and reassembly of an automatic transmission/transaxle. Students are expected to acquire a variety of skills and explain operation of these components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities. Student must have credit for AUTO 1101, 1106, and 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 (A) 2 credits
This course presents automotive driveline systems to students beginning their study of automotive service and repair. Manual transmissions, transaxles, differentials and theories of operation and malfunction diagnosis are presented. Lecture and lab activities cover proper teardown and reassembly procedures. Students are expected to acquire a variety of skills and explain operation of these components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisites: Placement into MATH 1000 or higher, placement into ENGL 0190 or higher and AUTO 1101 and AUTO 1106
Lab fee: $25.00

AUTO 2190 Hybrid Vehicle: Theory & Operations (SU) 2 credits
This course presents hybrid vehicles and theories of operation to students beginning their study of automotive service and repair. 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. Alternate fuels and advanced technology will also be discussed. Must have completed AUTO 1101, 1106, 1160
Lecture: 1.5 hours - Lab: 1 hour
Prerequisites: AUTO 1101, AUTO 1106, AUTO 1160
Lab fee: $10.00

AUTO 2193 Independent Study: Automotive Technology (A, SP SU) 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 (On Demand) 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 (SP) 2 credits
This course continues the study of automotive automatic transmissions/ transaxles building on the information and skills obtained in AUTO 2120. Emphasis is placed on in-car service, diagnosis, and repair. Students are expected to acquire a variety of skills and explain operation of these components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities. Student must have credit for 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 (A) 2 credits
This course continues the study of automotive driveline systems. The topics of clutch, transfer case, drive shaft, drive axles, 4WD hubs, and their diagnosis are explored through lecture, teardown, and reassembly. Students are expected to acquire a variety of skills and explain operation of these components Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities. Student must have credit for 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) 2 credits
This course continues the study of automotive climate control systems building on information and skills obtained in AUTO 1170. System diagnosis, live-car servicing, electrical troubleshooting, and automatic temperature control systems are explored through lecture and lab activities. Students are expected to acquire a variety of skills and explain operation of these components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities.
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) 2 credits
This course continues the study of automotive engine performance systems. This course covers exhaust gas analysis, scan tools emission, control systems and the fundamentals of OBDII. Students are expected to acquire a variety of skills and explain operation of these components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities. Student must have credit for 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. Principles presented in AUTO 2101 are further developed along with practical implementation strategies. Facilities and equipment planning and management and financial management and analysis are covered. 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 continues the study of automotive engines building on information and skills obtained in AUTO 1110. This class includes engine mechanical systems diagnosis and proper component replacement procedures. Students are expected to acquire a variety of skills and explain operation of these components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities. Student must have credit for AUTO 1110.
Lecture: 1 hour - Lab: 2 hours
Prerequisites: DEV 0115 or placement into MATH 1000 or higher and DEV 0155 or placement into ENGL 0190 or higher, and AUTO 1110
Lab fee: $40.00

AUTO 2360 Advanced Electrical System: Diagnosis & Repair (SP, SU) 3 credits
This course continues the study of automotive electrical systems building on information and skills obtained in AUTO 1260. System diagnosis, live-car servicing, supplemental restraints systems, and various body control computer systems will be included in this course through lecture and lab activities. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group activities. 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 (SP, SU) 3 credits
This course continues the study of automotive engine performance systems building on information and skills obtained in AUTO 2280. System diagnosis, live-car servicing, and various manufacturer's computer control systems will also be explored through lecture and lab activities. Students are expected to acquire a variety of skills and explain operation of these components. Mastery of skills and underlying concepts are evaluated both individually and through contribution to work group 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 (On Demand) 2 credits
This course includes instruction and assessment of skills and knowledge in four ASE areas. 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 daily shop environment.
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: $15.00

AUTO 2401 Auto Parts: Management (On Demand) 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 Intro to 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 0336 Intro to Human Neuroanatomy & Neurophysiology (A, SP, SU) 3 credits
This is an introductory-level neuroanatomy and neurophysiology course. This course will introduce the terminology, structure, and functions of the human nervous system.
Lecture: 3 hours
Prerequisite: Placement into ENGL 1100 Lab fee: $4.00

BIO 1101 Fundamentals of Human Anatomy & Physiology (A, SP, SU) 3 credits
BIO 1100 offers a general overview of normal anatomy and physiology including an online review of cell biology, biological chemistry, and tissues. Topics include terminology, homeostasis, membrane transport, and the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, urinary, digestive, and reproductive systems. Web students are required to take exams at a proctored testing facility. This course is not considered a college level science course.
Lecture: 2 hours
Prerequisite: Placement into ENGL 1100 Lab fee: $4.00

BIO 1111 Introduction to Biology I (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.
Lecture: 3 hours - Lab: 2 hours
Prerequisites: Placement into ENGL 1100, high school biology or BIO 0100 Lab fee: $20.00

BIO 1112 Human Biology (A, SP, SU) 4 credits
This course introduces the study of human biology. Topics included are human evolution, human reproduction, human growth and development, homeostasis, the human brain and the environmental impact of humans on earth.
Lecture: 3 hours - Lab: 2 hours
Prerequisites: ENGL 1100, high school biology or BIO 0100
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.
Lecture: 3 hours - Lab: 3 hours
Prerequisites: High school chemistry or CHEM 0100 and high school biology, 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, 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. Hybrid students are required to take exams at a proctored testing facility.
Lecture: 3 hours - Lab: 2 hours
Prerequisites: High school biology or BIO 0100 and high school chemistry or CHEM 0100 and 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 Hybrid 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: 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 2010 Gen Zoo & Animal Diversity (On Demand) 4 credits
This course offers a survey of the diversity of organisms in the Animal Kingdom. Emphasis will be placed on evolutionary interrelationships, and on the locomotory, nutritional, and reproductive strategies of the major groups.
Lecture: 3 hours - Lab: 3 hours
Prerequisite: BIO 1114 Lab fee: $27.00

BIO 2215 Introduction to Microbiology (A, SP, SU) 4 credits
BIO 2215 is a general microbiology course for nonmicrobiology 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: Placement into ENGL 0190 and BIO 0100
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: Placement into ENGL 1100 and BIO 2300
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: BIO 2300, BIO 2232, CHEM 1112 or CHEM 1113; or BIO 1121, BIO 1122, CHEM 1112 or CHEM 1113
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 BIO 0100 or BIO 1101 or BIO 1111 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 1111 or 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 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 1108 21st Century Skills (On Demand) 2 credits
Students will learn the contemporary skills needed to effectively compete in a rapidly changing global workplace environment. A survey of interpersonal communication, conflict resolution, teamwork, problem solving, ethics, professional development, leadership, and personal finance is included. Enrollment is limited to students who are also enrolled in a participating workforce development or career specific cohort.

Lecture: 2 hours
Prerequisite: Instructor consent is required Lab fee: $125.00

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 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: BMGT 1111

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: $6.00

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: BMGT 1102, BMGT 1111 Lab fee: $2.00

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, Entrepreneurship, and Accounting 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 2499 Nonprofit Management Capstone (A, SP) 3 credits
This course is a project-based capstone learning experience that will facilitate the application of knowledge acquired in BMGT 2245, 2246, and 2247 to a contemporary problem or initiative in a nonprofit organization. Leadership strategies relevant to a nonprofit organizational context and professional motivation and commitment will also be explored.
Lecture: 3 hours
Instructor permission required
Prerequisite: BMGT 2247

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 Applications (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 I (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.
Lecture: 1.5 hours- Lab: 1.5 hours
Prerequisite: Placement into ENGL 1100 Lab fee: $2.00

BOA 1104 Access I (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 MATH 1010 or higher
Lab fee: $2.00

BOA 1111 Bookkeeping I (A, SP, SU) 3 credits
This course covers the accounting cycle for service and merchandising businesses including analysis of business transactions, journalizing, posting, adjusting and closing entries, and financial statement preparation. Transactions involving payroll accounting are also covered.
Lecture: 3 hours
Prerequisite: Placement into MATH 1010 or higher
Lab fee: $3.00

BOA 1113 QuickBooks I (A, SP, SU) 1 credit
In this QuickBooks accounting software course, students will learn to navigate the software and keep a set of computerized books for a small company including functions such as recording deposits, writing checks, reconciling the bank statement, recording customer and vendor transactions, and generating reports.
Lecture: 0.5 hour - Lab: 1 hour
Prerequisites: MATH 1010 or higher and BOA 1111
Lab fee: $3.00

BOA 1114 QuickBooks II (A, SP, SU) 1 credit
Students will set up a new company in this course by creating a chart of accounts, customer and vendor lists, record purchase and sales transactions, make adjusting entries, process payroll. How to establish budgets and account for credit card sales and bad debt are also covered. This course also includes a project where the student will assume the role of a consultant providing QuickBooks consulting services to a client.
Lecture: 0.5 hour - Lab 1 hour
Prerequisite: BOA 1113 Lab fee: $3.00

BOA 1115 Computerized Accounting with Peachtree (A, SP, SU) 2 credits
This course contains basic accounting procedures using Peachtree® computerized accounting software. The course includes how to create a company file, run accounts payable, manage inventory and payroll, track inventory and fixed assets, maintain ledgers and journals and create reports. This course also includes a project where the student will assume the role of a consultant providing Peachtree consulting services to a client.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisite: BOA 1111 Lab fee: $3.00

BOA 1116 Adjusting Entries & Error Correction (SP, SU) 1 credit
This course examines why accruals, deferrals and other adjustments are made. Students will learn how to record accrued revenue and expenses, unearned revenue and prepaid expenses, and other adjusting entries such as depreciation and bad debt. Course also explores where accounting errors occur and how to find them. Students will learn how to perform a bank reconciliation and how to use a trial balance to find errors.
Lecture: 1 hour
Prerequisite: BOA 1111 Lab fee: $3.00

BOA 1117 Payroll (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 Lab fee: $3.00

BOA 1118 Inventory (SP, SU) 1 credit
This course examines how to record merchandise inventory using both the perpetual and the periodic methods. Computing cost of goods sold and valuing ending inventory is explored using different costing methods such as weighted average, FIFO, LIFO and lower of cost or market.
Lecture: 1 hour
Prerequisite: BOA 1111 Lab fee: $3.00

BOA 1119 Internal Controls & Fraud Prevention (SP, SU) 1 credit
This course examines internal controls and their role in the prevention of fraud. BOA 1119 also looks at how to prevent employee theft before it starts and how employees steal noncash assets. Students will learn how to prevent check fraud, credit card fraud and vendor cheating.
Lecture: 1 hour
Prerequisite: BOA 1111 Lab fee: $3.00

BOA 1120 Depreciation (A, SU) 1 credit
This course examines how to compute and record depreciation for book and tax purposes using different methods.
Lecture: 1 hour
Prerequisite: BOA 1111 Lab fee: $3.00

BOA 1121 Bookkeeping Certification Review (A, SU) 1 credit
This course is a comprehensive review of all bookkeeping certificate courses in preparation for taking the national exam to become a certified bookkeeper. In this project-based course, students will complete the full accounting cycle for a company.
Lecture: 1 hour
Prerequisite: BOA 2112 Lab fee: $3.00

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 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 1138 Computer Transcription (A, SP) 1 credit
This course is designed to develop skill in the use of transcription software equipment with emphasis on the fundamentals of English in grammar, spelling, and vocabulary. A final document in acceptable format with no errors is the goal in transcribing audio of communications in a broad range of business formats.
Lecture: .5 hour - Lab: 1.5 hours
Prerequisite: BOA 1131 Lab fee: $4.00

BOA 1139 Keyboarding Improvement (A, SP, SU) 1 credit
This elective course is designed to provide students with increased skill in the use of the keyboard by touch. The emphasis will be on speed and accuracy, using drills, straight-copy materials, and timed writings. Students must key by touch with accuracy, using correct finger placement.
Lecture: 1 hour
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.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisites: Placement into ENGL 1100 and MATH 1010 or higher
Lab fee: $5.00

BOA 1151 Office Procedures II (A, SP, SU) 2 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.
Lecture: 1.5 hours - Lab: 1.5 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.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisite: BOA 1102 Lab fee: $5.00

BOA 1188 PowerPoint II (A, SP, SU) 2 credits
This course includes intermediate and advanced features and functions using Microsoft PowerPoint presentation software. Emphasis will be placed on presentation, creation, and enhancement using formatting features, animation, movies, sounds, and various delivery methods.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisite: BOA 1103 Lab fee: $5.00

BOA 1191 Word II (A. SP) 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.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisite: BOA 1101 Lab fee: $5.00

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: $5.00

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. Students will also be introduced to e-portfolios.
Lecture: 1 hour - Lab: 2 hours
Prerequisites: CSCI 1101 or BOA 1101, BOA 1102, and BOA 1103
Lab fee: $5.00

BOA 2112 Bookkeeping II (A. SP) 3 credits
This course is a continuation of BOA 1111 Bookkeeping I. The course is designed to provide students with a strong basic knowledge of accounting and bookkeeping terminology and concepts related to notes payable, notes receivable, uncollectible accounts, inventory, property and equipment, partnerships, corporate organization including taxes, stocks and bonds, statement of cash flows, and comparative financial statements.
Lecture: 3 hours
Prerequisite: BOA 1111, MATH 1010 or higher Lab fee: $5.00

BOA 2125 Outlook (A, SP) 2 credits
This course provides a comprehensive coverage of a desktop information management application using Microsoft Outlook software. Students will learn to customize and administer Outlook as well as provide end user support.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisite: BOA 1191 Lab fee: $5.00

BOA 2167 Desktop Publishing (A, 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: $5.00

BOA 2195 Office Integration (A, SP) 2 credits
This course offers intermediate and advanced features to integrate Word, Excel, PowerPoint, and Access applications. Students will learn to join office applications that work together.
Lecture: 1.5 hours - Lab: 1.5 hours
Prerequisites: BOA 1104, BOA 1172, BOA 1188, BOA 1191
Lab fee: $2.00

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, BOA 2125, BOA 2195
Lab fee: $3.00

BOA 2999 BOA Capstone (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.
Lecture: 2 hours - Lab: 2 hours
Prerequisites: BOA 1132, BOA 1151, BOA 2125, BOA 2195
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 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: CHEM 0100 or CHEM 1111 or high school chemistry; MATH 1148 or higher; placement into ENGL 1100 or higher 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 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 or CHEM 252 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 one semester of Biological Science
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 (A, 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) 3 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 - Lab: 3 hours
Prerequisite: MATH 1075 or higher Lab fee: $23.00

CIVL 2230 Public Utility Systems (SP) 3 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 - Lab: 3 hours
Prerequisite: CIVL 2210 Lab fee: $30.00

CIVL 2910 Field Experience (On Demand) 3 credits
Field Experience offers real-world, off-campus job/work experience in civil engineering, consulting engineering, or the surveying industry that augments formal education received in the technology. Nontraditional Credit ("N") will not be allowed for this course.
Field Experience: 40 hours
Instructor permission required

CIVL 2994 Special Topics: Civil Engineering Technology (On Demand) 1-3 credits
The study of special topics in civil engineering technology industry designed to meet specific needs.
Lecture: 1 hour
Instructor permission required

Surveying (SURV)
Also see Civil Engineering Technology (CIVL)

SURV 1410 Introduction to Surveying (A, SU) 3 credits
This course offers a comprehensive study in performing measurements for the collection of data and for construction layout. The course elements include application of the English and metric (SI) measurement systems

in performing angular and distance measurement. Elements of differential leveling are used for establishing the elevations of new bench marks, topographic mapping by grid method, and cut/fill calculations to finish floor elevations of proposed structures. Data manipulation includes taping corrections, precision and accuracy determination, traverse closures, traverse adjustments, local and state plane coordinate systems, level circuit reductions, radial building staking notes and boundary line determination by inverse coordinates. This course also explores emerging surveying technologies in construction sciences.
Lecture: 1 hour - Lab: 6 hours
Prerequisite: MATH 1075 or higher Lab fee: $18.00

SURV 1420 Historical Surveying (A, SU) 2 credits
This is a historical review of the surveying profession from classical time to the mid-20th Century. Emphasis is placed on the three major United States governmental surveying and mapping agencies or bureaus from the late 18th Century to mid 20th Century (Dawn of the Digital Age). Field exercises with period original and reproduction surveying equipment support the subject material. Course also includes a review of current surveying and mapping technologies. Integrated topics include drafting, surveying, cartography and geographic information systems.
Lecture: 1 hour - Lab: 3 hours
Prerequisite: MATH 1075 or higher Lab fee: $23.00

SURV 1460 Computer Applications in Construction Sciences (A, SP) 2 credits
This course involves the integrated use of word processing, spreadsheet, database management, graphic- and computer-assisted drafting software to solve problems associated with the surveying industry and to produce formal engineering reports using the most current version of MS Office, Autodesk and Adobe Photoshop software products.
Lecture: 1 hour - Lab: 3 hours
Prerequisites: SURV 1410, MATH 1148 Lab fee: $20.00

SURV 2410 Engineering Surveying (A, SU) 4 credits
This class is a comprehensive study of the elements of route alignment including horizontal, circular, and spiral curves, combinations of circular and spiral curves, vertical curves, centerline and offset staking for rough and finished grade. The course includes the application of all elements of route design, construction staking and earthwork volume determination in a comprehensive integrated project format. Manual calculations are reinforced with the use of computer software such as Autodesk Civil 3-D.
Lecture: 2 hours – Lab: 6 hours
Prerequisites: SURV 1410, MATH 1148 Lab fee: $23.00

SURV 2430 Transportation Systems (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 transportation solutions.
Lecture: 2 hours - Lab: 3 hours
Prerequisites: SURV 1410, SURV 2410 Lab fee: $23.00

SURV 2450 Legal Principles in Surveying (SP) 3 credits
This course presents a study of statute and common law, as pertains to land surveying and real property rights and the methods to describe real property. Current practices, current court decisions and applicable laws, and Ohio Surveying Laws are examined and applied to real world scenarios.
Lecture: 2 hours - Lab: 3 hours
Prerequisites: SURV 1410, SURV 1420 Lab fee: $23.00

SURV 2480 Geodetic Surveying (SU) 4 credits
This course covers planning and execution of control surveying, cadastral surveying, network adjustment and topographic surveying using total stations and data collections, satellite positioning (Global Navigation Satellite System), and advanced imagery system. Elements also include remote sensing such as LIDAR and laser scanning.
Lecture: 2 hours – Lab: 6 hours
Prerequisites: SURV 1410, MATH 1148 Lab fee: $23.00

SURV 2490 Land Development Systems (SP) 3 credits
This course covers advanced surveying, including section and subdivision lines and residential property lines. Major topics include reestablishment of property boundaries and legal considerations for boundary descriptions, including local municipal record. This course also involves the development of preliminary plats, detailed plans and a final plat in accordance with State of Ohio minimum standards and local conveyance standards.
Lecture: 2 hours - Lab: 3 hours
Prerequisite: SURV 2410 Lab fee: $23.00

SURV 2994 Special Topics: Surveying (On Demand) 1-3 credits
Special topics in surveying technology industry designed to meet specific needs.
Lecture: 1 hour
Instructor permission required

Classics (CLAS)

CLAS 1222 Classical Mythology (A, SP, SU) 3 credits
This course is an introduction to the world of mythology through the study of myths from Greece and Rome. The course explores some of the religious ideas, traditions and values that distinguish one civilization from another, while also indicating universally shared themes. Attention will be given to cultural expression of mythical themes in literature and art.
Lecture: 3 hours
Prerequisite: Placement into ENGL 1100 Lab fee: $2.00

CLAS 1224 Classical Civilization: Greece (A, SP, SU) 3 credits
This course is a survey of the culture and ideas of Ancient Greece. Emphasis is on the literature, history, ideas, art, and theater of the Ancient Greeks.
Lecture: 3 hours
Prerequisite: Placement into ENGL 1100 Lab fee: $2.00

CLAS 1225 Classical Civilization: Rome (A, SP, SU) 3 credits
This course is a survey of the culture and ideas of Ancient Rome. Emphasis is on the literature, history, ideas, art, and theater of the Ancient Romans.
Lecture: 3 hours
Prerequisite: Placement into ENGL 1100 Lab fee: $2.00

CLAS 1226 Classical Civilization: Byzantium (A, SP, SU) 3 credits
This course is a survey of the cultural legacy of the Byzantines. Emphasis is on Byzantine popular culture, court life, religion, art, and literature.
Lecture: 3 hours
Prerequisite: Placement into ENGL 1100 Lab fee: $2.00

CLAS 1294 Special Topics: Classics (On Demand) 1-3 credits
Students explore special topics in classics designed to meet specific needs.
Lecture: 1 hour

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: Placement into ENGL 1100 and BIO 1101

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: Placement into ENGL 1100 and BIO 1101
Corequisite: CLA 1100
Lab fee: $300.00

College Success (COLS)

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.
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, SU) 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 24 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 2210 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 (SP, SU) 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, SU) 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 1000 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 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 1052 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 or Networking/Security certificate requirements.
Lab: 2 hours Lab fee: $1.00

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 Lab fee: $27.00

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 HMTL 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 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
Prerequisite: CSCI 1103 Lab fee: $4.00

CSCI 1445 Content Management & Integration (SP) 3 credits
The Internet contains a massive amount of data which is constantly being served all over the world. Managing this data server-side is no small task. In CSCI 1445, students will explore methods and techniques for managing large amounts of information and for organizing and delivering this information in a meaningful manner. In addition to implementing several examples as projects, students will also learn about the ethics and inherent security concerns of online content.
Lecture: 2 hours - Lab: 3 hours
Prerequisites: CSCI 1103, CSCI 1145 Lab fee: $2.00

CSCI 1511 Python Programming (A, SP) 3 credits
CSCI 1511 introduces the basic concepts of game design and programming. Students learn the Python programming language constructs to write programs that integrate classes, class methods, and class instances, built upon basic structures such as input method handling, 2-D sprite manipulation and animation, collision detection, game physics and basic artificial intelligence.
Lecture: 2 hours - Lab: 3 hours
Prerequisite: CSCI 1103 Lab fee: $2.00

CSCI 1531 Game Programming Language (SP) 3 credits
CSCI 1531 introduces the concepts of ANSI C programming. In addition to covering basic syntax and semantics, the course emphasizes problem solving methodology and modular programming techniques. Lab problems are directed by game programming applications. Computer lab projects will provide hands-on experience in developing programs with an ANSI C compiler environment including debugging techniques.
Lecture: 2 hours - Lab: 3 hours
Prerequisite: CSCI 1103

CSCI 1551 Concepts of 3D Games Engines (SP) 3 credits
CSCI 1551 is an introductory course in how a 3D, multiplayer, networked game engine would build platforms and control game logic. The game engine is Panda3D, developed by Disney. Panda3D is a framework for 3D rendering and game development for Python and C++ programs. Panda3D is Open Source and free for any purpose. Game development with Panda3D will consist of writing a Python program that controls the Panda3D library. Computer lab projects will provide hands-on experience investigating the various components of a network game.
Lecture: 2 hours - Lab: 3 hours
Prerequisite: CSCI 1511 Lab fee: $2.00

CSCI 1610 Object Oriented Analysis and UML (A, SP) 3 credits
CSCI 1610 is an introduction to object-oriented programming concepts and techniques and to system modeling using Unified Modeling Language. It teaches all of the major UML diagram types and the basic notation involved in creating and deciphering them. Students will learn to read, draw, and use visual modeling language to create clear and effective blueprints for software development projects.
Lecture: 2 hours - Lab: 3 hours
Prerequisite: CSCI 1103 Lab fee: $2.00

CSCI 1620 Visual Basic I (A, SP) 3 credits
CSCI 1620 emphasizes the essential aspects of creating the graphical user interface of a Visual Basic Windows program. The student also will learn fundamental aspects of coding a VB.NET program, along with more advanced topics such as manipulating MS Access databases, sequential file processing, error handling, and data validation. Software is provided to students.
Lecture: 2 hours - Lab: 3 hours
Prerequisite: CSCI 1103 Lab fee: $2.00

CSCI 1630 C# Programming I (A, SP, SU) 4credits
CSCI 1630 uses the Visual C# programming language as the programming tool for learning principles of object-oriented programming. The course covers implementation of classes that support static and instance methods, concrete vs. abstract classes, class inheritance, polymorphism, exception handling, and object serialization. The course demonstrates the implementation of event handler methods through GUI form containers. Students learn basic use of the LINQ interface to retrieve data from a SQL database for display on a GUI form. Students apply debugging techniques to repair faulty Visual C# code.
Lecture: 2 hours - Lab: 4 hours
Prerequisite: CSCI 1103 Lab fee: $4.00

CSCI 1772 Networking I (SP) 3 credits
CSCI 1772 is designed for students to learn advanced computer networking concepts and how they can be applied to support enterprise-wide information management of a large organization. The student will learn to install and configure network servers.
Lecture: 2 hours - Lab: 3 hours
Prerequisite: CSCI 1152 Lab fee: $2.00

CSCI 2241 Introduction to Mainframe Z/Os-Basic (A, SP) 3 credits
CSCI 2241 provides students the background, knowledge and skills necessary to begin using the basic facilities of a mainframe computer. Topics covered include the mainframe in business today (including mainframe job roles); mainframe interfaces; Job Control Language; mainframe hardware and architecture; middleware for the mainframe, application programming on the mainframe; networking, and security topics. This course is designed for someone with prior programming experience or education.
Lecture: 2 hours - Lab: 3 hours
Prerequisite: CSCI 1103 Lab fee: $2.00

CSCI 2251 Intro Mainframe Large Scale (A, SP) 2 credits
CSCI 2251 helps students gain an understanding of the reasons companies chose a mainframe system to run (and grow) their large-scale computing environments. Topics include capacity, scalability, integrity and security, availability, access to large amounts of data, systems management and autonomic capabilities. This course is designed for someone with prior programming experience or education. Term course
Lecture: 1 hour - Lab: 2 hours
Prerequisite: CSCI 2241 Lab fee: $2.00

CSCI 2261 Introduction to Mainframe Networking (A, SP) 2 credits

CSCI 2261 provides the background, knowledge and skills necessary to begin using the basic communication facilities of a mainframe system. Students will be given a broad understanding of networking principles and the hardware and software components necessary to allow the mainframe to participate in high volume data communications networks. Topics covered include overview of the importance of the mainframe environment, TCP/IP, SNA, SNA/IP implementation on the mainframe, networking operations, security and problem determination. Term course
Lecture: 1 hour - Lab: 2 hours
Prerequisite: CSCI 2241 Lab fee: $2.00

CSCI 2271 Introduction to Mainframe Security (A, SP) 3 credits
CSCI 2271 provides the background, knowledge and skills necessary to begin using the basic security facilities of a mainframe system. Students will have a broad understanding of both the security principles and the hardware and software components needed to insure that the mainframe resources and environment are secure. Topics covered include elements of security, systems architecture and virtualization, cryptography, as well as security in operating systems, networks, middleware and applications.
Lecture: 2 hours - Lab: 3 hours
Prerequisite: CSCI 2241 Lab fee: $2.00

CSCI 2325 Expert Access (A, SP, SU) 3 credits
CSCI 2325 covers advanced features of Microsoft Access database application software and the skill set required for Microsoft certification.
Lecture: 2 hours - Lab: 3 hours
Prerequisite: CSCI 1102 Lab fee: $10.00

CSCI 2330 Project Management Fundamentals & Case Studies (A) 4 credits
CSCI 2330 teaches the genesis of project management and its importance to improving the success of information technology projects. The student will demonstrate knowledge of project management terms and techniques such as the triple constraint of project management and the project life cycle using project management industry tools and techniques. Further, through the use of case studies, students will analyze and implement the concepts and techniques using appropriate project management documentation. This course satisfies PMI's 35-hour education requirement to sit for the Project Management Professional (PMP) Exam.
Lecture: 2 hours – Lab: 4 hours Lab fee: $4.00

CSCI 2370 Database Systems Programming (A, SU) 3 credits
CSCI 2370 presents database systems theory and application, including functional dependencies, normalization, data modeling and entity relationship model, entity relationship diagrams and structured query language. Students will design and build databases and write database programs.
Lecture: 2 hours - Lab: 3 hours
Prerequisites: CSCI 1103 Lab fee: $4.00

CSCI 2371 DB Administration & Data Mining (SP, SU) 4 credits
CSCI 2371 provides the background, knowledge and skills necessary to identify and perform tasks involved in the administration and management of a database system. Topics include user rights and responsibilities, concurrency security, reliability, backup and recovery. The second part of this course will cover data design, data extraction and transformation, data quality, OLAP processing, processing for business intelligence, reporting systems, data mining applications, data warehouses and data marts.
Lecture: 2 hours - Lab: 4 hours
Prerequisite: CSCI 1103 or CSCI 2325 Lab fee: $4.00

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 1. 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, SU) 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 (SP) 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 Networking Home & Small Businesses (A) 3 credits
CSCI 2750 is designed to teach students the fundamentals of networking while gaining the skills needed to obtain entry-level home and small business network installation jobs. Students gain knowledge in networking theory and obtain hands-on experience in networking, PC configuration, Internet connectivity, wireless connectivity, and file/print sharing. Recommended basic computer skills: file systems, Web browsing, etc. 1st term course. CISCO
Lecture: 2 hours - Lab: 3 hours Lab fee: $2.00

CSCI 2752 Working Small to Medium Business or ISP (A) 3 credits
CSCI 2752 is designed to teach students the basics of routing and remote access, addressing, and security. Students will gain hands-on experience with servers that provide e-mail services. Web spaces and authenticated access, network monitoring. Students will also learn troubleshooting skills as well as the necessary soft skills required for interacting with customers. 2nd term course
Lecture: 2 hours - Lab: 3 hours
Prerequisite: CSCI 2750 Lab fee: $20.00

CSCI 2754 Introducing Routing/Switch Enterprise (SP) 3 credits
CSCI 2754 is designed for students to learn the equipment applications and protocols installed in enterprise networks with an emphasis on switched networks, IP Telephony requirements and security. This course introduces advanced routing protocols such as Enhanced Interior Gateway Routing Protocol (EIGRP) and Open Shortest Path First (OSPF) Protocol. The hands-on exercises include configuration, installation and troubleshooting. 1st term course
Lecture: 2 hours - Lab: 3 hours
Prerequisite: CSCI 2752 Lab fee: $20.00

CSCI 2756 Design/Support Computer Network (SP) 3 credits
CSCI 2756 is designed for students to learn basic network design, how to gather user requirements, establish proof-of-concept, and perform project management tasks. Students learn lifecycle services such as system upgrades, competitive analysis and system integration. 2nd term course
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 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: $21.00

CMGT 1106 Field Supervision (SP, SU) 3 credits
Field Supervision presents the importance of, and the insight into, the complex and responsible task of managing people. Various phases of effective management will be discussed such as understanding employee behavior, improving productivity, communicating effectively with employees, ethics and professionalism, handling discipline problems, planning and organizing, making and implementing decisions, solving problems, reducing costs and improving safety. This course will improve your understanding of human behavior.
Lecture: 2 hours – Lab: 2 hours Lab Fee: $14.00

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 students' understanding of 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
This course offers 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 presents an explanation and application of the use of construction math relative to linear, area and volumetric measures of common construction materials. It also explains 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 students to materials covering the expanding concerns of construction safety and loss prevention. Students will learn to identify work hazards and unsafe practices and to utilize supervisory, safety, and loss-prevention techniques to minimize loss in productivity and resources. Students will also learn how to utilize OSHA and Ohio BWC resources as well as to prepare a safety and loss prevention plan of action, conduct a jobsite safety analysis, and to promote an ethical and proactive 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
CMGT 1141 presents a study of the current manual practices of estimating skills and methods utilized to create project estimates. Emphasis will be placed upon the 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 also is included.
Lecture: 2 hours - Lab: 3 hours
Prerequisite: CMGT 1131 Lab fee: $21.00

CMGT 1153 Residential Construction (A, SU) 3 credits
This course is an overview of residential construction including hands-on experiences. Emphasis is placed upon safety, residential construction methods and field operations, structural design elements, terminology, and the materials/tools and equipment used, along with an understanding of the sequential nature of the residential construction process. The lab portion of the course will focus on utilizing tools and materials, affording students an opportunity to experience assembling various parts of the residential building while emphasizing safe practices.
Lecture: 2 hours – Lab: 2 hours Lab fee: $7.00

CMGT 1171 Sustainability Management (A, SU) 3 credits
This course is an introduction to sustainable building science and its 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 effect 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 Intro to Bldg. Information Modeling (BIM) (A, SP) 3 credits
This course provides students with an overview of building information modeling (BIM). Emphasis will be placed upon introducing BIM technologies, developing students' understanding of the business and organizational 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: 2 hours
Prerequisite: ARCH 1111 Lab fee: $15.00

CMGT 2216 BIM Applications (SP, SU) 3 credits
This course is an exploration of means and methods for implementing building information modeling (BIM) on a construction project. Emphasis will be placed upon strategies for implementing BIM, identifying challenges and opportunities in the application of BIM technologies on the construction worksite, evaluating BIM as a tool for overseeing the entire building lifecycle, examining the challenges associated with sharing data among members of the project team, and sharing best practices as they pertain to the routine utilization of BIM technologies with construction projects.

Lecture: 2 hours – Lab: 2 hours
Prerequisite: CMGT 2215 Lab fee: $15.00

CMGT 2221 Managing Construction (SP, SU) 3 credits
This applications-based course introduces students to entrepreneurship, interdependency, and construction company management, building upon the topics covered in the program of study to date. Focus is on the operations of a construction management firm, including accounting and financial planning, business organization, ethics, analysis of management techniques, sales and marketing strategies, logistics, leadership, personnel issues and creating a sound business plan in order to be successful in the construction industry.
Lecture: 2 hours – Lab: 2 hours
Prerequisites: CMGT 1115, CMGT 1131 Lab fee: $8.00

CMGT 2231 Commercial Computer Estimating (SP, SU) 3 credits
This course studies 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. CMGT 2231 will also discuss 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), and the manual calculations involved with CPM (Critical Path Method) scheduling. The course will stress fundamental skills required 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 with exposure to various types of schedules and projects, and it will 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 2252 Construction Law (A, SU) 3 credits
This course offers an intensive study of the legal aspects and characteristics unique to the construction industry. Students review typical legal problems which arise in the day-to-day business of construction. The course will focus on important legal aspects and the role of each participant on the project, as well as on the duties and obligations of owners, design professionals and constructors, and how construction documents are prepared and utilized. Emphasis is placed upon the bidding process and laws; contracts, subcontracts and supply contracts; labor laws and issues; insurance and bonding; lien laws, dispute resolution and remedies; and ethical behavior in the construction industry.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: CMGT 1105 Lab fee: $14.00

CMGT 2281 Residential Computer Estimating (A, SP) 3 credits
CMGT 2281 is a comprehensive study of and an 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 a student with 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 designed to have student work at a construction industry-related company, complying with OBOR requirement for hours worked, with 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 designed 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 1001 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 1010 Policing (A) 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 1015 Criminal Procedure (A, 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 1016 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 1025 Criminology (A, SU, SP) 3 credits
This course explores the issue of crime causation in the United States. Theories of causation will be analyzed and critiqued from a sociological, biological, and psychological perspective.
Lecture: 3 hours

CRJ 1035 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 1040 Corrections (A, SP) 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 1044 Correctional Law (A) 2 credits
This course will cover the various Supreme Court rulings that deal with the care and treatment of prisoners confined in institutions. It will include the use of force, their right to have visitors, receive mail, attend religious functions, and the right to treatment. The course will also cover due process of the law.
Lecture: 2 hours

CRJ 1045 Juveniles and the Criminal Justice System (SP, SU) 2 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: 2 hours

CRJ 1050 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 1051 Intelligence Analysis Security Mgmt (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 reguarding intelligence support of homeland security measures implemented by the United States and explore how the intelligence community operates.
Lecture: 3 hours

CRJ 1052 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: 3 hours Lab fee: $35.00

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: 3 hours
Prerequisites: CRJ 2001, CRJ 2030 Lab fee: $65.00

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: 3 hours
Prerequisites: CRJ 2002, CRJ 2030 Lab fee: $65.00

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 2009 Teach/Learn Public Safety (A) 3 credits
The course is designed to give an overview of how to teach, both in an academic setting and in a training setting, for the public safety professions. The course teaches students how to teach others particular or theoretical skills and specific legal considerations for public safety.
Instructor permission required
Lecture: 3 hours

CRJ 2011 Crisis Intervention (A, SP) 2 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: 2 hours

CRJ 2012 Victimology (On Demand) 2 credits
This course will study the theory, law, and issues surrounding the victim. The history of the victim's rights movement and its applicability to the study of victims of crime will also be covered.
Lecture: 2 hours

CRJ 2017 Criminal Law (A) 3 credits
This course relates important aspects of the law related to criminal law violations. It gives a detailed differentiation between the criminal and the civil court systems as well as details various elements of crimes that must be proven in the court system.
Lecture: 3 hours

CRJ 2020 Constitutional Law (SP) 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) 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 (SP) 2 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.
Lecture: 2 hours

CRJ 2026 Crime Prevention (On Demand) 2 credits
This course will cover theories and strategies related to crime prevention. The preventive methodologies will explore crime prevention from a community and a Criminal Justice perspective.
Lecture: 2 hours

CRJ 2027 Public Relations (On Demand) 2 credits
This course will cover the relationship needed between any Criminal Justice agency and the media. Special emphasis will be placed on preparing those in positions of leadership or who have been designated as media representatives of agencies.
Lecture: 2 hours

CRJ 2030 Criminal Investigation I (A) 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.
Lecture: 3 hours

CRJ 2040 Correctional Administration (SP) 2 credits
This course will cover the various phases of administration as they relate to corrections. Three basic stages are covered: executive, mid-management and line operations. Each of these levels will be discussed as they relate to institutions, community-based institutions, and they will be covered for each division of corrections.
Lecture: 2 hours

CRJ 2041 Special Category Offender (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) 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 (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 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) 5 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: 3 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 (On Demand) 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 (A, 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 (On Demand) 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 (On Demand) 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 (A, SP) 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 1200, DHY 1210, DHY 1140, DHY 1260
Lab fee: $110.00

DHY 1130 Dental Radiography (SP) 3 credits
This course introduces the student to radiographic theory and techniques with emphasis on its nature and properties, safety precautions, and uses of the x-ray in dentistry. Laboratory experience provides opportunity for practice in film placement, tube angulation, exposure, processing and mounting.
Lecture: 2 hours - Lab: 3 hours
Prerequisites: BIO 2300, BIO 2232, CHEM 1113
Corequisites: DHY 1861, DHY 1250, DHY 1261, DHY 1300, DHY 1161
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: 2 hours
Prerequisites: BIO 2300, BIO 2232, CHEM 1113
Corequisites: DHY 1100, 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 special needs of the geriatric, pregnant and child patient.
Lecture: 1 hour
Prerequisite: DHY 1100; minimum grade of "C"
Corequisites: DHY 1861, DHY 1250, DHY 1261, DHY 1300, DHY 1130

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 necessary techniques and skills will be presented to perform an oral prophylaxis and related procedures.
Lab: 9 hours
Prerequisites: BIO 2300, BIO 2232, CHEM 1113
Corequisites: DHY 1100, 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 necessary techniques and skills will be presented to perform an oral prophylaxis and related procedures.
Lecture: 1 hour
Prerequisites: BIO 2300, BIO 2232, and CHEM 1113, all with a minimum grade of "C"
Corequisites: DHY 1100, 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 1861, DHY 1261, DHY 1300, DHY 1130

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 1200, DHY 1140, 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 1130, DHY 1161, DHY 1861, DHY 1250, DHY 1300

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 1861, DHY 1250, DHY 1261, DHY 1130

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 DHY 1130
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 2262, DHY 2862, DHY 2240
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 2262, DHY 2862, DHY 2200
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 2862, DHY 2240, DHY 2200

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 2863, DHY 2300, DHY 2400

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.
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.
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.
Clinical: 12 hours
Prerequisite: DHY 2263; minimum grade of "C"
Corequisites: DHY 2275, DHY 2264 Lab fee: $355.00

Dental Laboratory Technology (DENT)

DENT 1111 Anatomy & Occlusion (A, SP, SU) 3 credits
This course will provide an introduction to the oral cavity and masticatory system. Topics will include landmarks and supporting structures of the oral cavity along with the study of the bones and muscles of the head. Emphasis will be placed on the intense study of the permanent dentition. Students will also learn the effects of temporomandibular joint and mandibular movements associated with occlusal morphology. Students must be admitted to the Dental Laboratory program before enrolling in this course.
Lecture: 2 hours - Lab: 3 hours
Prerequisite: Acceptance into the Dental Laboratory program
Lab fee: $25.00

DENT 1142 Removable Partials (A, SP, SU) 4 credits
This course introduces and develops the study of the principles of removable partial dentures from survey, design, and fabrication to more complex, specialized techniques and designs such as stress-breakers and precision attachments. Students must be admitted to the Dental Laboratory program before enrolling in this course.
Lecture: 1 hour - Lab: 9 hours
Prerequisite: Acceptance into the Dental Laboratory program
Lab fee: $90.00

DENT 1153 Fixed Partials (A, SP, SU) 4 credits
This course involves the study of fabrication techniques regarding crown and bridge appliances, from construction of a single unit crown to multiple-unit structures. Students must be admitted to the Dental Laboratory program before enrolling in this course.
Lecture: 1 hour - Lab: 9 hours
Prerequisite: Acceptance into the Dental Laboratory program
Lab fee: $70.00

DENT 1223 Complete Dentures (A, SP, SU) 4 credits
This course provides students with an introduction to fundamental concepts and procedures necessary for constructing a complete denture. Procedures include preliminary impressions through wax contouring, with emphasis on artificial tooth arrangement. This course also includes procedures required to solve post-insertion problems (repair, reline, rebase). Other advanced topics include introduction of the immediate denture.
Lecture: 1 hour - Lab: 9 hours
Prerequisites: DENT 1111, DENT 1142 Lab fee: $65.00

DENT 1275 Ceramics (A, SP, SU) 4 credits
This course provides an introduction to dental ceramics and will involve a study of porcelain fused to metal restorations. Students will also learn to construct porcelain veneers and full-coverage, single- unit crowns.
Lecture: 1 hour - Lab: 9 hours
Prerequisites: DENT 1111, DENT 1153 Lab fee: $90.00

DENT 1285 Orthodontics (A, SP, SU) 2 credits
This course provides a basic introduction to the laboratory skills necessary to provide services in the areas of orthodontics.
Lecture: 1 hour - Lab: 3 hours Lab fee: $25.00

DENT 2364 History & Ethics (A, SP, SU) 2 credits
This course covers the history of dental technology and its effect upon dentistry. In addition, the course will explore current problems and situations a dental technician may encounter in the profession.
Lecture: 2 hours

DENT 2397 Applied Laboratory (A, SP, SU) 6 credits
This course consists mainly of laboratory time and is intended to simulate a working laboratory situation with regard to work schedules, case flow, and coping with real problems.
Lecture: 1 hour - Lab: 15 hours
Prerequisites: DENT 1223, DENT 1275 Lab fee: $115.00

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 0105 Basic Mathematics (A, SP, SU) 2 credits
This term class will introduce students to whole numbers, fractions, and decimals; study skill activities will build student skills in math study techniques, overcoming math anxiety, time management, calculator usage, and other topics to assist students overcome barriers to success in math. The course will also include managed small- group study time and practice designed to improve understanding of math and communication skills. A scientific calculator is required for the last chapter of the course and the final exam. Not open to students with credit for DEV 0115 or higher.
Lecture: 2 hours
Prerequisite: By placement exam Lab fee: $4.00

DEV 0115 Pre-Algebra (A, SP, SU) 4 credits
This course will include integers, expressions, linear equations, percents, proportions, geometry, application problems, rational expressions, and graphing basic linear equations. A scientific calculator is required. Concurrent enrollment in DEV 0116 strongly suggested for students unfamiliar with algebra. Not open to students with credit for MATH 1020 or higher.
Lecture: 4 hours
Prerequisites: By placement exam or DEV 0105; minimum grade of"C"
Lab fee: $9.00

DEV 0116 Master Math Pre-Algebra (A, SP, SU) 1 credit
This student success class will include discipline-based study skill work addressing math study, overcoming math anxiety, time management,

calculator usage and other topics to assist students overcome barriers to success in math. The course will also include managed small-group study time and practice designed to improve understanding of math and communication skills. A scientific calculator is required. Concurrent enrollment in DEV 0115 is required.
Lecture: 1 hour
Corequisite: DEV 0115 Lab fee: $3.00

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: Dev 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: Dev 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 1000 Survey of Digital Design (A, SP, SU) 3 credits
DDG 1000 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 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 1200 Color Mgt/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 1000 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) 3 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: 21 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 or FOTO 114 or FOTO 160

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 or FOTO 114 or FOTO 160
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 or FOTO 114 or FOTO 160
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 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 1990 Adv Digital Photography (A, SP, SU) 3 credits
FOTO 1990 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.
Lecture: 2 hours - Lab: 2 hours
Prerequisites: FOTO 1120, FOTO 1150 Lab fee: $5.00

FOTO 2120 Adv 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 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 1990 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 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 1990 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 1990 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 1990
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
Prerequisite: FOTO 1990 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 1990 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 1001 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 Lab fee: $22.00

ECDE 1002 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 Lab fee: $12.00

ECDE 1005 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 1001, ECDE 1002 Lab fee: $22.00

ECDE 1008 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 1001, ECDE 1002 Lab fee: $28.00

ECDE 1009 Language & Literacy Exp (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 1001, ECDE 1002 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 1008, ECDE 1009
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 1008, ECDE 1009 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 1008 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 1008, ECDE 1009

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 1009, 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
Prerequisites: ECDE 2820, ECDE 2920 Lab fee: $6.00

ECDE 2101 Experiences with Infants (On Demand) 1 credit
This course explores in more detail care giving for infants in group settings with emphasis on milestones of language, physical, and cognitive development, attachment, special needs, cultural influences, and guidance issues. Ohio's Early Learning and Development Standards will be examined in more detail as they pertain to infants.
Lecture: 1 hour
Prerequisite: ECDE 2010 Lab fee: $6.00

ECDE 2103 Experiences with Toddlers (On Demand) 1 credit
The course explores in more detail care giving for toddlers in group settings with emphasis on milestones of language, physical, and cognitive development, attachment, special needs, cultural influences, and guidance issues. Ohio's Early Learning and Development Standards will be examined in more detail as they pertain to toddlers.
Lecture: 1 hour
Prerequisite: ECDE 2010 Lab fee: $6.00

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 1008, ECDE 1009 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 1001 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 1008, ECDE 1009 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 1008, ECDE 1009
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 2831 Student Teaching Seminar (A, SP, SU) 2 credits
Students will have the opportunity to discuss their interactions with young children, staff, and parents in their assigned practicum settings. Students will analyze components of the learning environment, and their interrelationships in programs for young children and families as well as integrate theory and practice in planning that facilitates learning and promotes quality programming, guidance, health, and safety of pre-kindergarten children. Theories of development and curriculum will be reviewed along with factors that influence growth, development, and learning of young children. Successful completion with grade of "C" or better is required.
Seminar: 2 hours
Prerequisite: ECDE 2820
Corequisite: ECDE 2931 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 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 1008, ECDE 1009
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 2931 Student Teaching Practicum (A, SP, SU) 2 credits
This practicum allows students to integrate theories of curriculum and child development with actual teaching practice as they implement plans with young children individually and in groups. They will also interact with families, planning activities for family involvement. Students will hone their teaching skills in assigned pre-kindergarten classrooms five days a week for a total of 21 hours weekly.
Practicum: 14 hours
Prerequisite: ECDE 2920; minimum grade of "C"
Corequisite: ECDE 2831 Lab fee: $35.00

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

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 Topic: 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) 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) 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 the Allen Bradley SLC PLC's using RS 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, PHYS 0100 or higher, 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 2205 PCB Design, Assembly and Testing (A, SP) 3 credits
EET 2205 is an introductory course incorporating the use of computer aided design software and fabrication of printed circuit boards (PCB) from design and assembly through final testing including documentation standards. This course includes both through-hole PCBs and SMT (Surface Mount Technology) PCBs.
Lecture: 1 hour - Lab: 6 hours
Prerequisite: EET 1135 Lab fee: $18.00

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, as well as for the development of sophisticated digital systems.
Lecture: 2 hours – Lab: 2 hours
Prerequisites: EET 1005, 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 1003 Introduction to Rescue for the EMS Provider (SU) 2 credits
This course will introduce the student to the fundamentals of rescue from the EMS perspective. The program will provide case-based learning as well as some hands-on experience in approaching the scene of a rescue emergency with the goal of maintaining safety for the rescuer and victims.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: EMS 1860 Lab fee: $70.00

EMS 1004 River Rescue (SU) 2 credits
This course deals with rescuing victims from the water. It will include, but is not limited to, rope rescue systems, self rescue, rescue from shore, boat assisted rescues, and rescue from boats.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: EMS 1860 Lab fee: $30.00

EMS 1005 Ice & Cold Water Rescue (SP) 2 credits
The course deals with rescuing victims from ice covered and cold water, hypothermia and other related medical concerns.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: EMS 1860 Lab fee: $40.00

EMS 1006 Vertical Rescue (A, SP) 3 credits
This course is designed to present the fundamentals of rope rescue, using up-to-date equipment and techniques with a major emphasis on safety. Terminology, selection of proper equipment, essential knots, and current standards will be presented, as well as rope rescue systems and litter packaging. Practical application evolutions will include solving rescue problems and evaluating rope rescue systems stranded from ledges, cliffs, elevator shafts, etc.
Lecture: 1 hour – Lab: 6 hours
Prerequisite: EMS 1860 Lab fee: $40.00

EMS 1007 Search & Rescue Certificate (A, SP) 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 1008 WMD for Emergency Services (A, SP) 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 1009 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 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 1002, EMS 1860, 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, SP) 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 (A, SP) 3 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: 3 hours
Instructor permission required
Prerequisite: ACLS certification or equivalent Lab fee: $75.00

EMS 2004 EMT Refresher (SP, 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, SP) 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 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 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 Fund 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.
Lecture: 2 hours - Lab: 2 hours
Prerequisites: MATH 1150 or higher Lab fee:$25.00

ENGR 1182 Fund of Engineering II (A, SP, SU) 3 credits
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.
Lecture: 2 hours - Lab: 2 hours
Prerequisites: MATH 1151 or higher, ENGR 1181 Lab fee: $25.00

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.
Lecture: 3 hours
Prerequisite: DEV 0155; minimum grade of "C" or COMPASS writing score of 31-68 Lab fee: $5.00

ENGL 1099 Composition Workshop (A, SP, SU) 1 credit
ENGL 1099 Composition Workshop is a one-credit course offered in conjunction with ENGL 1100 for students who can benefit from additional independent small-group, or tutor-/teacher-directed work. This course enhances the development and improvement of reading and writing skills necessary for successful completion of ENGL 1100. Students must take this course concurrently with ENGL 1100.
Seminar: 1 hour

Prerequisite: COMPASS writing score of 55-68
Corequisite: ENGL 1100 Lab fee: $2.00

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.
Lecture: 3 hours
Prerequisite: ENGL 0190, minimum grade of "C" or COMPASS writing score of 69-99 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; 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; 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; 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; 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; 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; 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; 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; 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; 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; 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; 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; 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.
Lecture: 3 hours
Prerequisite: ENGL 1100; minimum grade of "C" Lab fee: $5.00

ENGL 2567 Composition II: Writing about Gender and Identity (A, SP, SU) 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, SP, SU) 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 (A, SP, 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. Conduct some research in preparation for informative and persuasive speeches, which are presented individually and in groups. Students receive feedback from the instructor and classmates and are video-taped for self-analysis. Credit does not count toward graduation in any degree program.
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

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, SU) 2 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: 1 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: 2 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 relevant changes in OSHA requirements. This is a repeatable course.
Lecture: 0.5 hours Lab fee: $50.00

ESSH 2750 Industrial Hygiene (A) 3 credits
This course is an overview of the science of industrial hygiene. It describes the process of investigating and examining workplace hazards and how those hazards are abated. The laboratory will emphasize the use of instrumentation and important calculations. Topics include introduction to industrial hygiene, principles of toxicology, occupational safety and health standards, occupational skin and noise disorders, indoor air quality, ergonomics, engineering and administrative controls, and personal protective equipment.
Lecture: 2 hours - Lab: 2 hours
Prerequisite: CHEM 1111 Lab fee: $18.00

ESSH 2900 ESSH Field Experience (SU) 2 credits
The Field Experience course requires an off-campus work experience in the environmental or safety services industry. This augments the formal education received in the degree program with actual work conditions and job experience. Nontraditional Credit ("N") will not be allowed for this course.
Field Experience: 24 hours

ESSH 2994 Special Topics: ESSH (On Demand) 1-4 credits
This course explores special topics from the environmental or safety industry designed to meet specific needs.
Lecture: Varies

Finance (FMGT)

FMGT 1101 Personal Finance (A, SP, SU) 3 credits
This course presents a lifetime program of money management for the individual. Topics such as budgets, savings, job search, buying a house, insurance, mutual funds, stock market, real estate investments, taxes, and estate planning are covered. Students will be able to write a basic personal financial plan.
Lecture: 3 hours
Prerequisite: Placement into DEV 0115 or higher Lab fee: $4.00

FMGT 1211 Investments (A, SP, SU) 3 credits
This course examines investments for the individual with emphasis on the securities markets. Topics presented include risk and return tradeoffs, sources of investment information, stocks, bonds, mutual funds, options and tax considerations.
Lecture: 3 hours
Prerequisite: Placement into DEV 0115 or higher Lab fee: $4.00

FMGT 2201 Corporate Finance (A, SP, SU) 3 credits
FMGT 2201 presents an introduction to the principles of financial management of private business firms. Topics covered include financial analysis, financial planning, working capital management, financial leverage, sources of financing, capital budgeting and capital markets.

Lecture: 3 hours
Prerequisite: ACCT 1211 Lab fee: $4.00

FMGT 2202 Money and Banking (A, SU) 3 credits
This course explores the operation, organization, and economics of the U.S. monetary and banking systems. Current trends, the monetary policy process, and the regulation of financial markets also are covered.
Lecture: 3 hours
Prerequisite: ECON 2200 Lab fee: $.4.00

FMGT 2232 Principles of Insurance (A, SP) 3 credits
This course introduces the principles of insurance and risk management, including terminology and definitions as used in the industry. The foundations, applications and selection of personal, life, health, and commercial insurance and liability are explored. Students must pass this course with a 'C' or better.
Lecture: 3 hours
Prerequisite: BMGT 1101, minimum grade C and placement into DEV 0115

FMGT 2242 International Finance (A, SP) 3 credits
This course covers the multinational firm, globalization, balance of payments, market for foreign exchange, international monetary system, and global capital markets. Also covered is the study of global debt and equity markets to optimize a firm's financial structure while minimizing foreign exchange exposure.
Lecture: 3 hours
Prerequisite: FMGT 1101 Lab fee: $4.00

FMGT 2299 Finance Capstone (A, SP) 3 credits
The student receives exposure to current developments in finance and economics through projects and research papers. FMGT 2299 is designed to serve as a capstone course for graduating students.
Lecture: 3 hours
Prerequisites: FMGT 1101, FMGT 1211, FMGT 2201, FMGT 2202

FMGT 2901 Finance Practicum/Seminar (A, SP, SU) 3 credits
This course offers a practical work experience in which the student is expected to perform various financial procedures. Emphasis is placed upon analyzing and understanding the work environment, industry and nature of the employing organization.
Seminar: 1 hour - Practicum: 14 hours
Prerequisites: FMGT 1101, FMGT 1211, FMGT 2201, FMGT 2202

Fire Science (FIRE)

FIRE 1000 Principles Emergency Services (A, SP) 3 credits
This course provides an overview to fire protection and emergency services, career opportunities in the fire protection and related fields, culture and history of the emergency services, fire loss analysis, and the organization and function of public and private fire protection services.
Lecture: 3 hours

FIRE 1001 Firefighter I (A, SP, SU) 5 credits
This course covers all of the basic performance and knowledge objectives in the current NFPA Standard 1001 for Firefighter I, including but not limited to: fire department organization, safety, fire alarm, fire behavior, extinguishment, rope, ladders, hose streams, fire control and rescue.
Lecture: 3 hours - Lab: 6 hours Lab fee: $300.00

FIRE 1002 Firefighter II (A, SP, SU) 5 credits
This course covers all of the basic performance and knowledge objectives in the current NFPA Standard 1001 for Firefighter II, including but not limited to: fire department organization, safety, fire alarms, fire behavior, extinguishment, rope, ladders, hose streams, fire control and rescue.
Lecture: 3 hours – Lab: 6 hours

FIRE 1003 Fire Behavior & Combustion (SP) 3 credits
This course explores the theories and fundamentals of how and why fires start, spread and are controlled.
Lecture: 3 hours
Prerequisites: FIRE 1000 or FIRE 1001 and FIRE 1002
Lab fee: $5.00

FIRE 1005 Basic Building Construction for the Fire Service (A) 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 1000 or FIRE 1001 and FIRE 1002
Lab fee: $5.00

FIRE 1007 Fire Hydraulics/Water Supply (SP) 2 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
Prerequisites: FIRE 1000 or FIRE 1001 and FIRE 1002
Lab fee: $8.00

FIRE 1009 Fire Prevention/Protection Systems (A) 3 credits
This is a dual course. Fire Prevention provides fundamental knowledge relating to the field of fire while Fire Protection Systems provides information relating to the features of design and operation of fire alarm systems.
Lecture: 3 hours
Prerequisites: FIRE 1000 or FIRE 1001 and FIRE 1002
Lab fee: $5.00

FIRE 1101 Legal Issues for the Emergency Services (SU) 3 credits
This course will address the federal, state, and local laws that regulate emergency services, and it includes a review of national standards, regulations, and consensus standards.
Lecture: 3 hours Lab fee: $5.00

FIRE 1103 Hazardous Materials Technician Level (A) 3 credits
This course will provide fundamental knowledge of the properties and behavior of various hazardous chemicals in our environment. It presents an overview of the physical and chemical characteristics of toxic, flammable, and reactive substances in the form of solids, liquids, and gases, combined with practical application of methods for responding to emergencies involving such materials.
Lecture: 3 hours
Prerequisites: FIRE 1001, FIRE 1002, FIRE 1003 Lab fee: $8.00

FIRE 1105 Strategies/Tactics of Firefighting (SP) 3 credits
This course presents the principles of fire ground control through utilization of personnel, equipment, and extinguishing agent.
Lecture: 3 hours
Prerequisites: FIRE 1000 or FIRE 1001 and FIRE 1002
Lab fee: $5.00

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 1000 or FIRE 1001 and FIRE 1002
Lab fee: $5.00

FIRE 2003 Fire Arson Investigation (SU) 3 credits
This course is intended to provide the student with the fundamental skills 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 1000 or FIRE 1001 and FIRE 1002
Lab fee: $5.00

FIRE 2005 Principles of 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 1000 or FIRE 1001 and FIRE 1002
Lab fee: $5.00

FIRE 2105 Advanced Building Construction/Collapse (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
Instructor permission required
Prerequisites: FIRE 1001, FIRE 1002

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 GIS in Industry (A, SP, SU) 2 credits
This course is to introduce members of construction, engineering, business, real estate, health, emergency management and utility industries to GIS. Students learn how to use ArcGIS tools to perform basic GIS tasks such as accessing, displaying, querying, and editing geographic data. In the course, students will learn the core GIS skills they need to support their organizations' missions using terminology, exercise scenarios, and data relevant to many industries. The course concludes with a group project in which students will apply what they have learned to work through a particular industry chosen scenario.
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 different types of programming used in GIS. Students will learn to use model-builder and they will learn how to use and customize scripts for use with ArcGIS. They will also be introduced to object-oriented programming. Students should have some familiarity with ArcGIS Desktop and concepts of programming. It is recommended the student take GIS 1201 concurrently.
Lecture: 1 hour - Lab: 4 hours
Prerequisites: ITST 1102, GIS 1200
Corequisite: GIS 1201 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 Adv 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: $30.00

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 2850 Seminar: GIS (A, SP, SU) 1 credit
This course is the application of business knowledge to specific areas of on-the job work experience. The student takes this course concurrently with GIS 2900.
Seminar: 1 hour
Corequisite: GIS 2900 Lab fee: $8.00

GIS 2900 GIS Practicum (A, SP, SU) 3 credits
This course is off-campus work experience in GIS 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. This course is only open to GIS.AAS or GIS.ICERT majors. The student takes this course concurrently with GIS 2850.
Practicum: 21 hours
Corequisite: GIS 2850

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, SU) 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, SU) 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: Placement into ENGL 1100 or higher and MATH 1030 or MATH 1050 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 Conv & Comp (AU, SP, SU) 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 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 HIM (A) 3 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: 3 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 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 1135A Health Data Management--Collection (A)1.50 credits
This course provides the theory component of health data management. The student is introduced to data collected and maintained by health care providers and the regulatory and accreditation standards requirements.
Lecture: 1 hour – Lab: 1 hour
Corequisite: HIMT 1111

HIMT 1135B Health Data Mgmt--EHR (A) 1.50 credits
This course provides hands-on experience with the electronic health record (EHR). Health record content is reviewed and data flow as it relates to navigation and use of the EHR.
Lecture: 1 hour – Lab: 1 hour
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 Clinical Classification I (SP) 3 credits
Students are introduced to the ICD-9-CM 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 1100; minimum grade of "C"
Corequisite: BIO 2300 Lab fee: $41.00

HIMT 1255 Clinical Classification II (SP) 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 1100; minimum grade of "C"
Corequisite: BIO 2300 Lab fee: $41.00

HIMT 1256 Clinical Documentation & Disease (A) 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 (SP) 3 credits
Students are introduced to revenue cycles, payers, and reimbursement systems as they apply to the payment of health care services.
Lecture: 3 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, 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 2133 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
Prerequisite: HIMT 1111; minimum grade of "C"

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"

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 (A) 2 credits
Students study the functions related to planning, organizing, controlling, budgeting, and evaluating human resources.
Lecture: 2 hours

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
Corequisite: HIMT 2860 or HIMT 2870

HIMT 2860 Professional Practice Experience Medical Coding Applications (A) 4 credits
Students are provided professional practice experience (PPE) in medical coding and reimbursement. This course is intended to help students bridge the gap between the classroom and work environment. Instructor permission required.
Lecture: 1 hour - Lab: 6 hours
Prerequisites: HIMT 1111, HIMT 1135, HIMT 1245, HIMT 1255, HIMT 1256, and HIMT 1265; minimum grade of "C"
Lab fee: $153.00

HIMT 2870 Professional Practice Experience HIM Applications (SP) 4 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 health care facilities. Students are assigned projects requiring the application of concepts studied throughout the HIMT curriculum including the creation of a database project. Instructor permission required.
Lecture: 1 hour - Lab: 6 hours
Prerequisites: HIMT 1111, HIMT 1135, HIMT 2133, HIMT 2860, and CSCI 2325; minimum grade of "C"
Corequisites: HIMT 2257, HIMT 2259, HIMT 2294
Lab fee: $62.00

HIMT 2870A PPE HIM App HIM Functions (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 health care facilities. Instructor permission required.
Lecture: 0.5 hour – Lab: 3 hours
Prerequisites: HIMT 1111, HIMT 1135, HIMT 2133, HIMT 2860; minimum grade of "C"
Corequisites: HIMT 2259, HIMT 2294, HIMT 2257
Lab fee: $31.00

HIMT 2870B PPE HIM App HIT Concepts (SP) 2 credits
Student 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. Instructor permission required.
Lecture: 0.5 hour – Lab: 3 hours
Prerequisites: HIMT 2870A, CSCI 2325 Lab fee: $31.00

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) 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: 2.5 hours - Lab: 1 hour 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 A/C & Heat Pump (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) 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) 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 A/C Systems (On Demand) 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 (On Demand) 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 (On Demand) 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 Adv 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.
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.
Lecture: 3 hours
Prerequisite: Placement into ENGL 1100 Lab fee: $2.00

HIST 1181 World Civilization I: Non-Western to 1500 (A, SP, SU) 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 (A, SP, SU) 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, 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 1535 Arboriculture (A, SU) 2 credits
This course introduces the basic principles of tree biology and care. Arboricultural practices will be discussed and performed.
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, SU) 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)

Dietetic Technician Major (DIET)

DIET 1901 DIET 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: Instructor permission required Lab fee: $60.00

DIET 1902 DIET Practicum II (SP) 2 credits
This course offers additional opportunities for practical application of information presented in the classroom from HOSP 1122, HOSP 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 situtions 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: DIET 1901; minimum grade of "C"
Corequisites: HOSP 1107, HOSP 1109 Lab fee: $20.00

DIET 2265 Dietetic Current Issues (SP) 1 credits
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.
Lecture: 1 hour

DIET 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: HOSP 1153, BIO 2232; minimum grade of "C"
Lab fee: $10.00

DIET 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.
Lecture: 2 hours - Lab: 2 hours
Prerequisite: DIET 2275; minimum grade of "C" Lab fee: $10.00

DIET 2277 Dietetic Technician Registration Exam Review (SP)1 credit
This course is designed to prepare dietetic technician majors for success in completing the American Dietetic Association- Commission on Dietetic Registration Examination for Dietetic Technicians.
Lecture: 1 hour
Prerequisite: DIET 2901

DIET 2901 DIET Practicum III (A) 2 credits
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. 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: 1 hour - Practicum: 7 hours
Prerequisites: DIET 1902; minimum grade of "C" or DIET 192 and DIET 193 Lab fee: $100.00

DIET 2902 DIET 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. A grade of C or higher is required for graduation.
Seminar: 1 hour - Practicum: 10.5 hours
Prerequisites: DIET 2901, DIET 2275; minimum grade of "C"
Corequisite: DIET 2276 Lab fee: $20.00

HOSP 1101 Research Hosp & 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 Principals & 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.
Lecture: 3 hours - Lab: 2 hours
Prerequisite: Placement into MATH 1010 Lab fee: $5.00

HOSP 1109 Basic Food Production (A, SP) 4 credits
In this course, students will learn to operate, clean and describe preventive maintenance of commercial foodservice equipment and apply that knowledge in a laboratory setting in which they will produce and serve marketable food products according to standardized recipes in a commercial kitchen environment. Basic knife skills and cooking techniques, following sanitation and safety guidelines, will be practiced. Appropriate uses for equipment and general equipment layout for safety, sanitation and efficiency will be discussed. The products will be served in a dining room setting.
Lecture: 2 hours -Lab: 6 hours
Corequisites: HOSP 1122, HOSP 1107 Lab fee: $117.00

HOSP 1110 Baking Principles (A, SU) 2 credits
This is a course in the fundamentals of baking terminology, baking principles, the characteristics and functions of the main ingredients used in bakery production, and an introduction to recipe adjustments and recipe costing.
Lecture: 2 hours
Prerequisite: Placement into MATH 1010

HOSP 1112 Breads (A, SP) 4 credits
This laboratory course builds on the baking terminology, baking science and theory of HOSP 1110. Bread-making processes and techniques, such as scaling, mixing and leavening methods, shaping, proofing, scoring, and baking are studied and practiced for skill development. A broad range of consumer baked goods such as yeast-raised breads, quick breads, complex whole grain and other artisan breads are produced. Industry standard products for commercial production will be introduced. Within the study of the various baking topics, ingredient selection considerations, conversions, recipe adjustments and recipe costing will be studied and incorporated. Principles of food safety and proper facilities and equipment safety will be emphasized.
Lecture: 1 hour - Lab: 9 hours
Prerequisites: HOSP 1122, HOSP 1110 Lab fee: $100.00

HOSP 1113 Pastries I (A, SU) 4 credits
HOSP 1113 is a laboratory course which builds on the baking terminology, baking science and theory of HOSP 1110. A broad range of consumer baked goods such as specialty cakes and cookies, pies, tarts, and fundamental pastry elements such as choux paste, meringues, custards, creams and sauces are studied and produced. Both scratch- and industry-standard convenience products will be utilized in the production of restaurant and specialty desserts. Within the study of the various topics, ingredient selection considerations, baking calculations, conversions, recipe adjustment and recipe costing are studied and incorporated. Principles of food safety and proper facilities and equipment safety will be emphasized.
Lecture: 2 hours - Lab: 6 hours
Prerequisites: HOSP 1110, HOSP 1122 Lab fee: $80.00

HOSP 1122 Hospitality Facilities & Sanitation (A, SP, SU) 2 credits
This course presents a detailed study of the HACCP (Hazard Analysis Critical Control Points) procedures which include the control of bacteria, materials handling and safety practices to maintain a safe and healthy environment for the consumer in the food and lodging industry. Included is an examination of laws and regulations related to safety, fire, and sanitation, as well as an emphasis on the importance of facility planning, design and maintenance. To receive credit for the course, students must pass the Applied Foodservice Sanitation examination from the Educational Foundation of the National Restaurant Association (ServSafe). Students will receive certificates from the Educational Foundation and from the Ohio Dept. of Health.
Lecture: 1 hour - Lab: 2 hours Lab fee: $10.00

HOSP 1143 Hospitality & Tourism Law (A, SU) 2 credits
HOSP 1143 provides a general knowledge of the law as it applies to the hospitality and tourism industry.
Lecture: 2 hours

HOSP 1145 Lodging Operations (A, SP) 3 credits
This course provides the student with a basic understanding of the lodging industry. It covers the activities of various hotel operating departments: front office, housekeeping, food & beverage, hotel purchasing, marketing, yield management, engineering, security and accounting. Emphasis will be placed on handling guest needs.
Lecture: 2 hours - Lab: 2 hours

HOSP 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: Placement into ENGL 1100, MATH 1010

HOSP 1154 Tourism Geography (A, SP, SU) 3 credits
This course presents a geographical and cultural study of all major regions of the world with emphasis on the most popular travel destinations. It includes lodging, points of interest, customer profile and transportation types for each destination.
Lecture: 2 hours - Lab: 2 hours

HOSP 1155 Tourism Operations (A, SP) 4 credits
This course provides students with a basic understanding of the travel and tourism industry. Travel agency operations are covered, with students using a variety of reference materials to develop air and rail itineraries, reserve cars and hotels, calculate fares, and create tours and cruises. Government agencies and organizations that affect the industry are described. Also included is a framework for the development of tourism in the community and region. This course is designed to combine student-reading materials with hands-on computer experience in a simulated travel agency setting. The state-of-the-art CBL VIASINC GDS Training System APOLLO will be used to develop student skills in the utilization of the Global Distribution System. Working in the networked Windows environment, students will learn how to search for travel information, make airline reservations and issue tickets.
Lecture: 3 hours - Lab: 2 hours
Prerequisite: HOSP 1154 Lab fee: $60.00

HOSP 2114 Pastries II (A) 4 credits
A laboratory course which builds on the baking terminology, baking science and theory and skill development of HOSP1113. A broad range of advanced topics in Pastry Arts such as restaurant style plated desserts and presentation components, classic European-style tortes and petit fours, specialty cakes, fillings, frostings, and decorative elements are studied and produced. Both scratch- and industry standard-convenience products will be studied and utilized. Within the study of the various topics, ingredient selection considerations, baking calculations, conversions, recipe adjustment and recipe costing are studied and incorporated. Principles of food safety and proper facilities and equipment safety will be emphasized.
Lecture: 2 hours - Lab: 6 hours
Prerequisite: HOSP 1113 Lab fee: $80.00

HOSP 2207 Hospitality Financial Analysis (A, SP, SU) 3 credits
This course looks at accounting theory and use of the Uniform System of Accounting as applied to the hospitality and restaurant industry. It emphasizes development and use of financial statements and provides an overview and understanding of the need for budgets and budgeting. This course covers the principles and procedures involved in an effective system of food, beverage, labor and sales control. Course emphasizes the development and use of standards and calculations of actual costs.
Lecture: 2 hours - Lab: 2 hours
Prerequisite: MATH 1010

HOSP 2214 International Cuisine (SU) 2 credits
This course focuses on the cuisines of the world. Students will research diverse countries and regions and prepare and present a written report on a specific country. Students will prepare foods using recipes that represent a variety of cultures, native ingredients, seasonings, and flavors. Instructor's consent is required.
Lecture: 1 hour - Lab: 2 hours
Prerequisites: ENGL 1100, HOSP 2216 Lab fee: $100.00

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: $135.00

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: $125.00

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: $60.00

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 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: $100.00

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 Operation (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. Students will be provided with the opportunity to complete the ACF Certification exams, both written and practical for Certified Pastry Culinarian (CPC).
Lecture: 1 hour – Lab: 2 hours
Instructor permission required Lab fee: $80.00

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 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 cours 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: $205.00

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: $100.00

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 and HRM 1223; minimum grade of "C",

ENGL 1100, STAT 1350 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", ENGL 1100, STAT 1350 Lab fee: $10.00

HRM 2223 Workplace Safety (A) 3 credits
This course provides the student in the Human Resources Management Technology 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 Technology, 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 Technology, the course provides a guided work experience (minimum of 14 hours per week) in a human resources office or work environment providing human resources services. The student and the employer/placement site supervisor determine exact duties. Students are responsible for securing their own practicum position. The course also provides for a discussion of the work experience and demonstration of the ability to transfer program skills to a real-world work environment through the completion of written weekly reports and the development of work related projects and assignments.
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, and HRM 2240; minimum grade of "C." 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

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 Exp 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 1010 Principles of Interactive Design (A, SP, SU) 3 credits

IMM 1010 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 1010 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 keyframes on a timeline and work with transform properties, motion paths, masks, and effects. Students will need to have Adobe Premiere Pro knowledge before taking this class.
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 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 2550 Foley Sound Creation (SP) 3 credits
IMM 2550 will cover both the production and post-production techniques associated with the creation of audio assets for use in digital media. Students will be required to plan and produce multimedia programs with audio assets that the individual student creates. The course provides an advanced understanding of audio equipment for digital production in the field and in the recording studio. The use of ProTools technology is emphasized.
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 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 2755 Rich Media Communications (A) 2 credits
IMM 2755 follows the guidance of the Adobe Certified Associate program objectives for their "Rich Media Communications" certificate. Upon successful conclusion of this course, 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 Rich Media Communications.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: IMM 1120 Lab fee: $21.00

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 2765 Visual Communications (A) 2 credits
IMM 2765 follows a curriculum directed by Adobe, which centers on the Adobe Photoshop software application. This course prepares students for testing in the Adobe Certified Associate "Visual 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 Visual 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) 3 credits
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: 21 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: 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 2901 Interpreting Practicum I (A, SP, SU) 3.5 credits
Students participate in a supervised practicum experience of a minimum of 160 hours 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 per 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 RID Code of Professional Conduct is required. This course must be completed with a B or higher to move into IEP 2902. A score of 80% or higher on Entrance Exam for Practicum (EEP) one semester prior to registration of IEP 2901 is required for this course. See advisor for information and assistance.
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"; score of 80% or higher on Entrance Exam for Practicum (EEP) one semester prior to registration
Corequisites: IEP 2203, IEP 2403 Lab fee: $40.00

IEP 2902 Interpreting Practicum II (A, SP, SU) 3.5 credits
Students participate in a supervised practicum experience of a minimum of 160 hours 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 per 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 RID Code of Professional Conduct is required. This course must be completed with a B or higher to satisfy graduation requirement.
Seminar: 1.5 hours - Practicum: 14 hours
Instructor/advisor permission is required.
Prerequisites: IEP 2203, IEP 2403; courses completed with minimum

grade of "C"; IEP 2901 with minimum grade of "B"
Lab fee: $40.00

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 (A, SP, 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 (A, 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 (A, SP, 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 1010 Retailing (A, SP, SU) 3 credits
MKTG 1010 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 1020 Branding (A, SP, SU) 3 credits
MKTG 1020 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 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 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 1285 Advertising & Promotion on the Web (A) 1 credit
MKTG 1285 provides the student with an overview of how the Internet can be used as part of an organization's advertising and promotional strategy. The focus is on the Internet as another means of communicating with an organization's various target markets.
Lecture: 1 hour Lab fee: $1.00

MKTG 1286 Customer Service on the Web (A) 1 credit
MKTG 1286 provides the student with an opportunity to see how the Internet can be used to improve the basic delivery of customer service and to improve customer relations for business organizations.
Lecture: 1 hour Lab fee: $1.00

MKTG 1287 Public Relations on the Web (A) 1 credit
MKTG 1287 focus course on the real world use of the Internet in developing organizational objectives. Students will use the Internet to examine trends, basic concepts and current practices in public relations.
Lecture: 1 hour Lab fee: $1.00

MKTG 1288 Market Research on Web (SP) 1 credit
MKTG 1288 students will use the Internet to gather information on customers, business organizations, and nonprofit institutions. Attention will be given to using the Internet as a tool to find the best sources of information to solve real-world marketing problems.
Lecture: 1 hour Lab fee: $1.00

MKTG 1289 Direct Marketing on the Web (SP) 1 credit
MKTG 1289 students will use the Internet as a tool in the direct marketing process. The focus will be on using the Internet as a vehicle to create databases and as a direct response mechanism for target markets.
Lecture: 1 hour Lab fee: $1.00

MKTG 1290 Government Marketing on the Web (SP) 1 credit
MKTG 1290 studies government characteristics and its use of emerging technology to market services to, and communicate with, citizens. The course will examine the relationships between government and citizens with an emphasis on the use of Web-based technology to enhance those relationships.
Lecture: 1 hour Lab fee: $1.00

MKTG 1292 Non-Profit Marketing Using Web (SP) 1 credit
A study of the characteristics of nonprofit organizations and their use of emerging technology to market services, raise funds, and communicate with people. The course will examine the relationships between nonprofit organizations and service consumers and funding agents with an emphasis on the use of Web-based technology to enhance those relationships.
Lecture: 1 hour Lab fee: $1.00

MKTG 2200 Web & Electronic 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 Info & 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 1010 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) 3 credits
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: 21 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/Entrepreneurship (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 seven (7) basic techniques of massage. The student will study the therapeutic applications and physiological effects of the basic techniques and begin to develop a systematic approach to the application of these techniques.
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 2280 Nationwide Children's Hospital Advanced Studies (A, SP, SU) 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 (A, SP) 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 (SP, 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 (A, 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 (SP, 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 (A, 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 0105; 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 percents 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.
Prerequisite: DEV 0115; 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 0115; minimum grade of "C" or completion of MATH 1099 (DEV-0115 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 0115; minimum grade of "C" or completion of MATH 1099 (DEV 0115 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 0115, 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 0115 or MATH 1020 or MATH 1030 or MATH 1075 registration Lab fee: $7.00

MATH 1110 Math Skilled Trades (A, SP, SU) 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, geometry, measurement, 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
This course is a continuation of MATH 1125. Course is designed as an in-depth study of the basic concepts of logic, geometric constructions and proof, algebraic thinking, 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; 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 extended and applied to solving equations and inequalities. 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 equations are solved using algebraic methods and Cramer's Rule. 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, SU) 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.
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 or MATH 152; minimum grade of "C"
Lab fee: $2.00

MATH 1156 Calculus for Bio Science (A, SP, SU) 5 credits
This course presents differential and integral calculus of a single variable including limits, continuity, derivatives, Mean Value Theorem, extrema, curve sketching, related rates, differentiation of the trigonometry, logarithmic, and exponential functions, integrals, area, Fundamental Theorem of Calculus, logarithmic and exponential functions, trigonometric and inverse trigonometric functions, methods of integration, applications of integration, and polar coordinates. Applications to the biological sciences will be stressed. Not open to students with credit for MATH 1151 and above.
Lecture: 5 hours
Prerequisite: MATH 1149 or MATH 1150, minimum grade of "C"

MATH 1157 Modeling for Bio Sciences (A, SP, SU) 5 credits
This course presents integration, topics in linear algebra, dynamical systems, vector fields, gradients, and team modeling projects. Not open to students with credit for MATH 1152 or MATH 2153 and higher.
Lecture: 5 hours
Prerequisite: MATH 1151 or MATH 1156; minimum grade of "C"

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 or MATH 152; 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 (A, 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 or MATH 254; minimum grade of "C"
Lab fee: $2.00

MATH 2366 Discrete Math Structures (A, SP, 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 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 254; 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 2153 or MATH 254; minimum grade of "C"
Lab fee: $2.00

Mechanical Engineering Technology (MECH)

MECH 1130 Statics (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.
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 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) 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: ENGT 1100, ENGT 1115, MATH 1113, MECH 1240
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: Placement into MATH 1148 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 will include infection control, sanitization, sterilization, hand-washing, measuring height and weight, setting up the physical examination tray, positioning patients and assisting the physician in examinations. The guidelines for OSHA compliance and emergency preparedness are discussed.
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 & 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. The topics included in this lecture include prescription legalities, prescription abbreviations, prescription format, maintenance of medication and immunization records, drug therapy, screening and follow-up patient procedures. The theory and principal of drug administration is discussed. The accuracy of recording medications in the medical record is emphasized.
Lecture: 2 hours
Prerequisites: MAT 1122, MAT 1123, MAT 1100, 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 1122, MAT 1123, MAT 1100, MAT 1200, MAT 1300, MAT 1400 with grade of "C" or higher
Corequisite: MAT 1230 Lab fee: $60.00

MAT 1238 Comp Apps 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 1122, MAT 1123, MAT 1100, 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 1122, MAT 1123, MAT 1100, 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 1122, MAT 1123, MAT 1100, 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 disease treated in the medical office by the various medical specialties will be studied.
Lecture: 2 hours
Prerequisites: Placement into MATH 1020, completion of MAT 1100 and 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: Placement into MATH 1020, completion of MAT 1100 and 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 1200, MAT 1300, MAT 1400, MAT 1122, MAT 1123, MAT 1230, MAT 1231, MAT 1238, MAT 1240, MAT 1241 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 1300, MAT 1400, MAT 1122, MAT 1123, MAT 1230, MAT 1231, MAT 1238, MAT 1240, MAT 1241 with grade of "C" or higher
Corequisite: MAT 2800

Medical Laboratory Technology (MLT)

MLT 1100 Introduction to Health Care (A, SP, SU) 2 credits
This course provides a general introduction to health care in the U.S., covering topics such as the history of Western medicine, legal and ethical issues, alternative medicine, safety issues, and the evolution of hospitals, medical education, and insurance. The course is taught through a combination of in-class and online materials and will provide students in health-related fields with the background necessary to pursue further studies.
Lecture: 2 hours
Prerequisite: DEV 0145 or placement into No Reading Required

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 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 into 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 into 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 Med 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 2260, MLT 2261, MLT 2250, MLT 2251 and MULT 1916; all courses completed with minimum grade of "C"
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 an approximate 60 mile radius of Columbus. Students will be required to provide their own transportation. Upon completion, students should be able to demonstrate competency in career entry-level areas.
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 1100, 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 1100, placement into ENGL 1100, and placement into No Reading Required
Corequisite: CLA 1100
Lab fee: $300.00

Mental Health/Addiction Studies/ Developmental Disabilities (MHAD)

MHAD 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

MHAD 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

MHAD 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 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

MHAD 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

MHAD 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: MHAD 1111, MHAD 1112, MHAD 1114, MHAD 1115, ENGL 1100, COLS 1100 Lab fee: $4.00

MHAD 1135 Intervention Strategies (A, SP, SU) (Modules A & B included) 3 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. Pharmacological interventions including the conditions for which they are prescribed, their physiological impact, and the common side effects of psychotropic medications will be addressed. This course must be completed with grade of "C" or higher.
Lecture: 3 hours
Prerequisites: MHAD 1111, MHAD 1112, MHAD 1114, MHAD 1115, ENGL 1100, COLS 1100 Lab fee: $5.00

MHAD 1135 Module A 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.
Certificate Course: Instructor permission required
Lecture: 2 hours Lab fee: $4.00

MHAD 1135 Module B Intervention Strategies (On Demand) 1 credit
This course focuses on pharmacological interventions including the conditions for which they are prescribed, their physiological impact, and the common side effects of psychotropic medications.. This course must be completed with grade of "C" or higher. Certificate course: Instructor permission required
Lecture: 1 hour Lab fee: $4.00

MHAD 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: MHAD 1111, MHAD 1112, MHAD 1114, MHAD 1115, ENGL 1100, COLS 1100 Lab fee: $4.00

MHAD 2194 SPT: MH/AS/DD (A, SP, SU) 1-4 credits
These courses are designed to meet specific needs of students who wish to pursue additional training in the MH/AS/DD 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

MHAD 2234 Therapeutic Laughter (SP) 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 MHAD technical electives or can be taken as a stand-alone course by any college student.
Lecture: 2 hours Lab fee: $8.00

MHAD 2241 Advanced Helping Skills (A, SP) 3 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: 3 hours
Prerequisite: MHAD 1120
Corequisites: MHAD 2861, MHAD 2901 Lab fee: $5.00

MHAD 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: MHAD 2861, MHAD 2901, MHAD 2241
Corequisites: MHAD 2862, MHAD 2922 Lab fee: $5.00

MHAD 2861 Fundamentals MH/AS/DD (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 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: MHAD 1120
Corequisites: MHAD 2901, MHAD 2241 Lab fee: $5.00

MHAD 2862 Treatment Approach MH/AS/DD (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, case management/service coordination, stage-wise treatment approaches, community integration, supported living, supported employment, recovery management, and trauma informed care. This course integrates class content with practicum objectives. This course must be completed with grade of "C" or higher.
Lecture: 4 hours
Prerequisites: MHAD 2861, MHAD 2901, MHAD 2241
Corequisite: MHAD 2922 Lab fee: $5.00

MHAD 2901 Practicum & Seminar I in MH/AS/DD (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: MHAD 1120
Corequisites: MHAD 2861, MHAD 2241 Lab fee: $23.00

MHAD 2922 Practicum & Seminar II in MH/AS/DD (A, SP) 4 credits
Students participate in a 210-hour supervised practicum experience in a community agency in their program of study (MH/AS/DD) 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: MHAD 2861, MHAD 2901, MHAD 2241
Corequisite: MHAD 2862 Lab fee: $23.00

MHAD 2933 MHAD Special Practicum & Seminar in MH, AS, or DD (On Demand) 3-4 credits
Students participate in a 150 to 210-hour practicum experience in a community agency in their program of study (MH, AS or DD) where utilization and practice of the knowledge and skills 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 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: 10-14 hours
Prerequisite: Instructor permission required Lab fee: $23.00

Multi-Competency Health (MULT)

(See also Clinical Laboratory Assisting Technology, Interpreter Education Program, Medical Laboratory Technology and Nursing Certificate.)

MULT 1010 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 1020 Cardiopulmonary Resuscitation (A, SP, SU) 0.50 credit
MULT 1020 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 1030 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 1020. American Heart Association CPR-Basic Life Support.
Lecture: 1 hour - Lab: 2 hours
Prerequisite: Placement into ENGL 1100 Lab fee: $55.00

MULT 1040 Adult & 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 1050 Exploring Healthcare 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-Competency (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 1910 Basic Electrocardiography (A, SP) 3 credits
This course is 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 48-hour clinical experience is required.
Lecture: 2 hours - Lab: 3 hours - Directed Practice: 3.20 hours
Prerequisites: Placement into ENGL 1100 and MULT 1010, completed with grade of "C" or higher
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 75 hours clinical phlebotomy experience and requiring an additional 60 successful blood collections in an inpatient setting. Phlebotomy Practicum II is designed for students who intend to be a professional phlebotomist and will be arranged individually. MULT 1950 and MULT 2950 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 (On Demand) 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 (On Demand) 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 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 (On Demand) 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 (On Demand) 3 credits
This course presents an examination of recording techniques in the studio for live performance. Analog and digital formats will be explored as will elements of post production.
Lecture: 2 hours - Studio: 3 hours Lab fee: $2.00

MUS 2222 Audio Production II (On Demand) 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

Nuclear Medicine Technology (NUC)

NUC 1149 Introduction to Clinic Nuclear Medicine/Pat (A) 2 credits
This course offers basic lecture and lab introduction to Nuclear Medicine clinical procedures with emphasis on Nuclear Medicine imaging, principles of patient care, venipuncture and medical ethics.
Lecture: 1 hour – Lab: 2 hours Lab fee: $56.00

NUC 1200 Introduction to Nuclear Medicine (A) 4 credits
NUC 1200 is an introduction to the fundamentals of Nuclear Medicine Technology through lecture and lab instruction. Topics included are math and physics review, radiopharmacy, radiation safety, imaging instrumentation and QC testing.
Lecture: 3 hours – Lab: 2 hours Lab fee: $56.00

NUC 1213 Physics and Instrumentation I (SP) 4 credits
This course presents an introduction to the basic concepts of the atom, nuclear physics, fundamentals of radioactivity and radioactive decay, radionuclides, interactions between radiation and matter, instrumentation and computer basics and statistics.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: NUC 1200 Lab fee: $26.50

NUC 1234 Radiopharmacy (SP) 4 credits
This lecture and lab course will present the principles of chemistry, radiochemistry and the basics of operating a hospital or commercialized nuclear pharmacy. Units of instruction include radionuclide generation, physical and biological characteristics of radiopharmaceutical generators, methods of sterilization, radiopharmaceutical preparation and calculations, radiopharmaceutical QC administration of diagnostic and therapeutic radiopharmaceuticals and FDA, USP, NRC and state regulations. All commonly used radiopharmaceuticals will be discussed including associated methods of localization.
Lecture: 3 hours – Lab: 2 hours
Prerequisites: NUC 1200, NUC 1149, CHEM 1113
Lab fee: $85.50

NUC 1251 Clinical Theory and Procedures I (SP) 5 credits
This lecture and lab course sequence demonstrates how a diagnostic and therapeutic study is completed from start to finish. Study reparations will be emphasized for all procedures including adult/pediatric considerations, scheduling of patients, choosing the proper radiopharmaceutical, basic patient pre-study preparations, providing patient care and maintaining communication. General study procedures will then be introduced through lecture and lab exercises by reviewing applicable anatomy/physiology, methods of radiopharmaceutical localization, selection of the proper camera or instrument, patient and camera positioning, utilization of proper imaging (planar and SPECT) techniques, image processing and display, image storage (PACS) and image critique. Procedures to be emphasized include the cardiovascular, pulmonary, musculoskeletal, and endocrine systems.
Lecture: 4 hours – Lab: 2 hours
Prerequisites: NUC 1200, NUC 1149, NUC 1234
Lab fee: $86.50

NUC 2215 Physics and Instrumentation II (SU) 4 credits
As a continuation of NUC 1213 Physics and Instrumentation I, this lecture and lab course will provide an in-depth study of the electronics, collimation and operations of single and multi-crystal cameras and Positron Emission Tomography (PET) imaging devices. Emphasis will include fundamentals of single photon emission computed tomography (SPECT), computed tomography (CT), PET, and combination units: SPECT/CT, PET/CT, and PET/MR. Emphasis will also be placed on QC and QA, acceptance testing, documentation, and new developments for imaging devices.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: NUC 1213 Lab fee: $10.75

NUC 2252 Clinic Theory and Procedures II (SU) 4.50 credits
This course will continue to affirm the fundamentals introduced in NUC 1251 Clinical Theory and Procedures I. The acquisition and processing procedures to be emphasized include central nervous, gastrointestinal, genitourinary, and hematologic systems and infection and tumor imaging. Laboratory exercises will be utilized to support procedures that have been covered in lecture. Special emphasis will be placed on SPECT, SPECT/CT, Positron Emission Tomography (PET), PET/CT and Fusion Technologies that allow the superimposition of PET or SPECT with CT or MR Images. Therapeutic procedures will also be reviewed including therapies of the endocrine, hematological, intracavity and skeletal systems. An in-depth study of federal (NRS and FDA) and state regulations regarding therapy procedures will be reviewed.
Lecture: 3.5 hours – Lab: 2 hours
Prerequisite: NUC 1251 Lab fee: $86.50

NUC 2280 Cross Modality Directed Practice (SP) 1.50 credits
This course is designed to present the theory and operation of CT technology. It will also include CT imaging quality management, an overview of pertinent sectional anatomy in a didactic format and supervised clinical education at multiple imaging facilities. The didactic portion of this course will be conducted through online and classroom instruction. An introduction to MR Imaging will also be conducted.
Lecture: 0.5 hour - Directed Practice: 5 hours
Prerequisite: NUC 2960

NUC 2960 Nuclear Medicine Practicum and Seminar I (SU) 3 credits
In this first practicum, the student will rotate through clinical hospitals and private offices and, while accompanied by a registered Nuclear Medicine Technologist, will become familiar with the care and positioning of the patient and camera. Students will be required to complete a portion of the "Required and Elective Procedures" (Comps) list. A special form will be utilized to allow the student to list how a procedure or study was conducted. Technologist image critique and physician study interpretation are incorporated into the form to provide a correlation of all factors that comprise a finished nuclear medicine images(s) to include an analysis of the structure or organ that was imaged/counted, patient positioning, radiation protection and data positioning. A one-hour weekly seminar is included in this course.
Seminar: 1 hour - Practicum: 14 hours
Prerequisites: NUC 1234, NUC 1251 Lab fee: $123.00

NUC 2961 Nuclear Medicine Practicum and Seminar II (A) 4 credits
As a continuation of Clinical Practicum I, Clinical Practicum and Seminar II provides the practical experience for the student to begin to work independently as a technologist. Students will also begin rotational shifts in commercial/hospital based radiopharmacies, radiation safety offices and specialty hospitals. Nuclear medicine imaging/counting procedures, instrumentation, radiopharmaceutical preparation under supervision, radiopharmaceutical injection/patient preparation, data and image processing and performing/critiquing QC procedures are emphasized. Image critique and physician study review are continued. Students will continue to complete a percentage of their "Required and Elective Procedures" (Comps) list. A one- hour weekly seminar is included in

this course.
Seminar: 1 hour - Practicum: 21 hours
Prerequisites: NUC 2252, NUC 2960 Lab fee: $123.00

NUC 2962 Nuclear Medicine Practicum and Seminar III (SP) 5 credits

As a continuation of Clinical II, Clinical Practicum and Seminar III provide the practical experience for the student to work more independently as a technologist. Students will continue to rotate through commercial/ hospital based radiopharmacies, radiation safety offices and radiologist/ physician reading rooms. Students will be required to complete their "Required and Elective Procedures" (Comps) list, in which they will prove their competency to prepare radiopharmaceuticals, perform radiopharmaceutical injection/patient preparations, communicate to patients, conduct imaging/counting/therapeutic studies, perform data and image analysis and perform QC procedures with little supervision. Image critique and physician study review will continue. A one-hour weekly seminar is included in this course.
Seminar: 1 hour - Practicum: 28 hours
Prerequisite: NUC 2961 Lab fee: $123.00

Nursing (NURS)

NURS 1094 Special Topic: Nursing (On Demand) 1-4 credits
This course is designed for special course topics.
Lecture: varies
Prerequisite: Instructor permission required

NURS 1100 Spiritual Nursing Care (SP) 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

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 hour
Prerequisite: NURS 1862 Lab fee: $20.00

NURS 1102 Principles of Basic Trauma Nursing (SP) 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.
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 (A) 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 (A) 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.
Lecture: 2 hours
Prerequisite: NURS 1862, minimum grade of "C" Lab fee: $25.00

NURS 1107 Current Trend Pediatric Nursing (SP) 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 (A, 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.
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.
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 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 Concepts of 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 - Clinical: 12 hours - Seminar: 2 hours
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 1101 Nurse Aide Train 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 is eligible to state test. However, the online hybrid NURC 1101 does NOT meet the requirements for the state approved nurse aide class in Ohio. The student who completes the hybrid version of this class will NOT receive a "certificate of class completion" and will not be eligible to take the state test for nurse aides. Both the traditional and hybrid versions satisfy the NURC 1101 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 0115; 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.
Lecture: 1.5 hours - Lab: 4.5 hours
Prerequisites: NURC 1101 with grade of "C" or better; Placement into ENGL 1100; Placement into DEV 0115; Placement into No Reading Required, or college transcript with previous ENGL coursework Lab fee: $30.00

NURC 1160 Pranic Healing Level I (A, SP, SU) 1 credit
This course provides the foundation of the theory and skills of the MCKS Pranic Healing System. Course topics include principles of self-recovery and life force; energetic anatomy; the relationship of energy centers to body systems; energy field scanning techniques; self restoration techniques; and stress reduction through meditation. The student earns a grade of satisfactory/unsatisfactory.
Lecture: 1 hour Lab fee: $75.00

NURC 1161 Pranic Healing Level II (A, SP, SU) 2 credits
This course is designed to further enhance the student's knowledge and skill in the art and science of the MCKS Pranic Healing System. It is a specialized course for the student, who is interested in becoming a more effective healer. The course includes the use of color pranas and additional techniques/skills including advanced scanning, cleansing and energizing.
Lecture: 2 hours
Prerequisite: NURC 1160 Lab fee: $75.00

NURC 1162 Pranic Healing Level III (A, SP, SU) 1 credit
This course provides the foundational theory and techniques for the MCKS Pranic Healing System for mental and emotional well-being. Course topics include advanced cleansing and energizing techniques, chakral and auric shielding, and protocols for stress, fear, and other mental and emotional health issues. Instruction also includes numerous methods for self-healing and relationship healing.
Lecture: 1 hour
Prerequisite: NURC 1161 Lab fee: $75.00

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 Topic: 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 experience in caring for elderly or chronically ill; letter of verification documenting employment history.
Lecture: 2 hours
Instructor permission required Lab fee: $39.00

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: $125.00

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. Content includes processes, chemistry, digestion, absorption, metabolism, and utilization of nutrients. An on-line review of biological chemistry, anatomy, physiology, and pathophysiology relevant to nutrition is also included in this course. A one-time techniques session including analysis of blood for nutrients is required of all students. Distance Learning students are required to take their exams at a proctored testing facility. Course is team-taught by faculty with advanced degrees limited to nutrition.
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 1001 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 1002 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 1005 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 1011 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. Students will be taught primary and secondary sources. The Lexis legal database will be introduced.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: LEGL 1001 and LEGL 1002 Lab fee: $60.00

LEGL 2005 Civil Practice & Procedure (A, SP) 3 credits
In this course, the student will learn the civil process of a typical trial through a study of the Ohio Rules of Civil Procedure, the Federal Rules of Civil Procedure, and Federal and State Rules of Evidence. The elements of a tort claim will be discussed with the drafting of pleading and how e-discovery and other pretrial processes and impact the legal process and the paralegal.
Lecture: 3 hours Lab fee: $60.00

LEGL 2010 Criminal Law & Procedure (SP, SU) 2 credits
The Ohio Criminal Code and Rules of Criminal Procedure will be the foundation of this examination of the pretrial and post-trial procedures in a criminal case. Students will be exposed to the criminal justice system from the elements of the offenses through post-conviction remedies. The drafting of motions and other documents associated with criminal matters will be included.
Lecture: 2 hours Lab fee: $40.00

LEGL 2012 Advanced Legal Research (SP, SU) 3 credits
This course is an intense production-oriented research and writing course designed to prepare the student to function under the requirement of rapid completion of research and writing assignments commonly made in law offices and other legal environments. The student will encounter a variety of opportunities, including motions, pleadings and briefs, the production of which will require both speed and accuracy and will incorporate both printed and computer-based research strategies.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: LEGL 1011 Lab fee: $60.00

LEGL 2014 Family Law (A, SP) 3 credits
This course explores domestic relations matters including marriage, divorce, dissolution, child custody and support, visitation and adoption. The law regulating such matters, and the drafting of appropriate documents, will be emphasized.
Lecture: 3 hours Lab fee: $40.00

LEGL 2018 Probate (SP, SU) 2 credits
This course is a study of the law of wills, trusts, living wills, health care power of attorney forms, estates and estate administration including estate taxation. The student will draft basic wills trust and plan a living will. Testate and intestate estates, law of descent and distribution, estate planning and other probate processes will be discussed.
Lecture: 2 hours Lab fee: $40.00

LEGL 2019 Real Estate (A, SP) 2 credits
In this course, the student will study the law governing real property, its ownership, sale, lease and other conveyances. Student will draft basic real estate documents utilized in conveyance or lease of real property. Landlord-Tenant legal practices will be explored. Title searching and title insurance are examined.
Lecture: 2 hours Lab fee: $40.00

LEGL 2023 Immigration Law (SP) 3 credits
This course is an overview of Federal Immigration Law and practices for assisting immigrants and illegal aliens. The student will learn the origins of immigration law and explore current developments. Course also reviews the classification of aliens, their legal rights, and the administrative and judicial processes involving immigration cases.
Lecture: 3 hours Lab fee: $40.00

LEGL 2024 Business Organizations (SP, SU) 3 credits
This class covers the fundamentals of the formation of business entities including sole proprietorships, partnerships, corporations, limited liability entities and nonprofits. Students will prepare documents regarding the formation of such organizations and learn how statutes regulate and control the formation and operation of business entities on the state and federal level.
Lecture: 3 hours Lab fee: $40.00

LEGL 2026 Administrative Law (A, SP) 3 credits
In this class, students will study the history and origins of administrative

agencies on the federal and state level. An examination of statutory law, case law, and current administrative rules and actions will be utilized to develop an understanding of the role and authority of administrative agencies. Particular attention will be paid to due process, formal and informal agency actions, and their rulemaking procedures. The paralegal's role in administrative adjudication will be emphasized.
Lecture: 3 hours Lab fee: $40.00

LEGL 2038 Insurance Law (SP) 2 credits
LEGL 2038 is an introduction to insurance law. The course will include principles of indemnity, interests protected, the transfer of risk, and claims processes. The student will be taught the impact of administrative law and civil litigation as it relates to insurance.
Lecture: 2 hours Lab fee: $40.00

LEGL 2043 Alternative Dispute Resolution (A, SP, SU) 3 credits
This course examines the legal, ethical, and policy issues that arise in the use of negotiation, mediation, arbitration, mini-trials, summary jury trials and conciliation. The development of mediation skills for personal and professional situations will be taught.
Lecture: 2 hours Lab fee: $40.00

LEGL 2044 Debtor/Creditor Relations (SP) 2 credits
This course will introduce students to the respective legal rights of creditors and debtors provided under federal and state law governing debt collection procedures. Students will learn the statutory and regulatory structure, location and jurisdiction of bankruptcy law and bankruptcy courts and their nonjudicial officers. Parties and proceedings will be discussed and students will receive an overview of the different bankruptcy chapters, forms and PACER filing system.
Lecture: 2 hours Lab fee: $40.00

LEGL 2050 Intellectual Property (SP) 3 credits
This course explores the world of patents, trademarks, copyrights and trade secrets as well as the history and origins of federal, state and foreign law which regulates the registration and ownership of these business assets. The course will discuss case law that covers these areas. Special emphasis will be given to the impact of the digital, electronic and Internet world in this specialized legal area. The student will learn the processes involved in registering and protecting these assets and the role of the legal professional in assisting the intellectual property client.
Lecture: 3 hours Lab fee: $40.00

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 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 101 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.
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 online 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 as soon as you have registered for exact pricing and ordering information of home lab kits.

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 0190
Lab fee: $1.00

PHYS 1106 Physics by Inquiry: Property Matter and Motion (A, SP, SU) 5 credits
This course is intended for nonscience majors, especially for those pursuing degrees in education. The course is an introduction to experimental science emphasizing physical properties and motion. The lab activities are designed to help students gain a better understanding of aspects of physical science. It is recommended the student complete PHYS 0100 before enrolling in this course.
Lecture: 4 hours Lab: 3 hours
Prerequisites: MATH 1020 or higher and placement into ENGL 1100
Lab fee: $20.00

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 & 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 or PHYS 119
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: MATH 1151 or higher, high school physics or PHYS 0100, placement into ENGL 1100 or higher 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 & 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 or PHYS 179 and MATH 1152 or higher
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 or PHYS 179
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 or MATH 254
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 Topic: 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 will 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 or placement into ENGL 1100, minimum grade of "C"

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, SP) 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 programs conceptual framework of person, health, environment, and nursing. The nature of a professionally caring 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. Economic issues related to health care will be integrated. 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, body mechanics, and wound care are reviewed as well as infection control practices. Math review is included in the course as independent study. Enrollment in this course requires admission to the Practical Nursing program.
Lecture: 1 hour - Lab: 3 hours Lab fee: $35.79

PNUR 1200 Mental Health Concepts PN (A, SU) 1 credit
The student is introduced to the role, responsibilities and the scope of practice for the practical nurse in dealing with patients who have mental health alterations or diagnoses. The concepts of therapeutic milieu, communication and the use of the nursing process in relation to various mental health disorders will be addressed. The thread running throughout will be the importance of students actively choosing to optimize their own mental health.
Lecture: 0.5 hour - Lab: 1.5 hours
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.
Lecture: 1 hour
Prerequisite: PNUR 1100

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.
Lecture: 1 hour
Prerequisite: PNUR 1100

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.
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.
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.
Lecture: 1 hour
Prerequisite: PNUR 1100

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 (SU) 2 credits
This hybrid course focuses on the practical nurse's role in medication administration to persons of all ages. The course introduces the 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 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) 1 credit
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: 0.5 hours - Lab: 1.5 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 (SU) 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 nutritional health, fluid and electrolyte 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: 0.5 hours - Lab: 1.5 hours
Prerequisites: PNUR 1100, BIO 2300, NURC 1102
Corequisite: PNUR 1300, PNUR 1866 Lab fee: $84.01

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 (SU) 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 1766, PNUR 1866
Corequisite: PNUR 1400, PNUR 1867

PNUR 1900 Transition to Practice (A, 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 1400, PNUR 1767, PNUR 1867
Corequisite: PNUR 1906 Lab fee: $138.75

PNUR 1906 PN Transition to Practice Practicum (A, 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.
Lecture: 3 hours
Prerequisite: Placement into ENGL 1100 Lab fee: $2.00

PSY 1194 Special Topics in Psychology (A, SP, SU) 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 (A, SP, SU) 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.

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 2335 Psychology of Adjustment (A, SP, SU) 3 credits
This course examines the psychological factors that influence human growth, development, and adjustment in modern society. Students will learn about ways in which modern society influences self-concept and self-esteem, stress and coping, group and relationship dynamics, social thinking and influence, and interpersonal communication.
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 course is a 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 Modern Quality Systems (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 TQM, Six Sigma, Lean Manufacturing, and the ISO/TS Registration Process. Business and individual development 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 field are studied.
Lecture: 2 hours – Lab: 4 hours Lab fee: $20.00

QUAL 2111 Reliability Systems Analysis (A) 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.

Radiography (RAD)

RAD 1101 Introduction to Equipment/Patient Care (A, SP, SU) 0.5 credit
This module introduces the student to radiographic equipment and patient care.
Lecture: 0.2 hour - Lab: 0.6 hour
Prerequisite: RAD 1190

RAD 1102 Radiography 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: RAD 1101

RAD 1103 Radiography 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: RAD 1101

RAD 1104 Radiography 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: RAD 1101

RAD 1105 Radiography 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: RAD 1101

RAD 1111 Introduction to Radiography 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

RAD 1113 Radiography Science (SP) 3 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: 3 hours
Prerequisite: RAD 1111

RAD 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: 2 hours Lab fee: $44.00

RAD 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

RAD 1142 Radiographic Procedures II (SP) 3 credits
This course serves as a continuation of RAD 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: RAD 1141 Lab fee: $97.60

RAD 1143 Special Procedures (SU) 2 credits
This course provides a detailed examination of cardiovascular, neurologic, interventional radiologic studies and common specialized procedures. The course begins with discussion of specialized equipment and materials. Emphasis is placed on pertinent anatomy, diagnostic value and/or therapeutic value of each examination.
Lecture: 1 hour - Lab: 3 hours
Prerequisite: RAD 1142 Lab fee: $5.00

RAD 1190 Radiation Protection for General Machine Operators
(A, SP, SU) 1.5 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: 1.5 hours

RAD 1801 RAD Seminar I (A) 1 credit
This course offers an evaluation and review of radiography cases and discussion of current issues in the radiologic sciences.
Seminar: 1 hour
Corequisite: RAD 1901

RAD 1802 RAD Seminar II (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: RAD 1801
Corequisite: RAD 1902

RAD 1803 RAD Seminar III (SU) 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: RAD 1802
Corequisite: RAD 1903

RAD 1901 RAD Practicum I (A) 2 credits
This directed practice 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. It is recommended that students complete RAD 1111 prior to or concurrently with RAD 1901.
Practicum: 14 hours
Corequisite: RAD 1801 Lab fee: $49.60

RAD 1902 RAD Practicum II (SP) 2 credits
This directed practice 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.
Practicum: 14 hours
Prerequisite: RAD 1901
Corequisite: RAD 1802 Lab fee: $49.60

RAD 1903 RAD Practicum III (SU) 2 credits
This course 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.
Practicum: 14 hours
Prerequisite: RAD 1902
Corequisite: RAD 1803 Lab fee: $31.00

RAD 2118 Advanced Exposure & Processing (SP) 2 credits
This advanced course analyzes factors which affect the diagnostic quality of the radiograph. Technique charts are developed. The importance of a quality assurance program is emphasized and quality control testing is presented. Students are required to conduct quality control testing and troubleshooting of radiographic equipment.
Lecture: 1 hour - Lab: 2 hours
Prerequisite: RAD 1118

RAD 2126 Radiography 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: RAD 1113 Lab fee: $30.00

RAD 2212 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: BIO 1122 or BIO 2300 (NOTE: RAD major requires completion of BIO 2300) Lab fee: $3.00

RAD 2222 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: RAD 1113 Lab fee: $49.00

RAD 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 pathologic process.
Lecture: 2 hours
Prerequisite: RAD 1143 Lab fee: $3.00

RAD 2804 RAD Seminar IV (A) 1 credits
This course offers an evaluation and review of radiography cases and discussion of current issues in the radiologic sciences. An overview of registry examination materials with mock registry examinations will also be included.
Seminar: 1 hour
Prerequisite: RAD 1803
Corequisite: RAD 2904

RAD 2805 RAD Seminar V (SP) 1 credit
This course offers an evaluation and review of radiography cases and discussion of current issues in the radiologic sciences. An overview of registry examination materials with mock registry examinations will also be included.
Seminar: 1 hour
Prerequisite: RAD 2804
Corequisite: RAD 2905

RAD 2904 RAD Practicum IV (A) 3 credits
This 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.
Practicum: 21 hours
Prerequisite: RAD 1903
Corequisite: RAD 2804 Lab fee: $49.60

RAD 2905 RAD Practicum V (SP) 3 credits
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.
Practicum: 21 hours
Prerequisite: RAD 2904
Corequisite: RAD 2805 Lab fee: $49.60

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.
Lecture: 3 hours Lab fee: $3.00

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.
Lecture: 3 hours Lab fee: $3.00

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.
Lecture: 2 hours Lab fee: $3.00

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.
Lecture: 2 hours Lab fee: $3.00

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: $3.00
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

REAL 2220 Real Estate 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: $3.00
Prerequisite: REAL 1011

REAL 2221 Prof 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: $3.00
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: $3.00
Prerequisite: REAL 1011

REAL 2270 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: $3.00

REAL 2275 Repair, Restore, Remodel (A, SP) 2 credits
This course is based on proven techniques used to repair, restore or remodel property that is functionally obsolete. Students will learn a broad overview of home systems, common repairs, and typical home maintenance. Students will understand the basic techniques used to restore historical properties as well. Students will study architectural style and design based upon property's age. The final part of the course will analyze what type of remodeling is economically feasible as well as scope of work and time involved.
Lecture: 2 hours Lab fee: $3.00

REAL 2294 SPT: Real Estate (On Demand) 2 credits
The student will explore selected issues relevant to the real estate industry.
Lecture: 2 hours

REAL 2394 SPT: Real Estate (On Demand) 3 credits
The student will explore selected issues relevant to the real estate industry
Lecture: 3 hours

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 student s 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: $3.00
Instructor permission required.

Respiratory Care (RESP)

RESP 1110 Introduction to Respiratory Care (SU) 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, infection control and health care informatics will be presented. Emphasis will be placed physical examination techniques. Student must be accepted into the Respiratory Care program.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: Placement into MATH 1148 Lab fee: $66.00

RESP 1220 Cardiopulmonary A & P (A) 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.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: RESP 1110
Corequisites: RESP 1230, RESP 1370, RESP 1861

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 directed to safety issues and the application to respiratory care practice.
Lecture: 2 hours
Prerequisite: RESP 1110
Corequisites: RESP 1220, 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 arterial blood gases, 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. 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 1110
Corequisites: RESP 1220, RESP 1230, RESP 1861
Lab fee: $25.00

RESP 1861 Introduction to the Clinical Experience (AU) 1 credit
This course is focused on introducing the student to the clinical setting. Emphasis is placed on patient safety and patient confidentiality.
Directed Practice: 5 hours
Prerequisite: RESP 1110
Corequisites: RESP 1220, 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.
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. Topics included are flexible fiber-optic bronchoscopy, cardiac output, 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 Pathophys 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 2870, RESP 2462, RESP 2472

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 bronchial hygiene therapy. The student will also perform arterial blood gas sampling. Special emphasis will be placed on the indications, contraindications, techniques and effectiveness of each. An introduction to pediatric and neonatal care will be provided. 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 2870, RESP 2472
Lab fee: $77.00

RESP 2472 Respiratory Equipment II (SU) 1 credits
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 2870, RESP 2462
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 credits
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.
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 and long-term, acute care settings. Experience with the pediatric and neonatal patient will be provided.
Directed Practice: 10 hours
Prerequisite: RESP 1860
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. Experience with the pediatric and neonatal patient will be provided with an emphasis on caring for the critically ill adult.
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 the opportunity to apply previously learned skills. Most time will be spent in the critical care setting. The student will have the opportunity to select specialty rotations in their area of interest. The students will complete the Advanced Cardiac Life Support provider course.
Practicum: 14 hours
Prerequisite: RESP 2890
Corequisite: RESP 2850 Lab fee: $25.00

Skilled Trades (SKTR)

SKTR 1000 Survey of the Construction Industry (A) 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: 2 hours Lab fee: $10.00

SKTR 1100 Basic Skills for the Construction Industry (On Demand) 2 credits
This course introduces the student to basic technical skills that are common to all construction trades: safety in the workplace, measuring and construction math, hand and power tool usage, blueprint reading, and basic rigging operations.
Lecture: 1 hour – Lab: 2 hours Lab fee: $20.00

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: $30.00

SKTR 1120 Carpentry: Fundamentals (A, SP) 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: $25.00

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: $55.00

SKTR 1180 Welding: Introduction to Stick (A, SP) 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 1020 or higher
Lab fee: $70.00

SKTR 1280 Welding: OxyFuel Methods and Plasma Cutting (A, SP) 2 credits
This course introduces the learning to OxyFuel welding (OFW) of mild steel and aluminum, this course will expand on Oxy-Fuel cutting and setup procedures taught in SKTR 1180. This course will cover equipment, setup, limitations, proper operation and methods used for plasma arc cutting and gouging, along with the basic nomenclature and use of the Carbon Arc Cutting (CAC) process. The learner will engage in lab activities pertaining to 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: SKTR 1180 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.
Lecture: 2 hours Lab fee: $15.00

SKTR 1310 Electrical: Wiring I (A, SP) 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: $31.00

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: $30.00

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 learning 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 work force. The learner will engage in lab projects joining metals in Lap, Tee, Butt, and V-groove configurations using gas-shielded (GMAW) and flux core (FCAW) methods and materials.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: SKTR 1180 Lab fee: $75.00

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: $45.00

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. This course will cover sizing and gauge of framing members for both structural and non-structural construction applications. The learner will engage in building wall systems, floor systems, ceiling systems and metal grid drop ceiling installations using steel framing materials, tools, and methods.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: SKTR 1320 Lab fee: $45.00

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: $100.00

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: $31.00

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, sheeting, 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 sheeting and insulation.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: SKTR 1320 Lab fee: $30.00

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: $55.00

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 1000, SKTR 1300, SKTR 2010
Lab fee: $30.00

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 1000, SKTR1300, SKTR 2020

Lab fee: $30.00

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 1000, SKTR 1300, SKTR 2040
Lab fee: $40.00

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 1000, 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 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 I (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: 1hour – Lab: 4 hours
Prerequisite: SKTR 2185 Lab fee: $95.00

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: 4 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.
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

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: ENGL 1100 Lab fee: $3.00

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 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 IS: 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 SPT: 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 (A, 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 1002 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 1004 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 1005 Introduction to Strength & Resistance (A, SP, SU) 1 credit
SES 1005 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 1006 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 1008 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 1009 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 1010 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 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

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. Course also offers 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. Also will examine the business, career and recreational applications.
Lecture: 1 hour - Lab: 3 hours
Prerequisite: SES 1101 Lab fee: $75.00

SES 2415 Advanced Strength & Resistance Training (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 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 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 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

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

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

SES 2730 Security Mgmt Sport & Special Events (A, SP, SU) 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

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

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

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

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

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

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, 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 1030 or MATH 1050, minimum grade of "C"
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, noncalculus 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 2180 Stats Bio Sciences (A, SP, SU) 4 credits
This course is designed to equip students with the statistical methods needed in gathering and analyzing data. The course includes sampling methods and data classification; descriptive statistics; basic concepts in probability; binomial, Poisson, and normal probability distributions; the Central Limit Theorem; estimating population parameters; interval estimation and hypothesis testing with one and two samples; chi-square tests of independence; experimental design; linear correlation and regression. Stat 2180 is intended primarily for students needing an integral calculus-based statistics course for majors in the biological and other life science fields.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: MATH 1151, minimum grade of "C"

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 Intro to Statistics Analysis (A, SP, 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
Prerequisite: MATH 1131 or MATH 1151 or MATH 1156, minimum grade of "C"

STAT 2460 Principles of Statistics for Engineers (SP) 4 credits
This course introduces descriptive statistics; probability theory; discrete and continuous random variables; expected value and variance; the normal distribution; sampling distributions and the Central Limit Theorem; confidence intervals and hypothesis testing for means and proportions; simple linear regression; analysis of variance; multiple linear regression; model selection; and selected topics from quality control and experimental design. Applications to problems in science, engineering, computer science, and related areas are explored. STAT 2460 is intended primarily for students needing a calculus-based course in probability and statistics.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: MATH 1152 or MATH 1157 or MATH 1172, minimum grade of "C"

STAT 2470 Introduction to Probability Statistics Eng/Sci (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, MATH 1157 or MATH 1172; minimum grade of "C" Lab fee: $2.00

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 indentifying 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 med/ 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 1001 Supply Chain Management Principles (A, SP, SU) 3 credits
SCM 1001 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 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 1001 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 1301 International Management (SP) 2 credits
SCM 1301 focuses on development of leadership and management skills and techniques needed to achieve the organization's strategic value chain goals and initiatives in a today's global business environment. Strategic use of economic, political, cultural, language, diversity concepts and the firm's core capabilities and resources is stressed in achieving global competitive advantages. Emphasis is placed on the dynamic nature of the international management challenge and on developing and managing various types of strategic alliances, organizational designs, technology, human resources and cross-cultural communications strategies as well as on conflict resolution and negotiation techniques.
Lecture: 2 hours
Prerequisite: SCM 1190 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 1001 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 1001 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 1001 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 1001 Lab fee: $1.00

SCM 2250 International Shipping (A, SP, SU) 3 credits
SCM 2250 discusses international shipping isssues 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 1001 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 1001 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 1001 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 place on performance as it relates to the planning, and managing of the supply chain. The student will explore topics such as how to proactively approach and resolve performance issues; developing and managing a balanced score card, selecting metrics to measure business and supply chain performance; creating positive relationships to ensure effective communication.
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) 3 credits
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: 21 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 also Civil Engineering Technology CIVL)

SURV 1410 Introduction to Surveying (A, SU) 3 credits
This course offers a comprehensive study in performing measurements for the collection of data and for construction layout. The course elements include application of the English and metric (SI) measurement systems in performing angular and distance measurement. Elements of differential leveling are used for establishing the elevations of new bench marks, topographic mapping by grid method, and cut/fill calculations to finish floor elevations of proposed structures. Data manipulation includes taping corrections, precision and accuracy determination, traverse closures, traverse adjustments, local and state plane coordinate systems, level circuit reductions, radial building staking notes and boundary line determination by inverse coordinates. This course also explores emerging surveying technologies in construction sciences.
Lecture: 1 hour - Lab: 6 hours
Prerequisite: MATH 1075 or higher Lab fee: $18.00

SURV 1420 Historical Surveying (A, SU) 2 credits
This is a historical review of the surveying profession from classical time to the mid-20th Century. Emphasis is placed on the three major United States governmental surveying and mapping agencies or bureaus from the late 18th Century to mid 20th Century (Dawn of the Digital Age). Field exercises with period original and reproduction surveying equipment supports the subject material. It also includes a review of current surveying and mapping technologies. Integrated topics include drafting, surveying, cartography and geographic information systems.
Lecture: 1 hour - Lab: 3 hours
Prerequisite: MATH 1075 or higher Lab fee: $23.00

SURV 1460 Computer Applications in Construction Sciences (A, SP) 2 credits
This course involves the integrated use of word processing, spread-sheet, database management, graphic and computer assisted drafting software to solve problems associated with the surveying industry and to produce formal engineering reports using the most current version of MS Office, Autodesk and Adobe Photoshop software products.

Lecture: 1 hour - Lab: 3 hours
Prerequisites: SURV 1410, MATH 1148 Lab fee: $20.00

SURV 2410 Engineering Surveying (A, SU) 4 credits
This class is a comprehensive study of the elements of route alignment including horizontal circular and spiral curves, combinations of circular and spiral curves, vertical curves, centerline and offset staking for rough and finished grade. The course includes the application of all elements of route design, construction staking and earthwork volume determination in a comprehensive integrated project format. Manual calculations are reinforced with the use of computer software such as Autodesk Civil 3D.
Lecture: 2 hours – Lab: 6 hours
Prerequisites: SURV 1410, MATH 1148 Lab fee: $23.00

SURV 2430 Transportation Systems (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 transportation solutions.
Lecture: 2 hours - Lab: 3 hours
Prerequisites: SURV 1410, SURV 2410 Lab fee: $23.00

SURV 2450 Legal Principles in Surveying (SP) 3 credits
This course presents a study of statute and common law, as pertains to land surveying and real property rights and the methods to describe real property. Current practices, current court decisions and applicable laws and Ohio Surveying Laws are examined and applied to real world scenarios.
Lecture: 2 hours - Lab: 3 hours
Prerequisites: SURV 1410, SURV 1420 Lab fee: $23.00

SURV 2480 Geodetic Surveying (SU) 4 credits
This course covers planning and execution of control surveying, cadastral surveying, network adjustment and topographic surveying using total stations and data collections, satellite positioning (Global Navigation Satellite System) and advanced imagery system. Elements also include remote sensing such LIDAR and laser scanning.
Lecture: 2 hours – Lab: 6 hours
Prerequisites: SURV 1410, MATH 1148 Lab fee: $23.00

SURV 2490 Land Development Systems (SP) 3 credits
This course covers advanced surveying, including section and subdivision lines and residential property lines. Major topics include reestablishment of property boundaries and legal considerations for boundary descriptions, including local municipal record. This course also involves the development of preliminary plats, detailed plans and a final plat in accordance with State of Ohio minimum standards and local conveyance standards.
Lecture: 2 hours - Lab: 3 hours
Prerequisite: SURV 2410 Lab fee: $23.00

SURV 2994 Special Topics: Surveying (On Demand) 1-3 credits
Special topics in surveying technology industry designed to meet specific needs.
Lecture: 1 hour
Instructor permission required

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 (A, SP, SU) 2 credits
This course presents and 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) 2 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: 2 hours
Prerequisites: THEA 2280 Lab fee: $2.00

THEA 2230 Introduction to Dramatic Literature (SP, SU) 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, SP) 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, ENGL 1100 Lab fee: $2.00

THEA 2232 Literature for Theatre II (A, 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, ENGL 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, SU) 3 credits
This course introduces the art and craft of writing plays. Emphas 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
Prerequisites: ENGL 1100, 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: $55.00

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: $79.30

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: $19.00

VET 1331 Veterinary Anatomy & Physiology (SP, SU) 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: $13.00

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: $98.00

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: $7.00

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: $57.30

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
Prerequisites: BIO 1121, BIO 1122 Lab fee: $15.00

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: $50.55

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: $238.25

VET 1536 Small Animal Health & Disease (SP, 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, SU) 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: $249.07

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: $15.00

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: $211.00

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 Lab fee: $7.00

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: $160.30

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: $104.00

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: $59.00

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: $59.00

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: $59.00

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: $59.00

VET 2950 Veterinary Practicum II (A, SP) 2 credits
This course is a continuation of VET 2900.
Practicum: 14 hours
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Melissa O'Neal ..... Fairfield Medical Center
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(See REGIONAL LEARNING CENTERS)

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Accreditation/Certification/Approval

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.

Allied Health

Dental Hygiene
American Dental Association Commission on Dental Accreditation
211 East Chicago Avenue
Chicago, IL 60611-2678
(312) 440-2915

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) 210-2350

Medical Laboratory Technology
National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
5600 N. River Road, Suite 720
Rosemont, IL 60018-5119
(713) 714-8880

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

Respiratory Care
Commission on Accreditation for Respiratory Care (CoARC)
1248 Harwood Road
Bedford, TX 76021-4244
(817) 283-2835

Automotive Technology

Automotive Technology and Ford ASSET Program
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

Business

Accounting and Finance
Business Management
Human Resources Management Technology
Business Office Applications
Accreditation Council for Business Schools and Programs (ACBSP)
7007 College Boulevard, Suite 420
Overland Park, KS 66211
(913) 339-9356

Construction Science

Construction Management
American Council of Construction Education (ACCE)
1717 North Loop 1604 East, Suite 320
San Antonio, TX 78232-1570
(210) 495-6161
ace@acce-hq.org

Landscape Design and Management
Professional Landscape Network (PLANET)
150 Elden Street, Suite 270
Herndon, VA 20170
(703) 736-9666

Engineering Technologies

Aviation Maintenance Technology
Federal Aviation Administration
2780 Airport Drive, Suite 300
Columbus, OH 43219
(614) 255-3120

Electronic Engineering Technology
ABET, Inc.
111 Market Place, Suite 1050
Baltimore, MD 21202
(410) 347-7700

Health, Dental and Veterinary Technology

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

Radiography

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

Surgical Technology

Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA)
6 W. Dry Creek Circle, Suite 110
Littleton, CO 80120
(303) 694-9262

Hospitality, Massage Therapy, Sport and Exercise Studies

Hospitality Management

Accrediting Commission for Programs in Hospitality Administration
P.O. Box 400
Oxford, MD 21654
(410) 226-5527

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

Massage Therapy

The State Medical Board of Ohio
30 East Broad Street, 3rd Floor
Columbus, OH 43215-6127
(614) 466-3934

Human Services

Mental Health/Addiction Studies/Developmental Disabilities

Council for Standards in Human Service Education (CSHSE)
Susan Kincaid, Ph.D., V.P., Prog. Accreditation
PMB 703, 1050 Larrabee Avenue, Suite 104
Bellingham, WA 98225-7367

Interpreter Education Program

Ohio Department of Education
25 S. Front Street
Columbus, OH 43215-4183
(614) 995-1545

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

Integrated Media and Technology

Supply Chain Management
Marketing

Accreditation Council for Business Schools and Programs (ACBSP)
7007 College Boulevard, Suite 420
Overland Park, KS 66211
(913) 339-9356

Justice and Safety Programs

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 Services Accreditation
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

Law Enforcement Academy

Basic Training Academy
Ohio Peace Officer Training Commission

Ohio Attorney General's Office
P. O. Box 309
London, OH 43140

Paralegal Studies

American Bar Association
Standing Committee on Legal Assistants
750 North Lake Shore Drive
Chicago, IL 60611
(312) 988-5618

Nursing

Nursing

National League for Nursing Accrediting Commission (NLNAC)
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

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
Career and Technical Programs

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Our Vision

Columbus State Community College is Central Ohio's front door to higher education and a leader in advancing our region's prosperity.

Our Mission

To educate and inspire, providing our students with the opportunity to achieve their goals.

Our Values

Student Success
We welcome and engage all students in creating individualized, accessible and mutually accountable pathways that allow them to pursue their goals.

Inclusion
We reflect the demographics of Central Ohio, and we leverage the college's rich diversity for the benefit of our local and global communities.

Quality
We expect excellence and accountability in ourselves and our students.

Innovation
We embrace bold ideas and an entrepreneurial spirit, and we are responsive to the changing needs of students, employers, and other stakeholders.

Learning
We are a community of teachers and learners who believe that fulfilling lives are grounded in self-awareness and continuous learning.

Partnership
We recognize that more can be accomplished collaboratively than individually, and we seek like-minded partners to advance our shared goals.

Stewardship
We are careful and thoughtful stewards of the resources entrusted to us.

Leadership
We lead by action and example to help our community pursue opportunities and address the challenges of the 21st century.

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")

Accounting
- Certificate of Accounting Concentration (CPA Exam Preparation)
- Certificate of Internal Auditing
- Certificate of Taxation Specialist

Architecture
- Architectural CAD Drafting Certificate
- 3D Visualization Certificate

Automotive Technology
- Automotive Service Management Major
- Ford ASSET Program
- Maintenance and Light Repair Certificate
- Ford Maintenance and Light Repair Certificate
- TechLINK Program

Aviation Maintenance Technology
- Aviation Maintenance Technician Airframe Certificate
- Aviation Maintenance Technician Powerplant Certificate

Business Management
- Business Management Major
- Entrepreneurship Major
- Entrepreneurship Certificate
- Managing Interpersonal Skills Certificate
- Nonprofit Management Certificate
- Pre-MBA Certificate
- Project Management Certificate

Business Office Applications
- Administrative Assistant Major
- Medical Administrative Assistant Track
- Bookkeeping Certificate
- Office Specialist Certificate

Civil Engineering Technology
- Civil Track
- Survey Track
- Surveying Certificate

Computer Science
- Game Developer Track
- MIS Project Management Track
- Network Administrator Track
- Network Security Track
- Software Developer Track
- Web Developer Track
- CCNA Discovery Certificate
- Computer Literacy Certificate
- Database Specialist Certificate
- Management Information Systems Certificate
- Network Administrator Certificate
- Network Security Certificate
- Software Developer Certificate
- System Z Certificate

Construction Management
- Building Information Modeling Certificate
- Estimating/Bidding Certificate
- Facility Conservation and Energy Management Certificate
- Field Supervision Certificate
- Residential Construction Management Certificate

Criminal Justice
- Corrections Major
- Criminal Justice Major
- Law Enforcement Major-Academy Track
- Law Enforcement Major-Professional Track
- Crime Scene Investigations Certificate
- Homeland Security Certificate
- Victim-Witness Advocacy Certificate

Dental Hygiene

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
- Advanced Digital Photography Certificate
- Black and White Film Certificate
- Business of Photography Certificate
- Photoshop for Photographers Certificate

Early Childhood Development and Education
- Basic Early Childhood Administrators Certificate
- Infant/Toddler Education Certificate

Electro-Mechanical Engineering Technology
- Information Technology Support Technician Major

Electronic Engineering Technology

Emergency Medical Services Technology
- Emergency Medical Technician (EMT) Certificate
- Paramedic Certificate

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

Engineering Technologies Certificates
- Computer Aided Drafting Technician Certificate
- Engineering Assembly Technician Certificate
- Engineering Technician Certificate
- Manufacturing Maintenance Technician Certificate

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

Fire Science

Geographic Information Systems
- Geographic Information Systems Certificate

Health Information Management Technology
- Medical Coding Certificate
- Health Data Analyst Certificate
- Health IT Workflow/Information Management Certificate
- Health IT Implementation/Technical Software Support Certificate
- Project Management for Health IT Certificate

Heating, Ventilating and Air Conditioning Technology
- High Pressure Boiler License Training Program Certificate
- Large Commercial Certificate
- Residential/Light Commercial Certificate

Hospitality Management
- Culinary Apprenticeship Major
- Dietetic Technician 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
- Dietary Manager Certificate
- Meeting and Event Management Certificate
- School Foodservice Manager Certificate

Human Resources Management Technology

Interactive Media
- Digital Video and Sound Major
- Video Game Art and Animation Track
- 3D Content Creation Certificate
- Game Development Certificate
- Rich Media Communication Certificate
- Visual Communication Certificate
- Web Communication Certificate

Interpreter Education Program
- American Sign Language/Deaf Studies Certificate

Landscape Design and Management

Marketing
- Direct Marketing Major
- Retail Management Major
- Direct Marketing Certificate
- Electronic Marketing Certificate
- Pre-MBA Certificate

Massage Therapy/Entrepreneurship (A.T.S.)
- Massage Therapy Certificate
- Massage Therapy Advanced Techniques Certificate

Mechanical Engineering Technology

Medical Assisting (A.T.S.)
- Medical Assisting Certificate

Medical Laboratory Technology
- Clinical Laboratory Assisting Certificate

Mental Health/Addiction Studies/Developmental Disabilities
- Advanced Mental Health Certificate
- Advanced Addiction Studies Certificate
- Advanced Developmental Disabilities Certificate
- Community/Habilitation Assistant Certificate
- Peer Support Specialist Certificate

Multi-Competency Health
- Basic Electrocardiography Certificate
- Health Care Manager Certificate
- Phlebotomy Certificate
- ASL/Deaf Studies Certificate
- Clinical Laboratory Assisting Certificate
- Complementary Care Certificate
- Nurse Aide Training Program Certificate
- Patient Care Skills Certificate
- Pranic Healing Certificate Level I
- Pranic Healing Certificate Level II
- Pranic Healing Certificate Level III
- Registered Nurse First Assistant Certificate
- Train the Trainer Nurse Aide Certificate

Nuclear Medicine Technology

Nursing
- Practical Nursing Program
- Complementary Care Certificate
- Nurse Aide Training Program Certificate
- Patient Care Skills Certificate
- Pranic Healing Certificate Level I
- Pranic Healing Certificate Level II
- Pranic Healing Certificate Level III
- Registered Nurse First Assistant Certificate
- Train the Trainer Nurse Aide Certificate

Paralegal Studies
- Paralegal Studies Certificate (Post Baccalaureate Option)

Quality Assurance Technology
- Bioscience Technology Basic Certificate

Radiography
- General X-ray Machine Operator (GXMO) Certificate

Real Estate
- Appraisal Certificate
- Real Estate Pre-Licensure Certificate

Respiratory Care

Skilled Trades Technology
- Apprenticeship Partnership Degree Programs
- Associate of Technical Studies Degree in Construction Trades
- Facilities Maintenance Degree
- Facilities Maintenance Certificate
- Facilities Module Certificates
- Intermediate Welder Certificate
- Introduction to the Construction Industry Certificate

Sport and Exercise Studies
- Exercise Science Major
- Physical Education Major
- Sport Management Major
- Exercise Specialist Certificate

Sterile Processing Technology (A.T.S.)
- Sterile Processing Technology Certificate

Supply Chain Management
- International Commerce Major
- Strategic Procurement Major
- International Business Certificate
- International Commerce Certificate
- Strategic Procurement Certificate
- Supply Chain Management Certificate

Surgical Technology
- Surgical Technology Certificate

Veterinary Technology