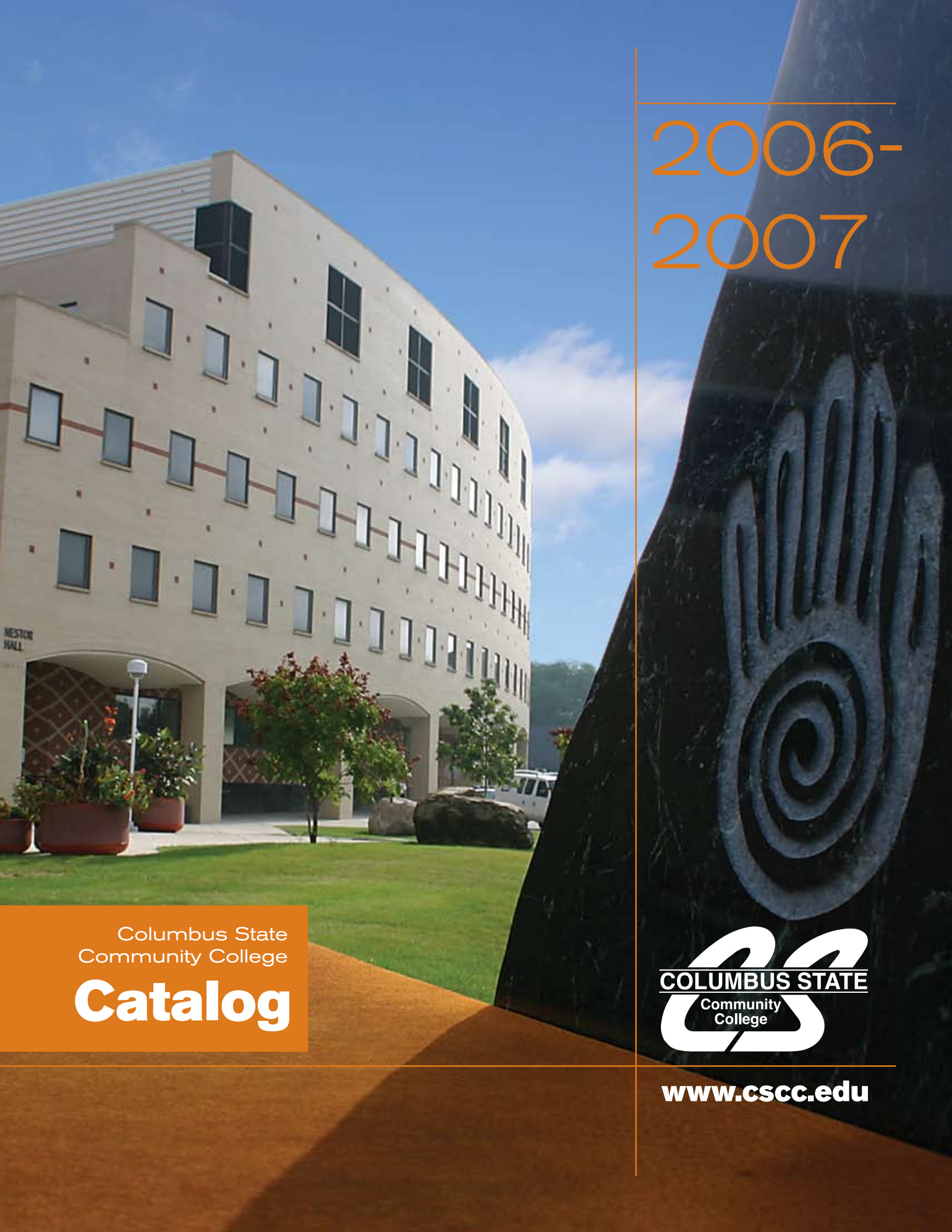


2006-2007

Columbus State Community College

Catalog

COLUMBUS STATE Community College

www.cscc.edu

Table of Contents

The Columbus State Community College Catalog contains current information regarding the school calendar, admission, degree requirements, fees, regulations, and course offerings. Columbus State Community College reserves the right to make changes in any material contained herein, as deemed necessary.

For specific information on any changes, please contact Columbus State at (614) 287-2453 or 1-800-621-6407 if calling long distance.

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, religion, ancestry, national origin, sex, 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. The College 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 accommodations because of a physical, mental, or learning disability, please contact the Department of Disability Services, Franklin Hall, Room 228.

Accreditation

Columbus State Community College is accredited by the North Central Association of Colleges and Schools. (North Central Association of Colleges & Schools, 30 N. LaSalle Street - Suite 2400, Chicago, Illinois 60602-2504, (312) 263-0456 or (800) 621-7440.)

Vision and Values

We see Columbus State Community College as a dynamic and diverse institution offering accessible, affordable, lifelong learning opportunities to meet the educational, employment, and enrichment needs of our community as it participates in the global economy.

We Value Being . . .

- An integral, respected, trusted partner in our community.
- A dynamic, evolving institution.
- An outstanding learning environment.
- An accessible educational institution.
- A diverse learning community.
- A results-oriented organization.
- Accountable.

Mission Statement

The mission of Columbus State Community College is to provide quality educational programs that meet the life-long learning needs of its community. Through its dynamic curriculum and commitment to diverse learners, the college will serve as a catalyst for creating and fostering linkages among the community, business and educational institutions. The college will proactively respond to the changing needs of our community and its role in the global economy through the use of instructional and emerging technologies.

Institutional Goals

- To recognize, develop, and support excellence in both learning and teaching.
- To provide a learner-centered environment that provides the support services which assure that learners attain their educational goals.
- To provide relevant, thorough, state-of-the-art technical education that prepares students to prosper in the world of work.
- To provide course work leading to an associate degree and/or lower-division preparation for college/university transfer.
- To provide educational, cultural, economic, social, recreational, or aesthetic programs and services to meet the changing needs of individuals in a multicultural community.
- To provide lifelong educational programming for personal and professional growth, cultural and recreational enrichment and international education.
- To foster an environment that values an understanding and appreciation of diversity.
- To develop and strengthen partnerships with industry, primary and secondary education, business, labor, community organizations and government to enhance the economic development of our service community.
- To broaden learning opportunities through the creation of a strong community outreach program.
- To collaborate with our community to understand and satisfy its needs and expectations to provide quality educational services within available resources.
- To encourage management policies that demonstrate institutional integrity and effectiveness.
- To enhance learning opportunities for students, faculty, staff, and administrators through the effective use of technology.

Strategic Planning Goals

- Technology Support
- Access
- Global Perspective
- Community Building
- Workforce Development
- Financial Resources Development
- Marketing and College Image
- Human Capacity Development
- Board Development
- Financial Stewardship

Philosophy of Academic Assessment

Columbus State believes that the College can influence how well and how much students learn. This belief is echoed in the opening line of the College's Mission Statement: "The mission of Columbus State Community College is to provide quality educational programs that meet the life-long learning needs of its community." Consistent with the second stated Institutional Goal of the College, "To provide a learner-centered environment that provides the support services which assure that learners attain their educational goals," academic assessment provides systematic, routine processes that allow the faculty to determine the degree to which the students are achieving the stated academic outcomes. The following questions guide the assessment process:

1. What do students need to learn?
2. To what extent are students learning?

Purpose of Academic Assessment

Academic assessment is the process for *ongoing measurement and improvement of student academic achievement.* The assessment program at Columbus State Community College (CSCC) has three specific and interrelated purposes:

1. to improve student academic achievement;
2. to document successes and identify opportunities for program improvement;
3. to provide evidence for institutional effectiveness.

CSCC's assessment program is faculty driven and includes assessment of courses and programs in the following academic divisions:

- Arts and Sciences
- Career and Technical Programs
- Continuing Education and Workforce Development

Message from the President

Dear Columbus State Student:

Welcome to Columbus State Community College. I am confident that you have made a smart choice to come to Columbus State to pursue your educational goals.

Whether you are just beginning your academic career or are returning to college to update your skills, I hope your experience with us is a rewarding one. The faculty and staff here at Columbus State are dedicated to providing you with the best educational experiences possible. Many of our faculty and staff are recognized both statewide and nationally for their professional expertise. Our classes are small, and students receive personal attention from faculty, making for a very nurturing learning environment.

As your community college, we are dedicated to providing access to higher education to everyone in our community. We also work hard to meet the job-training needs and workplace skills demanded by employers in central Ohio.

Whether you are here to earn a degree or just to take one class, we welcome you as a member of the Columbus State family.

Sincerely,

M. Valeriana Moeller

Val Moeller
President

Campus Directory

Department	Location	Phone
Academic Health Records	UN 134A	287-2450
Admissions (Welcome Center)	MA 101	287-2669
Advising & Counseling Services	AQ 116	287-2668
Arts & Sciences Division	NH 425	287-2512
Bookstore	DE Ground Fl	287-2427
Business & Industry Training	CT 339-103	287-5000
Cafeteria	DE	287-2483
Cashier Office/Fees	RH 2nd Floor	287-2414
Campus Tours	MA 101	287-2669
Career Placement Center (Acloche)	NH 119	287-5279
Career Services	AQ 116	287-2668
Child Development Center	WD	287-3600
Community Educ./Workforce Dev.	CL 297-111	287-2511
Community Outreach	FR 140	287-5433
Compass Placement Testing Lab	MA 255	287-3602
Continuing Professional Education	CL 295-203	287-5997
Copy Center	DE Ground Fl	287-5652
Developmental Education	AQ 215	287-5193
Disability Services	FR 223	287-2570
Distance Learning/Global Campus	DH 241	287-5991
Dublin Center	DB	287-7050
Educational Resources Center	ERC	287-2465
Entrepreneur Workforce	WD	287-5948
Financial Aid	RH Ground Fl	287-2648
GED	WD	287-5858
Gahanna Center	GH	476-4711
Goodale Center	ET	224-3554
Human Resources	RH 115	287-2408
International Initiatives/Comm Outreach	FR 136	287-5013
Intramural Sports	DE 134	287-5348
K-12 Initiatives	SX	287-5961
Knowledge Research & Planning	FR 122	287-3837
Language Institute	WD	287-5448
Library (Educ. Resources Ctr.)	ERC	287-2465
Marysville Center	ML	(937)644-1616
Multicultural Affairs	FR 132	287-2426
Off-Campus Program	DE 103	287-2696
Parking and ID	UN 048	287-2525
Public Safety	UN 048	287-2525
Records and Registration	MA 201	287-5353
Recreational Facilities	DE 134	287-2445
ROTC		236-6649
Southeast Center	SE	287-7200
Southwest Center	AV	287-7102
South-Western Center	GC	801-3385
Student Activities	NH 116	287-2637
Student Athletics	DE 134	287-5092
Student Support Services	EB 201	287-5331
Teaching Learning Resource Center	DH 241	287-5991
TechLink Program	DE 259	287-5318
TechPrep Consortium	NH 022	287-2452
Telephone Information Center	TIC	287-5353
Tours	MA 101	287-2669
Transitional Workforce	WD	287-5397
Tutoring Services	AQ 241	287-2474
Upward Bound	EB 201	287-5777
Veterans Services	RH 138	287-2644
Welcome Center (Admissions)	MA 101	287-2669
Westerville Center	WV	287-7000

Academic Programs

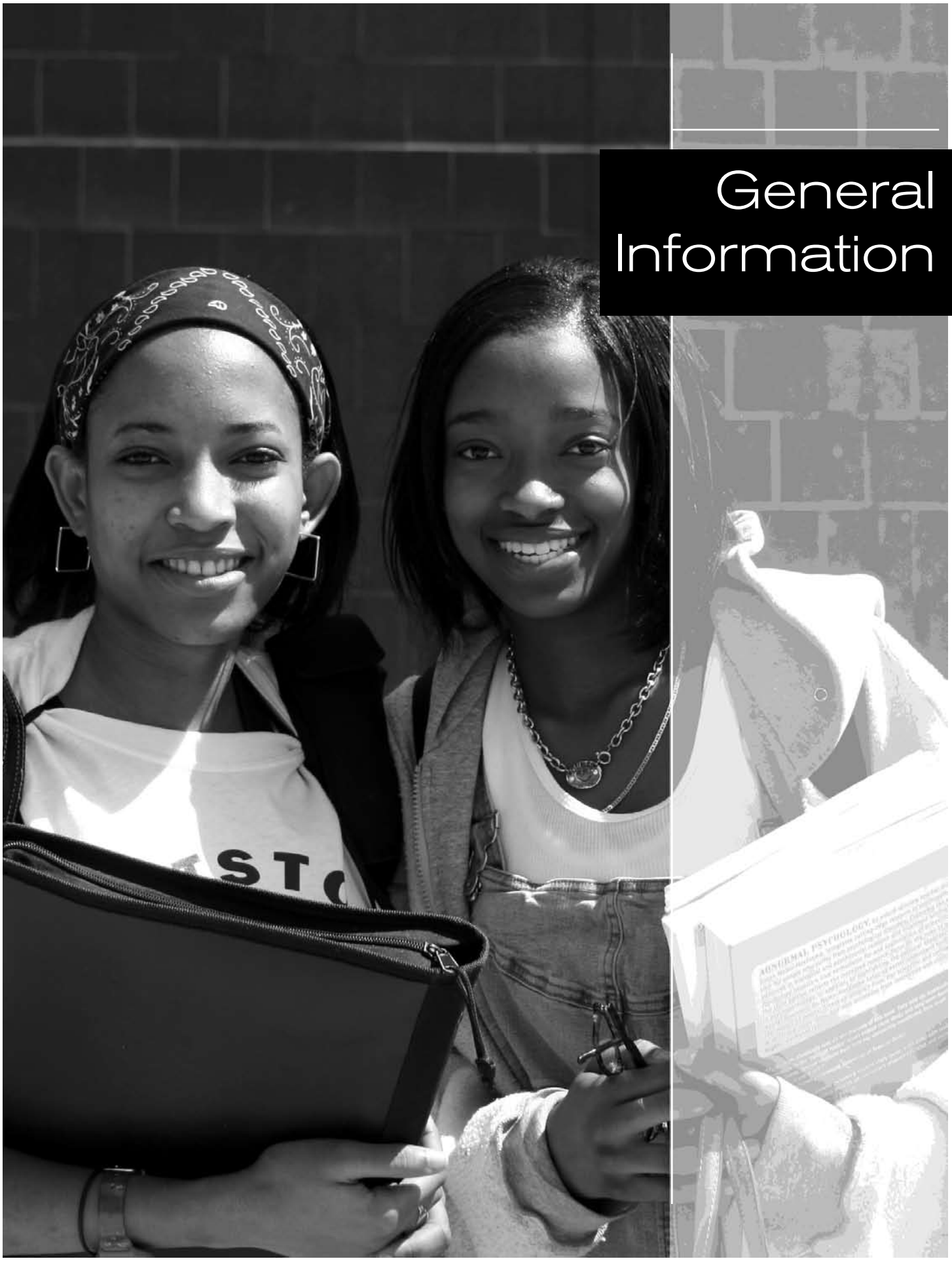
Arts & Sciences Division	**NH 425**	**287-2512**
Biological & Physical Sciences	NH 408	287-2522
Communication Skills	NH 420	287-2531/3630
Developmental Education	AQ 215	287-5193
Humanities	NH 408	287-5043
Mathematics	DH 415	287-5313
Modern Languages	FR 206A	287-5400
Social/Behavioral Sciences	TL 309	287-5005
Technical Communications	NH 420	287-3630/2531

Career & Technical Programs

Accounting	NH 432	287-5420
Appraisal	WD	287-5397
Architecture	DH 205	287-5030
Automotive & Applied Technology	DE 259	287-5318
Aviation Maintenance Technology	AV	287-7100
Business Management Technology	DE 240	287-5351
Civil Engineering Technology	DH 205	287-5030
Computer Information Technology	DE 259	287-5376/5009
Construction Management	DH 205	287-5030
Dental Hygiene	UN 410	287-5215
Dental Laboratory Technology	UN 433	287-2521
Early Childhood Development	UN 219	287-2540
Electro-Mechanical Eng. Technology	EB 312	287-5350
Electronic Engineering Technology	EB 312	287-5350
Emergency Medical Services Tech.	GA 001	287-3812
EMS/Fire Science	GA 001	287-3812
Environmental Science, Safety & Health	DH 205	287-5030
Finance	NH 432	287-5420
Fire Science	GA 001	287-3812
Ford ASSET	DE 259	287-5408
Geographic Information Systems	DH 205	287-5030
Graphic Communications Technology	EB 401	287-5010
Health Information Management	UN 307	287-5382
Heating, Ventilating and Air Cond.Tech.	DH 205	287-5318
Hospitality Management	EB 001	287-5126
Human Resources Management Tech.	DE 240	287-5351
Interactive Multimedia Production Tech.	EB 401	287-5010
Interpreting/American Sign Language Education	UN 219	287-2540
Landscape Design/Build	DH 205	287-5030
Law Enforcement	FR 206B	287-2591
Paralegal Studies	FR 206B	287-2591
Logistics	EB 401	287-5010
Marketing	EB 401	287-5010
Massage Therapy	UN 307	287-5382
Mechanical Engineering Tech.	EB 312	287-5350
Medical Assisting Technology	UN 407	287-2521
Medical Laboratory Technology	UN 307	287-5382
Medical Legal Assisting	FR 206B	287-2591
Mental Health/Chemical Dependency/ Mental Retardation	UN 219	287-2540
Multi-Competency Health	UN 507	287-2506/2606
Nuclear Medicine	GR 389	287-5215
Nursing	UN 507	287-2506
Office Administration Technology	DE 259	287-5009/5351
Quality Assurance Technology	EB 312	287-5350
Radiography	GR 111	287-5215
Real Estate	WD	287-5397
Respiratory Care	UN 407	287-2521
Sports & Fitness Management	UN 307	287-5382
Surgical Technology	UN 507	287-2506/2606
Veterinary Technology	VT 102	287-5511

Building Codes:

AQ..... Aquinas Hall
BA..... Ballet Met
CO..... Columbus Hall
CT..... 339 Cleveland Ave.
DB..... Dublin Center
DC..... Delaware Center
DE..... Delaware Hall
DH..... Davidson Hall
DX..... Discovery Exchange Bookstore
EB..... Eibling Hall
EN..... 385 E. Naughten
ET..... Goodale at Electrical Trades Ctr.
FR..... Franklin Hall
G3..... 192 N. Grant Ave.
G4..... 196 N. Grant Ave.
GA..... 375 N. GrantAve.
GC..... South-Western Center
GH..... Gahanna Center
GR..... 389 N. GrantAve
GT..... 356 N. Grant Ave.
MA..... Madison Hall
ML..... Marysville HS
MV..... 396 Mt. Vernon Ave
NH..... Nestor Hall
OP..... 164 N. Grant Ave.
PG..... Parking Garage
RH..... Rhodes Hall
SE..... Southeast Center
SW..... Southwest Center at Bolton Field
SX..... 366/370 6th St.
TC..... Tolles Center
TL..... Center for Technology & Learning
UN..... Union Hall
VT..... 384 N. 6th St.
WD..... Center for Workforce Development
WV..... Westerville Center
W2..... Westerville Center 2



General Information

Academic Calendar

Summer Quarter 2006
June 26, 2006 – September 9, 2006

April 24, 2006 (M).....Summer Quarter registration begins
June 26, 2006 (M).....*8-week term classes begin
June 26, 2006 (M).....*First 4-week term classes begin
June 26, 2006 (M).....*First-term classes begin
June 26, 2006 (M).....*Full-quarter classes begin
July 4, 2006 (T).....Independence Day – Campus closed
July 17, 2006 (M).....Last day to drop from first 4-week term classes
July 23, 2006 (SU).....First 4-week term classes end
July 24, 2006 (M).....*Second 4-week term classes begin
July 27, 2006 (TH).....Last day to drop from first-term classes
August 2, 2006 (W).....First-term classes end
August 3, 2006 (TH).....*Second term classes begin
August 4, 2006 (F).....Petition to graduate Autumn Quarter 2006 due in Records and Registration
August 5, 2006 (S).....Last day to remove Incompletes (I) incurred Spring Quarter 2006
August 14, 2006 (M).....Last day to drop from 8-week term classes
August 14, 2006 (M).....Last day to drop from second 4-week term classes
August 20, 2006 (SU).....Second 4-week term and 8-week term classes end
August 28, 2006 (M).....Last day to drop from full quarter classes
August 28, 2006 (M).....Last day to drop from second term classes
September 4, 2006 (M).....Labor Day – Campus closed
September 8, 2006 (F).....Graduation ceremony
September 9, 2006 (S).....Summer Quarter 2006 ends

Autumn Quarter 2006
September 20, 2006 – December 9, 2006

July 24, 2006 (M)..... Autumn Quarter registration begins
September 20, 2006 (W).. *8-week term classes begin
September 20, 2006 (W).. *First 4-week term classes begin
September 20, 2006 (W).. *First-term classes begin
September 20, 2006 (W).. *Full-quarter classes begin
October 9, 2006 (M) ..... Columbus Day – Campus closed
October 11, 2006 (W) ..... Last day to drop from first 4-week term classes
October 17, 2006 (T)..... First 4-week term classes end
October 18, 2006 (W) ..... *Second 4-week term classes begin
October 21, 2006 (S)..... Last day to drop from first-term classes
October 25, 2006 (W) ..... In-Service Day – Offices closed, no day classes
October 26, 2006 (TH)..... Last day to remove Incompletes (I) incurred Summer Quarter 2006
October 28, 2006 (S)..... First-term classes end
October 30, 2006 (M) ..... *Second-term classes begin
November 8, 2006 (W) .... Last day to drop from Eight-week term classes
November 8, 2006 (W) .... Last day to drop from second 4-week term classes
November 10, 2006 (F).... Veterans Day – Campus closed
November 14, 2006 (T).... Second 4-week term and 8-week term classes end
November 21, 2006 (T).... Last day to drop from full-quarter classes
November 21, 2006 (T).... Last day to drop from second-term classes
November 23-26, 2006 ... Thanksgiving Holiday – Campus closed (TH, F, S, SU)
December 1, 2006 (F) ..... Petition to graduate Winter Quarter 2007 due in Records and Registration
December 8, 2006 (F) ..... Graduation ceremony
December 9, 2006 (S) ..... Autumn Quarter 2006 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 within 10% of the time elapsed in the course, a 100% tuition refund will be issued. If the course is dropped within 20% of the time elapsed in the course, a 50% tuition refund will be issued. If the course is dropped within 30% of the time elapsed in the course, a 25% tuition refund will be issued.

Note: A course must be dropped before 10% 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.

Winter Quarter 2007
January 2, 2007 – March 17, 2007

October 23, 2006 (M) .....Winter Quarter registration begins
December 25, 2006 (M)....Christmas Day – Campus closed
January 1, 2007 (M).....New Year's Day – Campus closed
January 2, 2007 (T).....*8-week term classes begin
January 2, 2007 (T).....*First 4-week term classes begin
January 2, 2007 (T).....*First-term classes begin
January 2, 2007 (T).....*Full-quarter classes begin
January 15, 2007 (M).....Dr. Martin Luther King Jr. Day– Campus closed
January 23, 2007 (T).....Last day to drop from first 4-week term classes
January 29, 2007 (M).....First 4-week term classes end
January 30, 2007 (T).....*Second 4-week term classes begin
February 2, 2007 (F) .....Last day to drop from first-term classes
February 2, 2007 (F) .....Petition to graduate Spring Quarter 2007 due in Records and Registration
February 8, 2007 (TH).....First-term classes end
February 9, 2007 (F) .....*Second term classes begin
February 9, 2007 (F) .....Last day to remove Incompletes (I) incurred Autumn Quarter 2006
February 20, 2007 (T).....Last day to drop from 8-week term classes
February 20, 2007 (T).....Last day to drop from second 4-week term classes
February 23, 2007 (F) .....Presidents Day – Campus closed
February 26, 2007 (M).....Second 4-week term and 8-week term classes end
March 5, 2007 (M).....Last day to drop from full-quarter classes
March 5, 2007 (M).....Last day to drop from second-term classes
March 16, 2007 (F) .....Graduation ceremony
March 17, 2007 (S) .....Winter Quarter 2007 ends

Spring Quarter 2007
March 26, 2007 – June 9, 2007

January 29, 2007 (M).....Spring Quarter registration begins
March 26, 2007 (M).....*8-week term classes begin
March 26, 2007 (M).....*First 4-week term classes begin
March 26, 2007 (M).....*First-term classes begin
March 26, 2007 (M).....*Full quarter classes begin
April 8, 2007 (SU) .....Easter Sunday – Campus closed
April 16, 2007 (M).....Last day to drop from first 4-week term classes
April 22, 2007 (SU) .....First 4-week term classes end
April 23, 2007 (M).....*Second 4-week term classes begin
April 26, 2007 (TH) .....Last day to drop from first-term classes
April 27, 2007 (F) .....In-Service Day – Offices closed, no day classes
May 2, 2007 (W).....First-term classes end
May 3, 2007 (TH) .....*Second-term classes begin
May 4, 2007 (F) .....Petition to graduate Summer Quarter 2007 due in Records and Registration
May 5, 2007 (S) .....Last day to remove Incompletes (I) incurred Winter Quarter 2007
May 14, 2007 (M).....Last day to drop from 8-week term classes
May 14, 2007 (M).....Last day to drop from second 4-week term classes
May 20, 2007 (SU) .....Second 4-week term and 8-week term classes end
May 28, 2007 (M).....Memorial Day – Campus closed
May 29, 2007 (T).....Last day to drop from full-quarter classes
May 29, 2007 (T).....Last day to drop from second-term classes
June 8, 2007 (F) .....Graduation ceremony
June 9, 2007 (S) .....Spring Quarter 2007 ends

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

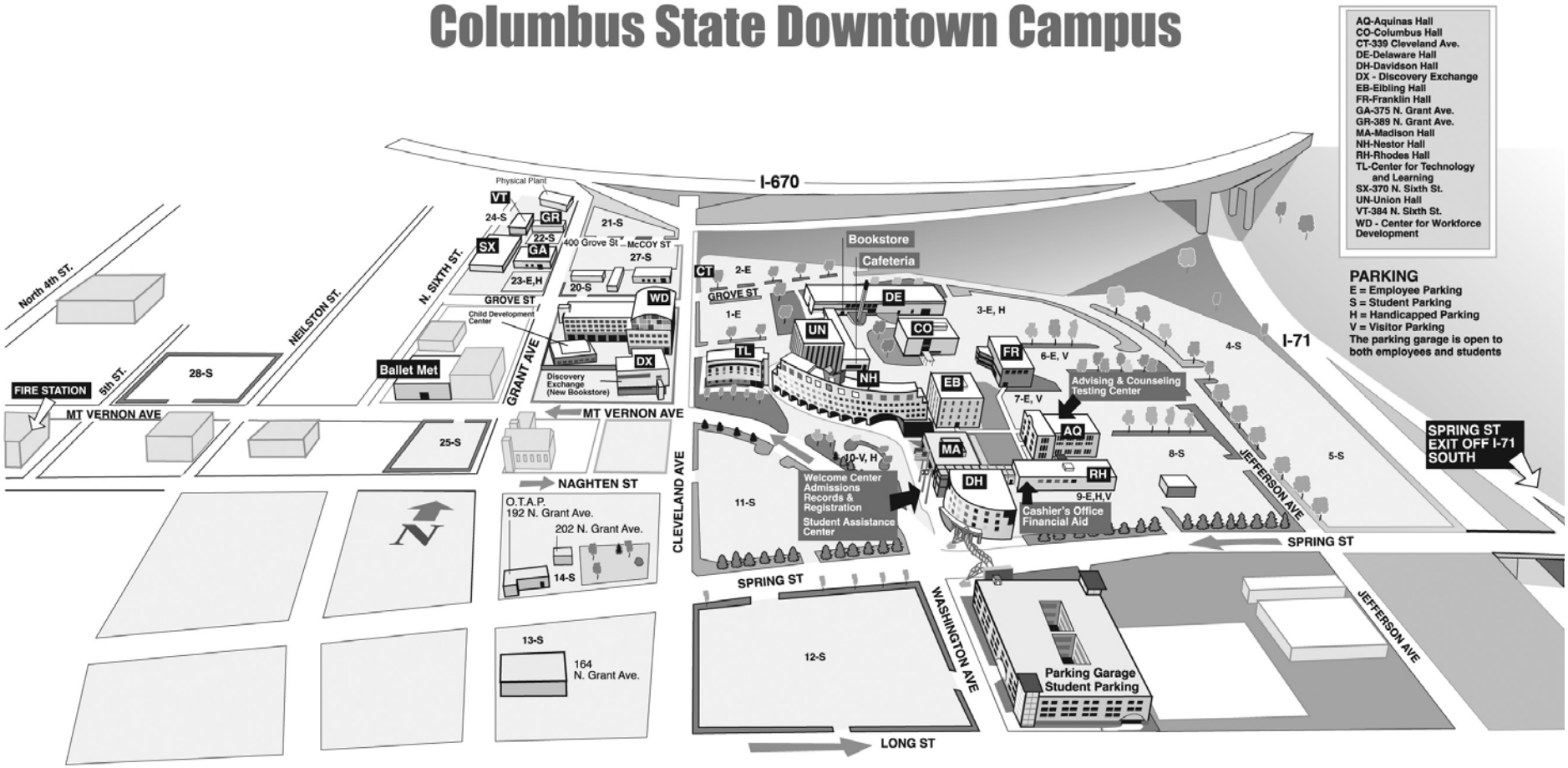
*Instructor signature required to add a course after the term begins.

Note: Tuition refunds are based upon the percentage of time elapsed in each course. If the course is dropped within 10% of the time elapsed in the course, a 100% tuition refund will be issued. If the course is dropped within 20% of the time elapsed in the course, a 50% tuition refund will be issued. If the course is dropped within 30% of the time elapsed in the course, a 25% tuition refund will be issued.

Note: A course must be dropped before 10% 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 Downtown Campus



Columbus State in Brief

For more than 40 years, Columbus State Community College has been meeting the diverse educational needs of the community and is proud to be an important contributor to the growth and change of Columbus and 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. On 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 more than 50 technical fields and transfer programs. The success of the College is reflected in the many accomplishments of these graduates and the many 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 technical education, offering the Associate of Applied Science and the Associate of Technical Studies degree programs in business, health, human service, public service, and engineering technologies to prepare graduates for immediate employment. The transfer programs, Associate of Arts and Associate of Science, meet the majority of freshman and sophomore course requirements of bachelor's degree programs offered by four-year colleges and universities throughout the state. Specific transfer agreements with area colleges and universities have also been developed.

In addition to courses offered on the main campus, classes are offered at 10 off-campus locations throughout central Ohio. The College's Division of Community Education and Workforce Development also offers customized training programs for local employers on campus or at the business site.

Columbus State's Downtown Campus is centrally located on approximately 80 acres near downtown Columbus. The campus currently has more than 20 buildings that house classrooms, laboratories, and offices of the College. Also part of the College's Downtown campus is the Educational Resources Center, which provides materials and resources for students. In addition to the main campus, the College 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 North Central Association of Colleges and Schools, and many of the College's degree programs are accredited by professional associations and agencies.

Campus Tours

Campus tours can be arranged by contacting the Admissions Office, located in the lower level of the Madison Hall Welcome Center, (614)-287-2669. Please call ahead to make a reservation.

Admissions/Welcome Center

New students are invited to begin the enrollment process in the Admissions Office, located on the lower level of the Madison Hall Welcome Center. International Student Admissions is also located in this area. Admissions Advisors assist new students with the admissions process and provide information on programs of study and next steps for enrollment, including new student orientation, placement testing, and applying for financial aid. In addition to completing new student orientation, all students should attend a new student success program/welcome reception offered by the Admissions Office prior to the start of each quarter. Students will learn about the many services and resources available to help them succeed at Columbus State. They will also find out about the benefits of getting involved in the wide variety of campus activities and organizations. For more information, contact the Admissions Office at (614) 287-2669 or review the Admissions link on our web site at www.cscc.edu

Downtown Campus Center

Columbus State Community College
550 East Spring Street
Columbus, Ohio 43215
Phone: (614)-287-5353.

Off-Campus Programs

Susan Norris-Berry, Director
(614) 287-5083

Columbus State's off-campus centers, located throughout the college's four-county service district, provide educational opportunities for more than 16,000 students each year with day, evening and weekend classes. Suburban centers offer courses in general education, computer skills and technical areas, and most are equipped for telecourse and distance learning delivery. 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 Testing, Distance Learning Testing, and other academic support services are provided at off-campus centers. Students may also pay fees (credit card payments only) at the Dublin, Southeast and Westerville center during designated hours; please contact these centers for current hours. A year-round schedule of classes is published annually that allows students to plan their educational programs several quarters in advance.

1 Delaware Center
Delaware Area Career Center,
North Campus
State Route 521
Delaware, Ohio 43015
Phone: (740)369-3890
Hours: M–R 5 – 10:30 p.m.

2 Dublin Center
6190 Shamrock Court
Dublin, Ohio 43016
Hours: M – F, 8 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

3 Gahanna Center
445 Havens Corner Road
Gahanna, Ohio 43230
Hours: M – R, 4:30 p.m. – 10:30 p.m.
Sat: 8 a.m. – 4 p.m.
Phone: (614)476-4711 Fax: (614)476-4764

4 Goodale Center at the Electrical Trades Center
947 Goodale Blvd
Columbus, Ohio 43212
Hours: M – F 8 a.m. – 3:30 p.m.
Phone: (614)224-3554 Fax: (614)224-3795

5 Marysville Center
800 Amrine Mill Road
Marysville, Ohio 43040
Hours: M – R, 5 p.m. – 8 p.m.
Phone: (937)644-1616
Fax: (937)644-1663

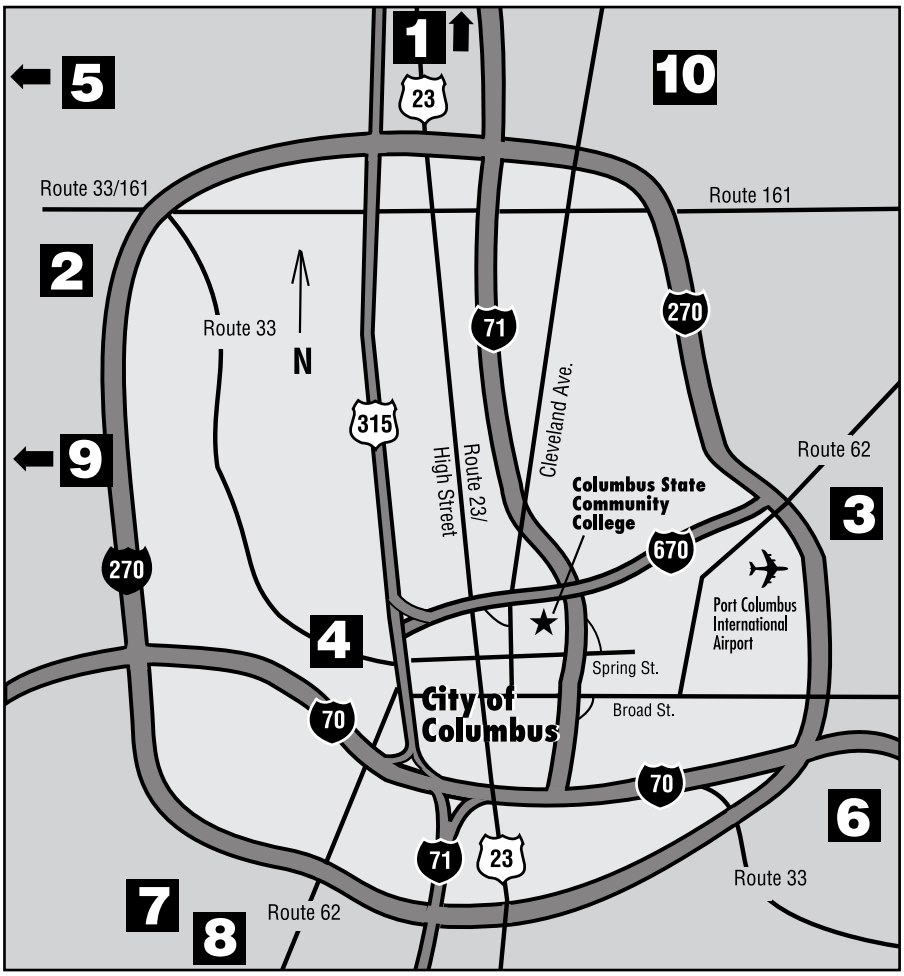
6 Southeast Center
4449 Professional Parkway
Groveport, Ohio 43125
Hours: M – F, 8 a.m. – 10:30 p.m.
Sat: 8 a.m. – 4 p.m.
Sun: 1 – 5 p.m.
Phone: (614) 287-7200
Fax: (614) 836-9127

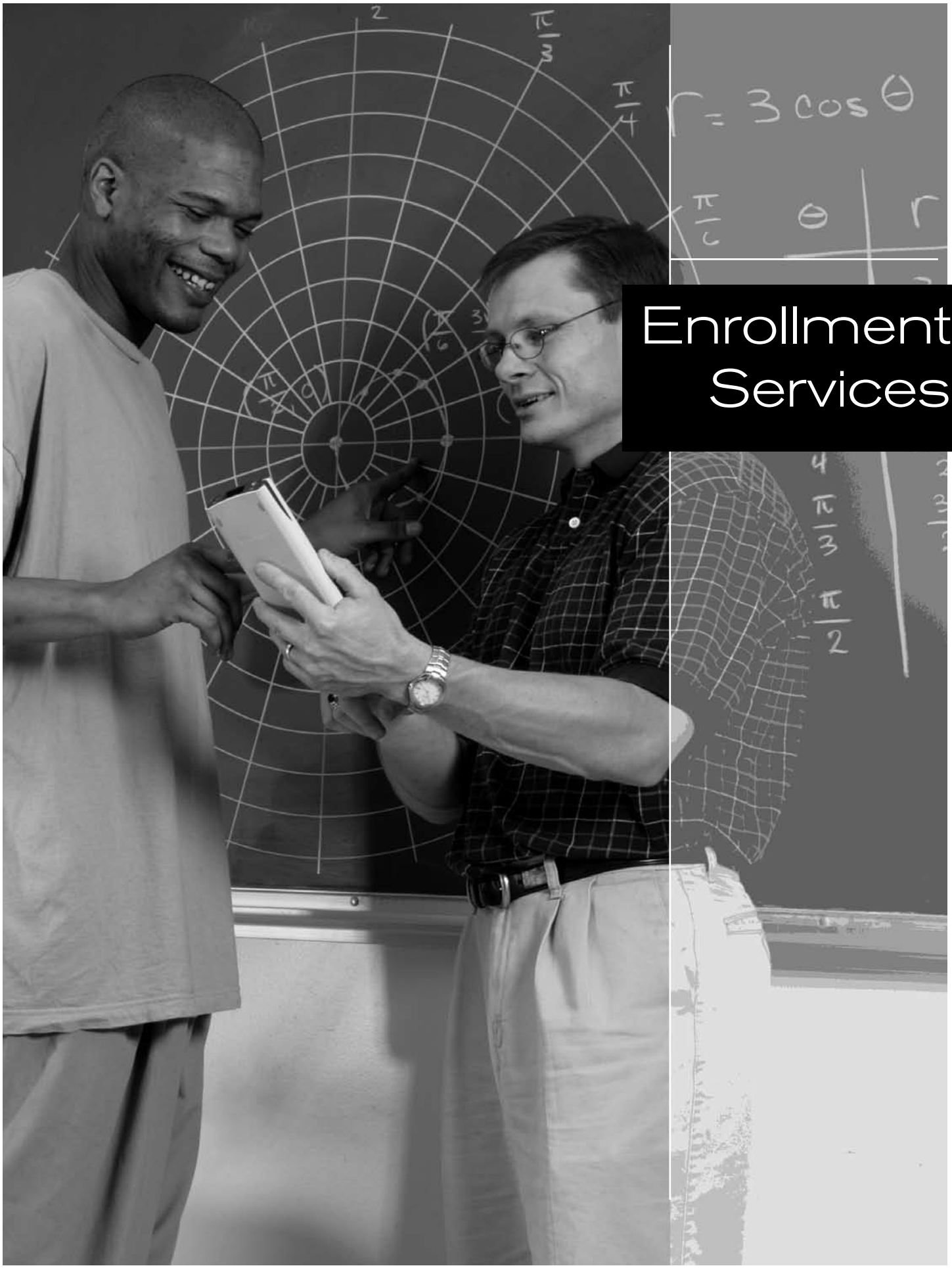
7 Southwest Center at Bolton Field
5355 Alkire Road
Columbus, Ohio 43228
Hours: M – F, 5 p.m.–10:30 p.m.
Sat: 9 a.m. - Noon
Phone: (614) 287-7102
Fax: (614) 878-0729

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

9 Tolles Center
7877 US Highway 42 South
Plain City, Ohio 43064
(614) 873 4666 ext. 298

10 Westerville Center
7233 Northgate Way and
7207 Northgate Way
Westerville, Ohio 43082
Hours: M – F, 8 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




r = 3 cos θ
θ
r
Enrollment
Services

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. 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 will be denied admissions.

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 technologies, including Nursing, have established additional requirements that must be fulfilled prior to acceptance. All prospective applicants are encouraged to contact the Admissions Office for specific information.

For some students, prerequisite 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.

Admission procedures, including changes in conditions of admissions status, will be adopted and implemented by the college. An application for enrollment in academic credit courses is not required for students enrolled exclusively in noncredit courses.

Application/Enrollment Procedures

For additional information, view the New Student Guide on the CSCC web site at www.cscc.edu.

High school graduates:

- Complete the application for admission.
- Submit a final official high school transcript verifying graduation, if required for admission to your chosen program of study (check the Specific Program Admissions Information in the Programs of Study section of this catalog for further details), to the Records and Registration Department.
- Complete placement tests.

High School Transcript /G.E.D scores

If required for admission to their chosen program of study, students should submit a final official copy of their high school transcript and/or an official copy of their G.E.D. scores. Please check the Specific Program Admissions Information in the Programs of Study section of this catalog to determine if your high school transcript/G.E.D. scores are required for admission to a particular program of study.

The official high school transcript and/or copy of official G.E.D. scores should be mailed to Columbus State Community College, Records and Registration Department, 550 East Spring St., P. O. Box 1609, Columbus, Ohio 43216-1609. All information submitted to the College relative to admission and academic status becomes and remains the property of the College.

Previous College Transcript

An official college transcript is requested 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, 550 East Spring St., P. O. Box 1609, Columbus, Ohio 43216-1609. All information submitted to the College relative to admission and academic status becomes and remains the property of the College.

Identification Number

An identification number is assigned to each student upon admission to the college. Social security numbers are not used as an identifier for student records. Student determined passwords allow access to CougarWeb functions.

(Please refer to the statement on Family Educational Rights and Privacy Act found on pages 28–30 for information on the release of student records.)

Applicants who have graduated from high school, completed a home school program, or received their G.E.D. (General Education Diploma):

- Complete the application for admission.
- If required for your chosen program of study, submit a final official high school transcript verifying graduation or an official copy of your G.E.D.scores to the Records and Registration Department.
- Complete New Student Orientation.
- Complete placement tests.
- Talk with an academic advisor to review your test results, explore programs, and select appropriate courses to schedule.

Applicants 18 and older who did not graduate from high school, did not complete a home school program, and did not receive a G.E.D. (General Education Diploma):

- Complete the application for admission.
- Complete New Student Orientation
- Complete placement tests. To be eligible to participate in financial assistance programs, these applicants must demonstrate the ability to benefit from college programs by achieving the required scores on the college's placement test.
- Talk with an academic advisor to review your test results, explore programs, and select appropriate courses to schedule.

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 quarters and transfer the credits back to the other college):

- Complete the application for admission.
- If required for your chosen program of study, submit a final official high school transcript verifying graduation or an official copy of your G.E.D. scores, if applicable, to the Records and Registration Department.
- Request that the former college(s) send an official transcript of prior college work to the Records and Registration Department. Obtain a copy of your transcript or other documentation of completed courses to bring with you when talking with advisors to assist them in recommending appropriate courses and next steps.
- Complete New Student Orientation.
- Complete placement tests. Students with transfer credit in college-level composition and algebra may not need to complete the entire placement test.
- Talk with an academic advisor to review your test results, explore programs, and select appropriate courses to schedule.

Applicants who are high school students interested in the Post Secondary Enrollment Options (PSEO) Program (concurrent enrollment in college classes while still in high school):

- Complete the application for admission.
- A Post Secondary Enrollment Options Program (PSEO) packet is available online at http://cscc.edu/USE/PDF-forms/PSEOP Application 06-07.pdf. Complete the student section and submit the application to your high school counselor. The high school counselor will complete the rest of the PSEO application and will send it to Columbus State Community College K-12 Initiatives Office, Attn: PSEO, with the high school transcript.
- Students meeting preliminary criteria must complete placement testing.
- Students meeting the placement test score requirements and additional entrance requirements will be offered admission into the PSEO program, and must attend a PSEO Orientation Session.
- Talk with an academic advisor to review your test results, explore programs, and select appropriate courses to schedule.
- Contact the K-12 Initiatives Office at 614-287-5961 to speak with an Underage Enrollment Advisor about the PSEO program or self-pay options for underage students at Columbus State.

Applicants who are Immigrants (Refugees, Permanent Residents, Asylees):

- Complete the application for admission.
- Attach a photocopy of the documentation verifying immigration status to the application.
- Submit original or certified photocopies of secondary school records showing graduation in original language and translated into English, if required for admission to your chosen program of study.
- Complete English as a Second Language placement test. Students with transfer credit in college-level English composition and algebra may not need to complete the entire placement test.
- Complete New Student Orientation
- Talk with an academic advisor to review your test results, explore programs, and select appropriate courses to schedule.

Applicants who are Non-Immigrants (Visa holders other than F-1 status):

- All required documents must be received in the International Enrollment Services Office by the following dates:
  - Spring Quarter: February 15
  - Summer Quarter: May 15
  - Autumn Quarter: August 15
  - Winter Quarter: November 15
- Complete the Non-Immigrant visa holders'/international student application (obtained from the International Admissions Office).
- Submit photocopies of both sides of your I-94 card, passport picture, and Visa stamp.
- Submit original or certified photocopies of secondary school records showing graduation in original language and translated into English, if required for admission to your chosen program of study.
- Complete English as a Second Language placement test. Students with transfer credit in college-level English composition and algebra may not need to complete the entire placement test.
- Complete New Student Orientation.
- Talk with an academic advisor to review your test results, explore programs, and select appropriate courses to schedule.

Additional documents may be requested by Columbus State before final admission is granted.

Applicants who are F-1 Status Visa Holders (International Applicants):

- All required documents must be received in the International Enrollment Services Office by the following dates:

F-1 applicants applying from abroad

- Spring Quarter: December 15
- Summer Quarter: March 15
- Autumn Quarter: June 15
- Winter Quarter: September 15

F-1 applicants applying from within the U.S.

- Spring Quarter: February 15
- Summer Quarter: May 15
- Autumn Quarter: August 15
- Winter Quarter: November 15

- Complete the Non-Immigrant/International Student application for admission.
- Submit original official high school transcript verifying graduation (high school diploma, examination results, etc., should be submitted with the transcript.) You must also submit a copy translated into English if the document is not written in English.
- Submit original or certified photocopies of college or university records in original language and translated into English.
- If English is not your native language, submit a non-institutional Test of English as a Foreign Language (TOEFL) score of 157 or higher (computer based), 54 or higher (internet based), or 480 or higher (written) **or** a non-institutional Michigan English Language Assessment Battery (MELAB) score of 78 or higher. The test results should be no more than two years old or you must complete Columbus State's ESL placement test. If you have completed a college level, non-ESL English course at another U.S. college, the TOEFL and MELAB requirement may be waived.
- Sponsor(s) must submit an affidavit of support and current bank statement showing sufficient funds to cover at least one-year cost of attending Columbus State Community College. The prospective student must complete and submit the financial statement form found in the application.
- Complete New Student Orientation.
- Talk with an academic advisor to review your test results, explore programs, and select appropriate courses to schedule.

F-1 Transient Student Applicants:

- All required documents must be received in the International Enrollment Services Office by the following dates:
  - Spring Quarter: March 1
  - Summer Quarter: June 1
  - Autumn Quarter: September 1
  - Winter Quarter: December 1
- Complete the Non-Immigrant/International Student application for admission.
- Submit photocopies of the following documents: both sides of your I-94 card, picture page of your visa stamp, front and back of your I-20 from the college you attend full-time, your transcript showing completion of college level, non-ESL English at your current college **or** a copy of your non-institutional TOEFL score of at least 157 (computer), 54 (internet based) or 480 (written) or MELAB score of at least 78.
- Submit the International Student Advisor Report completed by your advisor at your home school. (Continuing F-1 transient students must submit this form every quarter).
- Complete New Student Orientation.
- Talk with an academic advisor to review your test results, explore programs, and select appropriate courses to schedule.

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 quarter begins to update their academic record. The student should also request 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.

Student Assistance Center

The Student Assistance Center located in Madison Hall 225 is a center where students can solve registration, fee payment or financial aid issues. The Student Assistance Center also offers orientation sessions regularly throughout the year. During the hands-on interactive orientation, students learn how to get started at Columbus State and how to utilize the many online tools and resources available to help them in the enrollment process as new and continuing students. These services include:

Set up user name and password
Register and pay fees on the web
Complete the online Free Application for Federal Student Aid, (FAFSA)
View CougarWeb 101
Attend Registration 101
Complete various online financial aid processes

Students are encouraged to come to a group orientation session after being accepted to Columbus State. Please call the center for scheduled times at (614) 287-5538.

Hours of Operation
Monday – Thursday, 8 a.m. – 7:30 p.m.
Friday, 9:30 a.m. – 4:30 p.m.
Saturday, 9:00 a.m. – noon

The Admissions Office also offers a New Student Success Program/ Welcome Reception each quarter to introduce all new students to the many services and resources that can help them succeed at Columbus State. They will also learn about the benefits of getting involved in the wide variety of campus activities and organizations. Advisors and current students will provide valuable tips on how to have the best college experience possible. Campus tours are provided after each session. Additional details, including dates, times, reservation information, and online options, are available online www.cscc.edu, New Student Guide, Get Oriented links) or by calling the Admissions Office at (614) 287-2669.

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, tuition free, on a space-available basis. To register for credit courses applicable to an associate degree, senior citizens pay the one-time, non-refundable $50 matriculation fee, which covers the cost of enrolling at the College, including application and permanent record maintenance, a student identification card, any course lab fees, and the cost of books. (The matriculation fee will appear and be due for payment on the schedule and fee statement for the academic quarter in which the student initially registers for a class, even if the class is dropped or cancelled.)

Senior citizens are also admitted to special courses on a tuition-free, space-available basis once the course is financially self-supporting. Lab fees, books and instructional supplies are assessed to senior citizens as required of other students. Courtesy parking permits are provided at no cost to senior citizens. Student rates to concerts and student activities are available to enrolled senior citizens.

For information regarding programs and services, please call (614) 287-2453 (or 1 (800) 621-6407 if calling long distance).

Health Record

If you are accepted to or take courses in these technologies or programs you must submit a health record prior to registering for or attending technical classes: Dental Hygiene, Dietetic Technician, Early Childhood Development, Emergency Medical Services Technology, Health Information Management Technology, Histology, Medical Assisting Technology, Medical Laboratory Technology, Multi-Competency Health, Nuclear Medicine, Nursing, Phlebotomy, Radiography, Respiratory Care, Sports and Exercise Studies, Surgical Technology, and Veterinary Technology. A health record form will be provided by your department. Specific requirements vary by technology but could include a physician's examination, immunizations, and screenings.

Placement Tests

The Testing Center offers the COMPASS Placement Test, which is a computerized assessment for new students used to identify the appropriate starting level for reading, writing and math courses. Developmental education courses may be required to maximize the student's opportunity for academic and personal success. After students complete the COMPASS test, advisors help them select courses for their first quarter.

Placement testing is required for the following students:

- All students who plan to register for a course with established reading, writing, or math prerequisites.
- All students who register for 12 or more credit hours during their initial quarter at the College.
- All part-time students who will register for their 12th accumulative credit hour.
- All high school students intending to take classes.

Students with transfer credit in college-level composition and algebra from an accredited institution may not need to complete the entire placement test. These students should contact an Academic Advisor in Advising and Counseling Services (Aquinas Hall, Room 116, 287-2668) for course selection and registration information. Students whose native language is not English should contact the Admissions Office (Madison Hall Lower Level, 287-2669) to take the English as a Second Language Test.

COMPASS testing is done on a walk-in basis; appointments are not needed. A photo ID is required. For more information, contact the Testing Center in Aquinas Hall, Room 002, (614) 287-3602, or visit our Web site at www.cscc.edu. Sample test items and resources for review are available on this Web site.

Registering For Classes

Approximately seven weeks prior to the start of classes, both continuing and new students will be informed of the dates and times for registering for classes. Advisors will be available to help students with course selection.

Students can register for classes via the Web at www.cscc.edu, via CATS (Computer Automated Touchtone System) at (614) 287-2287, with a Telephone Information Center representative at (614) 287-5353, in-person with the Records and Registration Department, or at one of the off-campus centers. Course additions or section changes after the start of the quarter will be permitted only with the instructor's approval. Please see the current quarter Schedule of Classes for pertinent deadlines.

Students who wish to register for 22 or more credit hours in a quarter 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
Ohio State University
Otterbein College
Pontifical College Josephinum

Cross-registration is limited to one course per term (Autumn, Winter 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 quarter 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 their academic advisor and the Office of the Registrar 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 non-resident student.

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 that Selective Service System registration compliance must take place before disbursement of any federal financial aid funds, or the Ohio Instructional Grant, or before the institutional section of a Guaranteed Student Loan or PLUS application will be certified.

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 on-line 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 your number to the Telephone Information Center at (614) 287-5353.

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

Any change in your name, address, phone number, or program of study must be reported to the Records and Registration Department so the academic record may be updated.

Name changes require submission of official documentation such as a marriage certificate, court decree, etc.

Address and phone number changes may be made by calling the Telephone Information Center at (614) 287-5353 as well as in the Records and Registration Department. Each student is responsible for complying with any official communication sent to the last reported address.

Program of study changes may be made in the Records and Registration Department. Students may also 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.

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 of 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 Program Chairperson for Military Science, (614) 236-7114.

Financial Aid

Financial aid is available in four 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 Central Processing Service 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 from the Financial Aid Office, or online at http://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 an 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.

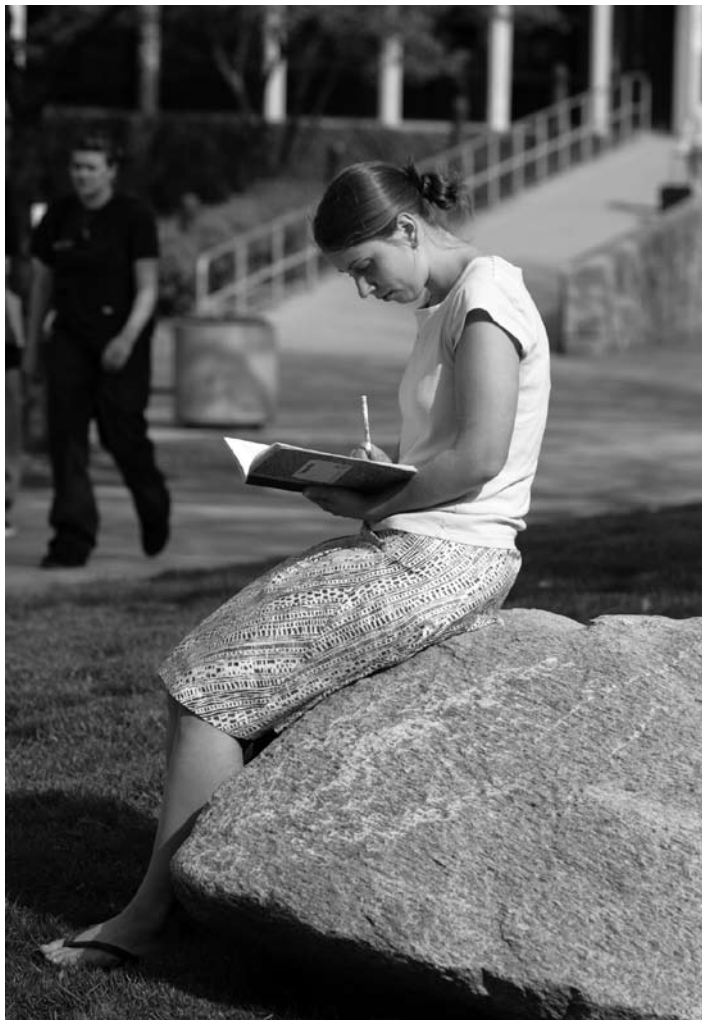
Application Procedures

Application materials are available in the Financial Aid Office, Rhodes Hall, Lower Level. Students can apply electronically through the Internet at www.fafsa.ed.gov. Students may also request information by calling (614) 287-2648. You must apply for financial aid each academic year. New FAFSA applications are available each year after January 1. Applications are accepted 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, CSCC has established priority deadlines for completing the appropriate application materials. These dates are available on the Financial Aid web page at www.cscc.edu.

How Do I Apply?

1. Make application for admission to Columbus State Community College.
2. Complete the Free Application for Federal Student Aid (FAFSA) paper application or apply online at www.fafsa.ed.gov. Computers can be used in the Student Assistance Center or in any computer lab at CSCC.
    a. Be sure to list Columbus State as the school you plan to attend by denoting **school code 006867** in step 6 of the FAFSA.
    b. If you are applying online, be sure to print the signature page. You will need to sign it and mail it to the address listed on the signature page. If you have previously submitted a FAFSA online, you may use the PIN assigned to you from the U. S. Department of Education to sign the application.
    c. If you are a first-time FAFSA filer and have not yet been assigned a PIN from the U. S. Department of Education, you may request one in advance to use when completing the on-line FAFSA. You may register on-line at www.pin.ed.gov/



3. After your FAFSA has been received and processed, you will receive a Student Aid Report (SAR) in approximately 4 weeks. Review these results. If corrections are necessary, you may bring the appropriate materials to the Financial Aid Office and have those corrections submitted electronically.
4. Once the Financial Aid Office has received your FAFSA results, we will review your file. Once your file is complete, you will be sent an official Financial Aid Award letter, explaining what 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:

- Not possess a bachelor's degree for grant eligibility.
- Be a United States citizen, eligible noncitizen, U.S. National, or permanent resident.
- Have a valid social security number.
- Have a high school diploma, G.E.D., 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 G.E.D. 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 Web page: www.cscc.edu/docs/FinAid/index.htm.
- Be a regularly admitted student, enrolled in an eligible program, working toward a degree or certificate.
- Not be in default, or owe an overpayment on any type of federal financial aid.
- Maintain satisfactory academic progress as defined by the Financial Aid Standards of Academic Progress Policy.

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. Generally, signed IRS income tax returns, Verification Worksheets, and documentation of untaxed income received are required.

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 Web page: cscc.edu/docs/FinAid/index.htm. **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 Columbus State Community College Development Foundation provides scholarships based upon availability of funding. Private donors, professional organizations, and the College establish these scholarships. Eligibility varies for each scholarship program. Students may apply for these scholarships by completing the Application for Development Foundation Scholarships, available in the Financial Aid Office. In general, these scholarships are based on variable criteria including, but not limited to, technology, financial need, credit hours earned, and academic and individual achievement. Scholarship applications are available in the spring for the upcoming financial aid year.

Scholarships are generally awarded for use during the Autumn, Winter and Spring quarters.

- The Martha B. Agler Scholarship
- Alpha Rho Epsilon Leadership Scholarship
- American Culinary Federation Columbus Chapter Scholarship Endowment
- Auxilary Services Part-Time Scholarship
- Aviation Safety Institute/John B. Galipault Memorial Scholarship
- Hector Boiardi Scholarship
- Barbara Brandt Scholarship
- Borghese Family Solar Challenge
- Business Management Scholarship
- Campos-Moeller Families Access Scholarship
- Carol Kizer Ohio Hospitality Educational Foundation ProStart Scholarship
- Columbia Gas of Ohio Minority Scholarship
- Columbus Club of Printing House Craftsmen/Rodney G. Bland Scholarship
- Columbus State Scholarship Endowment
- Construction Financial Management Association (CFMA) Scholarship
- Construction Sciences Scholarship
- Hospitality Management Memorial Scholarship
- Disability Services Scholarship
- Donald A. Borror/Dominion Homes Endowed Scholarship
- Dr. Kevin May Global Campus Scholarship
- Firstar Bank Endowed Scholarship for African-American Students
- Frank P. Gallo SCORE Scholarship
- Greg Golden Memorial/ERC Scholarship
- Grant/Riverside Methodist Hospitals–OhioHealth Scholarship in Medical Assisting Technology

- Grant/Riverside Methodist Hospitals–OhioHealth Scholarship in Surgical Technology
- Robert A. Harris Memorial Scholarship
- Huntington National Bank Student Scholarship
- International Facility Management Association Scholarship (IFMA)
- International Wine and Food Society Scholarship
- Janet E. Jackson Scholarship in Legal Assisting
- JC Penney Scholarship
- Mary Kay Jockisch Memorial Scholarship
- Dr. Patricia Keats Kasile Scholarship Endowment
- Frank B. Kroeger Engineering Technology Scholarship
- The Limited Inc., Scholarship
- The Limited Inc., Women's Scholarship
- Lowe's Home Improvement Warehouse Scholarship
- Victor Lucas Single Parent Scholarship
- MAPSYS Partner in Education Scholarship
- Mathematics Scholarship
- John M. McCormac, Jr., Scholarship in Emergency Medical Services
- Mechanical Engineering Technology Scholarship (MET)
- Cameron Mitchell Scholarship
- Nationwide Scholarship Endowment
- Nelson Homes Scholarship
- Harold M. Nestor Scholarship
- Northwest Title/Union Savings Bank Real Estate Scholarship
- Ohio Children's Foundation Scholarship
- Paralegal Studies
- Phi Theta Kappa Scholarship
- Elijah Pierce Scholarship
- The Police Academy Scholarship
- Real Estate Scholarship Endowment
- Rebecca Redman Twin Rivers Link
- Robert "Bob" Tepper Scholarship
- Ron Lofton Disability Services Scholarship
- Ross Laboratories Sports and Fitness Management
- Ross Laboratories Division of Abbott Laboratories Scholarship in Biological and Physical Sciences
- Chris Sayre Memorial Automotive Technology Scholarship
- The Scotts Company Scholarship in Landscape Design/ Build
- Social and Behavioral Sciences Scholarship
- State Auto Insurance Companies Scholarship in Microcomputing
- Timberlake Massage Therapy
- Union Tools Scholarship Endowment
- R. Reid Vance Memorial/Printing Industry of Central Ohio
- Carol Watkins Medical Laboratory Internship Award
- Marybelle Williams Adult Student Scholarship
- Stephen H. Wilson Mental Health/Chemical Dependency/ Mental Retardation Scholarship
- Wolfe Associates Scholarship in Technical Communication
- Worthington Industries, Inc., Work Study Scholarship

Scholarship availability and amounts contingent upon yearly funding.

Students can view scholarship information electronically by using the 'Scholarships' link from the Financial Aid secton of www.cscc.edu.

If you have been awarded a scholarship from an outside agency or organization, you will be 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 quarter to determine a student's enrollment status for disbursing financial aid. The number of credit hours 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 will not change.

The freeze date is designed to coincide with the close of the 100% tuition refund period. Please refer to the quarterly Schedule of Classes for the 100% refund dates for full-term, first-term, 4-week term, eight-week term, and flex-term classes.

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. In the case of Federal Stafford Loan or Federal PLUS Loan, the refund is made directly to the lending institution.

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.

OIG recipients dropping below 12 credit hours during the 100% refund period will be required to repay the entire amount of the grant. OIG recipients dropping below 12 credit hours during the 50% or 25% refund period will be required to repay a percentage of the grant.

Return of Unearned Title IV Funds Policy

Financial aid students who completely withdraw from all classes during a given quarter may be subject to owing 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 quarter in order to earn their 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 Web page: http://cscc/edu/docs/FinAid/index.htm.

Veterans Services

Columbus State Community College is approved for the training of veterans and other eligible persons. Students eligible to receive VA educational benefits must register with the Veterans Services Office in order to receive their benefits.

To apply for VA educational benefits, students must have completed the college admissions application and paid the application fee. Students should contact the VA Coordinator at least six weeks before they plan to attend to begin the application process.

Each applicant will be provided with a copy of the Standards of Satisfactory Academic Progress for VA Recipients, current VA guidelines, and pay scales.

To request an application or to receive more information about VA benefits, contact the VA Coordinator at (614) 287-2644.

Information and Services

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

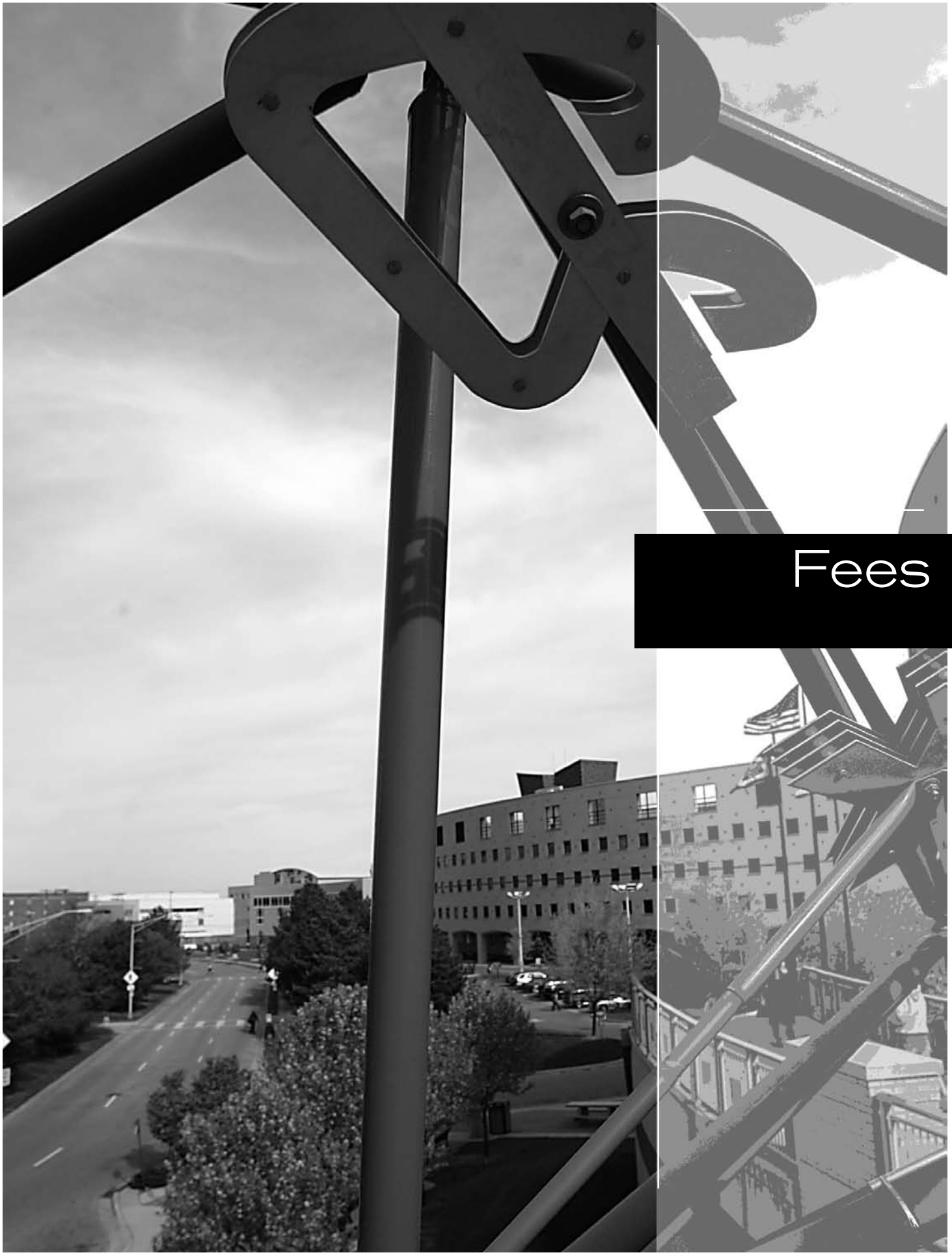
Telephone Numbers

Financial Aid Representative ..... (614) 287-2648
Toll ..... 1 (800)-621-6407
VA Coordinator ..... (614) 287-2644

Customer Service Hours

Financial Aid Office
Monday – Thursday ..... 8 a.m. – 7:30 p.m.
Friday ..... 9:30 a.m. – 4:30 p.m.
Saturday .....9 a.m. – noon

Veterans Services Office
Monday – Thursday ..... 8 a.m. – 5 p.m.
Friday ..... 9:30 a.m. – 4:30 p.m.



Fees

Fees

One-Time-Fee

Matriculation fee (nonrefundable) $50

Matriculation Fee

The one-time, nonrefundable $50 matriculation fee covers the cost of enrolling at the College, including application and permanent record maintenance and a student identification card. The matriculation fee will appear and be due for payment on the schedule and fee statement for the academic quarter in which the student initially registers for a class, even if the class is dropped or cancelled.

Instructional and General Fees

The resident credit hour fee of $79.00 is based on a $70.00 instructional fee and a $9 general fee. The general fee defrays the cost of registration, student activities services, and student support services of a noninstructional nature. Fees for non-Ohio residents and international students reflect a similar prorated instructional and general fee amount. All fees are subject to change.

Quarterly Academic Fees

Ohio Residents

Ohio residents are charged a combined instructional and general fee of $79.00 per credit hour. This fee includes a $70.00 instructional fee and a $9.00 general fee.

Non-Ohio, US Residents

Non-Ohio, U.S. residents are charged a combined instructional and general fee of $175.00 per credit hour. This fee includes a $159.00 instructional fee and a $16.00 general fee.

International Students

International students are charged a fee of $210.00 per credit hour. This fee includes a $189.00 instructional fee and a $21.00 general fee.

Lab Fees

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

Fee Payment

At the time of in-person registration for classes, the student will be given a class schedule and fee statement. When registering over the phone or on CougarWeb, the student can access their class schedule under "my schedule" and the charges under "make-a-payment" online via the Web at www.cscc.edu. Fee payment deadlines are listed in the quarterly enrollment guide at the above Website.

Late Payment of Fees

Fees not paid by published quarter deadline dates will result in the student's schedule being dropped. If a student is dropped for nonpayment, when they re-register, there will be a $75 re-registration fee. After any deadline date, any class registered should be paid the same day to avoid being subsequently dropped or restricted from future registrations or transcript requests.

NOTE: Financial aid does not automatically pay fees for courses added after the fee payment deadline. You may contact the Financial Aid Office for fee payment options. Additionally, Financial aid will not be available to pay for full-term or first-term classes added after the 100% refund period.

Student Health Insurance

Columbus State Community College offers low-cost group accident and sickness insurance. All full-time students are eligible for the plan. Coverage is worldwide, 24 hours a day, at home, at school or while traveling. The fee provides coverage for the entire 12-month period. Extended coverage for family and dependents is also available at an additional cost. For more details, request a student insurance program brochure from the Cashier's Office in Rhodes Hall or the Local Representative, Acordia, at www.acordia.com/colleges

Nonresident Credit 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 to the Cashier's Office 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 matriculation fee covers the cost of enrolling at the College, including application and permanent record maintenance, and a student identification card. The matriculation fee will appear and be due for payment on the schedule and fee statement for the academic quarter 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 non-directory information to individuals and organizations outside of the College without the student's written permission, except when required by law. Students may request that an official Columbus State transcript be sent to organizations and individuals outside of the College by completing the Transcript Request Form available in the Records and Registration Department and available via the Web a www.cscc.edu. Students wishing to take a copy of their transcript with them will be required to present photo identification. If a balance is owed to the College, Columbus State cannot 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 the *Catalog* for a summary of the act.)

Refunds

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

Instructional and general fee refunds are based upon the percentage of time elapsed in each course. If the course is dropped with 10% of the time elapsed in the course, a 100% refund of instructional and general fees will be issued. If the course is dropped with 20% of the time elapsed in the course, a 50% refund of instructional and general fees will be issued. If the course is dropped with 30% of the time elapsed in the course, a 25% refund of instructional and general fees will be issued. Lab fees may be refundable based upon the same percent of refund issued for instructional and general fees. No refunds are given beyond 30% of the term.

Please check with the Records and Registration Department for these deadlines, or refer to refund dates published in the quarterly Schedule of Classes.

A total refund of quarterly 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.

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

A resident of Ohio "for all other legal purposes" shall mean any person who maintains a 12-month place or places of residence in Ohio, prior to applying to the college, who is qualified as a resident to vote in Ohio and receive state welfare benefits, and who may be subjected to tax liability; provided such person has not, within the time prescribed by this rule, declared himself or herself to be, or allowed himself or herself to remain, a resident of any other state or nation for any of these or other purposes.

In determining whether an enrolled student is an Ohio resident, the college shall make a determination of fact in accordance with the above standards.

General Residency for Tuition Surcharge Purposes

The following persons will be classified as residents of the State of Ohio for tuition surcharge purposes:

A. Dependent students, at least one of whose parents or legal guardians has been a resident of Ohio for 12 consecutive months or more immediately **preceding** the enrollment of such student in an institution of higher education;
B. Persons who have resided in Ohio for all other legal purposes for at least 12 consecutive months immediately preceding their enrollment in an institution of higher education and who are not receiving and have not directly or indirectly received in the **preceding** 12 consecutive months, financial support from persons or entities who are not residents of Ohio for all other legal purposes.
C. A dependent child of a parent or legal guardian, or the spouse of a person who, as of the first day of a term of enrollment, has accepted full-time employment and established domicile in Ohio for reasons other than gaining the benefit of favorable tuition rates.

Documentation of full-time employment and domicile shall include, but is not limited to, both of the following documents:

I. A sworn statement from the employer or the employer's representative on the letterhead of the employer or the em-

ployer's representative certifying that the parent or spouse of the student is employed full time in Ohio.

II. A copy of the lease under which the parent or spouse is the lessee and occupant of rented residential property in the state; a copy of the closing statement on residential real property located in Ohio of which the parent or spouse is the owner and occupant; or if the parent or spouse is the not the lessee or owner of the residence in which he or she has established domicile, a letter from the owner of the residence certifying that the parent or spouse resides at that residence.

D. People who live and are gainfully employed full time or part time and self-sustaining in Ohio and who are pursuing a part-time program of instruction at an institution of higher education.

Residency Exceptions and Circumstances

1. A person on active duty status in the United States military service who is stationed and resides in Ohio and his or her dependents will be considered residents of Ohio for these purposes.
2. A person who enters and currently remains upon active duty status in the United States military service while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile.
3. Any alien holding an immigration visa or classified as a political refugee shall be considered a resident of the State of Ohio for state subsidy and tuition surcharge purposes. (See C.I. and C.II. above.)
4. No one holding a student or other temporary visa shall be eligible for Ohio residency for these purposes.
5. A dependent person classified as a resident of Ohio for these purposes shall continue to be considered a resident during continuous full-time enrollment and until his or her completion of one academic degree program.
6. In determining residency of a dependent student, removal of the student's parents or legal guardian from Ohio shall not, during a period of 12 months following such removal, constitute relinquishment of Ohio residency status otherwise established under item (C).
7. Any person once classified as a nonresident, upon the completion of 12 consecutive months of residency in Ohio for all other legal purposes, may request reclassification as a resident of Ohio for these purposes. Should such person present clear and convincing proof that no part of his or her financial support is or in the preceding 12 consecutive months has been provided directly or indirectly by persons or entities who are not residents of Ohio, for all other legal purposes, such person shall be reclassified as a resident (exceptions: non-immigrants.) Evidentiary determinations under this rule shall be made by the College, which may require, among other things, the submission of information regarding the sources of a student's actual financial support to that end.
8. Any reclassification of a person who was once classified as a nonresident for these purposes shall have prospective application only from the date of such reclassification.
9. A person who is transferred by his employer beyond the territorial limits of the fifty states of the United States and the District of Columbia while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile.
10. A person who has been employed as a migrant worker in Ohio (and his or her dependents) shall be considered a resident for these purposes provided such person has worked in Ohio at least four months during each of the three years preceding the proposed enrollment.

For further information on residency for tuition purposes, please contact the Records and Registration Department.

Parking Regulations

All motor vehicles, including motorcycles, parked on campus must have a current CSCC parking permit. Permits can be purchased from the Cashier's Office located on the second floor of Rhodes Hall. Hours are Monday–Thursday 8 a.m.–7:30 p.m.; Friday 8 a.m.–4:30 p.m. On the two Saturdays prior to the start of a quarter and the Saturday following the first week of a quarter, the Cashier's office and Public Safety Office will be open limited hours. Please call (614)-287-2525 for more information.

To purchase a permit you must have paid your tuition fees. Parking fee for one vehicle is $25.00 per quarter, and everyone is limited to one parking pass. You must purchase parking **each quarter**.

Parking Permit Location

1. Parking permit must be affixed to the inside of the rear window, lower right hand corner, or on the inside of the windshield, lower corner passenger side, if the vehicle windows have dark tint.
2. Permits are to be displayed so all information including permit number is clearly visible.

Temporary Permits

1. Temporary permits are available to those who need to park a vehicle that does not have a parking permit. Temporary permits may also be issued for special needs such as temporary handicap parking (limit 30 days) with a doctor's letter.
2. Temporary permits are available from the Public Safety Department at no cost. The temporary permit will be issued providing verification of the purchase of a regular permit.

Replacement Permits

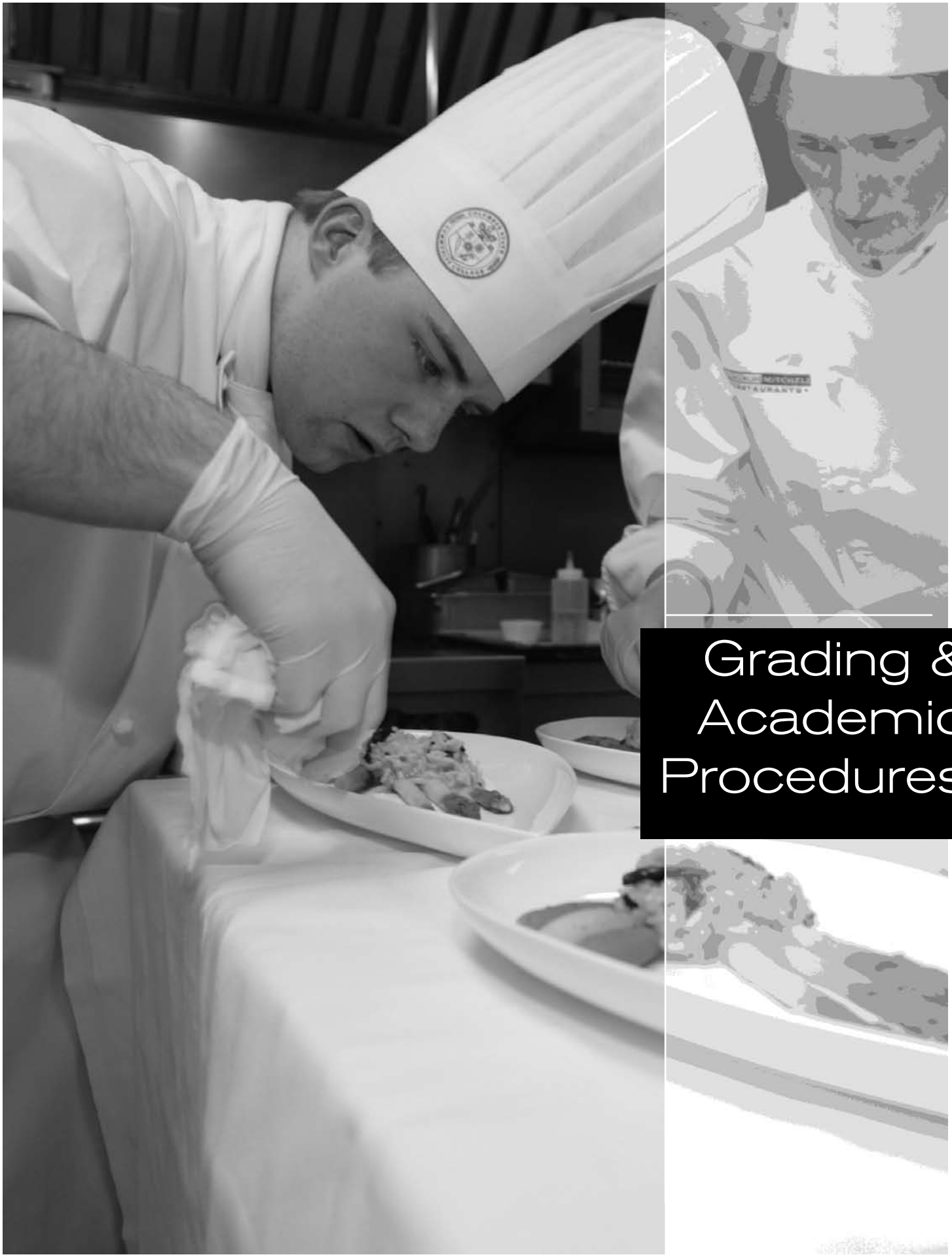
Lost or stolen parking permits will be replaced at a cost of $25.00.

Misuse of Permits

All parking permits are registered to the student or employee who was issued the permit and are nontransferable.

Towing

Unauthorized and illegally parked vehicles are subject to being towed at the owner's expense.



Grading & Academic Procedures

Grading and Academic Procedures

Grades

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

Quality		Value	Credit Awarded
Excellent	A	4	Yes
Good	B	3	Yes
Average	C	2	Yes
Poor	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 quarter. 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. 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 page 63 for information on the Ohio Transfer Policy. Transfer credit does not apply to meeting residency credit hour requirements.

Examination/Proficiency Credit (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. Examination/proficiency credit does not apply to meeting residency credit hour requirements.

AUDIT (R). A student may audit a course for information 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, non-traditional, 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 fourteenth calendar day of the quarter. 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.

Nonresident Credit (N). Nonresident 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. Nonresident credit does not apply to meeting residency hour requirements. Approved nonresident credit is posted to the transcript after the student has completed one course at CSCC.

Withdrawal (W). A course must be dropped before 10% of the course has elapsed to avoid a "W" appearing on the academic transcript. Withdrawals after 10% of the course has elapsed through the 63rd calendar day of the quarter for full-term courses and the 32nd calendar day of first-term courses are recorded as "W" on the academic transcript. Please refer to the Web at www.cscc.edu for specific quarterly date information. See "Course Drop/Withdrawal Procedure" in this section of the Catalog.

NO GRADE REPORTED ( ) – A blank indicates that the instructor did not report a grade. The instructor must report a grade within six weeks after the beginning of the next quarter, 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 on the Web at www.cscc.edu.

Calculating Grade Point Average

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

EXAMPLE

Course	Credit Hours	Course Grade Received	Grade Point Value	Course Grade Points (Credits x Pt. Value)
Beg Comp (ENGL 101)	3	B	3	3x3 = 9
Med Term (MULT 101)	2	B	3	2x3 = 6
Physiology (BIO 169)	5	C	2	5x2 = 10
Hematology (MLT 141)	6	A	4	6x4 = 24
Emergencies (MULT 103)	2	B	3	2x3 = 6
Total Credit Hours =	18		Total Grade Points =	55

$$\text{GPA} = \frac{\text{Total Grade Points}}{\text{Total Credit Hours}} = \frac{55}{18} = 3.055$$

Academic Standing

Each active student's record is reviewed at the close of each quarter. 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
1-9	1.0
10-19	1.4
20-29	1.5
30-39	1.6
40-49	1.7
50-64	1.8
65-84	1.9
85+	2.0

Dean's List

To recognize outstanding scholastic achievement, a Dean's List is compiled each quarter. 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 quarter. 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."

Academic Honors

An Academic Honors List is compiled at the end of spring quarter to recognize students who are not eligible for the Dean's List but who have achieved outstanding scholastic success over an academic year. Part-time students who have earned 12 or more hours of credit in any academic year (summer, autumn, winter and spring quarters) with a GPA of 3.5 or above will be recognized on the Academic Honors List at the end of spring quarter.

Class Attendance

Students are expected to attend all classes. A student who has excessive unexcused absences during the quarter and has not officially dropped the course will receive an "E" in that course. Additional attendance policies may be defined by each technology chairperson, department coordinator, or instructor.

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. For the purpose of graduation, a candidate for an Associate of Arts or Associate of Science degree must have a minimum 2.000 cumulative grade point average. A candidate for an Associate of Applied Science or Associate of Technical Studies degree must have a minimum 2.000 cumulative grade point average in all required technical course work and a minimum 2.000 cumulative grade point average (GPA) in all nontechnical course work.

Academic Warning

Any quarter in which a student's grade point average ***for the term*** drops below 2.000, he/she will be placed on Academic Warning and "WARNING" is printed on the student's grade report and transcript.

Academic Warning, First Term Only Rule

A student who is enrolled in his/her first term and is placed on academic warning will be restricted from registering for classes until he/she meets with an academic advisor in Advising and Counseling Services. This restriction also applies to first-term students on academic warning who have already registered for the next quarter and attempt to add or drop a class. During the meeting, an Academic Warning Form will be completed to designate what difficulties led the student to be placed on academic warning, to provide recommendations for improved grades the next quarter, and to promote academic success at the college.

Academic Warning and Students Beyond the First Term

Students who are beyond their first term of enrollment and receive a grade point average of less than 2.000 for any term will be strongly recommended to meet with an academic advisor or counselor.

Academic Probation

A student who is beyond his/her first term is placed on academic probation when his/her cumulative grade point average is below that designated by the Standards of Satisfactory Academic Performance.

The student will be restricted from registering for classes until he/she meets with an academic advisor in Advising and Counseling Services for academic intervention. This restriction also applies to students on academic probation who have already registered for classes for the next quarter and attempt to add or drop 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 quarter, 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 Academic Performance.

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 quarters), the student's cumulative grade point average remains less than that designated by the Standards of Satisfactory Academic Performance.

A student who is academically dismissed will be sent a letter notifying him/her of dismissal status and explaining the procedure for readmission. A student who is academically dismissed from the college **will not be permitted to enroll the following quarter**. If the student has already registered for the next quarter, his/her **Courses will be dropped and the student will not be permitted to attend**. This procedure is done within one week of processing the quarterly grade report/transcript.

Petition for Readmission

Any student petitioning for readmission must submit a Petition for Academic Readmission Form and meet with at least two college reviewers, at least one of whom is in Advising and Counseling Services (to determine conditions under which the student may return). The second reviewer is either the Director of Advising and Counseling Services or the student's academic department chairperson. If both college reviewers do not grant approval, the Registrar will determine final disposition. The entire readmission process (including all needed signatures) must be completed 30 calendar days prior to the beginning of the quarter for which the student seeks readmission. If a student is readmitted to the college, the student is then able to schedule classes and pay fees. The readmitted 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 form, including receiving a 2.000 term grade point average, in order to be eligible for continued enrollment.

Last Day to Complete Petition for Readmission

For Summer Quarter 2006: May 30, 2006
For Autumn Quarter 2006: August 22, 2006
For Winter Quarter 2007: December 5, 2006
For Spring Quarter 2007: February 27, 2007

Petition for Academic Review

Upon a second or any subsequent dismissal, the student who does not meet conditions must appeal to the Academic Review Board for readmission. The student must submit a Petition for Academic Review Form to the Dean of Student Life. The entire readmission process (including all needed signatures) must be completed 30 calendar days prior to the beginning of the quarter for which the student seeks readmission. Petition for Academic Review Forms will be available from the Records and Registration Office and from Advising and Counseling Services. The Dean of Student Life will chair and convene a board comprised of six members in addition to herself/himself. This Academic Review Board will review the petition (explaining the situation leading to the additional dismissal), as well as supporting documentation and the student's verbal explanation. Following its review and consideration of this information, the board will determine whether another readmission is warranted. The decision of the Academic Review Board will be final. Meeting with the Academic Review Board does not guarantee readmission.

Last Day to Complete Petition for Academic Review

For Summer Quarter 2006: May 30, 2006
For Autumn Quarter 2006: August 22, 2006
For Winter Quarter 2007: December 5, 2006
For Spring Quarter 2007: February 27, 2007

Standards of Satisfactory Academic Performance

TOTAL GPA CREDITS	GPA
1-9	1.0
10-19	1.4
20-29	1.5
30-39	1.6
40-49	1.7
50-64	1.8
65-84	1.9
85+	2.0

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 experi-

ences, 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.

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).

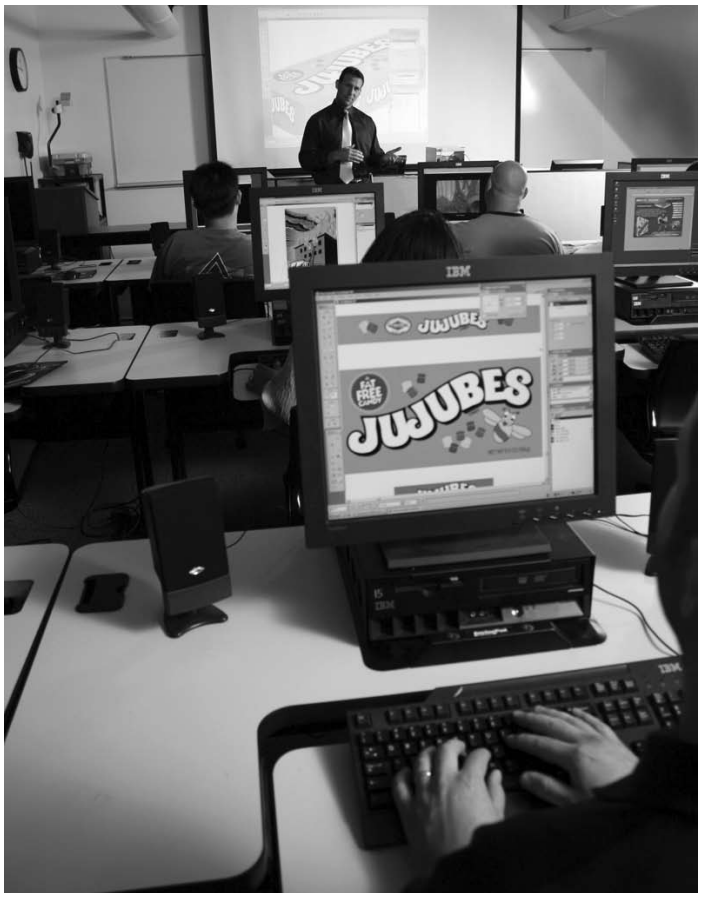
Because course content and technology may change rapidly, departments may determine a time that can lapse between the acquisition of learning and when the credit is being sought. This may vary depending upon the course.

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 later 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. To be eligible for the Fresh Start Rule the basic requirements include, but are not limited to, the following:

- The student must have been away from the College for at least three consecutive years
- The student has earned at least 12 credit hours meeting degree requirements with grades of "C" or better in every course since returning to the College following the minimum three-year absence



A student may use the rule one time. An information sheet providing the complete requirements of the Fresh Start Rule and petition are available in the Records and Registration Department and via the Web at www.cscc.edu.

Course Drop/Withdrawal Procedure

Students may drop full-term and second-term courses through the 63rd calendar day of the quarter, and they may drop first-term courses through the 32nd calendar day of the quarter (including Saturdays, Sundays and holidays). Please see the Records and Registration Department for deadlines for other short-term courses. To drop a class, it is necessary for the student to notify the College by using the Web, www.cscc.edu, CATS (Computer Automated Touchtone System) registration at (614) 287-2287; calling the Telephone Information Center, (614) 287-5353; or submitting a completed Registration Add/Drop Form to the Records and Registration Department or an Off-Campus Center during business hours. The revised schedule is the student's verification of completed registration transactions. 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.

Retroactive Academic Withdrawal

A student who received failing grades as the result of documentable extenuating circumstances that prevented the student from following academic withdrawal procedures may be eligible to petition to retroactively withdraw from courses and have those grades changed to "W." Students must provide adequate third-party documentation that explains the extenuating circumstances. More information is available from the Records and Registration Department.

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 request a Program of Study change in the Records and Registration Department. Students may also 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 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 shall 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 program or degree requirements. DARS provides a written report of courses in progress, courses completed and courses remaining for completion of program or degree requirements. It also reflects technical and nontechnical grade point averages (for technical programs) and the overall grade point average (all programs). Your advisor can help you interpret this report. Regular use of the DARS report will assist the student in making prudent course selections. Students may view or request copies of their DARS report on the Web at www.cscc.edu.

Student Status

Students are considered first-year status when they have successfully completed 47 or fewer credit hours as recognized by the College. A student shall be considered second-year after having satisfactorily completed a minimum of 48 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 quarter. A part-time student is one who is registered for 11 or fewer credit hours during a quarter.

Petition to Graduate

Each student who wishes to graduate must obtain a Petition to Graduate Form from the Records and Registration Department at the beginning of the quarter prior to the one in which the student intends to graduate. The student must meet with his or her 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 quarter to determine eligibility for graduation. The petition to graduate must be filed with the Records and Registration Department by the published deadline date for the intended quarter of graduation. The student will be notified of graduation eligibility after receipt of final grades.

Petition to Graduate Deadline Dates

Autumn Quarter 2006: August 4, 2006
Winter Quarter 2007: December 1, 2006
Spring Quarter 2007: February 2, 2007
Summer Quarter 2007: Mary 4, 2007

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 quarter of graduation determine the appropriateness of posting "Honors" on the graduate's transcript and Summa Cum Laude, Magna Cum Laude, or Cum Laude on the diploma. Verification of the completion of graduation requirements will be done after grades have been issued. Please allow eight weeks for delivery of the diploma via certified mail. Graduates' grade point averages and honors designations printed in the graduation program are based on calculations of all grades through the quarter prior to their graduation quarter. Honors categories are as follows:

*** Summa Cum Laude (with greatest praise) 4.000 GPA
** Magna Cum Laude (with great praise) 3.999-3.850 GPA
* Cum Laude (with praise) 3.849-3.500 GPA

Commencement

A formal graduation ceremony is held at the end of each quarter. All students who have petitioned to graduate for the current quarter are invited to attend the ceremony. Diplomas are not distributed during the ceremony. Diplomas will be issued after the verification of graduation requirements is complete. Please allow eight weeks

for delivery of the diploma via certified mail. Caps and gowns, furnished by the College, are standard attire for the ceremony. 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 Community College 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: Cashier's Office, 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 January 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. 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 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 students 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.

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, and to whom they are released. A copy of the release record shall be made available to the student if he or she requests. 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.

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

a. Requests from faculty and staff of Columbus State Community 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 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.

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 (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, full-time, over full-time, inclusive dates and quarters of enrollment)
h. Degrees and awards received (to include Dean's List and Academic Honors List)
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 from 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, other 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 nondirectory 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 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.

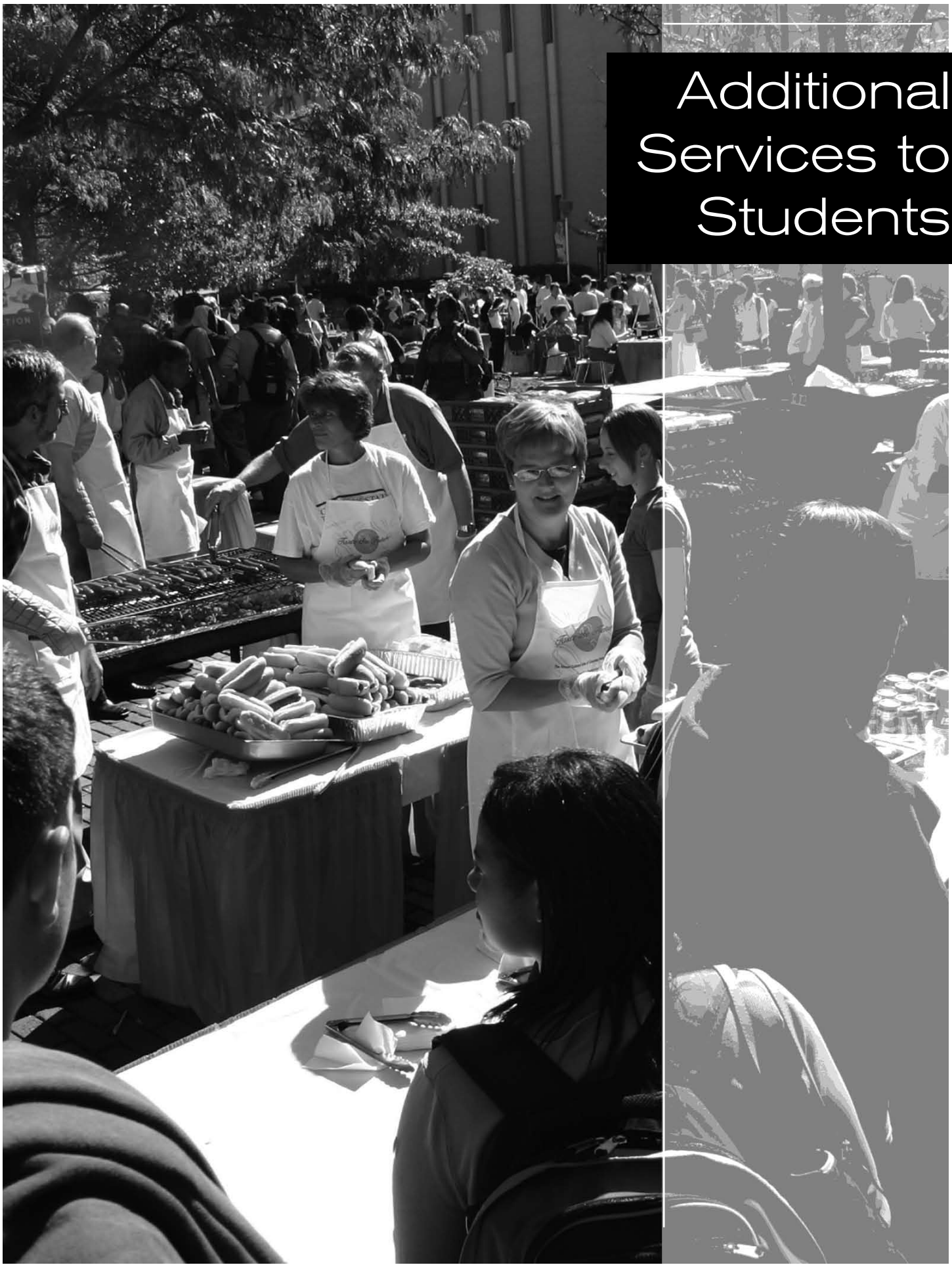
12. Complaints

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

Direct questions concerning your understanding of the Act to the Dean of Enrollment Services.

Additional Services to Students



Additional Services to Students

Columbus State Community College Bookstore

The Columbus State Bookstore's mission is to make your busy life simple. We have the supplies you need to excel in your classes at Columbus State, and if there is something you want but can't find, we will make every effort to find it for you. The Columbus State Bookstore offers you a one stop-shop for textbooks, supplies, imprinted apparel, gifts, electronics, academically priced software, general reading and reference books, candy, snacks and drinks.

The CSCC Bookstore provides…

- Competitively priced textbooks every day.
- Additional savings with the Cougar Rewards and Cougar Book Club Programs.
- A Website that provides you access to discounted textbooks, general merchandise, and information.
- Academically priced software, like the Microsoft Office Suite for only $99.99.
- A calculator rental program for TI-83 or TI-84 calculators.
- Daily textbook buyback.
- Bookstore services at the Dublin, Southeast, and Westerville off-campus locations during rush and buyback periods as published.

Visit your college store at 550 East Spring St., Delaware Hall (614)-287-2427, toll free (800)-621-6407, or http://bookstore.cscc.edu.

Hours of Operation: Monday–Thursday, 8 a.m.–9 p.m.
Friday, 8 a.m.–5 p.m.
Saturday, 9 a.m.–2 p.m.

The Discovery Exchange (The DX)

Exciting changes are coming soon. Columbus State will open a new retail complex known as The Discovery Exchange in autumn 2006 to be located at the corner of Cleveland and Mount Vernon avenues. The DX will house a variety of services including a bookstore, copy center, convenience store, and café, all serving students, employees, and the downtown community.

Visit us online at http://bookstore.cscc.edu for updates and more information.

Cashier's Office

The Cashier's Office is located on the second floor of Rhodes Hall. Hours of operation are: Monday–Thursday 8 a.m.–7:30 p.m., and Friday 9:30 a.m.–4:30 p.m. The Cashier's Office handles all fee payments, including parking permits ($25) and replacement identification cards ($4). Amusement park tickets (Summer Season), bus passes, and postage stamps can also be purchased at the Cashier's Office.

For more information, contact the Cashier's Office at (614) 287-2414.

Child Development Center

The Columbus State Child Development Center (CDC) is a year-round facility providing care and education to the children of Columbus State students, staff and faculty as well as the downtown community. As part of the Center for Workforce Development, the center's address is 315 Cleveland Ave., but the entrance is at the southeast corner of Grant and Grove streets. Children served range from six months to five years of age. The CDC is licensed through the Ohio Department of Job and Family Services and accredited through the National Association for the Education of Young Children. The center also partners with the Early Learning Initiative, a school readiness program for preschoolers.

The center is open Monday–Friday, 6:45 a.m.–6 p.m. The numbers of children served will be expanding through fall 2006. As age groups fill, a wait list will be maintained. Tuition subsidy is available through contracts with the Ohio Department of Job and Family Services, Champion of Children, and ELI.

For more information or a tour please call (614) 287-3600 or stop by.

Student E-Mail

Don't start the quarter without your free e-mail account. Columbus State Community College offers **StudentMail**, your own e-mail account, to all currently enrolled students. StudentMail is accessible at the Web site: http://student.cscc.edu/.

All currently enrolled first quarter 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 StudentMail Web site. Your email username and password can also be used to access Blackboard courses and login to campus labs.

The IT Learner Support Center, (614) 287-5050, is on the ground floor of the Library, Columbus Hall Lab assistants are available in computer labs to answer questions regarding your StudentMail account.

Advising and Counseling Services

Advising and Counseling Services offers the following services and programs to assist Columbus State learners:

- Academic advising and planning
- Career counseling and career development
- Transfer advising, including the annual College Transfer Fair, and opportunities to meet with admissions representatives and academic advisors from other institutions
- Educational workshops and programs
- Counseling for personal concerns
- Alcohol and drug prevention resources
- Student support groups and resources (such as Sister-Friends and The Adult Learner Connection)
- Advising and assistance for students having academic difficulty (academic warning, academic probation, dismissal, and petitions for readmission and academic review)
- Petitions to graduate for Associate of Arts and Science students

Academic Advising at Columbus State

After students apply to Columbus State, academic advisors in Advising and Counseling Services provide guidance on first quarter classes, either after students have taken the COMPASS placement test or after students' transcripts from previous institutions have been reviewed. In the first quarter advisors also review the specific requirements for completion of the student's academic program. **Programs of study** for all degrees and certificates are in the Columbus State catalog or on the Web at www.cscc.edu. Academic advisors can help students with academic planning throughout their studies at Columbus State.

Advising and Counseling Services provides academic advising and planning for the following students:

- **Transfer students** pursuing the Associate of Arts (AA) or Associate of Science (AS) degrees
- **Transient students** from other institutions taking classes at Columbus State
- **Undecided students** who are still exploring their educational and career goals
- **Technical program students** in Business or Engineering two-year programs through their first quarter of classes (Note: These students are assigned a faculty advisor during their second quarter.)
- **Technical program students** in one of the Health or Human and Public Services programs, including pre-Nursing, who have not yet been accepted into the program (Note: These students are assigned a faculty advisor when they are accepted into their respective programs.)
- **Associate of Technical Studies (ATS) program students**
- **Any students** experiencing academic difficulty

To locate your academic advisor, go to the Columbus State Web site at www.cscc.edu, or call (614) 287-2668.

Why is academic advising important? Academic advisors can help students select the correct courses for their major or career goal, and they can help develop a quarter-by-quarter plan for students' academic programs. Assistance in choosing a major or finding a career direction is also available. Advising and Counseling Services offers a wide range of educational and career-related information, including transfer opportunities, transfer guides, and visiting advisors from area four-year colleges who can help students with their planning for and transition to bachelor's degree programs. Students can access much of this information directly by exploring our web site: www.cscc.edu.

Career Counseling and Resources

Advising and Counseling Services also helps students with career decision-making and choosing an appropriate major or program of study. Services include:

- Assessing skills and interests and relating them to college majors and careers
- Developing a plan to explore careers
- Creating a career portfolio and building credentials
- Planning for the next career and educational transition
- Making self-assessment tools available on the Web, including:
  - * Discover Career Planning System: This computer-based career planning system is available in Aquinas Hall, Room 116 and the ERC (the Library), located on the top floor of Columbus Hall. Students must bring their own computer disk. If a student would like to meet with a career advisor after completing the assessment, appointments can be made in Advising and Counseling Services, Aquinas Hall, Room 116.
  - * Internet links to other effective career interest tests, which can be found on the Columbus State Web site: www.cscc.edu.

Career counseling is by appointment only in Advising and Counseling Services, Aquinas Hall, Room 116. Regular office hours for appointments are Monday–Thursday 8 a.m.-6 p.m. and Friday, 9:30 a.m.–3 p.m. To schedule an appointment please call (614) 287-2668.

Personal Counseling

Confidential, personal counseling and consultation services are available on a short-term basis at no charge in Advising and Counseling Services. Issues may include:

- Adjusting to college
- Improving study skills
- Stress and time management
- Coping with testing difficulties or test anxiety
- Managing personal or family relationships
- Self-esteem, depression, anxiety, or managing anger
- Grief counseling
- Alcohol and other drug use and abuse concerns

Information and referral to community resources and long-term assistance are also available. Appointments are recommended; call

(614) 287-2668 or stop by Advising and Counseling Services in Aquinas Hall, Room 116, for more information and assistance.

Educational Workshops Now Online

Advising and Counseling Services provides educational workshops online for many different topics designed to enhance the social, educational, and personal well-being of students. These virtual "Web shops" and related resources are available on our Web site at www.cscc.edu. Topics include stress/time management, choosing a major, career/life planning, test-taking, test anxiety, study skills, self-esteem, learning styles, wellness and body image, and many others.

Individual consultations are also available on these same topics. To arrange an appointment call (614) 287-2668.

Contact Us

Advising and Counseling Services is located on the first floor of Aquinas Hall, Room116. Walk-in and appointment times vary for different programs of study. For more information on any of our services or to arrange an appointment, please call (614) 287-2668. To email an advisor, go to www.cscc.edu, "Student Services, Academic Advisor Directory."

Academic advisors are also available at the Dublin site (614) 761-2800 and Westerville site (614) 882-2016. Call ahead for walk-in hours, or access them on the web at www.cscc.edu. Phone and email advising services are convenient options for distance learners.

Career Assistance Center – Acloche

Through a partnership with Acloche, a regional leader in Staffing and Human Resources Solutions, Columbus State Community College students and alumni have access to a full range of career assistance services, including:

- Job fairs
- Resume workshops
- Interviewing tips
- Connections with job opportunities and area employers
- Short-term, long-term, part-time, and full-time employment
- Internships and co-ops

To access job placement and career resources available through Acloche Career Assistance Center, Columbus State students and alumni can visit Nestor Hall, Room 119, or call (614) 287-5279. Regular office hours are 9 a.m.–6 p.m. Monday and Tuesday, 8 a.m.–5 p.m. Wednesday and Thursday, and 7:30 a.m.–4 p.m. Friday.

Contact the center for information on registration for career assistance or visit www.cscc.edu.

CSCC Copy Center

Currently located in the basement of Delaware Hall, just below the Bookstore at 550 East Spring St., the Columbus State Copy Center offers black & white and full color copies, as well as:

- Document Binding
- Lamination
- Faxing
- First Cclass postage
- Airborne/DHL shipping
- Money orders
- Notary services
- Graphic design
- Graduation announcements
- Scanning

Hours of Operation:
Monday–Thursday: 8 a.m.–7:30 p.m.
Friday: 8 a.m.–5 p.m.

Please feel free to stop by with any questions, comments or needs that you may have; or contact the Copy Center at 614-287-5652.

In autumn 2006, Columbus State will introduce the Discovery Exchange (DX) a beautiful and exciting center at the corner of Cleveland and Mount Vernon avenues. The DX will host a variety of services; including a bookstore, café, convenience store, and copy center.

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 received by Disability Services from appropriate medical, educational and psychological sources. These support services include, but are not limited to, adapted testing procedures, materials in alternate media, textbooks on tape, note taker notebooks, real-time captioning, and counseling. In addition, sign language interpreters and assistive listening devices are available for students who are deaf or hard of hearing. Adaptive equipment and software is also available on campus for student training and use in completing course requirements. Students may also meet with department counselors 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 state and federal resources in the continued development of program accessibility. For further information or to arrange for support services, please call (614) 287-2570 (VOICE/TTY). Disability Services is located in Franklin Hall, Rooms 223 and 228. More information is available on the Web at www.cscc.edu/docs/Disability/indexds.htm. You can also e-mail the department at disability@cscc.edu.

Educational Resources Center (Library)

The Educational Resources Center in Columbus Hall houses the Library and Media Services, providing a multimedia environment to support a wide range of learning experiences. The Library's collection includes print, audio-visual and electronic materials. In addition to the collection in the main stacks, there are collections of reference, reserve materials, periodicals (magazines and journals), microforms, newspapers, pamphlets and video-based courses. The Library catalog can be accessed through the ERC's Web page (www.cscc.edu/library), which serves as a gateway to the Library's electronic resources. Through Columbus State's membership in the OhioLINK network, library users have access to materials that may be requested online from the libraries of more than 80 Ohio colleges and universities. You need an active Cougar ID to access these resources.

In addition to the Library's collection of over 500 print periodical titles, users may search over 100 online research databases available through ERC subscriptions on OhioLINK. Many of these databases provide links to full-text articles and may be accessed from home computers. Also available through the ERC Web site, the Electronic Journal Center provides access to over six million full-text articles from scholarly journals. Reference assistance is available on the main floor of the ERC, and students are encouraged to ask for help in starting their research or in using a particular resource.

A 28-station computer lab, copiers, and typewriters are available, and there is a dedicated computer lab for library instruction classes. The Media Production Center, located on the ground floor of the ERC, offers display and presentation development assistance. These services, which include scanning documents (and converting to MS Word docs), photos and illustrations to be used for classroom assignments, and project consultation, are free with a valid Columbus State Community College ID. For more information about the ERC, call the Circulation Desk at (614) 287-2465, Reference Services at (614) 287-2460, or Media Production Services at (614) 287-2472.

Food Service

Located in Union Hall and operated by Aramark Corp., the cafeteria is open Monday –Thursday 7 a.m.–7 p.m., Friday, 7 a.m.–2 p.m., and Saturday, 7:30 a.m.–1:30 p.m. Breakfast foods are served until 10:30 a.m. The cafeteria has a wide variety of goods to choose from: The Market offers rotisserie chicken meals, hot carved sub sandwiches, chicken pot pie and many side dishes; Center Stage features chicken salad, pitas, and stir fry dishes; Grille Works is a full grill featuring combo meals with fries and a drink, seasoned twist fries and more; The Salad Bar features fresh greens, toppings, soups and a fruit bar; World's Fare is a hot, top-your-own food bar where you create your own hot meal; Easy Goes is take-out food for when you're in a hurry; and Taco Bell, DC Subs and Pizza Hut are also on site. Call (614) 287-2483 for more information.

Housing

Opportunities for student housing, including information on apartments, home sharing, and roommate matching, are available through Student Activities and Athletics. Students are encouraged to stop by the Student Activities Office, Nestor Hall 116, or call (614) 287-2637 for current housing information. Columbus State does not provide campus housing, the Student Activities Office only disseminates information it receives.

International Initiatives and Community Outreach

The Office of International Initiatives and Community Outreach is responsible for the development and implementation of programs and long-range plans for Columbus State's international students, visitors, exchange students and scholars, and curriculum. The office is the liaison and support to faculty, college departments, and staff regarding Columbus State's global initiatives.

The office, which is a part of Multicultural Affairs, works closely with the Global Initiatives Committee and the Provost Council to internationalize the curriculum.

Additionally, the office works closely with community service agencies, high schools, professional organizations, and other institutions on matters related to community outreach, and it helps plan and implement community service projects relating to international students and employers.

Intramural Sports

The intramural sports program is an integral part of campus life. Intramural activities provide the campus community the opportunity to compete in atlhletic 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, bowling, volleyball, softball, soccer, floor hockey, wiffle ball, and flag football. Quarterly 3 point shooting and free throw contests are also held. For more information call (614) 287-5348 from 8 a.m.–4:30 p.m.

Multicultural Affairs

The Office of Multicultural Affairs is responsible for the leadership of all programs and activities of the College that increase multicultural student access and retention within established policies and procedures of the College. Multicultural Affairs works with other College offices and departments to:

- Implement orientation and professional development programs related to multicultural affairs for administrative, instructional, professional, and support personnel of the College.
- Increase the employment of multicultural staff, faculty and administrators.
- Promote activities and programs that will result in increased retention and graduation rates of multicultural students.
- Market Columbus State Community College as an attractive institution of higher education for students to pursue their career goals.

The office is involved in the Columbus community. Working relationships have been developed with middle and high school principals, counselors, teachers, ministers, civic and community leaders and government officials to increase multicultural student enrollment and retention. Through campus visitations and enrollment in college credit articulation programs, students gain exposure to the College. Quarterly workshops, seminars, lectures, and forums are conducted by the office. For more information contact the Office of Multicultural Affairs and at (614) 287-2426.

Peer Tutoring Program

The campus-wide Peer Tutoring Program offers individual or group tutoring to eligible learners through the Developmental Education Department. The purpose of the program is to supplement learners' academic performance. Tutoring service is based on tutors' availability; therefore, learners are not guaranteed a peer tutor. Walk-in service is available for learners who need minimal assistance. Learners are encouraged to request a tutor the second or third week of school. For more information, call (614) 287-2474.

Publications

The "Columbus Statement," published by Student Activities and Athletics, provides a calendar of events for the upcoming weeks and important information about campus clubs, organizations and activities. **"**Cougar News" is the weekly student newspaper published by the Department of Communication Skills, as well as the Campus Journalist student club.

Department of Public Safety

Police/EMS, Safety & Security, Parking & Special Services

The College's Police officers are commissioned by the Ohio Peace Officers Training Council. The officers provide the following services:

- Patrol of campus lots and buildings
- Investigation of threats, harassment, disruptive or offensive actions and disorder
- Investigation of forced entry, theft or vandalism
- Escort service
- First aid to injured or ill people
- Enforce Ohio laws, College policy and rules

The department works closely with the Ohio State Highway Patrol, the Franklin County Sheriff's Office and the Columbus Police Department. The department also has a working relationship with other university police departments.

The Public Safety Department serves the Columbus State campus community 24 hours a day, 7 days a week. Many of the officers are also trained as bike patrol officers, increasing visibility and

improving student assistance. The Public Safety Office is located in Union Hall, Room 048, and can be reached by telephone at (614) 287-2525.

More information, including Clery crime statistics and crime logs, can be found at www.cscc.edu.

Recreational Facilities

A study lounge and a recreation lounge are located in Nestor Hall. The recreation lounge has a large screen television. A movie is offered weekly, Monday–Friday, from 9 a.m.–3:30 p.m., in the Nestor Hall recreation lounge. There is also a gymnasium in Delaware Hall, 134. Open gym is Monday, Tuesday, Thursday and Friday from 9 a.m.–noon. The Fitness Center is located in the lower level of Delaware Hall. For more information contact (614) 287-2445 or 287-2637.

Student Activities

The Department of Student Activities and Athletics (Student Activities Office, Nestor Hall 116 and Athletics Office, Delaware Hall 134) offers a variety of co-curricular activities that enhance students' educational experience and aid in the development of lifelong skills. Students are also offered a wide range of opportunities to improve their general leadership skills while on campus.

Student Ambassador Program

The Student Ambassador Program was developed to allow 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 is also a component of the Student Ambassador Program. Applications for the Student Ambassador Program are available during autumn and spring quarters.

Special Events and Activities

The Department of Student Activities and Athletics offers a number of special events and activities such as Welcome Back (autumn), Winter Wonderland (winter), Spring Fling (spring), and Jazz in July (summer). In addition, Earth Day, Black History Month, Women's History Month and other special interest activities are celebrated.

Student Intercollegiate Athletics

Columbus State currently offers the following intercollegiate sports.

Men's Baseball
Men's Basketball
Women's Basketball
Men's Soccer
Men's Track and Field
Women's Track and Field
Cheerleading
Women's Softball
Men's Cross Country
Women's Cross Country
Women's Volleyball
Golf

Tryouts are typically held during autumn quarter, with the exception of men's soccer, men's cross country, women's cross country, and women's volleyball, which are held during summer quarter. For more information on open tryouts, please contact the Office of Athletics, Delaware Hall, room 134 or call (614) 287-2445.

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 quarter and maintain the GPA required by Columbus State to be eligible for competition (some part-time students may be eligible).The College adheres to the guidelines established by, and is a member of, the National Junior College Athletic Association (NJCAA). Athletic scholarships are available for student athletes participating in men's and women's basketball. All other sports are nonscholarship. Columbus State is a member of the Ohio Community College Athletic Conference (OCCAC). This conference status allows our student-athletes to compete against other two-year colleges as well as some four-year institutions.

For more information about athletic programs call (614) 287-2445 or stop by the Athletics Office located in Delaware Hall 134, or visit www.cscc.edu/sports/.

Columbus State Bridgeview Golf Course & Driving Range

The Bridgeview Golf Course, 2738 Agler Road, is a challenging and scenic 9-hole golf course that is owned and operated by the College. The course is open year round, weather permitting, and is home to Columbus State golf classes and other academic uses. Leagues, lessons, and season passes are available.

The Driving Range has thirty sheltered and heated tee boxes and is open year round. CSCC employees and students can take advantage of a discount at the driving range, golf course, and pro shop. For more information contact the driving range, (614) 471-0871, golf course, (614) 471-1565, or Jeffrey Pruzinsky, manager, (614) 471-4257.

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 Student Activities and Athletics, Nestor Hall 116. Registration signifies that the club or organization will comply with the rules, regulations and guidelines of the college. The most recently active clubs at Columbus State include:

African American Women's Support Group "Sister Friends"
Alpha Phi Omega

Campus Outreach
Columbus State Drama Club
Columbus State Landscape Association
Columbus State Running Club
Columbus State Student Nurses' Association
Columbus State Student Organization of the American Dental Hygienists Association
Columbus State Tae Kwon Do Club
Cougar Chess Club
For a Better Ohio
Rainbow Cougars
International Student Association
Liberian Students Association
Muslim Student Association
Phi Theta Kappa
Silent Connection
Student Government Association
Student Chapter of Ohio Association of Veterinary Technicians
Student Paralegal Association
The College Democrats
The College Republicans

Additional Clubs:
Accounting Honorary Society
Columbus State Architecture Association
Columbus State Computer Club
Columbus State Film Club
Columbus State Roller Hockey Club
Crime Stoppers
El Club de Español de Columbus State
Equestrian Club
Eta Sigma Delta
Pathways to Medicine
Project Brotherhood
Society of Manufacturing Engineers

To learn more about our clubs and organizations, stop by the Student Activities Office, Nestor Hall 116, or call (614) 287-2637.

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 placed on disciplinary probation or be dismissed. Concerns involving allegations or violations of civil rights, including but not limited to sexual harassment, sexual misconduct with students, 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 Conduct Policy, the Academic Conduct Policy, the Student Code of Conduct and related procedures is published in the Student Handbook. The Student Handbook is available through many student services offices including Advising and Counseling Services, Aquinas 116, Student Activities and Athletics, Nestor 116, and is on the college web site, www.cscc.edu.

Student Handbook

The Student Handbook is a useful guide to many of the campus resources available to students. The handbook 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 and Counseling Services, Aquinas 116, Student Activities and Athletics, Nestor 116, and is on the college website, www.cscc.edu.

Sexual Harassment and Sexual Assault Policy

Columbus State Community College believes that all employees and students should be able to work and learn in an environment free of all discrimination and any form of sexual harassment or assault. To help ensure that employees and students are not subjected to illegal harassment or assault, and in order to create a comfortable work and learning environment, the college strongly opposes and prohibits any offensive physical, written, spoken or nonverbal conduct as defined and otherwise prohibited by state and federal law. In addition, sexual assault involving physical contact, sexual battery, and rape are felony crimes in Ohio. In cases where the student is the perpetrator, college policy defines sexual harassment and sexual assault as an example of general student misconduct, which may result in penalties up to and including dismissal from the college. For more information, or if you or someone you know is being sexually harassed, contact the College's EEO officer in the Human Resources Department, Rhodes Hall lower level, 287-2408. In emergency cases or after business hours, and in all cases of sexual assault or rape, immediately contact the Public Safety Department, Union 048, (614) 287-2525. In all cases of sexual harassment or sexual assault, confidential personal counseling and support for students is available in Advising and Counseling Services, Aquinas 116, (614) 287-2668.

Student Problem Resolution

A student problem resolution procedure has been established to help students resolve nonacademic and nondisciplinary problems they may encounter on campus. A copy of the Columbus State Community College Student Problem Resolution Procedure is published in the Columbus State Student Handbook or the Columbus State Policy & Procedures Manual. The Student Handbook is available through many student services offices including Advising and Counseling Services, Aquinas 116, Student Activities and Athletics, Nestor 116, and is on the college web site, www.cscc.edu.

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 Student Life Office, Aquinas 116H, or access www.cscc.edu.

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, Union 048, or access www.cscc.edu.

College Testing Services-Testing Center

The mission of the College Testing Services-Testing Center is to meet the testing needs of the campus community. We aim to provide a facility in which tests can be administered accurately and securely according to instructor and department guidelines. The center offers COMPASS placement testing, departmentalized testing, classroom make-ups, and distance learning testing. After you complete the COMPASS placement test, an advisor in Advising and Counseling Services will interpret your scores, and results for courses are obtained from the course instructor. Also, the Testing Center provides proctoring for non-Columbus State academic examinations for a fee of $25 per exam. The 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 between 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, tests will not be distributed one hour prior to closing, and tests must be finished by closing time. No extension of time will be given; therefore, plan sufficient time for taking your test(s).

The Testing Center is located in Aquinas Hall, Lower Level, Room 002. A picture ID is required. No children, food or beverages are allowed in the Testing Center. For more information, call (614) 287-2478 or 287-3602.

Tutoring Services

Learning Skills Centers (LSC)

The Learning Skills Centers offer tutorial assistance from professional tutors in the Developmental Education Department. Tutoring is provided for developmental mathematics, reading and writing courses. These centers also house computers for students' use and offer VCRs for studenys who wish to view lecture tapes after classes. 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.

Math Tutors

Faculty tutors are available on a walk-in basis for most math courses, beginning with MATH 102 through MATH 104 and other selected courses, in room 313, Davidson Hall. For more information, call (614) 287-5313.

TRIO Programs

To be eligible for a TRIO program applicants must be a first-generation college student (neither parent has a four-year college degree), and/or economically disadvantaged or limited income, according to the federal standards (federal TRIO programs) and/or an individual with a disability, a learning or physical disadvantage and academic need (determined by project guidelines).

Student Support Services

Student Support Services (SSS) is a federally funded grant program that provides comprehensive academic support services that enhance students' productivity and academic success. Eligible students receive quality one to one academic advising on a regular basis, tutorial assistance, other related academic support services and in some cases financial aid assistance. 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 supplemental instruction in developmental courses, personal counseling, exploration of career options, and personal career counseling and mentoring programs involving faculty, staff and/or peers. Participants will also have access, as availability permits, to a book and laptop loan program. SSS will provide assistance and support with overall adjustment to community college life.

Upward Bound

Upward Bound (UB) is a federally funded pre-college grant program designed to increase the academic skills and motivation of program participants to ensure their high school graduation and success in a post-secondary educational program. 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 will be accomplished through a well-rounded yearlong program designed to address the multiple needs of program participants. To that end UB has both summer and academic year components.

During the Academic Year:

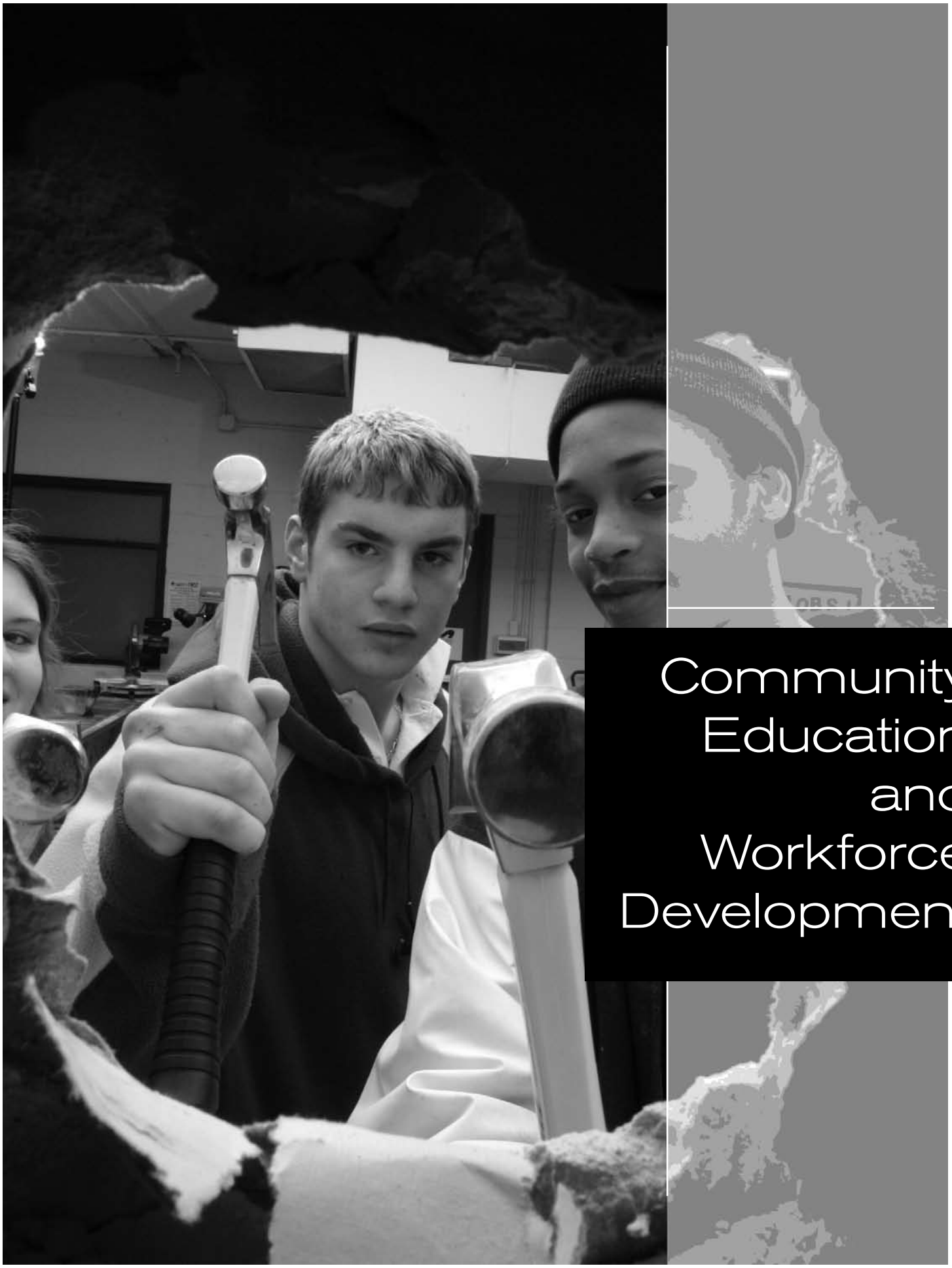
- Weekly academic enrichment and tutoring sessions to assist students in the basic academic areas of math, science, writing and reading. UB also provides individual academic, career and personal advising.
- Monthly Saturday Seminars: Guest speakers are invited to discuss special topics, students participate in team building and leadership activities, and special events are planned.

During the Summer Component:

- A six-week nonresidential academic program is offered. Participants attend UB academic enrichment classes five days per week, on the campus of Columbus State Community College. Students also participate in cultural, social and recreational activities.

Wellness Program

The Department of Student Activities and Athletics 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 chi gong, exercise to afro-rhythms, pilates, tae kwon do, tai chi, women's self-defense, and yoga. For more information, call (614) 287-5348.



Community Education and Workforce Development

Community Education and Workforce Development

Community Education and Workforce Development

Dr. Janet Wagner, Dean
(614) 287-2511

There is an ever-increasing need for meaningful, life-long learning for many people–those preparing to go to college, to get their first job, to advance in their current job or change careers. The Community Education and Workforce Development Division provides opportunities for students in traditional and nontraditional settings.

Each department in Community Education and Workforce Development is designed for students of varying ages, professional experience and education levels to assist in learning new skills or enhancing existing skills. Today's competitive labor market demands that employees are up to date on the latest business equipment, computer software, management techniques, professional trends, market information, computer networking, customer service, and office operations. Through Columbus State's Community Education and Workforce Development departments, students, business professionals, and new or first-time employees have the opportunity to learn many of these work-related skills at convenient times.

Practical Nurse Program

Sherry Bockus, Faculty/Coordinator
(614) 287-3618

The Practical Nurse Program is a part-time evening and weekend program designed to prepare graduates to provide health care needs to clients of all ages in a variety of health care settings. The seven-quarter program is designed as a career path for entry-level patient care providers. Nursing assistants and patient care assistants can continue their education to become licensed practical nurses after they successfully pass the licensing examination. Students also will be able to articulate into the nursing program's associate degree program at Columbus State Community College. The program is sequential and will help students develop communication, critical thinking, and problem solving skills. Nursing courses are structured to promote student learning through lecture, laboratory, clinical, seminar, and practicum experiences. 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

Automotive and Applied Technologies

Dr. Andrew A. Rezin, Administrator
(614) 287-5303

Applied Technologies

Larry Gill, Coordinator
(614) 287-5211

The mission of the Applied Technologies 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.

Introduction to the Construction Industry

The Applied Technologies has developed a series of courses 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.

The courses provide information about career opportunities in the construction industry, ranging from the 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 themselves to be better candidates to enter into a formal program of study to attain their career goals.

APPL 100 – The Construction Industry (On Demand)
2 credits

This course provides an overview of the vast array of career opportunities in the construction industry. Students will be exposed to careers ranging from the many administrative and management careers (e.g., construction management, architecture, and civil engineering) as well as to the wide range of skilled trades

careers (e.g., electrician, operating engineer, carpenter, plumber, etc.). Also covered will be the wide range of construction venues including residential, commercial, industrial, and public works construction.

Lecture: 2 hours – Lab: 0 hours

APPL 109 – Basic Skills for the Construction Trades (On Demand) 3 credits

This course provides information to students who are interested in entering into the construction trades in central Ohio. Students will be informed of the academic and technical knowledge and skills they must possess prior to entry into the trades. This course will also introduce the student to basic technical skills that are common to all trades including: workplace safety, blueprint reading, hand/power tool usage, measuring and cutting operations, direct and alternating current concepts, measurements, and circuit analysis.

Lecture: 2 hours – Lab: 2 hours

APPL 119 – The Construction Trades (On Demand) 3 credits

This course is the sequel to APPL109 and covers the many apprenticeship opportunities in the skilled construction trades in more detail. A history of the labor movement in the United States is covered to provide a background for the course. Representatives from various central Ohio trades organizations will provide additional information about their trade, its unique features and requirements, and requirements for entry into their apprenticeship program.

Lecture: 2 hours – Lab: 2 hours

Prerequisite: APPL109

Associate Degree Programs

The Applied Technologies degree programs are part of partnerships between area skilled 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 Applied Technologies degree programs combine apprenticeship courses, advanced technical coursework, and basic and general education courses to earn an Associate of Applied Science in Applied Technologies. Electrician, carpentry, millwright and operating engineer majors are currently available.

For further information about this program, please contact Larry Gill, Program Coordinator, (614) 287-5211; e-mail: lgill@cscc.edu.

Associate of Technical Studies and the Certificate Program

In partnership with several central Ohio skilled trades apprenticeship programs, the college offers certificate programs that allow 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. All Applied Technology partnership programs have restricted enrollment, requiring that participants are accepted into their respective trade apprenticeship programs.

For more information about the Applied Technologies programs, please contact Larry Gill, Program Coordinator, (614) 287-5211, e-mail: lgill@cscc.edu.

For information on how to build a college degree program for your industry or for your specific company, please contact Dr. Andy Rezin, Administrator, (614) 287-5303, e-mail: arezin@cscc.edu.

Automotive Technology

Dr. Andrew A. Rezin, Administrator (614) 287-5303

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 a 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 program was the nation's first college automotive program master certified by A.S.E. 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 of the automotive faculty are A.S.E. Master Certified technicians with extensive industry repair experience. The program was recently reevaluated and granted accreditation until 2009.

Industry Partnerships

The department maintains close working relationships with more than 475 auto repair shops in Central Ohio. This includes new car and truck dealerships, independent repair shops, corporate fleets, and local and regional governmental agencies. This association across the full spectrum of potential employers provides Columbus State students with the greatest opportunity to find their niche in the auto repair industry upon graduation.

Through its close association with area employers, the Automotive Technology Program offers a variety of internship and cooperative apprenticeship opportunities for students. These opportunities allow students to obtain paid work experience in area repair shops during their program. This work experience allows you to immediately apply what you have learned on campus in a real-life environment in the automotive repair industry. The college is committed to helping interested, qualified automotive students find placement in local shops to supplement their on-campus learning.

Maintenance and Light Repair Certificate

Students whose needs demand a short-term career track program can choose the Light Maintenance and Repair Certificate Program. This six-month program prepares students with 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, students can re-enter the college degree program at a later date to expand their knowledge and skills and work toward A.S.E. Master Technician certification.

YAATC

The Youth and Adult Automotive Training Center (YAATC) is designed to provide an opportunity for disadvantaged, at-risk people who have a desire to gain technical knowledge in automotive repair as well as increase their self-sufficiency. This will allow students to build a new perspective on life and their careers. YAATC will prepare each dedicated student to graduate with the technical knowledge to perform automotive maintenance and light repairs and have the opportunity to begin an extremely rewarding career in the automotive industry. YAATC also helps create a more diverse workforce in the automotive industry and helps fill the void of qualified automotive technicians. It will provide students with basic skills training, case management services, community agency referrals, job readiness instruction, intensive automotive technical instruction, co-op experiences and permanent job placements in the automotive repair industry.

For additional information please see plans of study under "Programs of Study."

Heating, Ventilating and Air Conditioning Technology

High Pressure Boiler License Training Program
Large Commercial Certificate
Residential/Light Commercial Certificate

Tom Henry, Coordinator
(614) 287-2657

The Heating, Ventilating and Air Conditioning Technology prepares graduates for a wide variety of jobs 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 and new construction markets.

The large increase in new high-rise buildings and real estate development within all major cities is a clear indication of the rapid increase in job market opportunities available. Also many Columbus State graduates find employment with equipment manufacturers in research and development. Today's society is demanding more emphasis on the ethical, legal and regulatory requirements related to environmental concerns that are facing the HVAC industry today and in the future.

The 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 business management experience can look to ownership of their own HVAC companies.

The four-course High Pressure Boiler License Training program prepares students to take the State of Ohio High Pressure Boiler Operators License examination. Students will still be required to establish actual work experience around 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.

For more information please see plans of study under "Programs of Study."

Business and Industry Training Services
(614) 287-5000

Business and Industry Training Services provides innovative approaches to training, consulting, and education through customer-driven partnerships. Columbus State's Business and Industry Training Services can help your company assess, analyze and target cost-effective performance consulting and business solutions tailored to the needs of your organization.

Contract Training and Consulting Services
These are a few of the contracted services that we can provide to your organization:

- Leadership and supervisory skills training
- Customer service training
- Business communications training: verbal and written communication, interpersonal skills, and team building
- Consulting services and business/organizational development programs
- Quality programs such as Lean Manufacturing and ISO certification
- End-user computer training on topics such as word processing, spreadsheets, presentations, E-mail, and Web authoring
- Industrial technology programs relevant to a variety of industries including hydraulics, pneumatics, electric motors, HVAC, and advanced manufacturing technologies
- Accounting and finance for both financial and non-financial managers
- Human resources training
- Customized individual, small or large training built around the needs of your organization
- Job analysis and employee assessments
- Experienced personnel to coordinate and implement training
- Quality trainers, consultants and instructors

For more information and to arrange a meeting with one of our professional Training and Performance Consultants, please call (614) 287-5000 or visit our Web site at www.cscc.edu.

Professional Development Seminars
Professional Development Seminars are noncredit courses meeting for one day each, from 8:30 a.m. – 4:30 p.m. Please call (614) 287-5000 or check our Web site at http://www.cscc.edu/workforce/bits/pdseminars/ for registration and up-to-date information on dates and locations. The following descriptions, titles and fees are current at the time of publication but are subject to change.

Human Dynamics Programs

BIBUS 101 Accounting and Bookkeeping
Learn about major accounting functions and practices such as fixed asset accounting, cost accounting, accounting transactions and internal accounting controls.

BIBUS 102 Basic Business Statistics
Learn the fundamentals of descriptive statistics in this introductory course. This course covers measures of central tendency and measures of variation, and gives special emphasis to the development and interpretation of graphs.

BIPDV 101 Brain Power 1
Learn recent breakthroughs about how your brain works and powerful new techniques that enable you to get through materials faster, comprehend better, and retain more. Double your present reading speed and retention rate to cut through materials and have information at your fingertips.

BIPDV 111 Brain Power 2
Build on what you learned in Brain Power 1 to take your skills to advanced levels. Learn advanced reading techniques to increase your reading speed 3–4 times your initial rate, how to be more successful in managing the change in your life, and rewire your brain for success.

BIPDV 310 Change Happens!
Develop the business skills needed to implement change more quickly and effectively. Learn about the "Four Stages of Change" and identify possible challenges. Develop proactive actions to increase acceptance and help others through a smoother change transition.

BISFT 109 Conducting Effective Interviews
This seminar, intended for managers, will give you the skills, knowledge and processes you need to interview and hire key performers. Information concerning legal considerations, interviewing skills and hiring candidates will also be covered.

BISFT 101 Confronting Effectively: Controlling the Escalation of Conflict
Do you boil inside when you know you should speak up? Do you avoid certain people even when you need to work with them? Most conflicts can be resolved in a way that benefits all concerned. You'll leave this seminar with a personal plan of action to help you effectively and proactively address conflicts in your own work environment.

BIBUS 103 Effective Presentations
Public speaking is said to be the number one fear of American adults. This course will help you overcome that fear by teaching you how to make successful group presentations in formal or informal settings. At the conclusion of this seminar, you will know how to plan and prepare a presentation, how to make a presentation, and how to appraise your own level of self-confidence in public speaking. You will also have the opportunity to practice making a presentation.

BILNG 601 Embracing Diversity
Diversity training isn't just about legal compliance. Understanding diversity will help you improve relationships with coworkers, customers, vendors and the general public.

BIPDV 201 Emotional EQ
Learn about a different kind of smart: Emotional Intelligence. Self-management, control, self-motivation and managing emotions

in the workplace are just a few of the topics that will be covered in this course.

BILNG 602 Generational Differences in the Workplace
Today's workforce is comprised of 3 – 4 very different generations. These different generations often have varying perceptions and expectations about work. During this seminar you will learn how to increase generational harmony by understanding differences and learning how to modify or adapt expectations.

BIPDV 301 Goal Setting
Learn to set personal and career goals.

BIBSC 101 Grammar for the Workplace
Who or whom? who, which, or that? Do you struggle to figure out which word is correct in the context of your sentence? This course will help you learn parts of speech, sentence structure, punctuation, capitalization, and proper grammar usage.

BIBUS 105 Grants Writing
Grants Writing gives you an overview of the grants writing process. You will understand the entire grants writing process from visioning through the proposal submission. This course will help you locate and identify grant opportunities, analyze submission guidelines, and prepare a winning proposal.

BISFT 102 How to Excel in Customer Service
Learn to recognize and anticipate customer expectations, identify elements of emotional response that interfere with good customer service, and develop communication skills that defuse customer complaints.

BISFT 110 Interviewing Skills: Put Your Best Foot Forward
This seminar, intended for employees, will help you make your next interview successful. Learn how to present a professional image, research the organization with which you're interviewing, polish your interpersonal skills to make a great impression, and write appropriate follow-up correspondence.

BISFT 104 Listening and Memory Development
Do you forget what someone tells you five minutes after they told you? Do you forget what you read right after you've finished reading it? Listening vs. hearing, becoming an effective listener and memory techniques are the main focuses of this course. Improving your listening and memory skills will enhance your effectiveness in your personal and professional life.

BISFT 105 Managing Relationships at Work
Learn to communicate effectively in an organizational setting with all types of people.

BIPDV 302 Managing Time and Work
Do you put things off till tomorrow when they really need to be done today? This course provides valuable tools and techniques to set priorities and manage your time.

BIBUS 106 Office Organizational Skills
Do misplaced documents make you late for deadlines? Organizing your workspace can make your work easier and more efficient. Techniques taught in this course will help you to tackle the endless flow of paperwork.

BISFT 106 Problem Solving and Decision Making
Learn how to identify different problem-solving styles that look at the whole picture, not just the task at hand. This course helps develop creativity, efficiency, and critical thinking to solve everyday problems.

BIBUS 107 Project Planning and Management Fundamentals
Focusing on effective project management, this introductory course will provide you tools to define, plan, implement, and evaluate projects.

BIBUS 108 Proofreading and Editing Techniques
Learn effective proofreading and editing techniques in this hands-on seminar. You will learn to use proofreader's marks to clearly indicate text and layout changes. This course also covers basic grammar rules including punctuation, sentence structure, and style.

BIBUS 111 Report and Proposal Writing
Learn to analyze report and proposal requirements and prepare reports that address the readers' needs regarding content and writing style.

BIPDV 303 Stress Management
Learn to cope with stress by identifying stress initiators and turning them into powerful drivers for change and accomplishment.

BIBUS 110 Technical and Procedural Writing
Learn basic techniques of technical writing to successfully convey a message using a minimum number of words and images. You will learn elements of style and usage in step-by-step writing, how to assemble material, and how to write a technical report.

BISFT 107 Train the Trainer (Critical Events for Training Success)
Even if you're not a full-time trainer, you may be called upon to develop and deliver training for customers, coworkers, or suppliers. This course will introduce tools and techniques to help you conduct effective training.

BISFT 108 Working with Difficult People
Ever wonder why you hit it off with one person and not another? Learn to use a behavior style model to build the skills you need to deal with difficult people.

BIBUS 109 Writing for Business: Level 1
Learn how to communicate more effectively by using clear, concise writing techniques and appropriate language for business communications. You will also learn how to choose the active or passive voice and how to write effective memos.

BIBUS 112 Writing for Business: Level 2
Building on the skills gained in the prerequisite course, Writing for Business Level 1, you will develop additional skills in proofreading, editing, memo organization and audience analysis.

Computer User Programs

BICPT 101 Introduction to Microsoft Windows
This course is designed to help you understand Microsoft Windows and your computer. You will acquire the skills necessary to customize your desktop, use the taskbar efficiently, manage files and folders, and work with documents.

BICPT 111 Advanced Microsoft Windows
This class covers six advanced interactive units that will help you learn how to share information between programs, maintain your computer, create back-up disks and manage your hard drive.

BICPT 401 Introduction to the Internet
This course explores the basic technologies of the Internet and the World Wide Web. You will review Internet fundamentals, gain the skills needed to navigate the World Wide Web, search the Internet, explore newsgroups, and customize your browser.

BICPT 402 Internet Research
The World Wide Web is a huge repository of information stored on hundreds of thousands of computers scattered across the globe. Finding information can seem deceptively easy. In fact, finding lots of information is often easier than finding the right information. This course will give you the techniques and strategies to effectively locate the information you are seeking.

BICPT 801 Adobe Acrobat Professional
Learn to convert and combine proposals, presentations, images and other documents into one compact PDF file using Adobe Acrobat. You will learn how to use annotation, linking, and bookmarking tools to create notes, and you will learn how to use dynamic date-time stamps as well as file viewing and navigation aids.

BICPT 802 Adobe Photoshop 7.0
To be successful in this course, you should have a knowledge or understanding of the following: color palettes and color models such as RGB and CMYK; the differences between raster formats such as GIF or JPG and vector formats such as EPS; and prior experience with draw tools including stroke, fill, and bezier curves. This class meets for two sessions.

BICPT 404 Dreamweaver MX
Dreamweaver, a powerful Web authoring package, is the choice of Web development professionals and others who want to go beyond the basic capabilities of tools like FrontPage. This introductory course will help you get started with Dreamweaver to create a basic Web site complete with links, images, formatting, style sheets and tables. To ensure your success, you should have a basic knowledge of HTML markup including structure and formatting tags. Understanding of file management, particularly directory trees, is also an important prerequisite. This class meets for two sessions.

BICPT 405 Introduction to Flash MX
Learn how to create multimedia Web pages in this introductory course. You will learn how to use color and shapes creatively, how to manipulate images and text, how to modify layers, and how to create simple animations.

BICPT 425 Advanced Flash MX
Advanced Flash MX is designed to teach experienced users how to animate symbols and shapes with actions and ActionScript, create forms, and integrate sound and video. This course will also teach you how to publish and test movies on the Web.

BICPT 703 Quickbooks Pro
Learn this new software that can share data with more than 60 programs. This software offers a full set of accounting features including payroll, credit card authorization, and inventory capabilities.

BICPT 702 Introduction to ACT! 6.0
ACT! 6.0 enables you to track and manage information about personal business contacts, such as addresses, telephone numbers and appointments. In addition you can create letters, memos, and fax cover pages; send email and faxes; and dial telephone numbers. This introductory seminar will allow you to become familiar with the basic capabilities of ACT! 6.0.

BICPT 121 Overview of Microsoft Office
This course presents the basic features of Word, PowerPoint, Excel, Access, FrontPage, and Outlook.

BICPT 501, 301 Introduction to Word
In this introductory course, you will learn how to create, edit, open, save and print documents; format characters and paragraphs; create and format tables; set margins; create headers and footers; and check spelling.

BICPT 511, 311 Intermediate Word
Learn to use Word more effectively in this intermediate course. You will learn how to create multiple columns, apply borders and shading to tables, utilize styles and templates to automate formatting, insert and format graphics and drawings, and print envelopes and labels.

BICPT 521, 321 Advanced Word
Master Word and take your productivity to a higher level with advanced tools and techniques such as forms, form letters, mail merges, macros, and revision marking.

BICPT 502, 302 Introduction to Excel
In this introductory course, you will learn how to create, edit, open, save and print workbooks; enter data, formulas, and functions; use absolute and relative references; format cells; and insert charts.

BICPT 512, 312 Intermediate Excel
Learn to use Excel more effectively in this intermediate course. You will learn how to work with lists, link and consolidate worksheets, create combination charts, sort and filter lists, and use advanced formatting.

BICPT 522, 322 Advanced Excel
Master Excel and take your productivity to a higher level with advanced tools and techniques such as PivotTables, PivotCharts, Goal Seek, macros, database functions, and external database queries.

BICPT 503, 303 Introduction to PowerPoint
In this introductory course, you will learn how to create, edit, open,

save and print presentations; format text; add, rearrange, and delete slides; use templates; utilize slide masters; insert tables, charts, and clip art; check spelling; and deliver presentations.

BICPT 513, 313 PowerPoint Sales Presentations
The intermediate course expands on the skills and concepts in the introductory course. You will learn how to plan presentations, set transitions, use sound and video, work with Autoshapes and pictures, and publish presentations to the Web.

BICPT 523, 323 Advanced PowerPoint
Master PowerPoint and take your productivity to a higher level with advanced tools and techniques such as custom presentations, animations, special effects, multimedia, and integration with other Microsoft Office applications.

BICPT 504, 304 Introduction to Access
In this introductory course, you will learn basic database concepts and how to plan, design, and create a database; work with fields and records; create and execute queries; create and use forms; and create and use reports.

BICPT 514, 314 Intermediate Access
Learn to use Access more effectively in this intermediate course. Add to your conceptual knowledge by learning how to normalize and implement referential integrity. In addition, you will learn how to relate tables, create advanced queries, add graphics and calculations to forms and reports, and add charts.

BICPT 524, 324 Advanced Access
Master Access and take your productivity to a higher level with advanced tools and techniques such as PivotTables, PivotCharts, advanced forms, macros, Access SQL, and Internet integration.

BICPT 601 Introduction to Project
This introductory course provides the skills necessary to organize the tasks involved in the completion of a project, monitor the progression of projects, and make the best use of your time, money and resources.
NOTE: In addition to the basic tools and techniques of MS Project, this course will reinforce theories and topics presented in the Project Planning and Management Fundamentals seminar.

BICPT 621 Advanced Project
Master Project and take your productivity to a higher level with advanced tools and techniques such as baselines, hyperlinks, drawing tools, reports, consolidating multiple projects, and sharing resources across projects.
NOTE: In addition to the tools and techniques of MS Project, this course will reinforce theories and topics presented in the Project Planning and Management Fundamentals seminar.

BICPT 205 Microsoft Outlook
Do you have e-mail but don't know how to manage its capabilities? This introductory course is designed to provide you with the skills to create and customize a message, work with attachments, use mail management tools and work with the electronic calendar.

BICPT 503, 403 Microsoft FrontPage Web Page Design
In this introductory course, you will learn how to create a basic Web site. Topics include selecting themes, creating new Web pages, formatting characters and paragraphs, creating lists, adding graphics, inserting tables, creating links to other pages, and creating navigation aids. This class meets for two sessions.

Certification Programs

Advanced Manufacturing Skills
Integrated Systems Technology training is your company's solution to filling high–tech jobs. Integrated Systems Technology (IST) progams crosstrain individuals in electrical, electronic, and mechanical systems. Graduates leave with entry-level knowledge of operating, troubleshooting and maintaining the high-tech equipment found in today's manufacturing environments. IST is proven successful in offering hands-on training, industry-standard equipment and experience, and industry-driven curricula.

Pharmacy Technician Program
This non-credit program prepares students to enter the pharmacy field in hospitals, home-infusion pharmacies, mail-order pharmacies, or community pharmacies as a technician working under the supervision of a registered pharmacist. This course will also prepare the student to take the Pharmacy Technician National Certification Exam.

The course is taught by local registered pharmacists who are members of the part-time faculty of Columbus State Community College.

Key topics covered

- Medical terminology specific to the pharmacy industry
- Reading and interpreting prescriptions
- Defining drugs by generic and brand names
- Dosage calculations
- Methods of I.V. therapy and aseptic technique
- I.V. flow rates
- Drug compounding
- Dose conversions
- Dispensing of prescriptions
- Unit dose
- Inventory control
- Billing and reimbursement

This course is offered four times per year and meets 2.5 hours per session, two days per week, over a 10-week period, for a total of 50 contact hours. For more information on current offerings, locations, and pricing, please call (614) 287-5000 or check our Web site at http://www.cscc.edu/workforce/pharmtech/index.htm.

15-hour ServSafe Certification Course

A detailed study of the HACCP (Hazard Analysis Critical Control Points) procedure, which includes the control of bacteria, materials handling, and safety practices to maintain a safe and healthy environment for the consumer and employees in the food, lodging, and healthcare industries. The course includes an examination of laws and regulations related to food safety and sanitation.

Designed for employees and individuals who may be in charge of the operation at a given time, this 15-hour noncredit course is based on the *ServSafe Essentials* textbook. The text will be mailed to the students with pre-class reading assignments two weeks prior to class. Topics that are included in the text and reinforced in the class are:

- The "how and why" of providing safe food
- Microorganisms that cause problems in food
- Personal hygiene
- Purchasing, receiving, storing, preparing and serving safe food
- Principles of the HACCP system
- Kitchen sanitation and pest management
- Food service rules, regulations and laws

Upon successful completion of an examination from the National Restaurant Association Educational Foundation, students will receive certificates from Columbus State Community College, the National Restaurant Association Educational Foundation, and the State of Ohio Department of Health. *This certification satisfies Ohio House Bill 223 for persons who may be in charge of the operation at any given time.*

Department of Continuing Professional Education

Frederick L. Baker, Administrator
(614) 287-5997

Continuing Professional Education provides a variety of professionals with continuing education through noncredit courses and seminars designed to meet their licensing and certification needs. The department also offers a variety of seminars and courses for those who need continuing education credits (CEUs) to stay current in their field, and for those seeking personal enrichment through life-long learning. All courses and seminars offered by C.P.E. are open to anyone who has an interest in the program. To access the department Web site, visit www.cscc.edu, click on ***Community Education and Workforce Development***, then ***Continuing Professional Education***.

The Columbus State ACT/SkillsMax Center for Community Education and Workforce Development

The ACT/SkillsMax Center offers many opportunities to the community Columbus State serves using distance training, assessment and testing to assist customers of the center to meet their personal or professional goals. Distance training is available featuring the following subject areas:

- Adult Literacy
- Computer Basics
- Industrial/Tech Safety Skills
- Information Technology (Intermediate and Advanced Computer Skills)
- Management/Leadership
- Personal Development

Users of online training can access courses through the Columbus State Web site. Instructions for purchasing courses are on the ACT Web site.

Server-based courses are provided at the CSCC ACT/SkillsMax Center and can be delivered to the individual or on an instructor-facilitated basis.

Assessments that are offered include WorkKeys, Discover, DISC, and SHR. These assessments can be given either by individual appointment or on a contract basis at the ACT/SkillsMax Center or on site, depending on the assessment tool requested. The center is a VUE , PROMETRIC and ETS testing site for various skill certifications such as CISCO, MOUS, MCSE, NET+, etc., and offers proficiency testing for CLEP. These tests are given by appointment. **The ACT high school assessment is currently not offered.**

Costs for these courses and services vary. Contact the Columbus State Community College ACT/SkillsMax Center for Community Education and Workforce Development at 614/287 ACT1 or e-mail the center at act1@cscc.edu.

Contacts for Continuing Professional Education at Columbus State are:

- Frederick L. Baker, J.D., Administrator fbaker@cscc.edu
- Lisa Kesig, Senior Office Assistant lkesig@cscc.edu
- Tracy La Mar, for registration and billing tlamar@cscc.edu
- David Watts, for technical and computer courses dwatts@cscc.edu
- Julie Maurer, for Business and Engineering programs jmaurer@cscc.edu or telephone- (614) 287-5997
- Andria Bolden, Coordinator, ACT/SkillsMax Center for Community Education and Workforce Development abolden@cscc.edu or
- Deborah Lyons, ACT/SkillsMax Center for Community Education and Workforce Development dlyons@cscc.edu telephone - 614/287-ACT1(2281)

Continuing Professional Education Course Descriptions

With the rapid changes in technology and work methods, many employers and employees seek continuing education classes to stay current in careers and job skills. Continuing Professional Education has several groupings of courses identified as the Continuing Professional Education Certificate Series. The department is a CISCO Networking Academy, offering courses in the CCNA and CCNP Certificate process, and delivering courses in C-Tech copper, fiber and telecommunications cabling. We are a member of the SHRM Learning System and the American Payroll Association PPS system. C.P.E. is also a provider of continuing education in a variety of health care professions including the Ohio Social Worker and Counselor Board.

If you are interested in completing a series for a certificate, contact Continuing Professional Education at (614) 287-5997.

CPEB: Business/Office Administration/Office Assistant
CPEC: Computer/Technology
CPEE: Engineering/Safety
CPEG: General
CPEH: Health/Allied Health
CPEL: Legal
CPEM: Language Courses
CPES: Personal Enrichment/Seminar

Alternative Dispute Resolution Specialist

CPEL 109 - Trends in Alternate Dispute Resolution
The purpose of Trends in Alternate Dispute Resolution is to examine the history of dispute resolution and the statutory/judicial establishment of alternative dispute resolution as a method used for disposal of civil disagreements. The evolution and development of ADR and the growth and impact of the alternative system on American jurisprudence and everyday society is evaluated. As this is an introductory course, the student will examine the process of ADR, current trends of ADR; its acceptance by the legal environment, business, society; and its use in the global economy.

CPEL 110 - The Arbitration Process
The Arbitration Process is an intensive examination of arbitration and the process for accomplishing dispute resolution through this forum. Students will explore both court annexed arbitration and private arbitration processes. Researching arbitration decisions and the use of legal resources in the arbitration process will be explored. Use of databases and the Internet will be included in the development of research techniques. Students will be able to conduct an arbitration at the completion of the course.

CPEL 111 - The Process of Mediation
The Process of Mediation is an overview of the mediation principles and process. Students will explore statutory and private mediation procedures. The course will concentrate on mediation for domestic relations; employment practices; and labor issues. Additionally, the student will be exposed to different models of mediation with particular emphasis on the Seven Step model. Methods of researching decisions and various legal resources utilized in mediation procedures are examined, including computer databases and the Internet. Students will be able to conduct a mediation at the completion of the course.

CPEL 112 - ADR – Methods of Negotiation and Resolution
This course will introduce the student to techniques used to achieve successful negotiation of disputes. Students will be introduced to principles of negotiation and will learn how to properly and effectively use the mechanics of client interviewing; recognize non-verbal cues; and define and analyze descriptions of conflicts. Methods of resolving conflicts through an evaluation of various successful negotiation strategies will be explored and applied.

CPEL 113 - Alternative ADR Procedures
ADR methods and procedures, other than arbitration and mediation, which are statutorily created and privately contracted in the resolution of business disputes, is the focus of Alternative ADR Procedures. Hire-A-Judge, Summary Jury Trial, mini-trials and international ADR methods will be explored for appropriateness of use in a given conflict. Students will be able to prepare forms and summaries required to complete these various ADR processes.

Worker's Compensation Specialist

CPEL 128 - The Process of BWC Claims
This course will acquaint the student with how the Bureau of Workers' Compensation processes claims, including how the bureau works with companies that are self-insured, the calculation of wages and compensation, payment of medical bills, authorization of medical treatment, determination of disability, as well as how the bureau addresses appeals of decisions, applications to reactivate, and permanent partial disability settlements in the resolution process.

CPEL 130 - The Workers' Compensation Adjudication Process
The Workers' Compensation Adjudication Process is designed to acquaint the student with how the Bureau of Workers' Compensation works with contested claims. The course will examine the adjudication of claims process from the claimant position, as well as that of the employer and the bureau. The emphasis of this course is how to conduct discovery and acquire information available through state files and computer systems, and procedures for adjudicating a claim through an administrative hearing. Violations of specific safety requirements, applications for permanent total disability, and the hearing and appeals process will be addressed.

CPEL 131 - Rating the Workers' Compensation Risk
This course is designed to acquaint the student with how the Bureau of Workers Compensation determines a premium based on an employer's risk factors. Different rating plans available through the bureau to establish appropriate premiums are discussed, as well as appeals available to an employer who contests a rating assigned. The emphasis is on the underwriting process of the bureau, however, the self-insured options available are addressed.

CPEL 132 - BWC Practice and Procedure
BWC Practice and Procedure is an in-depth examination of the procedures necessary to request and complete the hearing process in a claim made to the Bureau of Workers' Compensation. The practice and procedures are examined from both the bureau (internal) and claimant or employer (external) perspective. At the completion of the course, the student will be familiar with the procedures required to practice in the BWC and will further be able to initiate and conclude or defend a claim made to the bureau.

LEGAL

CPEL 105 - Technology in Professional Research
Technology in Professional Research will introduce students to the concepts of and use of technology in professional research. Students will use various resources to research and retrieve information relevant to their specific professional arena. Remote databases, CD-ROM, and the Internet will be addressed, as well as a review of basic computer literacy. The course will be delivered in computer labs, providing each student with a computer station to use in each session, as well as instruction through local and remote connections using LCD overhead projection. The student will be acquainted with Internet user groups where questions are asked and answered via e-mail and listservs. The goals of the course are to provide students with computer competencies that exceed the basics with confidence to be pro-active in the use of technology within the profession and to develop creative thinking skills.

CPEL 140 - Basics of Legal Research
Basics of Legal Research is an overview of the tools used by legal professionals to research statutes and case law. The course is designed for both persons who have little or no experience in the law or legal related fields as well as those who are employed in a legal environment.

CPEL 142 - Legal Terminology
Legal Terminology is a basic legal vocabulary course designed to acquaint students with little or no experience in the legal environment to terminology commonly used by legal professionals.

CPEL 143 - Computer Literacy for Legal Professionals
Computer Literacy for Legal Professionals acquaints the student with computer applications commonly used in legal research. A basic understanding of legal research material and traditional legal research methods is necessary.

In addition to these certifications, Continuing Professional Education offers Probate, Credit, Real Estate, and Elder Law programs.

Grant Writing

CPEG 114 - Beginning Grant Writing
Beginning Grant Writing shows how to find grants to fund your project; how to determine the most appropriate funding source, and how to write a basic response to requests for proposals for funding.

CPEG 115 - Advanced Grant Writing
Advanced Grant Writing examines how to draft responses to proposals for funding projects so your document will provide the best chances for you to receive the grant you are seeking. This course builds upon the basics of grant writing discussed in Beginning Grant Writing, with hands-on experience and expert feedback. A variety of methods used to draft RFP's will be explored.

SIGN LANGUAGE

CPEG 102 - Basic Sign Language – The ABC's
Learn how to communicate effectively with the hearing impaired. Basic Sign Language – The ABC's is an overview of the fundamentals of ASL and will give you the basic skills needed to communicate using sign language.

CPEG 103 - Intermediate Sign Language
Intermediate Sign Language is the second course in the ASL series and builds on the skills developed in Basic Sign Language. Increase your effectiveness in communicating with the hearing impaired by further developing your signing abilities with this interactive skill building class.

LANGUAGE INSTITUTE COURSES

CPEM 101 - Introduction to French Language and Culture
In this course, students will learn the basic conversational vocabulary, phrases and cultural information about the French-speaking world.

CPEM 102 - Introduction to Italian Language and Culture
In this course, students will learn the basic conversational vocabulary, phrases and cultural information about the Italian-speaking world.

CPEM 103 - Introduction to German Language and Culture
In this course, students will learn the basic conversational vocabulary, phrases and cultural information about the German-speaking world.

CPEM 104 - Introduction to Arabic Language and Culture
In this course, students will learn the basic conversational vocabulary, phrases and cultural information about the Arabic-speaking world.

CPEM 105 - Introduction to Spanish Language and Culture
In this course, students will learn the basic conversational vocabulary, phrases and cultural information about the Spanish-speaking world.

CPEM 106 - Introduction to Japanese Language and Culture
In this course, students will learn the basic conversational vocabulary, phrases and cultural information about the Japanese-speaking world.

CPEM 108 - Spanish for Landscaping
This course provides a foundation in the Spanish language with a focus on conversational words and phrases needed in the landscaping and groundskeeping fields. It is offered regularly on the Columbus State campus and can be presented at other sites to a group by agreement.

CPEM 113 - Spanish for Health Care 1
This course provides a foundation in the Spanish language with a focus on health-care vocabulary, including parts of the body, names of conditions and operations, directions, symptoms, and questions and answers. Courses can provide Continuing Education Credit for nurses and social workers. Spanish for Health Care 1 is offered quarterly on the Columbus State campus and can be presented at other sites to a group by agreement.

CPEM 114 - Spanish for Health Care 2
This second-level Spanish course focuses on health-care vocabulary and conversational ability. Courses can provide Continuing Education Credit for nurses and social workers. Spanish for Health Care 2 is offered quarterly on the Columbus State campus and can be presented at the other sites to a group by agreement.

CPEM 115 - Introduction to Somali Language and Culture
In this course, students will learn basic conversational vocabulary, phrases, and cultural information about the Somali-speaking world.

COMPUTER SKILLS

CPEC 101 - Introduction to PCs
Introduction to PCs is an introduction to PCs for the end user. No knowledge of computers is needed at all. This class will take you from turning on the computer to using basic word processing, the Internet and e-mail. Offered in general and senior sessions.

CPEC 109 - Introduction to the Internet
Have you ever wanted to "surf the net," do research, use e-mail, or just experience the Internet? Introduction to the Internet is an overview of the Internet that will give you the skills to navigate along the information super highway.

CPEC 110 - Intermediate Internet
Intermediate Internet builds on the skills acquired in Introduction to the Internet and develops techniques for the effective, efficient use of the Internet.

CPEC 111 - Advanced Internet
Advanced Internet teaches the student to become an expert in the use of the information super highway. The newest technology will be explored and the basics of building Web sites will be discussed.

CISCO Academy

The Cisco Academy for CCNA (Cisco Certified Network Assistant) consists of a 4-course curriculum designed to teach the student the basics of computer network systems, and to prepare them to sit for the Cisco Certification Exam for CCNA status. At the completion of the academy the student will be able to assist network engineers in the design, development, installation and implementation of a variety of network systems. Each class is 70 clock hours in length for a total of 280 clock hours of a combination of lecture and lab. The curriculum is available for either credit or noncredit.

CPEC 210 - Intro to Networking
Intro to Networking is an overview of networking theory and hardware. The student will learn about Network, Devices, IP Addressing, ARP/RARP, Media and Design, Topology, Structured Cabling, Electronics, and Management.

CPEC 211 - Routers and IOS
Routers and IOS expand on the introduction to the student to Routers and IOS. The following are discussed: OSI and the OSI Model, Layers 1–7, WANs, Routing, Using the Router, Router Components and Router Protocols, Startup and Setup, Configuration, IOS, TCP/IP, and IP Addressing.

CPEC 212 - LANs and Design
In LANs and Design, the student will learn the concepts of LANs and the design of LANs to meet a variety of needs in the market, including: LAN Switching, VLANs, LAN Design, IGRP, Access List, and Novell IPX

CPEC 213 - WANs and Design
In WANs and Design, the student will learn the concepts of WANs

and the design of WANs to meet a variety of needs in the market, including: WAN and WAN Design, PPP, ISDN, and Frame Relay

CPEC 214 - Cisco Academy Course 5 - Advanced Routing
Upon completion of this training course, you will be able to select and implement the appropriate Cisco IOS services required to build a scalable, routed network.

CPEC 215 - Cisco Academy Course 6 - Remote Access
Students learn how to build, configure and troubleshoot a remote access network to interconnect central sites to branch offices and home offices. Students also learn how to control access to the central site, as well as to maximize bandwidth utilization over the remote links.

CPEC 216 - Cisco Academy Course 7 – LAN Switching
Course Description not available

CPEC 217 - Cisco Academy Course 8 - Support
Course Description not available

CPEC 218 - Cisco - Unix
Fundamentals of UNIX teaches you how to use UNIX operating system commands and, in the hands-on exercises, basic Sun Microsystems' Solaris operating environment commands, and introduces you to the Common Desktop Environment (CDE–graphical interface between different environments). The class is intended for new users of UNIX. You will learn fundamental command-line features of the Solaris environment including file system navigation, file permissions, the vi text editor, command shells and basic network use. CDE features include Standard Desktop Tools, Text Editor, printing and mail.

CPEC 219 - Cisco - Web Design
Fundamentals of Web Design will focus on the overall production processes surrounding Web site design with particular emphasis on design elements involving layout, navigation and interactivity.

CPEC 220 - A+ Certification
The A+ Certification course is a hands-on, entry-level 5–7-week course teaching basic PC hardware and Windows software support, including installing memory, swapping hard drives, and troubleshooting the Windows operating system. Earning A+ Certification opens the door to the IT field and helps to qualify you for positions such as PC/LAN technician, help desk, and support technician.

CPEC 221 - MCSE IT200 - Networking Fundamentals, Network+ Certification
Upon course completion, students will be able to demonstrate understanding of basic network structure; identify the major network operating systems; associate various networking protocols with their functions; define the seven layers of the OSI model and identify the protocols, services, and functions that pertain to each layer; identify the use of various network hardware components; demonstrate knowledge of TCP/IP configuration concepts and addressing; and troubleshoot, maintain, and support networks. Students will develop networking skills through a combination of lecture and hands-on lab exercises. The knowledge and skills developed by students who complete this course will prepare them for the remainder of the MCSE curriculum.

CPEC 222 - MCSE 2151 - MS Windows 2000 Network and Operating System Essentials
Upon course completion, students will be able to describe the principal features of Windows 2000 and the basics of networking with Windows 2000; identify the tools used to perform various administrative tasks; describe the types of user accounts and the principal security features of a Windows 2000 network; describe the fundamentals of TCP/IP; and describe the network communication models used in a Windows 2000 network. The knowledge and skills developed by students who complete this course, along with the 2152: Implementing Microsoft Windows 2000 Professional and Server course, will prepare them for Exam 70-210: Installing, Configuring, and Administering Microsoft Windows 2000 Professional and Exam 70-215: Installing, Configuring, and Administering Microsoft Windows 2000 Server.

CPEC 223 - MCSE 2152 - Implementing Microsoft Windows 2000 Professional and Server
Upon course completion, students will be able to install or upgrade to Windows 2000, configure the Windows 2000 environment, create and manage user accounts, implement Windows 2000 clients and servers, implement security in Windows 2000, configure printing, and monitor and optimize performance in Windows 2000. The knowledge and skills developed by students who complete this course, along with the 2151: Microsoft Windows 2000 Network and Operating System Essentials course, will prepare them for Exam 70-210: Installing, Configuring, and Administering Microsoft Windows 2000 Professional and Exam 70-215: Installing, Configuring, and Administering Microsoft Windows 2000 Server.

CPEC 224 - MCSE 2153 - Implementing a Microsoft Windows 2000 Network Infrastructure
Upon course completion, students will be able to configure networking services such as DHCP, DNS, and WINS; configure and support remote access to a network; configure Windows 2000 as a network router; manage a Windows 2000 network; identify and resolve network connectivity problems by using Windows 2000 troubleshooting tools and utilities; and enable network connectivity between NetWare, Macintosh, and UNIX networks. The knowledge and skills developed by students who complete this course will prepare them for Exam 70-216: Implementing and Administering a Microsoft Windows 2000 Network Infrastructure.

CPEC 225 - MCSE 2154 - Implementing and Administering Microsoft Windows 2000 Directory Services
Upon course completion, students will be able to identify the concepts of the Active Directory directory service and its logical and physical structures; implement a Domain Name System (DNS) infrastructure in preparation for installing Active Directory; install Active Directory; use Group Policy to manage user environments and deploy software; create and manage trees and forests in a Windows 2000 network; and implement an Active Directory infrastructure based on the business requirements of a fictitious organization. The knowledge and skills developed by students who complete this course will prepare them for Exam 70-217: Implementing and Administering a Microsoft Windows 2000 Directory Services Infrastructure.

CPEC 226 - MCSE 1561 - Designing a Microsoft Windows 2000 Directory Services Infrastructure
Upon course completion, students will be able to design an Active Directory naming strategy that accommodates the organizational structure of a business, identify business needs and scenarios that may require modification of the Active Directory schema, plan a policy to govern schema modification, design an Active Directory domain and the organizational unit hierarchy within the domain, and plan for the design of an Active Directory structure that combines administrative, replication, and naming requirements of an organization. The knowledge and skills developed by students who complete this course will prepare them for Exam 70-219, Implementing and Administering a Microsoft Windows 2000 Directory Services Infrastructure.

CPEC 227 - MCSE 2010 - Designing a Microsoft Windows 2000 Migration Strategy
Upon course completion, students will be able to choose a migration path to Windows 2000 Active Directory; ensure continued productivity during a domain upgrade or a restructure by managing and mitigating risks of a production environment; develop a domain restructure strategy; and plan to deploy a migration strategy. The knowledge and skills developed by students who complete this course will prepare them for Exam 70-222: Upgrading from Microsoft Windows NT 4.0 to Microsoft Windows 2000.

CPEC 228 - MCSE 1562 - Designing a Microsoft Windows 2000 Networking Services Infrastructure
Upon course completion, students will be able to describe the attributes of a Windows 2000 networking services infrastructure design; define the design requirements for a Transmission Control Protocol/Internet Protocol (TCP/IP) solution; evaluate and create an Internet connectivity design using Network Address Translation; evaluate and create private network connectivity designs using Routing and Remote Access; and evaluate and create designs based upon the applications in use by an organization.

CPEC 229 - CIW - I-Net+/Foundations
Upon course completion students will be able to access the Internet and its wide array of useful resources. Students will learn how to use Web browsers, electronic mail, newsgroups, File Transfer Protocol (FTP), and Telnet. Students will also learn about search engines and business resources on the World Wide Web using the most popular Internet browsers, Netscape Navigator and Microsoft Internet Explorer. Students will learn about Web page creation and other aspects of Web authoring and will gain experience developing Web pages in a text editor and a graphic user interface (GUI) editor. Students also will learn how to use Cascading Style Sheets (CSS) and study the basics of Extensible Hypertext Markup Language (XHTML), JavaScript, Dynamic HTML (DHTML), and the Document Object Model (DOM). After completing this course, students will be able to create simple Web pages containing text, graphics, hyperlinks, tables, forms, and frames. Fundamental networking concepts and practices. Topics include network architecture and standards, networking protocols, TCP/IP, Internet servers, server-side scripting and database connectivity, and security.

CPEC 230 - CIW - Design Methodology and Technology
Upon course completion, students will know how to create and manage Web sites with tools such as Macromedia Dreamweaver 3.0 and Flash 4.0, FrontPage 2000, Dynamic HTML, and various multimedia and CSS standards. Students will also implement the latest strategies to develop third-generation Web sites, evaluate design tools, discuss future technology standards, and explore the incompatibility issues surrounding current browsers. The course focuses on theory, design and Web construction, information architecture concepts, Web project management, scenario development and performance evaluations.

CPEC 231 - CIW - E-commerce Strategy and Practices
Upon completion of this course, students will know how to conduct business online and understand the technological issues associated with constructing an electronic-commerce Web site. Students will implement a genuine transaction-enabled business-to-consumer Web site, examine strategies and products available for building electronic-commerce sites, examine how such sites are managed, and explore how they can complement an existing business infrastructure. Students get hands-on experience implementing the technology to engage cardholders, merchants, issuers, payment gateways and other parties in electronic transactions.

BUSINESS/OFFICE ASSISTANT/ ADMINISTRATIVE ASSISTANT

American Payroll Professional (Series)

CPEB 104 - Primary Skills (APA Payroll Series)
Payroll Primary Skills introduces the student to the basics of payroll. This survey class explores the payroll profession. Basic payroll terminology, law and procedure will be addressed.

CPEB 105 - Essential Skills (APA Payroll Series)
Essential Skills of payroll is the second and intermediate course in the payroll series. This procedures class builds on the skills acquired in the Primary Skills class.

CPEB 106 - Advanced Skills (APA Payroll Series)
This class is the final class in the APA payroll series. Advanced topics in payroll are exploresd, such as tax and benefits calculations and other topics that appear in the CPP examination.

CPEB 110 - Employee Benefits: Concepts and Health Care Benefits (CEBS Course 1)
This course begins with an overview of the environment of employee benefit plans and then addresses issues pertaining to health care and health care plans. Topics covered include managed care, maintaining and improving employee health, and a number of specialized health benefits. Timely topics of health care benefits for retirees and long-term care are also covered. The course concludes with coverage of disability and workers' compensation issues.

CPEB 111 - Employee Benefits: Design, Administration, and Other Welfare Benefits (CEBS Course 2)
The course begins by focusing on various forms of life insurance benefits provided through the employment relationship and continues with coverage of a variety of other welfare benefits. Flexible benefit plans and spending accounts are also discussed as well as the administration, funding, communication and taxation of welfare plans. Topics on multiemployer plans and benefits technology and information management are also included.

CPEB 112 - Retirement Plans: Basic Features and Defined Contribution Approaches (CEBS Course 3)
After a historical introduction of private pension plan development, the course reviews the objectives of plan design. It provides an overview of the legal requirements for qualified plans. Specific defined contribution plans discussed include money purchase, profit sharing, savings plans, ESOPs, 401(k) plans, IRAs, SIMPLE plans and plans for the self-employed. Also covered are: individual approaches to retirement plan design, a discussion of participant-directed investing, investment education and distribution planning.

CPEB 113 - Retirement Plans: Defined Benefit Approaches and Plan Administration (CEBS Course 4)
This course begins with an analysis of defined benefit features and an analysis of the differences between defined benefit and defined contribution plans. An overview of the retirement aspects of Social Security and Medicare is also presented. Other topics are: plan design, actuarial aspects, investments of plan assets and plan termination insurance. In addition, complex issues such as hybrid plans, early retirement incentives and special retirement plans for executives are discussed.

CPEB 114 - Contemporary Legal Environment of Employee Benefit Plans (CEBS Course 5)
Course 5 is a survey course of the legal environment of employee benefits. The nature of the legal system, the relevant legal principles and significant institutional aspects are reviewed. Additionally, the nature and extent of the power of federal and state governments to regulate business and employee benefits is presented.

CPEB 115 - Accounting and Finance (CEBS Course 6)
This courses emphazes accounting and financial concepts, with an introduction to fundamental economic principles and macroeconomic forces. The economics section provides the background necessary to understand the environment in which business activities take place. The role of accounting as a system of communicating information to users inside and outside the organization is presented. Concepts, principles and techniques of financial management are also included.

CPEB 116 - Asset Management (CEBS Course 7)
This course introduces asset management in the context of setting investment objectives for pension plan assets. Subjects covered include securities markets, investment analysis and theory, investment strategies, stock and fixed income security appraisal, and federal securities regulation.

CPEB 117 - Human Resources and Compensation Management (CEBS Course 8)
This survey course examines human resources and compensation management, including human resource planning, wage determination, employee benefits, total compensation concepts and non-economic rewards, as well as institutional and economic issues such as seniority, management rights and union security.

CPEB 118 - Health Economics
This course examines health economic issues using various microeconomic tools, and provides a theoretical basis for understanding the practical issues in health plan design, management and administration.

CPEB 119 - Contemporary Benefit Issues and Administration
This course keeps students abreast of contemporary benefit issues. Many of the topics covered in this course deal with the contemporary challenges employers face as they pursue their human resource objectives and adapt employee benefit plans to changing workforce needs and an evolving global business environment.

CPEB 124 - Concepts in Human Resources Management
Concepts in Human Resources Management is an 11-week course integrating the SHRM Learning System to teach the basics of human resource management and to prepare the participant to take the PHR or SPHR exams.

CPEB 125 - Fundamentals of Human Resource Management
This course is designed for entry-level human resource professionals, supervisors who have responsibility for interviewing and training employees, and those investigating or seeking a career in human resources. The course centers on: essentials of human

resource management, basics of compensation, employment law in the workplace, effective recruitment and selection techniques, orienting and training employees, and ensuring quality performance.

Engineering and Safety

Engineering

CPEE 101 - Building Systems Overview (BOC 101)
Provides an overview of preventive maintenance, energy efficiency principles, and fundamentals of building systems, equipment, and operations. Reviews heating, cooling, ventilation and control systems, water, lighting, and indoor air quality. Covers system interaction and relationship to overall building performance. Provides foundation for Level I certification courses. One day. Project: Facility and Equipment Floor Plan.
Cost: $950 for entire 7-course certification program
CEUs: 0.7

CPEE 102 - Energy Conservation Techniques (BOC 102)
Helps operators gain a better understanding of how energy is used in commercial buildings and how to identify and prioritize conservation opportunities. Includes basic principles of energy accounting, evaluation of fuel options, operation and maintenance strategies to improve efficiency, and energy management planning techniques. One day. Project: Energy Use Profile for Facility.
Cost: $950 for entire 7-course certification program
CEUs: 0.7

CPEE 103 - HVAC Systems and Controls (BOC 103)
Focuses on operation and maintenance of equipment and components typically found in commercial buildings, including central heating, cooling, air and ventilating systems in buildings. Provides introduction to automatic control systems and equipment, particularly for central air systems. Emphasis placed on group problem solving and exercises with respect to preventive maintenance. Two days. Project: Heating System Operational Review.
Cost: $950 for entire certification program
CEUs: 0.7

CPEE 104 - Efficient Lighting Fundamentals (BOC 104)
Covers lighting fundamentals and types of lighting for economical and energy efficient lighting systems. Participants learn principles of efficient lighting, including evaluation of lighting levels, quality and maintenance. Other topics include lighting fixture and control technologies, common upgrades, retrofit and redesign options, and management strategies as they apply to space use and function. One day. Project: Lighting Survey for Facility.
Cost: $950 for entire certification program
CEUs: 0.7
Date: TBA

CPEE 105 - Maintenance and Related Codes (BOC 105)
Provides an overview of health, safety, energy, and environmental codes that impact facility operation. Stresses how to comply with the requirements of the most important health and safety codes and how to use the energy and maintenance related codes to improve energy efficiency. One day.
Cost: $950 for entire certification program
CEUs: 0.7

CPEE 106 - Indoor Air Quality (BOC 106)
Introduces the basic causes of indoor air quality problems and begins to develop a method of diagnosis and solution. Students will gain an understanding of the dynamic components of indoor air quality in relation to source control, occupant sensitivity and ventilation. Emphasis will be placed on communications with building occupants for reliable investigations without aggravating existing issues.
Cost: $950 for entire certification program
CEUs: 0.7

CPEE 107 - Facility Electrical Systems (BOC 107)
Develops an understanding of how electricity is distributed in a facility and common electrical distribution problems. This course will emphasize the fundamentals of electricity and its application to the workplace. Project: Electrical Distribution Sketch for Facility.
Cost: $950 for entire certification program
CEUs: 0.7

Safety

CPEE 200 10-Hour OSHA General Industry Safety Outreach Training
CPEE 201 30-Hour OSHA General Industry Safety Outreach Training
CPEE 202 General Industry Continuity of Operations (COOP) Awareness Level Training
CPEE 203 Mold Mitigation
CPEE 210 OSHA Hazardous Communication Standard (HCS or HAZCOM) B 29 CFR 1910.1200
CPEE 211 24-Hour Hazardous Materials Technician B 29 CFR 1910.120 (q)(6)(iii)
CPEE 212 8-Hour First Responder: Awareness Level B 29 CFR 1910.120 (q)(6)(i)
CPEE 213 8-Hour First Responder: Operations Level B 29 CFR 1910.120 (q)(6)(ii)
CPEE 220 40-Hour HAZWOPER for Site Workers B 29 CFR 1910.120 (e)(3)
CPEE 221 24-Hour HAZWOPER for RCRA TSDF Workers B 29 CFR 1910.120 (p)
CPEE 222 8-Hour HAZWOPER Supervisor B 29 CFR 1910.120 (e)(4)
CPEE 250 Weapons of Mass Destruction - Awareness Level
CPEE 223 8-Hour HAZWOPER Refresher B 29 CFR 1910.120 (e)(8)
CPEE 224 8-Hour Incident Commander B 29 CFR 1910.120 (q)(6)(v)

Online Courses

Columbus State's Global Campus offers a series of noncredit courses online for convenient continuing education, anytime, any-

where. Many of the courses are Microsoft approved study guides, which can lead to Microsoft Certification. Visit the College's web site at www.cscc.edu for a complete course listing. The courses are offered in cooperation with DPEC, a Columbus computer training company.

CPEC 112 - Mind Leaders Online Professional Series
User-paced professional development online courses and certificates.

CPEC 113 - Mind Leaders Online Technical Series
Technical, self-paced, online courses and certificates.

For additional online courses, contact the Columbus State ACT/SkillsMax Center for Community Education and Workforce Development

Transitional Workforce Department

Entrepreneur Workforce
Real Estate Programs
Appraisal Programs

(614) 287-2447 or (614) 287-5397

The Transitional Workforce Department provides courses for a variety of students who want to gain the skills needed to enter, re-enter, or advance in the workforce. These include:

- Individuals not yet eligible or ready for credit classes.
- Those who want to pursue initial career and educational goals via noncredit courses.
- Business-minded people who want to advance their entrepreneurship.
- Those who want to pursue a career in real estate or appraisal.

OTAP (Orientation to Trade and Apprenticeship Programs)

Carol Higgins, Program Coordinator
(614) 224-3818

OTAP - Orientation to Trade and Apprenticeship Programs
This intense 8-week job training program teaches students the skills required to gain employment in the skilled trades and acceptance in apprenticeships or other career training programs. Students will have the opportunity to acquire skills in mechanical principles, applied technology, blueprint reading, basic electricity, fluid dynamics, thermodynamics, carpentry, hand power tools, OSHA safety, and applied math. Students will gain knowledge to take entry-level exams for employment and training in trades-related fields. For further information or to apply, call Central Registration at 287-5858.

OTAP for Youth
This creative after-school training program for Franklin County youth 16 to 18 years of age teaches students the skills needed to become employed or accepted into the trades upon graduation from high school. This program provides the same hands-on training as the adult OTAP program but in a modified format. The program runs eight weeks, two days per week from 4:30 to 7:00 p.m.
A hot meal is provided, bus passes are available to ensure transportation, and incentives are given for attendance and completion. This program is funded entirely by the Franklin County Job and Family Services. For further information or to apply, call Central Registration at 287-5858.

OTAP Plus* is offered winter and spring, 2006, and will add 4 weeks of credit classes to the OTAP course:

APPL 100 - The Construction Industry (2 hrs. lecture) 2 credit hours
APPL 109 - Basic Skills for the Construction Trades (2 hrs. lecture/2 hrs lab) 3 credit hours
APPL 119 - Employability Skills for the Construction Trades (3 hrs. lecture) 3 credit hours

*This course currently available for TANF-eligible students only. For further information or to apply, call Central Registration at 287-5858.

Academic Enrichment Program

Academic enrichment classes are designed for students who want to improve their basic English language and mathematical skills, pursue an Ohio High School Equivalent Diploma (GED), and/or review skills needed to improve career or educational opportunities. The classes offered include:

TWBSC 102	**Fundamental Math 1**
TWBSC 202	**Fundamental Math 2**
TWBSC 302	**GED MaSS (Math, Science and Social Studies)**
TWBSC 101	**Language Arts I, Writing and Reading**
TWBSC 201	**Language Arts 2**
TWBSC 301	**GED Language Arts and Reading**
TWBSC 303	**Advanced Reading**

PLATO courseware is available in the classroom lab and offers more than 2,000 hours of basic-to-advanced level instruction in reading, writing, math, science and life and work skills.

Entrepreneur Workforce (noncredit)

This department provides courses for those thinking of starting a small business in various areas. Currently, we are offering a home inspector class.

ENW150 - Home Inspection Course
Provides everything you need to know to become self-employed as a home inspector. Students use their accumulated skills, experience and knowledge to reinvent themselves as home inspectors.

Learn what it takes to start your new home inspection business as you network with other students, perform actual home inspections, and submit inspection reports.

Real Estate Programs

Real estate classes are available to anyone who wants to become a licensed assistant, sales agent or broker; finish the entire two-year degree program and receive an Associate of Applied Science degree; or just take classes for personal use or knowledge.

Pre-licensing sales classes are offered every quarter at various times throughout the day and week, including Saturday. Pre-licensing classes have attendance requirements. Courses required to sit for the state sales licensing examination include:

REAL 101 Real Estate Principles & Practices
REAL 102 Real Estate Law
REAL 111 Real Estate Finance
REAL 112 Real Estate Appraisal

Real Estate Associate Degree (Associate of Applied Science)
Designed for those who are pursuing a career in real estate. This course of study fulfills sales agent and broker educational requirements and provides classes for life-long learning. Please see plan of study under "Programs of Study."

Real Estate Sales Post-Licensing
Classes are offered once per quarter and fulfill the Ohio Division of Real Estate's requirement for 10 post-licensing hours. Call for dates.

Real Estate Continuing Education Courses
Offered periodically, these classes offer a variety of continuing education topics including ethics, fair housing and core law.

Appraisal Program

Pre-licensing and Certification Classes
The only one of its kind in Central Ohio, this program offers individuals the education necessary to pursue appraisal licensing and certification in Ohio, including appraiser assistant, licensed appraiser, certified residential appraiser or certified general appraiser.

Appraisal Continuing Education
Classes are scheduled periodically throughout the year. Call for the current schedule.

7-Hour and 15-Hour USPAP Classes
Classes for the 7-hour and 15-hour Uniform Standards of Professional Appraisal Practice (USPAP) are scheduled at least eight times per year. Call for the current schedule.

Appraisal Degree Program (Associate of Applied Science)
Designed for those who are pursuing a career in appraisal, this course of study provides advanced learning for professional appraisers and classes for life-long learning. Please see plan of study under "Programs of Study."

Language Institute

Tara L. Narcross, Ph.D., Coordinator
(614) 287-5448

Central Ohio's growing immigrant population and its increasing international connections have brought new attention to the importance of language instruction. In response to the growing need for focused language programming, The Language Institute provides specialized and occupational language courses as well as Basic English as a Second Language for individuals, companies, and organizations. It offers courses through open enrollment and by contract. Courses in language and cultural topics can be customized to meet client needs for a particular industry or cultural focus. Further course information can be found under the Continuing Professional Education Department section.

Basic English Program

Basic English 1 - LILNG-100
In Basic English 1, students will be introduced to English pronunciation, the alphabet, numbers and basic literacy (reading and writing), as well as American culture as it relates to life skills.

Basic English 2 - LILNG-200
Using present and past tenses, students will expand their abilities and knowledge in written and spoken vocabulary, questions and answers, and descriptions. The course also includes a secondary emphasis on life skills, culture and reading comprehension.

Basic English 3 - LILNG-300
Basic English 3 is designed to improve vocabulary skills as well as reading comprehension and writing ability. Students will build on previous knowledge and pave the way for further learning.

Basic English 4 - LILNG-400
In Basic English 4, students will work to improve vocabulary, writing skills, grammar ability and reading comprehension. Mastery of this level is especially important for those students who plan to continue toward credit coursework through the college, the Academic Enrichment program or preparation toward the GED.

Intensive Basic English - LILNG-500
Understanding English is the vehicle toward success in the United States and many other parts of the world. The Intensive Basic English course presents the curriculum of Basic English 2 and Basic English 3 in a single intensive course, putting the student on the fast track to knowledge of the language.

Optional Basic English Courses

Basic Communication 1 LIBSC-100
This course focuses on oral communication for students. It can be taken alone or along with other Basic English courses.

Citizenship Preparation LILNG-600
In this course, students can improve their English, learn about U.S. customs, history and culture, and prepare to take the U.S. Citizenship Exam.

Introduction to Computers for ESL Speakers LICPT-100
In this course, students who are unfamiliar with computers can learn the basics of using a computer, including using a word processor, saving and printing documents, entering data on a spreadsheet, using e-mail, and finding information on the Internet.

Introduction to Microsoft Word for ESL Speakers LICPT-200
This 8-hour weekend mini-course provides students who are already familiar with computer basics the information they need to use Microsoft Word.

Tech Prep/Heart of Ohio Consortium

Claude Graves, Executive Director
(614) 837-9443

Administered by Learning Systems, Columbus State houses the Tech Prep/Heart of Ohio Consortium's central office and acts as fiscal agent. Columbus State is a founding member of the Heart of Ohio Tech Prep Consortium. Since 1992, the college and its consortium partners–50 high schools, Central Ohio Technical Col-

lege, the Electrical Trades Center, two regional campuses of Ohio University, and central and southern Ohio business, industry and labor organizations–have worked together to offer high-quality college tech prep programs.

Students who choose college tech prep in 11th grade enter a seamless curriculum for two years of high school, moving directly into a related associate degree program at Columbus State. Tech prep college programs are currently available in accounting, architecture, automotive, business management, civil engineering, computer information, construction management, electro-mechanical engineering, electronic engineering, environmental, finance, graphic communication, interactive multimedia production, law enforcement, mechanical engineering, multicompetency health, nursing, and sports and fitness management.

K-12 Initiatives

Laurie Johns, Administrator
(614) 287-5961

The mission of the K-12 Initiatives Department is to enhance the educational opportunities of the youth in Columbus State's service area, while fostering the development of life-long learning. This department is directly responsible for the following programs at Columbus State:

Underage Student Population Enrollment Options
Allows students between the ages of 14 and 18, with or without a high school diploma, to enroll in college credit coursework. Students may be enrolled in public, private or home school institutions and are considered self pay students. The coursework they complete may apply toward high school graduation requirements as established by the secondary institution they are attending.

Post Secondary Enrollment Option Program
Allows students in high school to attend college and apply the college credit to their high school graduation requirements.

CPS Pathways to Success Initiative, Career Academics
Pathways for current Columbus Public high school Career Academy students to complete summer courses and enter into articulated two-year associate technical programs with advance placement.

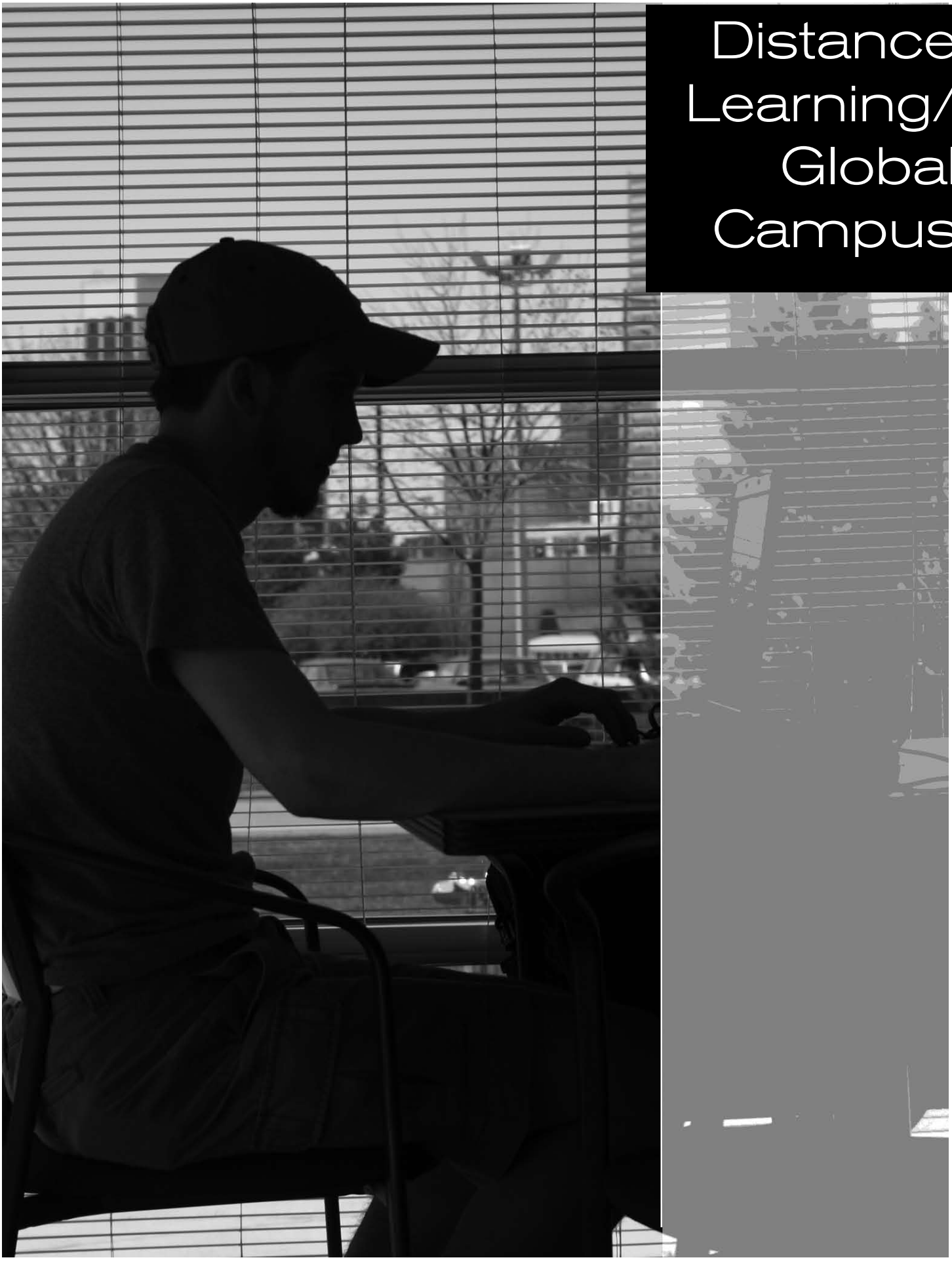
Tech Prep Program
Pathways for current high school tech prep students to enter into articulated two-year associate degree technical programs with advance placement.

Cougar Crew Reading Literacy Tutor Program
Columbus State students and employees serve as reading literacy tutors in area elementary schools during and after school.

Enrichment Programs
Outreach for individuals and families regarding academic enrichment. Some of our programs include Kids In College, Youth In College, Summer Youth, and Literacy Festivals.

Linkages for Primary and Secondary Education
Opportunities for training and development to enhance knowledge, experiences and practice regarding college and life-long learning options for professionals and their students.

Distance Learning/ Global Campus



Distance Learning/Global Campus

Distance Learning at Columbus State Community College

Distance Learning through Columbus State's Global Campus is a unique alternative to traditional on-campus learning, allowing students from around the city or around the globe the capability of learning with the latest interactive Web and video technologies without the limits of time and place.

Go the Distance and Get the Degree!

The Global Campus offers more than 340 courses, three degrees, and five certificates through Distance Learning instruction. Degree programs include the Associate of the Arts; Associate of Applied Science in Business Management; Associate of Applied Science in e-Commerce; Associate of Applied Science in Geographic Information Systems (GIS); Associate of Applied Science in Nursing; Associate of Applied Science in Marketing including concentrations in Purchasing Logistics, Direct Marketing, e-Commerce, and Customer Service. Online certificates include Geographic Information Systems (GIS), Direct Marketing, e-Commerce, Logistics Purchasing, and Logistics Certificate. Look for new certificates and majors in the near future.

Online Nursing Program Track

For the following courses the student must be admitted to the online Nursing Program Track. These are blended courses in that all theory is online, but the student must still participate in laboratory and clinical practice:

Nurs 110 Introduction to Nursing
Nurs 111 Health Promotion of Women and Families
Nurs 112 Introduction to Nursing Concepts pf Health Maintenance and Restoration
Nurs 113 Nursing Skills
Nurs 120 Health Assessment in Nursing I
Nurs 121 Health Assessment in Nursing II
Nurs 130 Concepts of Pharmacology I
Nurs 131 Concepts of Pharmacology II
Nurs 210 Nursing Concepts of Health Maintenance and Restoration
Nurs 211 Nursing Concepts of Health Maintenance and Restoration II
Nurs 212 Nursing Concepts of Health Maintenance and Restoration III
Nurs 213 Concepts of Nursing Management

Types of Distance Learning

Web-based courses

Web-based courses use a variety of new Web technologies and software to provide a stimulating and interactive learning experience. An Internet-ready computer with a minimum of Internet Explorer 5.0 is required for students to log onto their courses daily. Communication and course materials or assignments, as well as interaction with classmates, all occur within the course management system called Blackboard. When proctored testing is required, testing can be completed in the vicinity of the student.

Video-Based

Video-based courses are televised on the educational access channel or can be viewed on rented tapes from the library. Students can access broadcasting schedules as well as course information on their Blackboard course site or at http://global.cscc.edu. Telecourses may require students to mail in assignments as well as meet throughout the quarter. When proctored testing is required, testing can be completed in the vicinity of the student

Videoconferencing

Videoconferencing courses are offered using state-of-the-art videoconferencing equipment. The instructor is located at one site, and the course is broadcast to additional classrooms. This technology is highly interactive so that students have the opportunity to ask questions of the instructor and of classmates at any site.

Blended Course

A course comprised of multiple distance learning modalities such as Web and video based content to offer an exciting way to learn using the latest instructional technology. When proctored testing is required, testing can be completed in the vicinity of the student.

Hybrid Course

A course in which all the instructional and laboratory/clinical sessions are completed in a combination of traditional classes and at a distance. Students attend regularly scheduled sessions on campus. Because those on campus meeting dates may be limited, please consult the academic department for specific information.

Getting Started in Distance Learning: http://global.cscc.edu

- Check out the latest opportunities, programs, and courses.
- Go through *Distance Learning Getting Started* to learn what skills are needed to be a successful Distance Learner.
- See a demo of a Web-based course.

Ohio Learning Network

The Ohio Learning Network is a collaboration of Ohio colleges and universities using technology and innovation to enhance distance-learning opportunities statewide. OLN offers access to a variety of distance education opportunities as outlined in the OhioLEARNS catalog, which can be found online at www.oln.org.

Baccalaureate Degree Completion Programs via Distance Learning

These programs allow students who have completed their associate degree at Columbus State, to complete a related bachelor's degree via distance learning from the following universities:

University of Cincinnati

Bachelor's in Liberal Arts and Social Sciences-
Addiction Studies

Franklin University
- Bachelor of Science in Business Administration
- Bachelor of Science in Technical Administration
- Bachelor of Science in Computer Science
- Bachelor of Science in Management of Information Systems
- Bachelor of Science in Health Services Administration

Miami University
- Bachelor's in Applied Science/Major Electro-Mechanical Engineering

Ohio University
- Bachelor of Specialized Studies

University of Akron
- Master of Applied Politics

University of Toledo
- Bachelor of Science in Electronic Engineering and Computer Science
- Bachelor of Arts program in Liberal Studies

Global Campus Courses

The following is a list of distance learning courses. Please consult the *Quarterly Schedule of Classes* for additional courses added throughout the year.

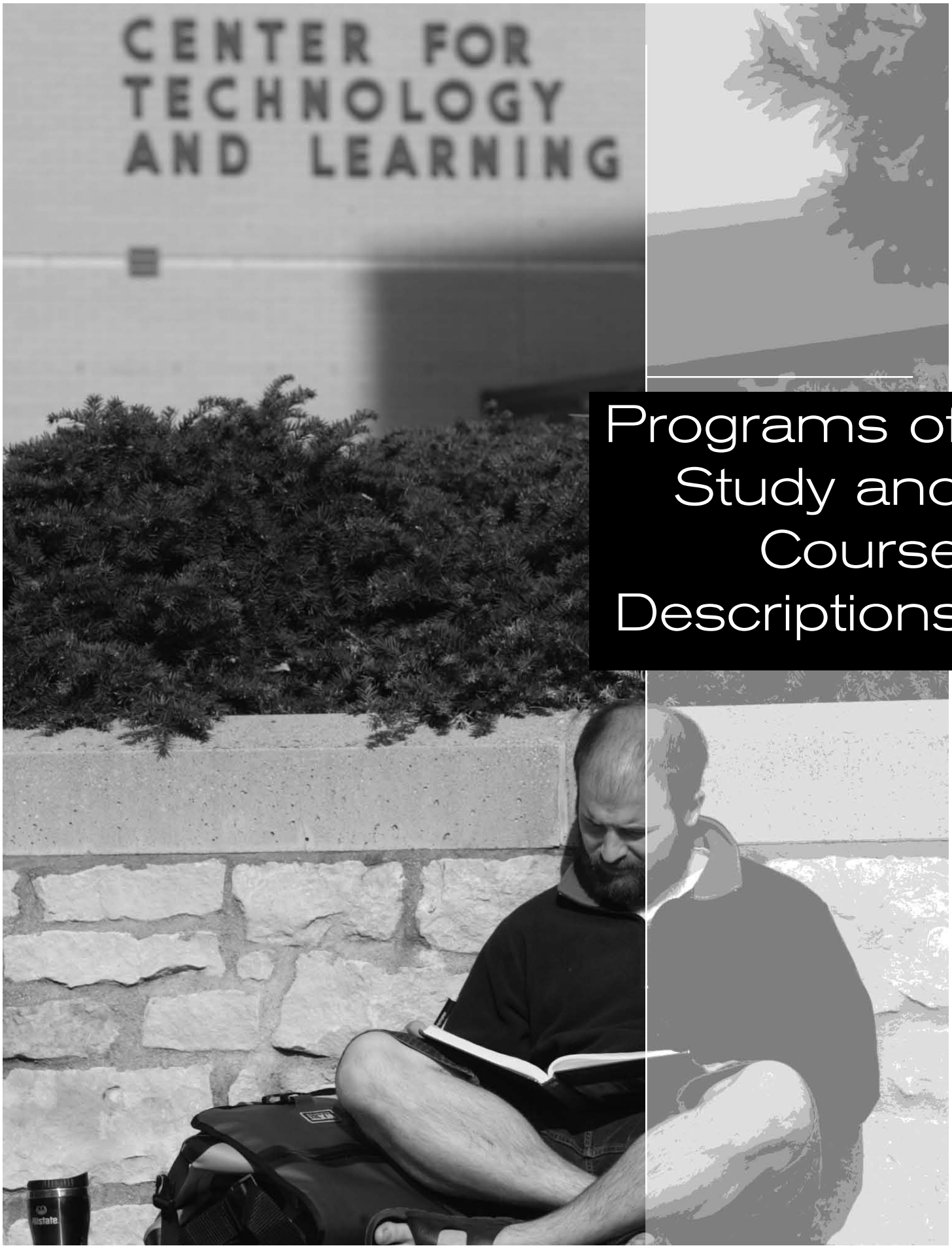
ACCT106	**Introduction to Accounting I**
ACCT107	**Introduction to Accounting II**
ACCT221	**Financial Statement Analysis I**
ANTH200	**Introduction to Physical Anthropology**
ANTH201	**World Prehistory**
ANTH290	**Capstone Experience in Anthropology**
ARCH112	**Construction Drafting CAD I**
ASC 190	**Freshman Seminar**
AUTO061	**Basic Automotive Systems & Theories of Operation**
BIO 100	**Introduction to Biological Sciences**
BIO 101	**Introduction to Anatomy & Physiology**
BIO 111	**Introduction to Biology I**
BIO 112	**Introduction to Biology II**
BIO 115	**General Microbiology**
BIO 161	**Human Anatomy**
BIO 169	**Human Physiology**
BIO 170	**Human Pathophysiology**
BIO 174	**Biological Science I**
BMGT101	**Introduction to Business**
BMGT102	**Managing Interpersonal Skill I**
BMGT111	**Management**
BMGT208	**Organization Communication**
BMGT211	**Organizational Behavior**
BMGT216	**Business Ethics**
BMGT218	**Management Training for Supervisors**
BMGT219	**International Business**
BMGT220	**Leadership Fundamentals**
BMGT231	**Small Business Development**
BMGT232	**Small Business Operation**
BMGT247	**Legal and Financial Issues in Nonprofit Management**
BMGT253	**Negotiation Principles**
BMGT271	**Management Decisions**
BMGT272	**Case Studies in Business Seminar**
CHEM100	**Introduction to Chemistry**
CHEM111	**Elementary Chemistry I**
CHEM112	**Elementary Chemistry II**
CHEM113	**General & Biological Chemistry**
CHEM171	**General Chemistry I**
CHEM172	**General Chemistry II**
CHEM173	**General Chemistry III**
CIT 089	**Introduction to FrontPage**
CIT 092	**Introduction to HTML**
CIT 094	**Web Learning Tools**
CIT 100	**Computer Literacy**
CIT 101	**PC Applications I**
CIT 102	**Computer Literacy II**
CIT 139	**Web Essentials**
CIT 141	**Web Publishing**
CIT 145	**HTML**
CIT 147	**JAVA Script Fundamentals**
CIT 162	**Introduction to Visual Basic**
CIT 163	**Visual Basic**
CIT 231	**Expert Excel**
CIT 233	**Expert Access**
CIT 250	**Network Communication Systems**
CIT 263	**Advanced Visual Basic**
CIT 266	**Interactive COBOL**
CIT 268	**Object-Oriented COBOL**
CIT 280	**ACP Examination**
CMGT105	**Construction Contract Documents**
COMM105	**Speech**
COMM110	**Conference and Group Discussion**
COMM115	**Oral Interpretation**
COMM220	**Introduction to Mass Communication**
DENT-111	**Anatomy**
DENT121	**Complete Dentures I**
DENT132	**Occlusion**
DENT153	**Fixed Partial Dentures I**
DENT275	**Ceramics I**
DEV 006	**Basic Grammar Skills**
DEV 007	**Basic Punctuation Skills**
DEV 030	**Basic Mathematics**
DEV 031	**Pre-Algebra**
DEV 050	**Career/Life Planning**
DHY 109	**Dental Terminology**
ECD 107	**Curriculum Planning**
ECON100	**Introduction to Economics**
ECON200	**Principles of Microeconomics**
ECON240	**Principles Macroeconomics**
ENGL100	**Language Development**
ENGL101	**Beginning Composition**
ENGL102	**Essay & Research**
ENGL111	**English Composition**
ENGL200	**Business Communications**
ENGL204	**Technical Writing**
ENGL207	**Writing for the Web**
ENGL210	**Creative Writing**
ENGL220	**Introduction to Literature**
ENGL225	**Introduction to Fiction**
ENGL230	**Introduction to Dramatic Literature**
ENGL235	**Introduction to Poetry**
ENGL240	**Introduction Science Fiction**
ENGL245	**Introduction to Film**
ENGL250	**Writing About the American Experience**
ENGL251	**American Identity**
ENGL252	**Images of Men and Women in Literature**
ENGL253	**Regional American Writing**
ENGL260	**Survey of Modern US Literature**
ENGL261	**Survey of British Literature**
ENGL262	**Survey of British Literature**
ENGL264	**Introduction to Shakespeare**
ENGL270	**African - American Writers**

Global Campus Courses - continued

ENGL281	Writing Fiction
ENGL282	Writing Poetry
ENGL284	Writing Creative Nonfiction
ENGL298	Special Topics in English
ENGL299	Special Topics in English
ENVR252	Health and Safety Training for Hazardous Waste Operations
ENVR256	Hazardous Materials Refresher Training
ENVR282	Sustainable Building Strategies
FMGT101	Personal Finance
FMGT201	Business Finance
FREN101	Elementary French I
FREN102	Elementary French II
FREN103	Intermediate French I
FREN104	Intermediate French II
GEOG200	World Regional Geography
GEOG207	Introduction to Geographic Information Systems
GEOG280	Elements of Cartography
GIS 100	Acquiring GIS Data
GIS 130	Introduction to Spatial Analysis
GIS 251	GIS Software I - ArcGIS
GIS 253	GIS Software II
GIS 275	Planning and Implementing GIS
GIS 277	Introduction to ArcIMS
GIS 278	VBA Programming for GIS
GIS 279	Introduction to GIS Databases
GIS 280	Advanced GIS Applications
GIS 290	Seminar for GIS
GIS 291	GIS Practicum
GRPH110	Survey of Graphic Communications
GRPH112	Intro to Computer Graphics
GRPH114	Digital Photography
GRPH122	Electronic Publishing
GRPH125	Image Assembly
GRPH131	Design and Typography
GRPH241	Estimating
GRPH243	Computer Graphic Illustration
GRPH251	Electronic Imaging
GRPH252	Digital Imaging II
GRPH273	Design II
GRPH282	Electronic Publishing II
GRPH289	Buying & Selling Printing
GRPH294	Running a Photography Business
HIMT111	Introduction to Health Information Management Tech
HIMT112	Internet Applications in Heath Care
HIMT113	Managed Care Trends
HIMT121	Advanced Medical Terminology
HIMT133	Legal Aspects of the Health Record
HIMT135	Health Data Management
HIMT141	Pharmacology for HIMT
HIMT243	Comparative Health Settings in HIM
HIMT245	ICD-9-CM Coding
HIMT255	CPT-4 Coding
HIMT256	Clinical Data Analysis
HIMT257	Introduction to Health Statistics
HIMT259	Quality and Resource Management
HIMT267	Principles of Management
HIMT270	Certified Case Management
HIMT274	Issues in Health Information Management
HOSP143	Hospitality and Travel Law
HOSP145	Lodging Operations
HOSP153	Nutrition
HOSP257	Computer Reservations Systems
HRM 121	Human Resource Management
HRM 220	Labor Relations
HUM 111	Civilization I
HUM 112	Civilization II
HUM 113	Civilization III
HUM 151	American Civilization to 1877
HUM 152	American Civilization Since 1877
HUM 222	Classical Mythology
HUM 270	Comparative Religions
IMMT100	Digital Literacy
IMMT101	The World of Multimedia
IMMT111	The Digital Revolution
IMMT121	Introduction to Multimedia
IMMT122	Digital Media Preparation
IMMT153	Formatting & Screenwriting for Digital Video and Audio
IMMT250	Document Transfer Using Adobe Acrobat
IMMT251	Multimedia Practicum
IMMT252	Seminar on Multimedia Production
LAND110	Landscape Computer Applications
LAWE101	Introduction to Criminal Justice
LAWE253	Criminal Procedure
LEGL101	Introduction to Legal Assisting
LEGL102	The Legal System
LEGL103	Law Office Procedures and Management
LEGL250	Intellectual Property
LEGL261	Business Law I
LEGL264	Legal Environment of Business
LOGI100	Principles of Logistics
LOGI110	Transportation & Traffic Management
LOGI151	Purchasing Principles I
LOGI152	Purchasing Principles II
LOGI205	Freight Claims
LOGI210	Warehouse Management
LOGI211	Inventory Management
LOGI225	Export/Import
LOGI226	Introduction to Export Administration Regulations
LOGI227	Electronic Import/Export Documentation
LOGI228	Importing
LOGI229	International Transportation Regulatory Compliance
LOGI240	Transportation Law/Regulations
LOGI245	Transportation Rates & Pricing
LOGI246	Purchasing Negotiation
LOGI250	Transportation of Hazardous Materials
LOGI256	Advanced Purchasing Seminar
LOGI297	Special Topics in Logistics
MASS235	Massage Law and Business Principles for Massage Therapy
MASS271	Massage Anatomy & Physiology I
MASS272	Massage Anatomy & Physiology II
MASS273	Massage Anatomy & Physiology III
MAT 296	Seminar
MATH101	Business Math
MATH104	Intermediate Algebra
MATH116	Mathematics for the Liberal Arts
MATH135	Elementary Statistics
MATH148	College Algebra
MECH244	Statistical Process Control
MECH250	Materials Science
MHCR114	Introduction to Chemical Dependency
MHCR117	Introduction to Documentation Skills
MKTG101	Introduction to Retailing
MKTG111	Marketing Principles
MKTG122	Business & the Internet
MKTG131	Market Research Principles
MKTG140	Advertising and Promotion
MKTG145	Services Marketing
MKTG146	Nonprofit Marketing
MKTG150	Introduction to E-Commerce
MKTG205	Quantitative Methods for Retailing
MKTG214	Merchandising
MKTG221	Consumer Behavior
MKTG223	Sales Principles & Practices
MKTG226	Customer Service Principles & Practices
MKTG229	Organizational Marketing
MKTG236	Direct Marketing
MKTG237	Database Marketing
MKTG261	Financial Analysis of Direct Marketing Results
MKTG264	Call Center Operations
MKTG265	Understanding Interactive Users

Global Campus Courses - continued

MKTG266	Marketing Communications on the Web
MKTG267	Electronic Payment Systems
MKTG270	Global Marketing/International Business Practice Firm
MKTG285	Ads & Promo on Web
MKTG286	Customer Service on the Web
MKTG287	Public Relations on the Web
MKTG288	Marketing Research on the Web
MKTG289	Direct Marketing on the Web
MKTG290	Government Marketing on the Web
MLT 100	Introduction to Health Care
MLT 130	Immunology
MLT 141	Hematology I
MLT 142	Hematology Lab
MLT 220	Immunohematology
MLT 223	Immunohematology Lab
MLT 242	Body Fluids
MLT 244	Medical Laboratory Case Studies
MLT 250	Clinical Microbiology
MLT 251	Clinical Microbiology Lab
MLT 260	Clinical Chemistry
MULT101	Medical Terminology
MULT270	Human Resource Management for Health Services
MULT272	Health Care Resource Management
NSCI101	Natural Science I
NSCI102	Natural Science II
NSCI103	Natural Science III
NURS109	Student Transition
NURS110	Introduction to Nursing
NURS111	Health Promotion of Women and Families
NURS112	Introduction to Nursing Concepts of Health Maintenance and Restoration
NURS113	Nursing Skills
NURS120	Health Assessment in Nursing I
NRSS121	Health Assessment in Nursing II
NURS 130	Concepts of Pharmacology
NURS131	Concepts of Pharmacology II
NURS191	Basics of Gerontological Nursing
NURS193	End of Life Care
NURS196	Nursing Concepts Enhancement II
NURS198	Info Tech in Health
NURS210	Nursing Concepts of Health Maintenance and Restoration
NURS 211	Nursing Concepts of Health Maintenance and Restoration II
NURS 212	Nursing Concepts of Health Maintenance and Restoration III
NURS 213	Concepts of Nursing Management
OADM101	Business Grammar Usage
OADM113	Quickbooks
OADM131	Keyboarding I
OADM131A	Keyboarding Module 1 (Alphabetic Keyboarding)
OADM186	Introduction to Word
OADM187	Introduction to Excel
OADM188	Introduction to Powerpoint
OADM189	Introduction to Access
OADM191	Word I
PHIL101	Introduction to Philosophy
PHIL130	Ethics
PHIL150	Introduction to Logic
PHYS100	Introduction to Physics
PHYS117	College Physics (Mechanics and Heat)
PHYS118	College Physics (Electricity, Magnetism and Light)
PHYS177	General Physics I
PNUR101	Foundations of Practical Nursing
PNUR102	Introduction to Practical Nursing Concepts
PNUR103	Practical Nursing Concepts Related to Health Promotion, Maintenance and Restoration
PNUR105	Concepts Related to Practical Nursing Practice
POLS101	Introduction to American Government
POLS165	Introduction to Politics
PSY 100	Introduction to Psychology
PSY 200	Educational Psychology
PSY 230	Abnormal Psychology
PSY 240	Dev. Through Life Span
PSY 251	Adolescent Psychology
PSY 261	Introduction to Child Development
SFMT100	Personal Fitness
SFMT225	Athlete Intervention
SFMT230	Fitness Concepts for Special Populations
SFMT231	Exercise Physiology
SFMT234	Sport Marketing
SFMT237	Corporate Health
SFMT241	Kinesiology
SFMT280	History of Sport in the United States: 1840-Present
SFMT292	Practicum I
SFMT294	Practicum II
SFMT298	Special Topics in Sport
SOC 101	Introduction to Sociology
SOC 202	Social Problems
SOC 210	Sociology of Deviance
SOC 230	Marriage and Family Relations
SOC 280	American Race & Ethnic Relations
SPAN101	Elementary Spanish I
SPAN102	Elementary Spanish II
SPAN103	Intermediate Spanish I
SPAN104	Intermediate Spanish II
SSCI101	Cultural Diversity
SSCI102	America in Transition
SSCI103	Social Problems
SSCI104	World Economic Geography
SSCI290	Capstone Experience in Social Sciences
SURV299	Special Topics in Civil Engineering Technology
TCO 102	Tools and Techniques for Technical Communicators
TCO 245	HTML-Based Online Documentation
TCO 297	Special Topics in Technical Communication
TCO 299	Special Topics in Technical Communication
THEA100	Introduction to the Theater
THEA233	Literature for the Theater III
VET 266	Animal Health and Disease II



Programs of Study and Course Descriptions

Programs of Study & Course Descriptions

General Education

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 Outcomes 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 outcomes include the following competencies:

1. 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.

2. 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.

3. 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.

4. 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.

5. Scientific and Technological Effectiveness
Scientific and technological effectiveness involves differentiating between scientific and non-scientific 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.

6. 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 & 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 can be completed within two years for students enrolled full-time. Baccalaureate Degree completion agreements have been made with Ashland University, Capital University, DeVry Institute of Technology, Franklin University, Ohio Dominican University, Otterbein College, Shawnee State University, the University of Akron, the University of Phoenix, and Wilberforce University that enable technology students to complete baccalaureate degrees in General Studies areas such as business management within two years of full-time study at those institutions. Technology Specific 2+2 Agreements for the Associate of Applied Science to the BA/BS degrees have been developed with Bethel College, Circleville Bible College, Devry Institute of Technology, Embry-Riddle Aeronautical University, Florida International University, Miami University of Ohio, Mount Carmel College of Nursing, Mount St. Joseph College, Ohio University, Sullivan University, The Ohio State University, Tiffin University, The United States Sports Academy, the University of Rio Grande, the University of Cincinnati, and the University of Toledo. Bachelor degree completion information is available from the academic departments and the Counseling Center.

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 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 required. The Associate of Science Degree requires completion of Calculus and Analytical Geometry II, which is the foundation for further study in advanced physics, chemistry, mathematics and engineering. Careers in the biological and health sciences may not require this level of mathematics.

Specific agreements have been made with colleges at The Ohio State University, Antioch College, Ashland University, Capital University, Central State University, Franklin University, Kent State University, Mount Carmel College of Nursing, Ohio Dominican University, Ohio University, Otterbein College, Shawnee State University, the University of Akron, the University of Cincinnati, the University of Toledo, and Wilberforce University 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 degree requirements at those institutions. Guides for course selection to meet specific requirements at these schools are available in the Columbus State Counseling Center or from the Dean of Arts and Sciences.

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 60 quarter hours to the general education requirements of all state supported institutions in Ohio. Those students who complete the AA or AS degree are to be given preferential consideration for admission to all Ohio public colleges.

In 2005, at the urging of the Ohio Legislature, all public 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 University Parallel guides are available in the Columbus State Counseling Center 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 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 twelve quarters from the time the student initially enrolled in the program. If the student does not receive a degree within twelve consecutive quarters of initial enrollment, and there is a change in the degree requirements, the Provost for Learning Systems 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 and Associate of Science Degrees

1. All students must satisfactorily complete at least 92 credit hours of approved courses, a minimum of 35 hours of which must be completed at Columbus State. Approved courses are designated below. Satisfactory completion requires a final grade of A, B, C, or D. Transfer credit may be awarded for courses in which a "C" or better has been earned at other accredited institutions, or a "D" or better from public Ohio institutions, if the course level equivalencies have been approved by the Dean of Arts and Sciences. Courses listed in the "Transfer Module" or "Transfer Assurance Guides" of an Ohio college, have been pre-approved for credit toward a Columbus State degree. Credits by examination, proficiency credit, non-traditional credit, and transfer credit do not apply toward meeting residency credit hour requirements.
2. All students must attain an overall grade point average of 2.0 or better for all credit courses at the 100 level or above taken at Columbus State. Grade point averages are calculated on the following scale: A=4, B=3, C=2, D=1, E=0. Number equivalencies are not assigned for grades other than these.
3. All students must complete the following General Education Requirements for the Associate of Arts or the Associate of Science degrees.
4. All students must file a "Petition to Graduation" during the quarter preceding their graduation quarter. Refer to page 28 of this Catalog for complete details.

ASC 190 Freshman Seminar – 2 hours or ASC 150 Individual Learning and Motivation –5 hours required for all new degree seeking students or students new to Columbus State with less than 15 applicable hours of transfer credit from their previous college. Students are to take this course in conjunction with ENGL 101 or ENGL 111.

Communication Skills-12 quarter hours minimum

College Composition - (5-6 hours required)

ENGL 101 Beginning Composition (3 hours) **and**
ENGL 102 Essay and Research (3 hours) **or**
ENGL 111 English Composition (5 hours)
(Students who place into ENGL 111 may take ENGL 111 instead of ENGL 101 and ENGL 102.)

Composition and Literature (3-5 hours required)

Students who complete ENGL 111 must take a five-hour Composition and Literature course. Additional courses in this category may not be taken as elective hours.

ENGL 220 Introduction to Literature (3 hours)
ENGL 250 Writing About the Amer. Exp. (5 hours)
ENGL 251 The American Identity (5 hours)
ENGL 252 Images of Men & Women in Amer. (5 hours)
ENGL 253 American Regional Writing (5 hours)

Oral Communication (3 hours required)

COMM 105 Speech (3 hours)
COMM 110 Conference and Group Discussion (3 hours)
COMM 115 Oral Interpretation (3 hours)

Mathematical and Logical Analysis - Associate of Arts Degree requires 10 quarter hours, 5 must be in mathematics. The remaining 5 hours may be from mathematics, statistics, logic,

or computer programming. The Associate of Science Degree requires completion of MATH 152.

Mathematics

MATH 116	Mathematics for the Liberal Arts (5 hours) **or**
MATH 148	College Algebra (5 hours) **or**
MATH 130	Mathematical Analysis for Business (5 hours)
MATH 150	Precalculus (5 hours)
MATH 151	Calculus and Analytical Geometry I (5 hrs)
MATH 152	Calculus and Analytical Geometry II (5 hrs)
MATH 153	Calculus and Analytical Geometry III (5 hrs)
MATH 254	Multivariable Calculus (5 hrs)
MATH 255	Elementary Differential Equations I (5 hrs)
MATH 268	Elementary Linear Algebra (5 hours)
MATH 285	Ordinary and Partial Differential Equations (6 hrs)
MATH 131	Business Calculus I (5 hours)
MATH 132	Business Calculus II (5 hours)

Statistics

MATH 135	Elementary Statistics (5 hours)
MATH 233	Statistics for Business (5 hours)
MATH 277	Probability and Statistics I (5 hours)
MATH 278	Probability and Statistics II (5 hours)

Formal Logic

PHIL 150	Introduction to Logic (5 hours)
PHIL 250	Symbolic Logic (5 hours)

Computer Programming

CIT 161	Programming 1 (5 hours)
CIT 261	Programming 2 (5 hours)
CIT 165	COBOL 1 (5 hours)
CIT 265	COBOL 2 (5 hours)
CIT 266	Interactive COBOL (5 hours)
CIT 173	Database Programming (3 hours)
CIT 273	Database Systems (3 hours)
CIT 167	C++ Programming 1 (5 hours)
CIT 267	C++ Programming 2 (5 hours)

Biological and Physical Sciences

Associate of Arts - 15-20 hours

Option 1: (15 hours) NSCI 101, NSCI 102, and NSCI 103.

Option 2: 20 hours from the following approved lists. At least one course must be from the Biological Sciences and at least one course must be from the Physical Sciences.

Associate of Science - 25 hours

Option 1: NSCI 101, NSCI 102, and NSCI 103, and 10 additional hours of mathematics above the level of MATH 152 Calculus and Analytic Geometry II or 10 additional hours of laboratory science from the following approved lists.

Option 2: 25 hours of laboratory science from the following approved lists, including one approved 10-hour sequence. At least one course must be taken from the Biological Sciences and at least one course must be from the Physical Sciences.

Option 3: 15 hours of laboratory science from the approved lists **and 10 hours** of mathematics above the level of MATH 152 Calculus and Analytic Geometry II.

Approved 10-hour Sequences

Physical Sciences	Biological Sciences
CHEM 111& 112	BIO 111 & BIO 112
CHEM 171 & 172	BIO 111 & BIO 115
PHYS 117 & 118	BIO 111 & BIO 126
PHYS 177 & 178	BIO 111 & BIO 127
	BIO 111 & ANTH 200
	BIO 161 & BIO 169
	BIO 174 & BIO 175

Approved Individual Courses

Physical Sciences	Biological Sciences
CHEM 113 (5 hours)	ANTH 200 (5 hours)*
CHEM 173 (5 hours)	ANTH 240 (5 hours)*
CHEM 251 (5 hours)	BIO 104 &105 (6 hours)
CHEM 252 (5 hours)	BIO 115 (5 hours)
CHEM 253 (5 hours)	BIO 125 (5 hours)
CHEM 261 (5 hours)	BIO 126 (5 hours)
GEOL 101 (5 hours)	BIO 127 (5 hours)
GEOL 121 (5 hours)	BIO 161 (5 hours)
GEOL 122 (5 hours)	BIO 169 (5 hours)
PHYS 119 (5 hours)	BIO 170 (5 hours)
PHYS 179 (5 hours)	BIO 201 (5 hours)
	BIO 205 & 206 (6 hours)

*Note: Students may not use ANTH 200 and ANTH 240 to satisfy both Biological Science and Social Science Requirements.

Social and Behavioral Sciences – 15-20 hours

Option I: 15 quarter hours - choose three from:

SSCI 101	Cultural Diversity (5 hours)
SSCI 102	Popular Culture (5 hours)
SSCI 104	World Economic Geography (5 hours)
SSCI 105	Law and Society (5 hours)

Option II: 20 quarter hours from at least two areas:

Integrated/Interdisciplinary

SSCI 101	Cultural Diversity (5 hours)
SSCI 102	Popular Culture (5 hours)
SSCI 104	World Economic Geography (5 hours)
SSCI 105	Law and Society (5 hours)

Economic/Geography

ECON 100	Introduction to Economics (5 hours)
ECON 200	Principles of Microeconomics (5 hours)
ECON 240	Principles of Macroeconomics (5 hours)
GEOG 200	World Regional Geography (5 hours)
GEOG 207	Intro to Geographic Information Systems (5 hours)
GEOG 280	Elements of Cartography (5 hours)

Political Science

POLS 101	Introduction to American Government (5 hours)
POLS 165	Introduction to Politics (5 hours)

Psychology

PSY 100	Introduction to Psychology (5 hours)
PSY 200	Educational Psychology (5 hours)
PSY 230	Abnormal Psychology (5 hours)
PSY 235	Psychology of Adjustment (3 hours)
PSY 240	Human Growth and Development (4 hours)
PSY 245	Children with Exceptionalities (5 hours)
PSY 251	Adolescent Psychology (5 hours)
PSY 261	Introduction to Child Development (5 hours)
PSY 267	Social Psychology (5 hours)

Sociology/Anthropology

ANTH 200	Introduction to Physical Anthropology (5 hours)*
ANTH 201	World Prehistory (5 hours)
ANTH 202	Introduction to Cultural Anthropology (5 hours)
ANTH 240	Introduction to Forensic Anthropology (5 hours)*
SOC 101	Introduction to Sociology (5 hours)
SOC 202	Social Problems (5 hours)
SOC 210	Sociology of Deviance (5 hours)
SOC 230	Marriage and Family Relations (5 hours)
SOC 280	American Race and Ethnic Relations (5 hours)

*Note: Students may not use ANTH 200 and ANTH 240 to satisfy both Biological Science and Social Science Requirements.

Humanities- 15 quarter hours -

Option I:

HUM 111	Civilization I (5 hours)
HUM 112	Civilization II (5 hours)
HUM 113	Civilization III (5hours)

Option II:

HUM 111	Civilization I (5 hours)
HUM 151	American Civilization to 1877 (5 hours)
HUM 152	American Civilization since 1877 (5 hours)

4. **Elective Requirements – 15-20 hours**
   Associate of Arts students select a minimum of 20 elective hours. Associate of Science students select a minimum of 15 hours. Students may complete their degree requirements from any of the courses listed above, or below in the Transfer Module. In addition students may select electives from the following:
   Business Related: ACCT 106 & 107, BMGT 111, BMGT 219, LEGL 261, 262, & 264.

   Foreign Languages: Arabic, Chinese, French, German, Italian, Japanese, Latin, or Spanish,

   Creative Writing: ENGL 281 through ENGL 285, THEA 215

   Humanities and Fine Arts: Any courses listed under ART, COMMUNICATIONS, DANCE, HISTORY, HUMANITIES, MUSIC, THEATER.
   or ENGL 208 through 215, ENGL 225 through 245, ENGL 260 through 278, ARCH 100, MECH 120, and MECH 251.
   Mathematics: MATH 105 & 106
   Other elective options may be chosen from pre-approved lists available from the Counseling Center or the Dean of Arts and Sciences. 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 University Parallel Guide available from the Counseling Center or the Dean of Arts and Sciences. On-line transfer advising support is available at cscc.edu. Go to Arts and Sciences Home Page, Course Applicability System (CAS).

5. **Capstone Experience - 3 hours**. Within the last 2 quarters prior to graduation, students must complete a "Capstone" course in the discipline of their intended major at a baccalaureate institution. The Capstone Experience should be selected in consultation with a faculty advisor.

6. **Complete a Petition to Graduate the Quarter prior to Graduation**.

Ohio Transfer Policy

The Ohio Board of Regents has established the **Transfer Module**, which is a specific set of courses from a college or university's general education requirements. The Transfer Module contains 55-60 quarter hours (or 36-40 semester hours) of course credits in English composition, mathematics, fine arts, humanities, social science, behavioral science, natural science, physical science and interdisciplinary courses.

A Transfer Module completed at one public college or university will automatically meet the requirements of the Transfer Module at the receiving institution, after the student has been accepted. Students may be required to meet additional general education requirements that are not included in the Transfer Module. Since private colleges and universities in Ohio may or may not be participating in the Transfer Module policy, students are encouraged to check with the college of their choice regarding their transfer agreements.

Students who complete Columbus State's degree requirements in Communication Skills, Mathematics, Humanities, Biological and Physical Sciences, and Social and Behavioral Sciences will automatically have completed the Transfer Module.

Transfer Module

English Composition -

College Composition - 5 - 6 hours required

ENGL 101	Beginning Composition (3) **and**
ENGL 102	Essay and Research (3) **or**
ENGL 111	English Composition (5)

Mathematics and Logical Analysis - select a minimum of one course

Mathematics - 5 hours required

MATH 116	Mathematics for the Liberal Arts (5)
MATH 130	Mathematical Analysis for Business I (5)
MATH 131	Business Calculus I (5)
MATH 132	Business Calculus II (5)
MATH 148	College Algebra (5)
MATH 150	Precalculus (5)
MATH 151	Calculus and Analytic Geometry I (5)
MATH 152	Calculus and Analytic Geometry II (5)
MATH 153	Calculus and Analytic Geometry III (5)
MATH 254	Multivariable Calculus (5)
MATH 255	Elementary Differential Equations (5)
MATH 266	Discrete Mathematical Structures (5)
MATH 268	Elementary Linear Algebra (5)
MATH 285	Ordinary and Partial Differential Equations (6)

Biological and Physical Sciences - select Option I or Option II

OPTION I:

Integrated/Interdisciplinary

NSCI 101	Natural Science I (5)
NSCI 102	Natural Science II (5)
NSCI 103	Natural Science III (5)

OPTION II: select three courses from at least two areas

Biological Sciences

BIO 111	Introductory Biology I (5)
BIO 112	Introductory Biology II (5)
BIO 115	General Microbiology (5)
BIO 125	General Botany (5)
BIO 126	Introduction to Ecology (5)
BIO 161	Human Anatomy (5)
BIO 169	Human Physiology (5)
BIO 174	Biological Sciences I (5)
BIO 175	Biological Sciences II (5)

BIO 201 Animal Diversity and Systemics (5)

Physical Sciences

CHEM 111 Elementary Chemistry I (5)
CHEM 112 Elementary Chemistry II (5)
CHEM 113 General and Biological Chemistry (5)
CHEM 171 General Chemistry I (5)
CHEM 172 General Chemistry II (5)
CHEM 173 General Chemistry III (5)
GEOL 121 Physical Geology (5)
PHYS 117 College Physics - Mechanics and Heat (5)
PHYS 118 College Physics - Elect, Magnetism & Light (5)
PHYS 119 College Physics - Modern Physics (5)
PHYS 177 General Physics I (5)
PHYS 178 General Physics II (5)
PHYS 179 General Physics III (5)

Arts/Humanities - select Option I or Option II

OPTION I: select one of the Civilization sequences

Ingegrated/Interdisciplinary

HUM 111 Civilization I (5) and
HUM 112 Civilization II (5) and
HUM 113 Civilization III (5) **or**
HUM 111 Civilization I (5) and
HUM 151 American Civilization to 1877 (5) and
HUM 152 American Civilization since 1877 (5)

OPTION II: select three courses from at least two areas

Interdisciplinary

HUM 205 Medicine and the Humanities (5)
HUM 222 Classical Mythology (5)
HUM 245 Music and Art Since 1945 (5)

Western Arts

ART 101 History of Western Art (5)
MUS 101 History of Western Music (5)

Philosophy

PHIL 101 Introduction to Philosophy (5)
PHIL 130 Ethics (5)
PHIL 270 Philosophy of Religion (5)

World/Non-Western Cultures

HUM 251 History of Latin America (5)
HUM 252 The Islamic World and the Middle East (5)
HUM 253 History of China and Japan (5)
HUM 254 Introduction to African Literature (5)
HUM 270 Comparative Religions (5)

Literature

ENGL 230 Introduction to Dramatic Literature (5)
ENGL 235 Introduction to Poetry (5)
ENGL 240 Introduction to Science Fiction (3)
ENGL 262 Survey of British Literature (5)
ENGL 264 Introduction to Shakespeare (5)
ENGL 265 Modern European Lit. in Translation (5)
ENGL 270 Black American Writers (5)
ENGL 276 Women in Literature (5)
ENGL 274 Introduction to Non-Western Literature (5)

Social and Behavioral Sciences - select Option I or Option II

OPTION I: select three courses from the following

Integrated/Interdisciplinary

SSCI 101 Cultural Diversity (5)
SSCI 102 Popular Culture
SSCI 105 Law and Society (5)

OPTION II: select three courses from at least two areas

Economics/Geography

ECON 100 Introduction to Economics (5)
ECON 200 Principles of Microeconomics (5)
ECON 240 Principles of Macroeconomics (5)
GEOG 200 World Regional Geography (5)

Political Science

POLS 101 Introduction to American Government (5)
POLS 165 Introduction to Politics (5)

Psychology

PSY 100 Introduction to Psychology (5)
PSY 200 Educational Psychology (5)
PSY 230 Abnormal Psychology (5)
PSY 235 Psychology of Adjustment (3)
PSY 240 Human Growth and Development (4)
PSY 261 Introduction to Child Development (5)
PSY 267 Social Psychology (5)

Sociology/Anthropology

ANTH 200 Introduction to Physical Anthropology (5)
ANTH 201 World Prehistory (5)
ANTH 202 Introduction to Cultural Anthropology (5)
ANTH 240 Forensic Anthropology (5)
SOC 101 Introduction to Sociology (5)
SOC 202 Social Problems (5)
SOC 210 Sociology of Deviance (5)
SOC 230 Marriage and Family Relations (5)
SOC 280 American Race and Ethnic Relations (5)

Conditions for Transfer Admission

Students who meet the Transfer Module requirements are subject to the following conditions:

1. The policy encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module and either the Associate of Arts or the Associate of Science degrees. These students will be able to transfer all courses in which they received a passing grade of "D" or better. Students must have an overall grade point average of 2.0 to be given credit for the Transfer Module.
2. The policy also encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module with a grade of "D" or better in each course and 90 quarter hours or 60 semester hours. Students must have an overall grade point average of 2.0 to be given credit for the Transfer Module. For individual courses, only those in which a "D" or better has been earned will transfer.
3. The policy encourages receiving institutions to admit on a non-preferential consideration basis, students who complete the Transfer Module with a grade of "D" or better in each course, and less than 90 quarter hours or 60 semester hours. These students will be able to transfer all courses in which they received a grade of "D" or better.

Admission to a given institution does not guarantee that a transfer student will be automatically admitted to any major, minor or field of study offered at that institution. Once admitted, transfer students will be subject to the same catalog requirements as all other students. Transfer students will be accorded the same class standing and other privileges as all other students based on the number of credits earned. All residency requirements must be successfully completed at the receiving institution prior to the granting of a degree.

Responsibility of Students

Early in their college career, students should identify the major and the university they wish to transfer into from Columbus State. They should plan their course of study to meet the requirements of the degree program they wish to pursue at the receiving four-year institution. Students should determine if there are foreign language or special course requirements that can be completed in the freshman or sophomore year. Students are encouraged to consult with an academic advisor to determine their specific transfer requirements.

Appeals Process

An appeals process is required at each institution, which allows students who disagree with application of transfer credits to file an appeal. If a transfer student's appeal is denied by the institution, the student must be advised in writing how to appeal at the state level Articulation and Transfer Appeals Review Committee. This committee will recommend a resolution to each case.

The 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 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 established transfer agreements with the following institutions. Please see your academic advisor for specific transfer course information.

Associate of Arts and Associate of Science Degrees to B.A. and B.S. Degrees
Antioch College
Ashland University
Capital University
Central State University
Franklin University
Ohio Dominican University
Ohio University
The Ohio State University - All Colleges
Otterbein College
Shawnee State University
University of Akron
University of Cincinnati- School of Planning, College of Design, Art, Architecture and Planning
University of Toledo
Wilberforce College

On-Line BA Degree Completion
University of Toledo: Associate of Arts
AAS in Technical Communication
AAS in Health Information Management

Degree Completion Programs for all Columbus State Degrees
Ashland University
Capital University
Central State University
Devry Institute of Technology
Franklin University
Ohio Dominican College
Otterbein College
The University of Akron
University of Phoenix
Wilberforce University
Shawnee State University

Guaranteed Admission to all Graduates of Columbus State (AA,AS, or AAS)
Ashland University
Central State University
Ohio Dominican College
Otterbein College
Shawnee State University
The University of Akron
University of Phoenix
Wilberforce University

Technology Specific Agreements for Associate of Applied Science Degrees
Bethel College
Interpreting/Transliterating
Cleveland State University College of Business Administration
Supply Chain Management (Logistics)
Marketing
Circleville Bible College:
Accounting Technology
Business Management Technology
Early Childhood Development Technology
Nursing Technology
Devry Institute of Technology:
Accounting Technology
Business Management Technology
Computer Information Technology
Electronic Engineering Technology
Embry-Riddle Aeronautical University:
Aviation Maintenance Technology
Florida International University:
Hospitality Management to Hotel and Food Service Mgmt.

Miami University:
Electronic Engineering Technology
Electro-Mechanical Engineering Technology
Mechanical Engineering Technology

Mount Carmel College of Nursing
A.A.S. in Nursing to B.S. in Nursing

Mount St. Joseph College:
All A.A.S. degrees in Health, Human and Public Services

Ohio University:
All A.A.S. degrees in Health, Human and Public Services
Hospitality Management to Hotel and Food Service Mgmt.

The Ohio State University
Business Management to BS in Technical Education and Training: Business
Education

Sullivan University
Hospitality Management

Tiffin University
Business Management to BS in Business Administration
Law Enforcement to BS in Criminal Justice

United States Sports Academy
Sports and Fitness Management to Bachelor of Sport Science
Associate of Arts or Associate of Science to Bachelor of Sport Science

University of Cincinnati
Chemical Dependency to Addictions Major, Sociology

University of Rio Grande:
Associate of Science Degree to B.S. in Mathematics

University of Toledo
Electronics Engineering Technology to Computer and Information Science Technology
Health Information Management to Health Information Management
Technical Communication to BA in Liberal Studies

Graduation Requirements: Associate of Applied Science Degree

Requirements of All Graduates

1. The satisfactory completion of 90-110 quarter 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 non-technical courses.
3. The completion of no fewer than 35 of the required credit hours, including no fewer than 20 credit hours in technical courses approved by the department chairperson, while in attendance at Columbus State Community College. Credits by examination/proficiency, non-traditional credit, and transfer credit do not apply toward meeting residency credit hour requirements.
4. All students must file a "Petition to Graduation" duirng the quarter preceding their graduation quarter. Refer to page 28 of this Catalog for complete details.

General Education Requirements

1. 12 credit hours in English/Communication Skills:
   ENGL 101, ENGL 102 (students placing into ENGL 111 can take ENGL 111 instead of ENGL 101 AND ENGL 102), COMM 105, COMM 110 or COMM 115 (depending on the technology requirement), and one of the following three courses: ENGL 200, ENGL 202, or.ENGL 204.
2. Five credit hours in Humanities: HUM 111, HUM 112, HUM 113, HUM 151, HUM 152, or HUM 224.
3. Five credit hours in Social and Behavioral Sciences for students in Engineering and Health and Human Services degree programs: SSCI 101, SSCI 102, SSCI 104, or SSCI 105.
   Five credit hours in Biological and Physical Sciences for students in the Business and Public Services degree programs: NSCI 101 or BIO 104 & 105.
   Following are exceptions to this requirement:
   a. Mental Health/Chemical Dependency/Mental Retardation students must take BIO 112 to fulfill the requirement.
   b. Early Childhood Development, and Interpreting/Transliterating students must take NSCI 101 or BIO 104 & 105 to fulfill the requirement.
   c. Computer Information Technology, Dietetic Technician Major, EDP Auditing and Medical Office Administration students must take SSCI 101, SSCI 102, SSCI 104 or SSCI 105 to fulfill the requirements.

Basic Studies Requirements

Each technical program requires completion of at least 21 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 45 to 67 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 (ATS) application, which includes the proposed program of study.

To prepare and submit the ATS application, applicants should first, call Advising and Counseling Services in Aquinas Hall 116 to set up an appointment with an academic advisor, 614-287-2668. The advisor will then provide the application to the student. Second, the student should submit the application draft, which includes a personal statement and rationale for the ATS 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 their ATS program.

Columbus State reserves the right not to approve any ATS 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 ATS Graduates

1. The satisfactory completion of 90-110 credit hours.
2. The attainment of a C (2.00) average in all technical courses, and a C (2.00) average in all non-technical courses.
3. The completion of no fewer than 35 of the required credit hours, including no fewer than 20 credit hours in technical courses approved by the department chairperson(s), while in attendance at Columbus State Community College. Credit by examination/proficiency, non-traditional credit, and transfer credit do not apply toward meeting residency credit hour requirements.
4. All students must file a Petition to Graduate during the quarter preceding their graduation quarter. Refer to page 28 of this Catalog for complete details.

Specific Program Requirements

In this section, the requirements for Columbus States programs of study are listed alphabetically by department or technology. After you have located the program you are interested in, you will find a listing of the courses to be taken. The first three or four alpha identifiers of each course number indicate which department offers the course. For example, course numbers beginning with EET are all from the Electronic Engineering Technology and VET indicates Veterinary Technician Technology. A chart in the Course Description Section shows all the departments and their corresponding numbers.

Honors Program

Columbus State offers an honors program for eligible students. Honor courses offer students more challenging, faster-paced coursework. Courses in English, humanities, and social sciences will be open to students who have completed or placed into ENGL 111, and have received permission from the Director of the Honors Program. Please see the quarterly list of course offerings for the complete listing of honors courses. For more information on the honors program, please call (614) 287-2512.

Academic Programs

ARTS AND SCIENCES DIVISION
Associate of Arts Degree
Associate of Science Degree
AA in Technical Communication

CAREER AND TECHNICAL PROGRAMS
Accounting
- EDP Auditing Major
- Bookkeeping Certificate
- Certificate of Accounting Concentration
- Certificate of Internal Audit

Appraisal
- Certification Licensing

Architecture
- Architecture Transfer Option
- 3D Visualization Certificate
- Facility Management Certificate

Automotive Technology
- Vocational Education Transfer Option with The Ohio State University
- Automotive Service Management Major
- Ford ASSET Program
- Maintenance and Light Repair Certificate
- TechLINK Program
- YAATC

Aviation Maintenance Technology
- Aviation Maintenance Technician Certificate

Business Management
- Vocational Education Transfer Option with The Ohio State University
- Business Management Major
- Small Business Management Major
- Leadership Development Certificate
- Training and Development Certificate
- Managing Interpersonal Skills Certificate
- Nonprofit Management Certificate

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

Computer Information Technology
- Vocational Education Transfer Option with The Ohio State University
- Network Administrator Track
- Software Developer Track
- User Support Track
- Web Developer Track
- Applications Developer Fast Track Certificate
- Database Specialist Certificate
- Information Security Certificate
- Network Administrator Certificate
- Object-Oriented Programming Certificate
- User Support Specialist Certificate

Construction Management
- Vocational Education Transfer Option with The Ohio State University
- Estimating/Bidding Certificate
- Field Supervision Certificate
- Residential Construction Management Certificate

Dental Hygiene
Dental Laboratory Technology/Small Business Management (ATS)
- Dental Laboratory Technology Certificate

Early Childhood Development
- Child Care Administration Certificate
- Infant/Toddler or School Age Child Care or Pre-School Ed. Certificate
- Child Development Association (CDA) credential preparation

Electro-Mechanical Engineering Technology
Electronic Engineering Technology
- Computer Electronics Major

Emergency Medical Services Technology
- EMT-Basic Certificate
- EMT-Intermediate Certificate
- EMT-Paramedic Certificate

EMS/Fire Science (ATS)
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
- GIS Certificate

Graphic Communication Technology
- Desktop Publishing Certificate
- Graphic Communication Design I Certificate
- Photography Certificate
- Printing Certificate
- Printing Management Certificate

Health Information Management Technology
- Medical Coding Specialist Certificate
- Medical Transcription Certificate

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

Horticulture (See Landscape Design/Build)
Hospitality Management
- Chef Apprenticeship Major
- Dietetic Technician Major
- Food Service/Restaurant Management Major
- Travel/Tourism/Hotel Management Major
- Baking Certificate
- Dietary Manager Certificate
- Travel Industry Certificate

Human Resources Management Technology
Interactive Multimedia
- Digital Audio/Video Production Major
- Webtech: Web Design Certificate

Interpreting/American Sign Language Education
- American Sign Language/Deaf Studies Certificate

Landscape Design/Build
Law Enforcement
- Corrections Major
- Law Enforcement Major
- Law Enforcement Management Major
- Law Enforcement Major - Academy Track

Legal Assisting (see Paralegal Studies)
Marketing
- Customer Service Major
- Direct Marketing Major
- e-Commerce Major
- Retail Management Major
- Direct Marketing Certificate
- e-Commerce Certificate

Massage Therapy
- Massage Therapy Certificate

Mechanical Engineering Technology
Medical Assisting (ATS)
- Medical Assisting Certificate

Medical Laboratory Technology
Mental Health/Chemical Dependency/Mental Retardation
- Mental Health Track
- Chemical Dependency Track
- Mental Retardation Track
- Substance Abuse Prevention Track
- Advanced Chemical Dependency Certificate
- Community Living Specialist Certificate
- Prevention Specialist Certificate
- Advanced Mental Health Certificate
- Advanced Mental Retardation Certificate

Multi-Competency Health
- EMT- Paramedic Degree Track
- Patient Care Degree Track
- Animal Assisted Therapy in Education Certificate
- Basic Electrocardiography Certificate
- Health Care Manager Certificate
- Histology Certificate
- Nurse Aide Training Program Certificate
- Phlebotomy Certificate
- Registered Nurse First Assistant Certificate
- Train the Trainer Certificate

Nuclear Medicine Technology
Nursing
- Vocational Education Transfer Option with The Ohio State University

Office Administration
- Administrative Assistant Major
- Administrative Assistant Legal Cognate
- Administrative Assistant Medical Cognate
- Office Skills Certificate

Paralegal Studies
- Paralegal Studies Certificate (Post Baccalaureate Option)
- Workers' Compensation Certificate

Practical Nurse Certificate
Quality Assurance Technology
Radiography
Real Estate
Respiratory Care
- Registered Respiratory Therapist Program

Retail Management (See Marketing)
Sports & Exercise Studies
- Exercise Specialist Certificate
- Exercise Science Major
- Physical and Recreational Instructor Major
- Sport Management Major

Supply Chain Management
- Purchasing Major
- Global Trade Certificate
- Supply Chain Management Certificate
- Purchasing Certificate

Surgical Technology
- Surgical Technology Certificate

Veterinary Technology

Accounting

Accounting Associate Degree
EDP Auditing Major
Certificate of Accounting Concentration
Bookkeeping Certificate
Certificate of Internal Auditing

Accountants, and theoretical principles they use in their work, stand at the very center of our financial and economic activities. Economists, investors, business executives, labor leaders, bankers, and government officials all rely upon financial statements and other reports prepared by accountants to summarize and interpret the multitude of financial transactions that comprise day-to-day economic activity. The true value of an accountant is measured by his or her ability to develop and present understandable, reliable analyses of financial positions and the results of operations upon which business decisions are based.

The Accounting Associate Degree program prepares graduates for employment as accountants in business, industry, and government. Many experienced accountants become owners/operators of their own public accounting firms. The program emphasizes the use of personal computers along with manual procedures of accounting. The Accounting Associate Degree program is ideally suited to the needs of those who wish to take the Ohio CPA Examination with qualifying examinations upon graduation.

The Associate Degree major in EDP Auditing serves many student and employer requests for accounting training that emphasizes systems analysis and programming. This major fills a gap for those trained in accounting or computer science who do not have the opportunity to gain expertise in both areas without on-the-job training or pursuit of advanced degrees. Job opportunities for EDP auditing specialists exist in public accounting firms, industrial-commercial accounting departments (particularly internal auditing), and with governmental accounting employers. The program's diversity also enables graduates to seek employment in data processing management, systems analysis, programming, controlling, cost accounting, and general accounting. Graduates of this program may also qualify to take the Ohio CPA Examination through qualifying equivalency examinations.

The Certificate of Accounting Concentration is intended for individuals that currently possess a bachelor's, master's or Ph.D. in an area other than accounting and want to qualify under Ohio law to sit for the Ohio CPA exam. The 58 hours of course work recommended would provide candidates with the broadest possible knowledge of all four parts of the Ohio exam.

The one-year Bookkeeping Certificate program develops the competencies needed for success as a full-charge bookkeeper. Credits earned in the Certificate program may be applied to an Associate Degree in Accounting, EDP Auditing, or other business technologies.

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. These topics will be covered in eight five-week courses. These courses will meet one evening per week, making them convenient for the working professional. This certificate can be obtained easily in a year by taking one course at a time.

Upon completion of the Associate 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.
- Apply theory and practical applications of job order, process, and activity based cost systems including the evaluation of actual to standard costs.
- Prepare systems flowcharts and evaluate the internal control of a business system.
- Compare and use financial statements for decision making purposes.
- Explain the purpose and standards for an independent audit.
- Explain the procedures used in applying auditing standards in conducting an independent audit.
- Prepare budgets and forecasts for financial decisions.
- Identify and describe each of the rules contained in the AICPA Code of Professional Conduct.
- Prepare individual income tax returns and research tax questions.
- Prepare federal, state, and local payroll tax returns as well as franchise and personal property tax returns.

EDP Auditing Major

In addition to many of the Accounting competencies, a graduate majoring in EDP Auditing will be able to:

- Write, debug, test, maintain and document programs, according to a program specification, in IBM mainframe Assembly Language or Structured ANSI COBOL.
- Use an on-line editor for program development.
- Analyze an existing internal control system and reconfigure its specifications to conform to auditing software.
- Perform system analysis to improve accountability of system results.

Accounting Associate Degree

Quarter 1		
ENGL 101	Beginning Composition	3
BMGT 111	Management	5
ACCT 106	Introduction To Accounting I	5
CIT 101	PC Application 1	3
TOTAL CREDIT HOURS		**16**
Quarter 2		
ENGL 102	Essay & Research	3
SSCI 104	World Economic Geography	5
ACCT 107	Introduction To Accounting II	5
ACCT 121	Data Processing for Accountants	4
HUM XXX	Humanities 111,112,113,151, 152 or 224	5
TOTAL CREDIT HOURS		**22**

Quarter 3

ENGL 200	Business Communications	3
COMM 105	Speech	3
ACCT 108	Introduction To Accounting III	4
ACCT 126	Accounting Systems	5
ACCT 211	Cost Accounting	5
TOTAL CREDIT HOURS		**20**

Quarter 4

MATH 135	Elementary Statistics	5
LEGL 265	Business Law for Accountants	5
ACCT 201	Intermediate Accounting I	5
ACCT 221	Financial Statement Analysis I	3
TOTAL CREDIT HOURS		**18**

Quarter 5

ACCT 202	Intermediate Accounting II	5
ACCT 232	Federal Taxation	5
ACCT 222	Financial Statement Analysis II	3
ACCT 241	Auditing I, Principles	3
TOTAL CREDIT HOURS		**16**

Quarter 6

BMGT 272	Case Studies in Business Seminar	3
ACCT xxx	Accounting Technical Elective	4
ACCT 203	Advanced Accounting	5
ACCT 231	State & Local Taxation	3
ACCT 242	Auditing II, Applications	3
TOTAL CREDIT HOURS		**18**
TOTAL DEGREE CREDIT HOURS		**110**

Technical Elective must be selected from the following list of courses:

ACCT 236	Advanced Taxation	4
ACCT 266	Public Admin./Fund Accounting	4
ACCT 271	Accounting Internship*	2
ACCT 272	Internship Seminar*	2
ACCT 275	Fraud Examination I	2
ACCT 276	Fraud Examination II	2
ACCT 281	Sarbanes Oxley Act I	2
ACCT 282	Sarbanes Oxley Act II	2
ACCT 291	Internal Audit I	2
ACCT 292	Internal Audit II	2
ACCT 293	Operational Auditing	2
ACCT 294	Internal Audit – Special Topics	2

* Must be taken together

EDP Auditing Major

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 121	Mathematics for Computer Technology	5
ACCT 106	Introduction To Accounting I	5
CIT 101	PC Application 1	3
TOTAL CREDIT HOURS		**16**

Quarter 2

ENGL 102	Essay & Research	3
CIT 103	Computer Concepts and Logic	3
CIT 163	Visual Basic 11	4
LEGL 261	Business Law I	3
ACCT 107	Introduction To Accounting II	5
TOTAL CREDIT HOURS		**18**

Quarter 3

ENGL 200	Business Communications	3
ACCT 121	Data Processing for Accountants	4
ACCT 108	Introduction To Accounting III	4
COMM 105	Speech	3
TOTAL CREDIT HOURS		**14**

Quarter 4

CIT 165	COBOL I	5
CIT 175	Systems Analysis I	4
ACCT 201	Intermediate Accounting I	5
SSCI 104	World Economic Geography	5
TOTAL CREDIT HOURS		**19**

Quarter 5

CIT 265	COBOL II	5
CIT 275	Systems Analysis II	4
ACCT 202	Intermediate Accounting II	5
ACCT 241	Auditing I, Principles	3
TOTAL CREDIT HOURS		**17**

Quarter 6

ACCT 242	Auditing II, Applications	3
ACCT 256	Final Project	5
xxxx xxx	Technical Elective	3
HUM XXX	Humanities 111,112,113,151,152 or 224	5
TOTAL CREDITHOURS		**16**
TOTAL DEGREE CREDIT HOURS		**100**

Technical Elective must be selected from the following list of courses:

CIT 266	Interactive COBOL	5
CIT 173	Database Programming	3
CIT 231	Expert Excel	3
CIT 167	C++ Programming I	4
CIT 267	C++ Programming II	4
CIT 151	Networking I	3
ACCT 232	Federal Taxation	5
ACCT 266	Public Administration/Fund Accounting	4

Certificate of Accounting Concentration

COURSE		CR
Quarter 1		
ACCT 106	Introduction To Accounting I	5
TOTAL CREDIT HOURS		**5**

Quarter 2

ACCT 107	Introduction To Accounting I	5
ACCT 121	Data Processing for Accountants	4
TOTAL CREDIT HOURS		**9**

Quarter 3

ACCT 211	**Cost Accounting**	**5**
ACCT 108	Introduction to Accounting III	4
TOTAL CREDIT HOURS		**9**

Quarter 4

LEGL 265	Business Law for Accountants	5
ACCT211	Cost Accounting	5
TOTAL CREDIT HOURS		**10**

Quarter 5

ACCT 202	Intermediate Accounting II	5
ACCT 232	Federal Taxation	5
ACCT 241	Auditing I, Principles	3
TOTAL CREDIT HOURS		**13**

Quarter 6

ACCT 203	Advanced Accounting	5
ACCT 266	Public Admin/Fund Accounting	4
ACCT 242	Auditing II, Applications	3
TOTAL CREDIT HOURS		**12**
TOTAL CERTIFICATE CREDIT HOURS		**58**

Bookkeeping Certificate

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 102	Beginning Algebra I	4
CIT 101	PC Application 1	3
ACCT 106	Introduction To Accounting I	5
TOTAL CREDIT HOURS		**15**
Quarter 2		
ENGL 102	Essay and Research	3
OADM 131	Keyboarding I	3
LEGL 261	Business Law I	3
ACCT 121	Data Processing for Accountants	4
ACCT 107	Introduction To Accounting II	5
TOTAL CREDIT HOURS		**18**
Quarter 3		
ENGL 200	Business Communications	3
OADM 132	Keyboarding II	3
ACCT 108	Introduction To Accounting III	4
ACCT 126	Accounting Machines Systems	5
TOTAL CREDIT HOURS		**15**
Quarter 4		
HUM XXX	Humanities 111,112,113,151,152 or 224	5
ACCT 201	Intermediate Accounting I	5
ACCT 231	State & Local Taxation	3
ACCT 211	Cost Accounting OR	5
ACCT 232	Federal Taxation	5
TOTAL CREDIT HOURS		**18**
TOTAL CERTIFICATE CREDIT HOURS		**66**

Certificate of Internal Auditing

Course		CR
Quarter 1		
ACCT 275	Fraud Examination I	2
ACCT 276	Fraud Examination II	2
TOTAL CREDIT HOURS		**4**
Quarter 2		
ACCT 281	Sarbanes Oxley I	2
ACCT 282	Sarbanes Oxley II	2
TOTAL CREDIT HOURS		**4**
Quarter 3		
ACCT 291	Internal Audit I	2
ACCT 292	Internal Audit II	2
TOTAL CREDIT HOURS		**4**
Quarter 4		
ACCT 293	Operational Auditing	2
ACCT 294	Internal Audit – Special Topics	2
TOTAL CREDIT HOURS		**4**
TOTAL CERTIFICATE CREDIT HOURS		**16**

Appraisal

The associate degree program in Real Estate Appraisal offers the coursework that meets the standards of professionalism in the appraisal industry. Courses meet the educational requirements for appraisal registration, licensure and certification in the state of Ohio.

The program meets the career objectives of persons interested in real estate appraisal and allied real estate professions. Licensed appraisers will find that the program provides training to upgrade their professional competence and to meet future education requirements. 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.

Continuing Education

Only courses approved by the Ohio Division of Real Estate and Professional Licensing qualify for continuing education credit for licensed appraisal professionals. Please check with the Real Estate Department staff or the Ohio Division of Real Estate and Professional Licensing for course approval before enrolling. Before registering for classes, students should contact the Real Estate Department if they are interested in taking 1) only classes to prepare for specific appraisal goals, or 2) only selected courses to meet continuing education requirements of the Ohio Division of Real Estate and Professional Licensing.

Columbus State offers the 7-Hour and 15-Hour National USPAP Update Courses quarterly.

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

- think critically and solve problems
- communicate effectively
- recognize the value of human diversity
- demonstrate interpersonal and life management skills
- determine the best method to arrive at real property value
- complete various standard appraisal forms and reports
- demonstrate the market analysis techniques and applications
- complete appraisals for all real property including but not limited to residential, commercial, business and agricultural
- apply appropriate technology as needed within the appraisal profession
- continue appraisal education

Appraisal Associate Degree

First Quarter		
ENGL 101	Basic Composition	3
MATH 101	Business Math	5
REAL 101	Principles and Practices	4
APPR 101	Principles of Appraisal	5
TOTAL CREDIT HOURS		**17**

Second Quarter

ENG 102	Essay & Research	3
HUM XXX	111, 112, 113, 151, 152 **or** 224	5
APPR 102	Procedures of Appraisal	5
TOTAL CREDIT HOURS		**13**

Third Quarter

ENGL 200	Business Communication	3
ACCT 106	Intro to Accounting I	5
LEGL 264	Legal Environment of Business	4
APPR 284	Uniform Standards of Professional Appraisal Practices	2
APPR 110	Basic Income	5
TOTAL CREDIT HOURS		**19**

Fourth Quarter

COMM 105	Speech	3
CIT 101	PC Applications	3
APPR 230	Advanced Income	4
APPR 115	Report Writing	1
FMGT 201	Business Finance	5
APPR 290	Appraisal Practicum I	1
APPR 291	Appraisal Seminar I	1
TOTAL CREDIT HOURS		**18**

Fifth Quarter

ECON 200	Principles of Microeconomics	5
BMGT 111	Management	5
APPR 201	Advanced Application	3
APPR 210	Eminent Domain Appraisal	3
APPR 292	Appraisal Practicum II	1
APPR 293	Appraisal Seminar II	1
TOTAL CREDIT HOURS		**18**

Sixth Quarter

NSCI 101	Natural Science	5
APPR 211	Litigation & Expert Testimony	3
APPR 220	Market Analysis and Highest and Best Use	5
APPR 294	Appraisal Practicum III	1
APPR 295	Appraisal Seminar III	1
TOTAL CREDIT HOURS		**15**
TOTAL DEGREE CREDIT HOURS:		**100**

Architecture

Architecture Transfer Option
3D Visualization Certificate
Facility Management Certificate

Architecture graduates assist architects and others in preparing plans and specifications. Many also work for builders and contractors, land developers, remodelers, facility and property managers, and with building product manufacturers and retailers. The Columbus job market for architecture graduates is remaining strong as Columbus continues to grow.

Columbus State's Associate Degree program in Architecture teaches manual and CAD drafting, product selection and specification, and code evaluation skills used daily in the occupation. Students in the program share common courses in materials, structures, blueprint reading and co-op work experiences with other programs in the Construction Sciences Department. This provides architecture students with a strong foundation of technical skills and a sense of teamwork required in the construction industry.

The Architecture program provides students with a solid educational background in communication skills, math, computer literacy and operations, and humanities and 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. These include orthographic projection and one-point and two-point perspective 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.
- Detail building structures utilizing wood, steel, and concrete manuals and handbooks.
- Understand and be familiar with project coordination, total project development and professional practice.

Architecture Transfer Option

This plan of study should be considered in order to enhance a student's opportunity for transferring to a four-year institution with a major in architecture. This transfer option contains additional course requirements in mathematics and the physical sciences and fewer architecture courses than the basic Architecture program. The student interested in this track should consult with an academic advisor in the department at the start of the program.

3D Visualization Certificate

This post-associate certificate program will provide students with advanced coursework in 3D Modeling, Rendering and Animation. Two separate tracks of study are available. One track concentrates upon the use of form*Z while the other track concentrates upon the use of Autodesk 3ds MAX. Each track is composed of five courses. The student may choose to pursue one track or the other or may choose to do both.

This certificate is geared towards professionals and students with prior experience in architecture, interior design, graphic design or other related field.

Prerequisites for entering this certificate program include: having already received an associate degree or higher in a related field of study, having completed 50 or more credit hours within a related field of study, or receiving permission from a faculty member.

Facility Management Certificate

The Facility Management Certificate comprises six basic courses which will enable a student to understand basic facility management functions and apply current management techniques and principles to facility management situations. The student will acquire an awareness of Facility Management as a profession and become equipped with many of the basic tools in order to enter it successfully.

These courses may be taken by themselves or combined with other courses as an Associate of Technical Studies degree (ATS). [see "Designing Your Own Degree".]

The need for skilled facility managers is expected to increase dramatically in the Columbus area, and in the national scene.

This certificate is not to be confused with the phrase "Certified Facility Manager" (CFM), as established by the International Facility Managers Association (IFMA), which carries with it an implication of extensive experience and testing.

Architecture Associate Degree

COURSE		CR
Quarter 1		
ARCH 110	Construction Drafting - Manual I	2
CIVL 120	Basic Construction Materials	3
CMGT 121	Building Construction Drawings	3
ENGL 101	Beginning Composition	3
MATH 104	Intermediate Algebra	5
TOTAL CREDIT HOURS		**16**
Quarter 2		
ARCH 111	Architectural Drafting - Manual II	4
ARCH 112	Construction Drafting – CAD I	2
ENGL 102	Essay & Research	3
MATH 148	College Algebra	5
TOTAL CREDIT HOURS		**14**
Quarter 3		
ARCH 100	Intro to the History of Architecture	5
ARCH 113	Architectural Drafting – CAD II	2
ARCH 155	Residential Construction / Wood Structures	3
ARCH 161	Presentation Drawings	3
MECH 130	Statics	3
TOTAL CREDIT HOURS		**16**
Quarter 4		
ARCH 214	Electricity (First Term)	2
ARCH 215	Lighting (Second Term)	2
MECH 242	Strength of Materials	3
SSCI 10x	Social Science 101, 102, 104 or 105	5
COMM 105	Speech or COMM 110 Conference & Group Discussion	3
TOTAL CREDIT HOURS		**15**
Quarter 5		
ARCH 114	Architectural Drafting – CAD III	2
ARCH 221	Design Studio I	3
ARCH 232	Building Construction Standards	3
ARCH 250	Building Enclosure Materials	3
LAND 152	Site Planning	4
TOTAL CREDIT HOURS		**15**
Quarter 6		
ARCH 223	Design Studio II	3
ARCH 237	Structures – Steel, Concrete & Masonry	4
ARCH 263	Working Drawings I	4
ENGL 204	Technical Writing	3
ENVR 282	Sustainable Building Strategies	3
TOTAL CREDIT HOURS		**17**
Quarter 7		
ARCH 264	Working Drawings II	4
ARCH 270	Professional Practice and Management	3
xxx xxx	Technical Elective	3
HUM 1xx	Humanities 111, 112, 113, 151, 152 or 224	5
TOTAL CREDIT HOURS		**15**
TOTAL DEGREE CREDIT HOURS		**108**

Technical Electives must be selected from the following list of courses:

ARCH 115	MicroStation CAD Drafting I	3
ARCH 291	Field Experience	3
ARCH 299	Special Topics in Architecture	1-5
CMGT 105	Construction Contract Documents	3
LAND 101	Landscape Principles	3
LAND 206	Landscape Graphics	4
ARCH 240	3D Modeling & Rendering - AutoCAD	3
ARCH 242	3D Visualization – formñZ I	4
ARCH 283	Sustainable Architectural Design	3

Architecture Transfer Option

COURSE		CR
Quarter 1		
ARCH 110	Construction Drafting - Manual I	2
CIVL 120	Basic Construction Materials	3
CMGT 121	Building Construction Drawings	3
ENGL 101	Beginning Composition	3
MATH 151	Calculus and Analytical Geometry I	5
TOTAL CREDIT HOURS		**16**

Quarter 2

ARCH 111	Architectural Drafting -Manual II	4
ARCH 112	Construction Drafting – CAD I	2
ENGL 102	Essay & Research	3
MATH 152	Calculus and Analytical Geometry II	5
TOTAL CREDIT HOURS		**14**

Quarter 3

ARCH 100	Intro to the History of Architecture	5
ARCH 113	Architectural Drafting – CAD II	2
ARCH 155	Residential Construction / Wood Structures	3
ARCH 161	Presentation Drawings	3
MECH 130	Statics	3
TOTAL CREDIT HOURS		**16**

Quarter 4

ARCH 214	Electricity (First Term)	2
ARCH 215	Lighting (Second Term)	2
MECH 242	Strength of Materials	3
SSCI 10x	Social Science 101, 102, 104, or 105	5
COMM 105	Speech or COMM 110 Conference & Group Discussion	3
TOTAL CREDIT HOURS		**15**

Quarter 5

ARCH 114	Architectural Drafting – CAD III	2
ARCH 221	Design Studio I	3
ARCH 232	Building Construction Standards	3
ARCH 250	Building Enclosure Materials	3
LAND 152	Site Planning	4
TOTAL CREDIT HOURS		**15**

Quarter 6

ARCH 223	Design Studio II	3
ARCH 237	Structures – Steel, Concrete & Masonry	4
ENGL 204	Technical Writing	3
ENVR 282	Sustainable Building Strategies	3
PHYS 117	College Physics (Mechanical and Heat)	5
TOTAL CREDIT HOURS		**18**

Quarter 7

PHYS 118	College Physics	5
ARCH 270	Professional Practice and Management	3
xxx xxx	Technical Elective	3
HUM 1xx	Humanities 111, 112, 113, 151, 152 or 224	5
TOTAL CREDIT HOURS		**16**
TOTAL DEGREE CREDIT HOURS		**110**

Technical Electives must be selected from the following list of courses:

ARCH 291	Field Experience	3
ARCH 299	Special Topics in Architecture	1-5
ARCH 115	MicroStation CAD Drafting I	3
CMGT 105	Construction Contract Documents	3
LAND 101	Landscape Principles	3
LAND 206	Landscape Graphics	4
ARCH 240	3D Modeling & Rendering - AutoCAD	3
ARCH 242	3D Visualization – formñZ I	4
ARCH 283	Sustainable Architectural Design	3

3D Visualization Certificate

COURSE		**CR**
Quarter 1		
formñZ		
ARCH 242	3D Visualization – form·Z I	4
or		
Autodesk 3ds MAX		
ARCH 246	3D Visualization – 3ds MAX I	4
TOTAL CREDIT HOURS		**4**
Quarter 2		
formñZ		
ARCH 243	3D Visualization – form·Z II	4
ARCH 252	Post Production (second term)	3
or		
Autodesk 3ds MAX		
ARCH 247	3D Visualization – 3ds MAX II	4
ARCH 252	Post Production (second term)	3
TOTAL CREDIT HOURS		**7**
TOTAL CERTIFICATE CREDIT HOURS		**11**

Facility Management Certificate

COURSE		**CR**
Quarter 1		
FAC 111	Introduction to Facility Management	3
CMGT 121	Building Construction Drawings	3
TOTAL CREDIT HOURS		**6**
Quarter 2		
FAC 150	Operations & Maintenance	3
XXX xxx	Technical Elective	3
TOTAL CREDIT HOURS		**6**
Quarter 3		
FAC 240	Voice and Data Systems	3
ARCH 270	Professional Practice and Management	3
TOTAL CREDIT HOURS		**6**
TOTAL CERTIFICATE CREDIT HOURS		**18**

Technical Electives must be selected from the following list of courses:

HAC 141	Principles of Refrigeration	4
CMGT 115	Building Construction Methods	3
HRM 121	Human Resources Management	4
ARCH 232	Building Construction Standards	3
FAC 250	Computers in Facility Management	2
FAC 260	Problems in Facility Management	4

Automotive Technology

Automotive Technology Associate Degree
Automotive Service Management Major
Ford ASSET Program
Maintenance & Light Repair Certificate
Vocational Education Transfer Option with
Ohio State University College of Education
YAATC

Graduates of the Associate Degree program in Automotive Technology are qualified for entry-level positions as automotive service technicians, service writers, 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.

The Automotive Technology Program at Columbus State is Master Certified by NATEF, the educational branch of ASE. To receive this certification, the program was evaluated against industry standards of quality. To earn an Associate Degree, students complete 60 credit hours in automotive technical courses. These courses cover all aspects of mechanical and electrical automotive systems. Students are able to specialize by selecting courses focused on their specialty areas. These specialty areas include the eight basic areas of ASE, alternative fuels, plus service and parts department management. To earn the degree, students must complete 46 credit hours of related coursework (including communication skills, math, management skills, and computer literacy).

The program is designed to allow students to enter at the level most appropriate for their present knowledge and skills. Students with experience and/or prior training may enroll in technical courses to update and improve their knowledge and skills. Courses AUTO 061 and AUTO 062 are designed to prepare students with little experience for other technical courses. Students may receive credit in these courses by satisfactorily completing the courses, by passing proficiency exams, or by presenting evidence of ASE certification. Students who have completed a high school vocational program in Automotive Technology may also receive advanced placement through our articulation agreements with area schools. ASE certification may also be used to earn credit for additional technical courses.

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

- Solve automotive problems in a systematic, logical, and efficient manner.
- Diagnose and repair driveability problems on early and current car models, including those with fuel injection and computerized engine controls.
- Diagnose and repair simple and complex electrical problems.
- Diagnose and repair engine mechanical problems.
- Diagnose and repair automatic transmissions and transaxles, including total rebuilding of units.
- Diagnose and repair manual transmissions and transaxles, as well as other driveline components such as driveshafts, drive axles, and differentials.
- Precisely measure engine and other automotive parts, using the appropriate measuring instruments.
- Diagnose brake system problems and perform a complete brake service (including necessary machining).
- Diagnose and repair steering and suspension problems and properly align the suspension of all types of automobiles and light trucks, using either two- or four-wheel alignment machines.
- Diagnose and repair automotive air-conditioning systems.
- Demonstrate an understanding of basic principles needed for understanding of new technologies as they become incorporated into automobile designs.
- Make repair estimates and complete the necessary paperwork for customer service and warranty repairs.
- Apply basic business practices, including cultivation of good customer and employee relations.

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. We are pleased to work closely with our students to help those interested in finding paid cooperative work experience placements in local shops. 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 students are working in dealerships as well as taking coursework on campus, the scheduling of courses is arranged to coordinate with the students' work schedule. Please contact Bill Warner (614) 287-2675, 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.

Automotive Technology Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 101	Business Mathematics	5
AUTO 061	Basic Automotive Systems & Theories of Operation	4
AUTO 062	Auto Shop Orientation & Service	4
CIT 101	PC Applications 1	3
TOTAL CREDIT HOURS		**19**

Quarter 2

AUTO150	Brake Systems Theory & Operation	4
AUTO160	Electrical Systems Theory & Operation	3
ENGL 102	Essay & Research	3
HUM xxx	HUM 111, 112, 113, 151, or 224	5
BMGT xxx	Business Management Elective	3-5
TOTAL CREDIT HOURS		**18**

Quarter 3

AUTO170	Heating and Air Condition Systems Theory & Operation	4
AUTO120	Automatic Transmission Operation & Overhaul	4
AUTO125	Automatic Transmission Diagnosis & In-Car Repair	3
AUTO165	Electrical/Electronic Diagnosis & Repair	3
Science Elective:	NSCI101 or PHYS100	4-5
TOTAL CREDIT HOURS		**18**

Quarter 4

AUTO110	Engine Operation & Overhaul	4
AUTO115	Engine Diagnosis & In-Car Repair	3
AUTO140	Steering and Suspension Theory & Operation	4
SSCI 10x –	101, 102, 104, or 105	5
AUTO175	Heating and Air Conditioning Systems Diagnosis & Repair	3
TOTAL CREDIT HOURS		**19**

Quarter 5

AUTO130	Manual Transmissions/Drivelines Operation & Overhaul	4
AUTO135	Manual Transmissions Diagnosis & In-Car Repair	3
AUTO180	Engine Performance Theory & Operation	4
ENGL204	Technical Writing	3
AUTO155	Brake Systems Diagnosis & Repair	3
TOTAL CREDIT HOURS		**17**

Quarter 6

AUTO185	Computerized Engine Performance	4
COMM105	Speech	3
AUTO145	Steering & Suspension Diagnosis & Repair	3
Technical Elective		2
AUTO300	Shop Experience	4
TOTAL CREDIT HOURS		**16**
TOTAL DEGREE CREDIT HOURS		**107**

TECHNICAL ELECTIVES -

AUTO 210	Current Trends in Engine Repair	2
AUTO 220	Current Trends in Auto. Trans.	2
AUTO 230	Current Trends in Man. Trans.	2
AUTO 240	Current Trends in Susp. Stg.	2
AUTO 250	Current Trends in Brake Systems	2
AUTO 260	Current Trends in Electrical Syst.	2
AUTO 270	Current Trends in Heating & A/C	2
AUTO 280	Current Trends in Engine Perf.	2
AUTO181	Fundamentals of Alternative Fuels	3
AUTO 186	Advanced Alternative Fuel Sys.	2
AUTO 190	Automotive Bus. Mgmt.	3
AUTO 191	Service Advising	3
AUTO 192	Auto. Service Management	3
AUTO 245	Steering, Suspension & Brakes Diagnosis & Evaluation	3
AUTO 265	Electrical Diagnosis & Evaluation	3

Automotive Service Management Major:

The program is designed to prepare students for entry-level management positions in automotive service operations. Students will attain a sound foundation in the technical systems of the automobile as well as a broad spectrum of principles and practices needed in managing a repair operation. Students with experience and/or prior training may enroll in technical courses to update and improve their knowledge and skills.

Upon completion of the program students earn an Associate Degree of Applied Science in Automotive Technology. 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
Quarter 1		
AUTO 061	Basic Automotive Systems & Theories of Operation	4
AUTO 062	AUTO Shop Orientation & Service	3
MATH 101	Business Math	5
ENGL 101	Beginning Composition	3
CIT 101	PC Applications 1	3
TOTAL CREDIT HOURS		**18**

Quarter 2

AUTO 110	Engine Operation & Overhaul	4
AUTO 150	Brake Systems Theory & Operation	4
AUTO 160	Electrical Systems Theory & Operation	4
BMGT 101	Introduction to Business	5
TOTAL CREDIT HOURS		**17**

Quarter 3

AUTO 170	Heating & Air Condition Systems Theory & Operation	4
AUTO 120	Automatic Transmissions Operation & Overhaul	4
AUTO 180	Engine Performance Theory & Operation	4
BMGT 111	Management	5
ENGL 102	Essay & Research	3
TOTAL CREDIT HOURS		**20**

Quarter 4

AUTO 140	Steering and Suspension Theory & Operation	4
AUTO 130	Manual Transmissions/Drivelines Operation & Overhaul	4
ENGL 200	Business Communications	3
AUTO 190	Auto. Business Mgmt.	3
AUTO 191	Service Advising	3
TOTAL CREDIT HOURS		**17**

Quarter 5

HUM xxx	Humanities 111, 112, 113, 151, 152, or 224	5
COMM 105	Speech	3
AUTO 192	Auto. Service Mgmt.	3
NSCI 101	Natural Science I or	
PHYS 100	Physics	5
AUTO 193	Auto. Service Merchandising	3
TOTAL CREDIT HOURS		**19**

Quarter 6

SSCI 10x	Social Science 101, 102, 104, or 105	5
QUAL 240	Total Quality Management	3
AUTO 197	Auto. Parts Management	3
xxx xxx	Technical Elective	2
xxx xxx	Technical Elective	2
TOTAL CREDIT HOURS		**15**
TOTAL DEGREE CREDIT HOURS		**106**

TECHNICAL ELECTIVES

BMGT 216	Business Ethics	3
AUTO 195	Auto. Parts Inventory Control.	2
AUTO 196	Auto. Parts Sales	2
AUTO 101	Auto care	3

Ford ASSET

The Automotive Technology Department also offers a two-year cooperative training program sponsored by Ford Motor Company. This program, called ASSET, covers the same subject areas as the Automotive Technology two-year program but is unique in two ways: (1) all lecture and lab exercises are specific to Ford Motor Company products; and (2) ASSET includes 3 quarters of cooperative paid work experience at a sponsoring Ford, Lincoln or Mercury Dealer. For specific information on the Ford ASSET program, contact the Ford ASSET Coordinator. Graduates of this program receive an Associate's degree in Automotive Technology and have the opportunity to earn ASE certifications and advanced Ford certifications.

Ford ASSET Program

COURSE		CR
Quarter 1		
CIT 101	PC Applications 1	3
ENGL 101	Beginning Composition	3
AUTO160	Electrical Systems Theory & Operation	4
AUTO150	Brake Systems Theory & Operation	4
TOTAL CREDIT HOURS		**14**
Quarter 2		
AUTO140	Steering & Suspension Theory & Operation	4
AUTO170	Heating & A/C Systems Theory & Operation	4
ENGL102	Essay & Research	3
Social Science Elective – SSCI 101, 102, 104 or 105		5
TOTAL CREDIT HOURS		**16**
Quarter 3		
FORD100	Introduction to Ford Technology	4
FORD103	Manual Transmissions / Drivelines	4
FORD101	Basic Engines	4
FORD114	Steering and Suspension Diagnosis	2
ENGL200	Business Communication	3
TOTAL CREDIT HOURS		**17**
Quarter 4		
FORD201	Cooperative Experience	4
FORD211	Automotive Seminar	1
COMM105	Speech	3
MATH101	Business Math	5
TOTAL CREDIT HOURS		**13**
Quarter 5		
FORD 116	Auto Electronics/Engine Controls	4
FORD 165	Antilock Brake Systems	2
FORD 164	Electronic Steering & Suspension Systems	2
FORD108	Engine Performance	5
Humanities Elective – HUM111,112,113,151, 152 or 224		5
TOTAL CREDIT HOURS		**18**
Quarter 6		
FORD270	Advanced Climate Control Diagnosis	2
FORD202	Cooperative Exp	4
FORD212	Automotive Seminar	1
TOTAL CREDIT HOURS		**8**
Quarter 7		
Science Elective NSCI101 or PHYS100		5
FORD 102	Automatic Transmissions	5
FORD 111	Engine Repair	2
FORD 126	Advanced Electronic Engine Controls	4
TOTAL CREDIT HOURS		**16**
Quarter 8		
Business Elective BMGT101, BMGT231 or FMGT101		4
FORD 203	Cooperative Exp	4
FORD 213	Automotive Seminar	1
TOTAL CREDIT HOURS		**9**
TOTAL DEGREE CREDIT HOURS		**110**

Maintenance & Light Repair Certificate Program

Area employers have expressed a need for more employees to perform maintenance and light repairs. This short-term certificate program prepares students for employment as entry-level automotive maintenance technicians. The program can be completed part-time in three quarters. Successful completers of the program are employable in both dealerships and independent repair shops. Students also have the option to obtain Ford Motor Company training credentials by completing two additional courses. Graduates of the M&LR Certificate can apply all of the credits earned in this program towards future completion of the Automotive Technology or Ford ASSET Associate Degree programs.

COURSE		CR
Quarter 1		
AUTO061	Basic Automotive Systems & Theories of Operation	4
AUTO062	Auto Shop Orientation & Service	4
Quarter 2		
AUTO150	Brake Systems Theory & Operation	4
AUTO160	Electrical Systems Theory & Operation	4
Quarter 3		
AUTO140	Suspension & Steering Theory & Operation	4
AUTO170	Heating and A/C Systems Theory & Operation	4
Total Credit Hours		**24**
Optional (Ford Certifications):		
FORD 240	Steering & Brakes Diagnosis	3
FORD 260	Electrical System Diagnosis	3

Vocational Education Transfer Option with Ohio State University College of Education

The Automotive program at Columbus State has completed an articulation agreement with the Technical Education and Training Program of the Ohio State University College of Education. This agreement allows Automotive students to complete their associate degree at Columbus State, transfer their credits to Ohio State, and complete a baccalaureate degree in Technical Education Training. Students completing the Ohio State program are eligible for certification by the Ohio Department of Education to teach in related high school vocational programs throughout the State of Ohio. Interested students should contact their Columbus State department chairperson for curriculum requirements and additional details. Please note that course requirements for this transfer option may differ from the standard plan of study published in the catalog.

YAATC

The Youth and Adult Automotive Training Center (Y.A.A.T.C.) is designed to provide an opportunity for disadvantaged, at-risk persons who have a desire to gain technical knowledge in automotive repair as well as increasing their self-sufficiency. This will allow students to build a new perspective on life and their careers. Y.A.A.T.C will prepare each dedicated student to graduate with the

technical knowledge to perform automotive maintenance and light repairs and have the opportunity to begin an extremely rewarding career in the automotive industry. Another purpose of Y.A.A.T.C is to create a more diverse workforce in the automotive industry and to fill the void of qualified automotive technicians. It will provide students with basic skills training, case management services, community agency referrals, job readiness instruction, intensive automotive technical instruction, co-op experiences and permanent job placements in the automotive repair industry.

Who is eligible?

Any person who is:

- Drug Free
- 18 years old (at time of graduation from YAATC)
- Able to possess a valid driver's license within 6 months
- Unemployed or Underemployed
- Interested in the automotive industry
- Willing to dedicate 12 months to Y.A.A.T.C
- Motivated and interested in making a positive change
- High School Diploma or G.E.D. (at time of graduation from YAATC)

The Y.A.A.T.C program will take 12 months for each student to complete. The first session will be intensive testing to assess what each person needs in order to better prepare for successful completion. Upon completion of testing, students will be linked with appropriate community agencies (i.e, substance abuse counseling, GED classes and life skills training.) Next, students will begin basic skills training until they reach the required level to begin the program. Following these services, students will undergo the job readiness portion of the program where work ethic, resume preparation and interviewing skills will be covered. Once these services are completed, students will begin the technical skills training in the automotive department at Columbus State Community College. This phase will last for the remaining 9 months. Intrusive case management services and individual counseling will be offered throughout the entire program.

While taking 418 hours of technical education and instruction, students will be placed with a partnering dealership to begin a Co-op assignment. Students will be paid for their work in the dealerships and will be working 20-30 hours a week gaining valuable industry experience under the guidance of a master technician while finishing the remainder of their technical instruction at CSCC. Upon successful completion of the program, students will be offered permanent positions with the dealerships where they completed their co-op assignments.

If you have any questions regarding Y.A.A.T.C. or would like to apply for the program please contact: Robyn Price at 287-5504 (rprice03@cscc.edu) or Jim Brady at 287-5738 (jbrady@cscc.edu).

Aviation Maintenance Technology

Aviation Maintenance Technology Associate Degree
Aviation Maintenance Technician Certificate

Aviation Maintenance Technicians (AMT) are a vital component of the fast paced and exciting aviation industry. There are many opportunities for travel and interesting job locations. Aerospace industry growth creates a continual demand for newly trained AMTs. The Aviation Maintenance Technician has many career opportunities within the Aviation industry as well as non-aviation industries due to the skills of the AMT.

Students in the Aviation Maintenance Technology program may pursue technical training for the Airframe and Powerplant Certificate or the Associate Degree of Applied Science. The Airframe & Powerplant Certificate program covers the structural, electrical, hydraulic, environmental, and powerplant systems of many types of aircraft. Students who complete the certificate program may take additional course work in english, mathematics, physics, and other electives to receive an Associate Degree in Applied Science. The certificate and Associate Degree can be completed in eight quarters.

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 jet engine aircraft and helicopter. Well-equipped classrooms and laboratories provide students with 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 safely complete inspections, repairs and alterations of aircraft and complete the required maintenance entries after completion.
- 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 Associate Degree

COURSE		CR
Quarter 1		
AMT 101	Introduction to Aviation	4
AMT 110	AMT Regulations, Privileges & Documentation	4
AMT 115	Aircraft DC Electricity	5
MECH 120	Mechanical Drafting 1	3
ENGL 101	Beginning Composition	3
TOTAL CREDIT HOURS		**19**
Quarter 2		
AMT 130	Aircraft Ground Handling & Safety	2
AMT 140	Aircraft Tools, Hardware, & Materials	5
AMT 145	Aircraft AC Electricity	5
AMT 150	Basic Aircraft Inspection Systems	2
ENGL 102	Essay and Research	3
MATH 103	Beginning Algebra II	4
TOTAL CREDIT HOURS		**21**
Quarter 3		
AMT 160	Aircraft Reciprocating Engine Maintenance 1	4
AMT 162	Aircraft Reciprocating Engine Maintenance 2	5
AMT 165	Aircraft Propellers	3
AMT 175	Aircraft Electrical Systems 1	3
MATH 111	Technical Math I	4
TOTAL CREDIT HOURS		**19**
Quarter 4		
AMT 180	Aircraft Turbine Engine Maintenance 1	5
AMT 182	Aircraft Turbine Engine Maintenance 2	5
AMT 190	Aircraft Ice/Rain Protection Systems	2
AMT 195	Aircraft Electrical Systems 2	4
PHYS 181	Technical Physics (Mechanics)	4
TOTAL CREDIT HOURS		**20**
Quarter 5		
AMT 210	Aircraft Sheet Metal Structures	5
AMT 212	Aircraft Wood, Dope, & Fabric	3
AMT 215	Aircraft Environmental Controls	3
AMT 220	Aircraft Fuel Systems	3
MECH 250	Materials Science	3
ENGL 204	Technical Writing	3
TOTAL CREDIT HOURS		**20**
Quarter 6		
AMT 235	Aircraft Instrumentation	4
AMT 240	Aircraft Composite Structures	3
AMT 245	Aircraft landing Gear & Fluid Power Systems	6
AMT 250	Advanced NDI for Aircraft	3
SSCI 10x	Social Science 101, 102, 104, or 105	5
TOTAL CREDIT HOURS		**21**
Quarter 7		
AMT 255	Aircraft Navigation & Communication Systems	4
AMT 260	Aircraft Rigging & Assembly	3
AMT 262	Fundamentals of Helicopter Maintenance	3
AMT 270	Aircraft Conformity Inspections	5
Basic Related	Elective – BMGT 101, ENVR 101, or EET 132	3-5
COMM 105	Speech	3
TOTAL CREDIT HOURS		**21-23**
Quarter 8		
AMT 280	Advanced Aircraft Maintenance Practices	6
AMT 285	Aircraft Weight & Balance	3
AMT 290	Human Factors in Aviation Mainenance	4
AMT 295	Aircraft Systems Review	3
HUM xxx	Humanities 111, 112, 113, 151, 152, or 224	5
TOTAL CREDIT HOURS		**21**
TOTAL DEGREE CREDIT HOURS		**162-164**

Aviation Maintenance Technician Certificate

COURSE		CR
Quarter 1		
AMT 101	Introduction to Aviation	4
AMT 110	AMT Regulations, Privileges & Documentation	4
AMT 115	Aircraft DC Electricity	5
MECH 120	Mechanical Drafting 1	3
TOTAL CREDIT HOURS		**16**
Quarter 2		
AMT 130	Aircraft Ground Handling & Safety	2
AMT 140	Aircraft Tools, Hardware & Materials	5
AMT 145	Aircraft AC Electricity	5
AMT 150	Basic Aircraft Inspection Systems	2
TOTAL CREDIT HOURS		**14**
Quarter 3		
AMT 160	Aircraft Reciprocating Engine Maintenance 1	4
AMT 162	Aircraft Reciprocating Engine Maintenance 2	5
AMT 165	Aircraft Propellers	3
AMT 175	Aircraft Electrical Systems 1	3
TOTAL CREDIT HOURS		**15**
Quarter 4		
AMT 180	Aircraft Turbine Engine Maintenance 1	5
AMT 182	Aircraft Turbine Engine Maintenance 2	5
AMT 190	Aircraft Ice/Rain Protection Systems	2
AMT 195	Aircraft Electrical Systems 2	4
TOTAL CREDIT HOURS		**16**
Quarter 5		
AMT 210	Aircraft Sheet Metal Structures	5
AMT 212	Aircraft Wood, Dope, & Fabric	3
AMT 215	Aircraft Environmental Controls	3
AMT 220	Aircraft Fuel Systems	3
TOTAL CREDIT HOURS		**14**
Quarter 6		
AMT 235	Aircraft Instrumentation	4
AMT 240	Aircraft Composite Structures	3
AMT 245	Aircraft Landing Gear & Fluid Power Systems	6
AMT 250	Advanced NDI for Aircraft	3
TOTAL CREDIT HOURS		**16**
Quarter 7		
AMT 255	Aircraft Navigation & Communication Systems	4
AMT 260	Aircraft Rigging & Assembly	3
AMT 262	Fundamentals of Helicopter Maintenance	3
AMT 270	Aircraft Conformity Inspections	5
TOTAL CREDIT HOURS		**15**
Quarter 8		
AMT 280	Advanced Maintenance Practices	6
AMT 285	Aircraft Weight & Balance	3
AMT 290	Human Factors in Aviation Maintenance	4
AMT 295	Aircraft Systems Review	3
TOTAL CREDIT HOURS		**16**
TOTAL CERTIFICATE CREDIT HOURS		**122**

Business Management

Business Management Associate Degree
Business Management Major
Small Business Management Major
Training and Development Certificate
Managing Interpersonal Skills Certificate
Nonprofit Management Certificate
Leadership Development Certificate
Vocational Education Transfer Option with Ohio State University College of Education

In order to compete effectively in the 21st Century successful managers and entrepreneurs will need a complex set of interpersonal, communication, analytical and decision-making skills. Columbus State's Business Management program focuses on meeting these requirements for students who wish to attain a two-year 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 available. Included in the program are opportunities for the student to elect to take a hands-on internship experience with a local company or government agency, or to pursue independent research projects. The entire degree program is also available to students via distance learning.

To meet the demands of students desiring to own or operate a small business, the program includes a Small Business Management Major described below.

The Business Management Department also offers a Training and Development Certificate, intended to provide a unique opportunity to build your training and development skills, even if you are not working in human resources or training departments of your company. Professionals in all areas, such as managers who train, can benefit from skills and knowledge gained in these courses. This is a three-course certificate program available to degree as well as non-degree seeking students interested in improving training and development skills.

The Managing Interpersonal Skills certificate program is designed to provide 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 the opportunity to learn about themselves as well as others. This is a four-course certificate program available to degree as well as non-degree seeking students interested in improving their interpersonal skills.

The Business Management Department is also offering a Certificate Program in Nonprofit Management. The four-course sequence is designed to prepare 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, practical, and yields 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 nonprofit experience as well as academic preparation. Business Management Technology newest certificate program, The Leadership Development Certificate, has been designed to teach an awareness of current trends in leadership and to develop skills necessary for leaders to face today's organizational challenges. Students will learn to identify and acquire fundamental skill sets that serve to strengthen their leadership potential including: conflict resolution, communication skills, creative thinking, and managing diversity.

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

Upon completion of the Associate Degree program in Business Management, 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.

In addition to the Business Management core outcomes, a graduate pursuing the Business Management degree on-campus will be able to:

- Assess and develop their own communication, leadership, and team building styles.
- Recognize and adapt to the communication, leadership, and team building styles of others.

Small Business Management Major

In addition to the Business Management core outcomes, a graduate pursuing the Small Business Management degree 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.

Business Management Major

COURSE		CR
Quarter 1		
OADM 101	Business Grammar Review	3
MATH 101	Business Math	5
*CIT 101	PC Applications 1	3
BMGT 101	Principles of Business	5
BMGT 102	Managing Interpersonal Skills I	3
TOTAL CREDIT HOURS		**19**
Quarter 2		
BMGT 111	Management Principles	5
PSY 100	Introduction to Psychology	5
ENGL 101	Beginning Composition	3
XXX XXX	Business Elective	3
TOTAL CREDIT HOURS		**16**
Quarter 3		
ENGL 102	Essay & Research	3
BMGT 211	Organizational Behavior	4
COMM 110	Conference & Group Discussion **or**	
COMM 105	Speech	3
LEGL 264	Legal Environment of Business	4
ECON 200	Principles of Microeconomics	5
TOTAL CREDIT HOURS		**19**
Quarter 4		
ENGL 200	Business Communication	3
BMGT 220	Leadership Fundamentals	3
HRM 121	Human Resource Management	4
ACCT 106	Introduction to Accounting I	5
MKTG 111	Marketing Principles	5
TOTAL CREDIT HOURS		**20**
Quarter 5		
ACCT 107	Introduction to Accounting II	5
HRM 220	Labor Relations **or**	
BMGT 253	The Art and Science of Conflict Resolution	5
FMGT 201	Business Finance	5
HUM XXX	Humanities 111,112,113,151,152, or 224	5
TOTAL CREDIT HOURS		**20**
Quarter 6		
NSCI 101	Natural Science	5
BMGT 271	Management Decisions	2
BMGT 272	Case Studies in Business Seminar	3
BMGT 216	Business Ethics	3
XXX XXX	Technical Elective	3
TOTAL CREDIT HOURS		**16**
TOTAL DEGREE CREDIT HOURS		**110**

***Computing Skills Requirement:**
Business Management students will be expected to have mastered MS Word, PowerPoint, and Access software applications. Those students who are not proficient in any of the foregoing applications should enroll in CPT 101, PC ApplicatonsI.

Students who have proficiency in one or more of the foregoing applications should choose from the following courses to complete the three-credit Computer Skills Requirement:

CIT 101	PC Applications I	3
CIT 093	Project Management	1
OADM 113	QuickBooks	1
OADM 186	Intro To Word	1
OADM 187	Intro to Excel	1
OADM 188	Intro to PowerPoint	1
OADM 189	Intro to Access	1

Technical Electives:
In the courses listed below, BMGT prefix courses are approved for "business elective" requirements; all courses are approved for "technical elective" requirements:

BMGT 103	Interpersonal Skills II	3
BMGT 104	Stress Management	1
BMGT 105	Time Management	1
BMGT 106	Budgeting	1
BMGT 108	Organization Communication	3
BMGT 201	Creative Problem Solving	3
BMGT 202	Facilitating Organizational Processes	3
BMGT 204	Management in the Political Environment	4
**BMGT 218	Management Training for Supervisors	5
**BMGT 219	International Business	3
BMGT 229	International Management	4
BMGT 230	Organizational Development and Change	5
**BMGT 231	Small Business Development	4
**BMGT 232	Small Business Operations	4
BMGT 245	Introduction to Non-Profit Management	5
**BMGT 253	The Art and Science of Conflict Resolution	4
BMGT 258	Planning and Process Improvement Tools	3
BMGT 261	Business Mgmt Internship I	4
BMGT 262	Special Problems in Business Management I	2
BMGT 269	Managing a Diverse Workforce	3
BMGT 273	Management Service Project	3
BMGT 276	Assessment, Analysis, & Evaluation Skills	4
BMGT 277	Instructional Design & Development Skills	4
BMGT 278	Training Delivery Skills	4
BMGT 279	The Trainer Tool Kit	3
BMGT 280	Business Etiquette	3
**BMGT 281-285	Studies in Contemporary Business	1-5
HRM 124	Personnel Interviewing	4
MATH 135	Elementary Statistics (Math 103 prerequisite)	5
CIT 102	PC Applications II	3
CIT 137	Advanced Information Presentation	3
MKTG 122	Business and the Internet	3
MKTG 266	Customer Service	3
**OADM 172	Microsoft Excel	3
**OADM 188	PowerPoint	1

**Also offered in distance learning/independent studies modes.

Small Business Management Major

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 101	Business Mathematics	5
*CIT 101	PC Applications 1	3
BMGT 101	Principles of Business	5
BMGT 102	Managing Interpersonal Skills	3
TOTAL CREDIT HOURS		**19**
Quarter 2		
ENGL 102	Essay & Research	3
ECON 100	Introduction to Economics	5
BMGT 111	Management	5
MKTG 111	Marketing	5
TOTAL CREDIT HOURS		**18**
Quarter 3		
ENGL 200	Business Communications	3
PSY 100	Introduction to Psychology	5
LEGL 264	Legal Environment of Business	4
ACCT106	Introduction to Accounting I	5
TOTAL CREDIT HOURS		**17**
Quarter 4		
COMM 105	Speech	3
ACCT107	Introduction to Accounting II	5
HRM 121	Human Resources Management	4
BMGT 231	Small Business Development	4
NSCI 101	Natural Science	5
TOTAL CREDIT HOURS		**21**
Quarter 5		
HUM XXX	Humanities 111,112,113,151, 152 or 224	5
BMGT 232	Small Business Operations	4
MKTG 226	Customer Service Principles	3

FMGT 201	Business Finance	5
XXX XXX	Technical Elective	3
TOTAL CREDIT HOURS		**20**

Quarter 6

BMGT 234	Cases in Small Business	4
BMGT 238	Small Business Management Internship	4
BMGT 239	Small Business Management Internship Seminar	2
BMGT 235	Strategic Business Planning	5
TOTAL CREDIT HOURS		**15**
TOTAL DEGREE CREDIT HOURS		**110**

***Computing Skills Requirement:**
Small Business Management students will be expected to have mastered MS Word, PowerPoint, and Access software applications. Those students who are not proficient in any of the foregoing applications should enroll in CPT 101, PC ApplicatonsI.

Students who have proficiency in one or more of the foregoing applications should choose from the following courses to complete the three-credit Computer Skills Requirement:

CIT 101	PC Applications I.3	
CIT 093	Project Management	1
OADM 113	QuickBooks	1
OADM 186	Intro To Word	1
OADM 187	Intro to Excel	1
OADM 188	Intro to PowerPoint	1
OADM 189	Intro to Access	1

Note: The following courses may be used by Small Business Management majors to satisfy the Technical Elective requirements. Students currently serving as owner/manager of a small business, upon proof of ownership/management, may substitute the following electives for the BMGT 238 and 239 Internship Experience.

Electives:

BMGT 201	Creative Problem Solving	3
BMGT 211	Organizational Behavior	4
BMGT 216	Business Ethics	3
BMGT 219	International Business	3
BMGT 229	International Management	4
HRM 124	Personnel Interviewing	4
BMGT 236	Franchising	3
BMGT 237	Home-Based Business	3
BMGT 253	The Art and Science of Conflict Resolution	4
BMGT 280	Business Etiquette	3
CIT 137	Information Presentation	3
MKTG 122	Business and the Internet	3
MKTG 150	Introduction to E-Commerce	3
OADM 113	QuickBooks	1
OADM 114	QuickBooks II	1
OADM 187	Intro to Excel	1

Vocational Education Transfer Option with Ohio State University College of Education

The Business Management program at Columbus State has completed an articulation agreement with the Technical Education and Training Program of the Ohio State University College of Education. This agreement allows Business 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. Interested students should contact their Columbus State department chairperson for curriculum requirements and additional details. Please note that course requirements for this transfer option may differ from the standard plan of study published in the catalog.

Training and Development Certificate

COURSE		**CR**
Quarter 1		
BMGT 276	Assessment, Analysis &Evaluation	4
Quarter 2		
BMGT 277	Instructional Design &Development	4
Quarter 3		
BMGT 278	Training Delivery Skills	4
Quarter 4		
BMGT 279	The Trainer Tool Kit……..	3
TOTAL CERTIFICATE CREDIT HOURS		**15**

Managing Interpersonal Skills Certificate

COURSE		**CR**
Quarter 1		
BMGT 102	Managing Interpersonal Skills I	3
Quarter 2		
BMGT 103	Managing Interpersonal Skills II	3
Quarter 3		
BMGT 201	Creative Problem Solving	3
Quarter 4		
BMGT 202	Facilitating Organizational Processes	3
OR		
BMGT 253	The Art and Science of Conflict Resolution	4
TOTAL CERTIFICATE CREDIT HOURS		**12 -13**

Nonprofit Management Certificate

COURSE		**CR**
Quarter 1		
BMGT 245	Introduction to Nonprofit Management	5
Quarter 2		
BMGT 246	Operational Management of Nonprofit Organizations	5
Quarter 3		
BMGT 247	Legal and Financial Issues in Nonprofit Management	5
Quarter 4		
BMGT 248	Leadership Seminar in Non-Profit Management……	5
TOTAL CERTIFICATE CREDIT HOURS		**20**

Leadership Development

COURSE		**C R**
Quarter 1		
BMGT 220	Leadership Fundamentals	4
Quarter 2		
BMGT 201	Creative Problem Solving…	3
OR		
BMGT 253	The Art and Science of Managing Conflict	3
Quarter 3		
BMGT 202	Facilitating Organizational Process	3
Quarter 4		
BMGT 208	Organizational Communications	3
Quarter 5		
BMGT 230	Organizational Development& Change Mgmt	5
TOTAL CERTIFICATE CREDIT HOURS		**21**

Civil Engineering Technology

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

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. Graduates of the program 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.

The Civil Engineering Technology Surveying Certificate is a one- year, three-quarter 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 fulfills the State of Ohio Board of Registration for Engineers and Surveyors Education Requirements toward registration as a Professional Surveyor.

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).
- Apply appropriate proportioning, mixing, placing, curing and admixtures to ensure quality structural concrete structures.
- Perform appropriate testing of soils, aggregates, asphalt and portland cement concrete, masonry, steel and wood in accordance with American Society of Testing Methods (ASTM) procedures.
- Apply regulatory and industry standards to design stormwater management systems.
- Apply regulatory and industry standards to design sanitary wastewater collection systems.
- Perform all field operations to determine preliminary route alignment, prepare centerline, offset staking notes, and stake a proposed project for finish grade complete with cut sheet.
- Apply Ohio Department of Transportation (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.
- 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.

Civil Engineering Technology - Civil Track

COURSE		CR
Quarter 1		
ARCH 110	Construction Drafting - Manual I	2
CIVL 120	Basic Construction Materials	3
CMGT 105	Construction Contract Documents	3
CMGT 121	Building Construction Drawings	3
ENGL 101	Beginning Composition	3
MATH 148	College Algebra	5
TOTAL CREDIT HOURS		**19**
Quarter 2		
ARCH 112	Construction Drafting – CAD I	2
CIVL 121	Heavy Construction Materials	3
CIVL 123	Heavy Construction Drawings	3
CIVL 125	Heavy Construction Methods	3
ENGL 102	Essay & Research	3
MATH 150	Pre Calculus	5
TOTAL CREDIT HOURS		**19**
Quarter 3		
ARCH 113	Architectural Drafting – CAD II	2
CMGT 131	Construction Quantity Survey	3
COMM 105	Speech or COMM 110 Conference and Group Discussion	3
SURV 141	Basic Surveying	4
MULT 104	Adult and Pediatric CPR	1
PHYS 181	Technical Physics	4
TOTAL CREDIT HOURS		**17**
Quarter 4		
CIVL 221	Elementary Hydraulics	3
ENGL 204	Technical Writing	3
ENVR 252	Health and Safety Training	3
CIVL 243	Heavy Construction Estimating	3
MECH 130	Statics	3
SURV 241	Route Surveying	4
TOTAL CREDIT HOURS		**19**
Quarter 5		
ARCH 115	MicroStation CAD Drafting I	3
CIVL 223	Public Utility Systems	3
MECH 242	Strength of Materials	3
SSCI 10x	Social Science 101, 102,, 104, 105, or SOC 202	5
SURV 245	Survey Law	3
TOTAL CREDIT HOURS		**17**

Quarter 6

HUM xxx	Humanities 111, 112, 113, 151, 152 or 224	5
SURV 243	Heavy Construction Standards	4
SURV 248	Advanced Surveying Systems	4
SURV 249	Land Subdivision Systems	3
xxx xxx	Technical Elective	3
TOTAL CREDIT HOURS		**18**
TOTAL DEGREE CREDIT HOURS		**109**

Technical Electives must be selected from the following list of courses:

ARCH 237	Structures – Steel, Concrete & Masonry	4
CIVL 291	Field Experience	3
CIVL 299	Special Topics in Civil Engineering Technology	1-5
SURV 242	Computer Applications in Surveying	3
SURV 247	Townsite/Urban Development	3

Surveying Certificate

COURSE		**CR**
Quarter 1		
ARCH 110	Construction Drafting – Manual I (First Term)	2
ARCH 112	Construction Drafting -CAD I (Second Term)	2
CIVL 123	Heavy Construction Drawings	3
ENGL 101	Beginning Composition	3
MATH 148	College Algebra	5
SURV 141	Basic Surveying	4
TOTAL CREDIT HOURS		**19**

Quarter 2

ENGL 102	Essay & Research	3
MATH 135	Elementary Statistics **or** MATH 150 Pre Calculus	5
REAL 102	Real Estate Law	3
SURV 241	Route Surveying	4
SURV 245	Survey Law	3
TOTAL CREDIT HOURS		**18**

Quarter 3

ENGL 204	Technical Writing	3
SURV 243	Heavy Construction Standards	4
SURV 247	Townsite/Urban Development	3
SURV 249	Land Subdivision Systems	3
*xxxx xxx	Technical Elective	4
TOTAL CREDIT HOURS		**17**
TOTAL CERTIFICATE CREDIT HOURS		**54**

***Technical Elective Options**

LAND 152	Site Planning	4
SURV 248	Advanced Surveying Systems	4
SURV 299	Special Topics in Surveying	1-5

Civil Engineering Technology - Survey Track

COURSE		**CR**
Quarter 1		
ARCH 110	Construction Drafting - Manual I	2
SURV 100	Introduction to Geomatics	2
CIVL 120	Basic Construction Materials	3
CMGT 121	Building Construction Drawings	3
ENGL 101	Beginning Composition	3
MATH 148	College Algebra	5
TOTAL CREDIT HOURS		**18**

Quarter 2

ARCH 112	Construction Drafting – CAD I	2
CIVL 121	Heavy Construction Materials	3
CIVL 123	Heavy Construction Drawings	3
ENGL 102	Essay & Research	3
GIS 105	Photogrammetry	2
MATH 150	Pre Calculus	5
TOTAL CREDIT HOURS		**18**

Quarter 3

ARCH 113	Architectural Drafting – CAD II	2
LAND 152	Site Planning	4
EET 144	PC Hardware	3
SURV 141	Basic Surveying	4
PHYS 181	Technical Physics	4
TOTAL CREDIT HOURS		**17**

Quarter 4

GIS 251	GIS Software I	3
COMM 105	Speech or COMM 110 Conference and Group Discussion	3
ENGL 204	Technical Writing	3
SURV 242	Computer Appl in Surveying	3
SURV 241	Route Surveying	4
MULT 104	Adult and Pediatric CPR	1
TOTAL CREDIT HOURS		**17**

Quarter 5

GIS 203	Remote Sensing	3
ENVR 252	Health and Safety Training	3
GEOG 280	Introduction to Cartography	5
SSCI 10x	Social Science 101, 102,, 104,105 or SOC 202	5
SURV 245	Survey Law	3
TOTAL CREDIT HOURS		**19**

Quarter 6

HUM xxx	Humanities 111, 112, 113, 151, 152 or 224	5
SURV 243	Heavy Construction Standards	4
SURV 248	Advanced Surveying Systems	4
SURV 249	Land Subdivision Systems	3
xxx xxx	Technical Elective	3
TOTAL CREDIT HOURS		**19**
TOTAL DEGREE CREDIT HOURS		**108**

Technical Electives must be selected from the following list of courses:

ARCH 115	MicroStation CAD Drafting I	3
CIVL 291	Field Experience	3
SURV 247	Townsite/Urban Development	3
SURV 299	Special Topics in Surveying	1-5

Computer Information Technology

(Formerly Computer Programming Technology and Microcomputing Technology)

Network Administrator Track
Software Developer Track
User Support Track
Web Developer Track
Vocational Education Transfer Option with Ohio State University College of Education
Applications Developer Fast Track Certificate
Database Specialist Certificate
Information Security Certificate
Network Administrator Certificate
Object-Oriented Programming Certificate
User Support Specialist Certificate
Also see: EDP Auditing Major (Accounting)
Also see: Computer Electronics Major (Electronic Engineering Technology)

This is an exciting time to become involved in Computer Information Technology. As the industry grows, we find that the economy is requiring IT workers to be proficient in analytical ability and in creative problem solving using skillful communication. Industry expects employees to be proficient and effective by means of work groups and collaborative technologies to convey ideas and reach consensus.

The faculty in Computer Information Technology (CIT) are excited to offer learners an opportunity to begin a career, retool an experienced career, or enhance and add the *expected* value to industry marketability. The full-time and adjunct faculty in CIT bring years of professional experience from industry and higher education. They are experts in facilitating learning and relating the theory and application of the curriculum to real-world scenarios. The faculty have made a commitment to Columbus State learners to provide an education that is rich in application as well as theory to allow for lifelong learning, success, and employment.

The Computer Information Technology curriculum provides graduates with a foundation of logic, programming, operating systems, applications, systems analysis, and networking through a core set of courses. Learners may choose to specialize in a particular plan of study: Network Administrator, Software Developer, User Support, or Web Developer.. CIT offers a number of industry subject-specific certificates in database, networking, hardware/software, and applications.

Upon completion of the Associate Degree in Computer Information Technology, Network Administrator Track, the graduate will be able to:

- Participate in collaborative projects utilizing the Systems Development Life Cycle (SDLC).
- Determine project requirements of a computer network system.
- Create project documentation using PC-based applications software.
- Install a variety of server configurations using current network software and protocols.
- Apply workstation configurations using a variety of operating systems commands.
- Integrate project requirements utilizing current database technology.
- Apply operating systems commands for effective disk management.
- Complete a series of exercises to prepare for a popular vendor certification program.

Upon completion of the Associate of Applied Science Degree in Computer Information Technology, Software Developer Track, the graduate will be able to:

- Determine project requirements.
- Design an information technology solution pertaining to the student's degree.
- Develop applications using programming languages.
- Design an enterprise database.
- Identify networking concepts.
- Prepare project documentation.
- Participate in collaborative projects utilizing the Systems Development Life Cycle (SDLC).

Upon completion of the Associate Degree in Computer Information Technology, User Support Technician Track, the graduate will be able to:

- Participate in collaborative projects utilizing the Systems Development Life Cycle (SDLC).
- Determine project requirements.
- Create project documentation using PC-based applications software.
- Identify and install PC hardware components.
- Utilize fundamental elements of desktop publishing and web applications to design and create projects, forms and web pages.
- Apply operating system fundamentals for effective disk management.
- Perform network administration using a variety of network platforms.
- Structure a comprehensive solution to achieve project objectives.

Upon completion of the Associate Degree in Computer Information Technology, Web Developer, the graduate will be able to:

- Participate in collaborative projects utilizing the Systems Development Life Cycle (SDLC).
- Determine project requirements.
- Create project documentation using PC-based applications software.
- Develop applications using web programming languages.
- Create a multiple page, multiple presentation Web site.
- Integrate project requirements for an e-commerce Web site using current database and networking technology.
- Complete a series of exercises to prepare for a popular vendor certification program.
- Apply operating systems fundamentals for effective disk management.

In addition to many of the Computer Information Technology competencies, a graduate with a Certificate in the Applications Developer Fast Track will be able to:

- Demonstrate techniques of object analysis and object design.

- Design and code programs in C++, and Visual Basic.
- Design objects and classes associated with object technology.
- Debug a C++ or Visual Basic.NET program.
- Develop Web front-end applications.
- Utilize a database for a Web application.

In addition to many of the Computer Information Technology competencies, a graduate with a Certificate in Database Specialist will be able to:

- Prepare a systems design utilizing a database management system.
- Design and implement an Oracle and Access 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 Information Technology competencies, a graduate with a Certificate in Information Security will be able to:

- Describe and analyze security threats.
- Protect and 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 your organization.
- Understand the ethical issues related to network security.
- Design and implement wireless networks.
- Work with VPNs and firewalls.
- Protect your Internet and intranet 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 Information Technology competencies, a graduate with a Certificate in Network Administrator 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.
- Complete an industry standard network system examination.
- 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 Information Technology competencies, a graduate with a Certificate in Object-Oriented Programming will be able to:

- Demonstrate techniques of object analysis and object design.
- Design, code, and process ANSI Standard C++ programs.
- Design, code, and process ANSI Standard Object-Oriented COBOL programs.
- Design objects and classes associated with object technology.

In addition to many of the Computer Information Technology competencies, a graduate with a Certificate in User Support Specialist will be able to:

- Identify the terms and concepts of information systems for business applications.
- Create project documentation using PC-based applications software.
- Identify and install PC hardware components.
- Develop and maintain a Web page.
- Use DOS and Windows operating system commands to perform basic system operations.
- Participate as a part of a group on a typical business system project.
- Apply the basic principles of Local Area Networks, including various topologies, types of communications, security operations, and available diagnostics.
- Perform basic network administration tasks in MS Windows 2000.
- Explain networking protocols and network configurations, circuit analysis of high-speed modems, packet-switching techniques, pulse code and pulse-width modulation techniques.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Computer Information Technology and Certificate programs.

Network Administrator Track

- MATH 102 - Beginning Algebra I
- OADM 131 - Keyboarding I
- Placement into ENGL101 – English Composition

Software Developer Track

- MATH 104 Intermediate Algebra
- Placement into ENGL101 or 111

User Support Technician Track

- Placement into ENGL101 – English Composition
- Placement into MATH 102 - Beginning Algebra I or completion of DEV 031 - Pre-Algebra
- OADM 131 - Keyboarding I

Web Developer Track

- Placement into ENGL101 – English Composition
- MATH 102 - Beginning Algebra I
- OADM 131 - Keyboarding I

Applications Developer Fast Track Certificate

- Complete MATH 121 – Mathematics for Computer Technology and faculty advisor approval.
- NOTE: This certificate is designed for those already in the IT field looking to update their skills.

Database Specialist Certificate

- Complete MATH 102 and faculty advisor approval.

Information Security Certificate

- CIT 151 – Networking 1

Network Administrator Certificate

- Complete CIT 151 – Networking 1

Object-Oriented Programming Certificate

- CIT 165 - COBOL I
- Work experience approved by the Department Chair.

User Support Specialist Certificate

- CIT 101 – PC Applications 1
- Placement into ENGL101 – English Composition
- OADM 131- Keyboarding
- Placement into MATH 102 - Beginning Algebra I

Computer Information Technology Associate Degree
Network Administrator Track

COURSE		CR
Quarter 1		
CIT 101	PC Applications 1	3
CIT 103	Computer Concepts and Logic	3
CIT 121	PC Operating Systems	3
CIT 151	Networking 1	3
ENGL 101	Beginning Composition	3
BMGT101	Introduction to Business	5
TOTAL CREDIT HOURS		**20**
Quarter 2		
CIT 097	Business Access	1
CIT 123	Workstation Installation & Configuration	3
CIT 251	Networking 2	3
MATH104	Intermediate Algebra	5
ENGL 102	Essay & Research	3
TOTAL CREDIT HOURS		**15**
Quarter 3		
CIT 175	Systems Analysis 1	4
CIT 233	Expert Access	3
CIT 250	Network Comm. Systems	3
CIT 252	Enterprise Networking	4
ACCT106	Introduction to Accounting I	5
TOTAL CREDIT HOURS		**19**
Quarter 4		
CIT 171	Database Administration/SQL	4
CIT 253	TCP/IP	3
CIT 255	Server Admin I	4
MKTG 111	Marketing Principles	5
COMM105	Speech or	
COMM 110	Conference & Group Discussion	3
TOTAL CREDIT HOURS		**19**
Quarter 5		
CIT 163	Visual Basic 1	4
CIT 257	Network Security	3
CIT 271	Data Mining and Data Warehousing	4
HUM XXX	Humanities 111, 112, 113, 151, or 152	5
ENGL204	Technical Writing	3
TOTAL CREDIT HOURS		**19**
Quarter 6		
CIT 258	Wireless Networking	3
CIT 282	Capstone for Web Dev., Networking and User Support	5
LEGL 261	Businness Law 1	3
SSCI10X	SSCI 101, 102, 104, 105 or Soc 202	5
TOTAL CREDIT HOURS		**16**
TOTAL DEGREE CREDIT HOURS		**108**

Computer Information Technology Associate Degree
Software Developer Track

COURSE		CR
Quarter 1		
CIT 101	PC Applications 1	3
CIT 103	Computer Concepts and Logic	3
MATH 104	Intermediate Algebra	5
ACCT106	Introduction to Accounting I	5
ENGL 101	Beginning Composition	3
TOTAL CREDIT HOURS		**19**
Quarter 2		
CIT 121	PC Operating Systems	3
CIT 163	Visual Basic 1	4
CIT 175	Systems Analysis 1	4
ENGL 102	Essay & Research	3
BMGT 101	Introduction to Business	5
TOTAL CREDIT HOURS		**19**
Quarter 3		
CIT 137	Advanced Information Presentation	3
CIT 151	Networking 1	3
CIT 263	Visual Basic 2	4
CIT 275	Systems Analysis 2	4
XXX xxx	Basic Education Elective	3
TOTAL CREDIT HOURS		**17**
Quarter 4		
CIT 167	C++ Programming 1	4
CIT 169	Java Programming 1	3
CIT 173	Database Programming	3
CIT 264	Visual Basic 3	4
COMM 105	Speech **or**	
COMM 110	Conference and Group Discussion	3
TOTAL CREDIT HOURS		**17**
Quarter 5		
CIT 267	C++ Programming 2	4
CIT 269	Java Programming 2	3
CIT 273	Database Systems	3
ENGL 200	Business Communications	3
HUM XXX	HUM 111, 112, 113, 151, 152, or 224	5
TOTAL CREDIT HOURS		**18**
Quarter 6		
CIT 280	ACP Examination	1
CIT 281	Capstone for Software Developer	5
SSCI10X	SSCI 101, 102, 104, 105 & Soc 202	5
XXX xxx	Basic Education Elective	5
TOTAL CREDIT HOURS		**16**
TOTAL DEGREE CREDIT HOURS		**106**

Computer Information Technology Associate Degree
User Support Track

COURSE		CR
Quarter 1		
CIT 101	PC Applications 1	3
CIT 103	Computer Concepts and Logic	3
MATH104	Intermediate Algebra	5
XXX XXX	Basic Education Elective	3
ENGL101	Beginning Composition	3
TOTAL CREDIT HOURS		**17**

Quarter 2

CIT 102	PC Applications 2	3
CIT 121	PC Operating Systems	3
ACCT106	Introduction to Accounting I	5
ENGL102	Essay & Research	3
BMGT101	Introduction to Business	5
TOTAL CREDIT HOURS		**19**

Quarter 3

CIT 123	Workstation Operations	3
CIT 137	Advanced Information Presentation	3
CIT 175	Systems Analysis 1	4
CIT 231	Expert Excel	3
ACCT107	Introduction to Accounting II	5
TOTAL CREDIT HOURS		**18**

Quarter 4

CIT 125	PC Maintenance	3
CIT 139	Web Essentials	3
CIT 149	Groupware	3
CIT 151	Networking 1	3
CIT 233	Expert Access	3
ENGL204	Technical Writing	3
TOTAL CREDIT HOURS		**18**

Quarter 5

CIT 135	E Publishing	3
CIT 163	Visual Basic 1	4
CIT 225	PC Troubleshooting and Diagnosing	3
CIT 250	Network Communications Systems	5
HUM XXX	Humanities 111,112,113,151, 152 or 224	5
TOTAL CREDIT HOURS		**20**

Quarter 6

CIT 200	Certification Review	1
CIT 282	Capstone for Web Dev., Network and User Support	5
SSCI10X	SSCI 101, 102, 104, 105 or Soc 202	5
COMM105	Speech or	
COMM 110	Group Discussion	3
TOTAL CREDIT HOURS		**14**
TOTAL DEGREE CREDIT HOURS		**106**

Computer Information Technology Associate Degree
Web Developer Track

COURSE		**CR**
Quarter 1		
CIT 101	PC Applications 1	3
CIT 103	Computer Concepts and Logic	3
MATH 104	Intermediate Algbra	5
SSCI 10X	SSCI 101, 102, 104, or 105	5
ENGL 101	Beginning Composition	3
TOTAL CREDIT HOURS		**19**

Quarter 2

CIT 121	PC Operating Systems	3
CIT 102	PC Applications 2	3
CIT 139	Web Essentials	3
CIT 175	Systems Analysis 1	4
ENGL 102	Essay & Research	3
TOTAL CREDIT HOURS		**16**

Quarter 3

CIT 137	Advanced Information Presentation	3
CIT 141	Web Publishing	3
CIT 163	Visual Basic 1	4
CIT 233	Expert Access	3
ENGL 207	Writing for the Web	3
TOTAL CREDIT HOURS		**16**

Quarter 4

CIT 145	HTML	3
CIT 151	Networking 1	3
CIT 169	Java Programming 1	3
MKTG 111	Marketing Principles	5
XXX xxx	Basic Education Elective	3
TOTAL CREDIT HOURS		**17**

Quarter 5

CIT 147	Java Script Fundamentals	3
CIT 171	Database Administration/SQL	4
CIT 269	Java Programming 2	3
ENGL204	Technical Writing	3
ACCT106	Introduction to Accounting I	5
XXX XXX	Basic Education Elective	3
TOTAL CREDIT HOURS		**21**

Quarter 6

CIT 200	Certification Review	1
CIT 270	Advanced Web Programming	4
CIT 282	Capstone for Web Dev., Networking, and User Support	5
HUM1XX	HUM 111, 112, 113, 151, 152 or 224	5
COMM105	Speech or	
COMM110	Conference and Group Discussion	3
TOTAL CREDIT HOURS		**18**
TOTAL DEGREE CREDIT HOURS		**107**

Vocational Education Transfer Option with Ohio State University College of Education

The Computer Information Technology-Web Developer program at Columbus State has completed an articulation agreement with the Technical Education and Training Program of the Ohio State University College of Education. This agreement allows Computer Information Technology-Web Developer 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. Interested students should contact their Columbus State department chairperson for curriculum requirements and additional details. Please note that course requirements for this transfer option may differ from the standard plan of study published in the catalog.

Applications Developer Fast Track Certificate

COURSE		**CR**
Quarter 1		
CIT 175	Systems Analysis 1	4
CIT 145	HTML	3
TOTAL CREDIT HOURS		**7**

Quarter 2

CIT 167	C++ Programming 1	4
CIT 163	Visual Basic 1	4
TOTAL CREDIT HOURS		**8**

Quarter 3

CIT 173	Database Programming	3
CIT 267	C++ Programming 2	4
TOTAL CREDIT HOURS		**7**

Quarter 4

CIT 270	Advanced Web Programming	4
CIT 169	Java Programming 1	3
TOTAL CREDIT HOURS		**7**
TOTAL CERTIFICATE CREDIT HOURS		**29**

Database Specialist Certificate

COURSE		**CR**
Quarter 1		
CIT 233	Expert Access	3
CIT 175	Systems Analysis 1	4
TOTAL CREDIT HOURS		**7**
Quarter 2		
CIT 171	Database Administration/SQL	4
CIT 173	Database Programming	3
TOTAL CREDIT HOURS		**7**
Quarter 3		
CIT 273	Database Systems	3
CIT 271	Data Mining and Data Warehousing	4
TOTAL CREDIT HOURS		**7**
Quarter 4		
CIT 163	Visual Basic 1	4
CIT 200	Certification Review	1
TOTAL CREDIT HOURS		**5**
TOTAL CERTIFICATE CREDIT HOURS		**26**

Information Security Certificate

COURSE		**CR**
Quarter 1		
CIT 257	Network Security	3
CIT 258	Wireless Networking	3
TOTAL CREDIT HOURS		**6**
Quarter 2		
CIT 259	Advanced Network Security	3
CIT 260	Web Security	3
TOTAL CREDIT HOURS		**6**
Quarter 3		
CIT 276	Information Security Audit	3
TOTAL CREDIT HOURS		**3**
Quarter 4		
CIT 277	Computer Forensics	3
TOTAL CREDIT HOURS		**3**
Quarter 5		
CIT 278	Business Continuity & Disaster Recovery	3
TOTAL CREDIT HOURS		**3**
Quarter 6		
CIT 200	Certification Review	1
TOTAL CREDIT HOURS		**1**
TOTAL CERTIFICATE CREDIT HOURS		**22**

Network Administrator Certificate

COURSE		**CR**
Quarter 1		
CIT 250	Network Communication Systems	3
TOTAL CREDIT HOURS		**3**
Quarter 2		
CIT 251	Networking 2	3
CIT 253	TCP/IP	3
TOTAL CREDIT HOURS		**6**
Quarter 3		
CIT 252	Enterprise Networking	4
TOTAL CREDIT HOURS		**4**
Quarter 4		
CIT 255	Server Administraton 1	4
TOTAL CREDIT HOURS		**4**
Quarter 5		
CIT 257	Network Security	3
CIT 258	Wireless Networking	3
CIT 200	Certification Test Review	1
TOTAL CREDIT HOURS		**7**
TOTAL CERTIFICATE CREDIT HOURS		**24**

Object-Oriented Programming Certificate

COURSE		**CR**
Quarter 1		
CIT 167	C++ Programming 1	4
CIT 163	Visual Basic 1	4
TOTAL CREDIT HOURS		**8**
Quarter 2		
CIT 267	C++ Programming 2	4
CIT 268	Introduction to Object-Oriented COBOL	4
TOTAL CREDIT HOURS		**8**
Quarter 3		
CIT 169	Java Programming 1	3
CIT 263	Visual Basic 2	4
TOTAL CREDIT HOURS		**7**
TOTAL CERTIFICATE CREDIT HOURS		**23**

User Support Specialist Certificate

COURSE		**CR**
Quarter 1		
CIT 102	PC Applications 2	3
CIT 103	Computer Concepts & Logic	3
CIT 121	PC Operating Systems	3
CIT 139	Web Essentials	3
TOTAL CREDIT HOURS		**12**
Quarter 2		
CIT 151	Networking 1	3
CIT 123	Workstation Installation and Configuration	3
CIT 125	PC Maintenance	3
TOTAL CREDIT HOURS		**9**
Quarter 3		
CIT 225	PC Troubleshooting and Diagnosing	3
CIT 250	Network Communications Systems	3
ENGL204	Technical Writing	3
TOTAL CREDIT HOURS		**9**
TOTAL CERTIFICATE CREDIT HOURS		**30**

Construction Management

Field Supervision Certificate
Estimating/Bidding Certificate
Residential Construction Management Certificate
Vocational Education Transfer Option with Ohio State University College of Education

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 these 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 quarter 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 as necessary construction projects.
- 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
Quarter 1		
ENGL 101	Beginning Composition	3
CMGT 101	Managing a Construction Company	3
CMGT 105	Construction Contract Documents	3
CMGT 115	Building Construction Methods	3
CMGT 121	Building Construction Drawings	3
CIVL 125	Heavy Construction Methods	3
TOTAL CREDIT HOURS		**18**
Quarter 2		
ARCH 110	Construction Drafting – Manual I (First Term)	2
ARCH 112	Construction Drafting – CAD I (Second Term)	2
CIT 101	PC Applications 1	3
CMGT 106	Supervision of Field Operations	3
CIVL 123	Heavy Construction Drawings	3
CMGT 131	Construction Quantity Survey	3
ENGL 102	Essay & Research	3
TOTAL CREDIT HOURS		**19**
Quarter 3		
CIVL 120	Basic Construction Materials	3
CMGT 135	Safety and Loss Prevention	3
CMGT 141	Building Estimating	3
MATH 148	College Algebra	5
ENVR 101	Introduction to Environmental Science, Safety and Health	3
ENVR 160	OSHA 10-Hr Construction Safety & Health	1
TOTAL CREDIT HOURS		**18**
Quarter 4		
CMGT 241	Planning and Scheduling	3
CIVL243	Heavy Construction Estimating	3
MATH 135	Elementary Statistics	5
SURV 141	Basic Surveying	4
TOTAL CREDIT HOURS		**15**
Quarter 5		
COMM 105	Speech	3
CMGT 251	Construction Cost Controls	3
CMGT 252	Construction Law	3
HUM 1xx	Humanities 111, 112, 113, 151, 152 or 224	5
ECON 200	Principles of Microeconomics	5
TOTAL CREDIT HOURS		**19**
Quarter 6		
CMGT 261	Project Management	3
CMGT 2xx	CMGT 231 or 281	3
ENGL 200	Business Communications	3
SSCI 10x	Social Science 101, 102, 104, or 105	5
xxx xxx	Tech Elective	3
TOTAL CREDIT HOURS		**17**
TOTAL DEGREE CREDIT HOURS		**106**

Technical Electives must be selected from the following list of courses:

CIVL 121	Heavy Construction Materials	3
CMGT 231	Computer Estimating	3
CMGT 253	Residential Construction	3
CMGT 291	Field Experience	4
SURV 241	Route Surveying	4
SURV 245	Survey Law	3
CMGT 281	Computer Estimating Residential	3
CMGT 282	Sustainable Building Documents, Drawings & Materials	2
CMGT 283	Sustainable Building Methods, Estimating & Marketing	2
ACCT 106	Intro to Accounting	5
BMGT 102	Managing Interpersonal Skills	3
CMGT 299	Special Topics	1 – 5
MULT 104	Adult and Pediatric CPR	1

Field Supervision Certificate

Quarter 1		
CMGT 105	Construction Contract Documents	3
CMGT 115	Building Construction Methods	3
CMGT 121	Building Construction Drawings	3
MATH 148	College Algebra	5
CIT 101	PC Applications 1	3
TOTAL CREDIT HOURS		**17**

Quarter 2

CMGT 106	Supervision of Field Operations	3
CIVL 123	Heavy Construction Drawings	3
CIVL 125	Heavy Construction Methods	3
CMGT 131	Construction Quantity Survey	3
ENGL 111	English Composition	5
TOTAL CREDIT HOURS		**17**

Quarter 3

CMGT 135	Safety and Loss Prevention	3
CMGT 241	Planning and Scheduling	3
CMGT 252	Construction Law	3
ENGL 200	Business Communications	3
SURV 141	Basic Surveying	4
TOTAL CREDIT HOURS		**16**
TOTAL CERTIFICATE CREDIT HOURS		**50**

Estimating/Bidding Certificate

Quarter 1

CMGT 105	Construction Contract Documents	3
CMGT 115	Building Construction Methods	3
CMGT 121	Building Construction Drawings	3
MATH 148	College Algebra	5
CIT 101	PC Application 1	3
TOTAL CREDIT HOURS		**17**

Quarter 2

CIVL 123	Heavy Construction Drawings	3
CIVL 125	Heavy Construction Methods	3
CMGT 131	Construction Quantity Survey	3
CMGT 253	Residential Construction	3
ENGL 111	English Composition	5
TOTAL CREDIT HOURS		**17**

Quarter 3

CMGT 141	Building Estimating	3
CMGT 231	Computer Estimating Building	3
CMGT 281	Computer Estimating Residential	3
CMGT 241	Planning and Scheduling	3
CIVL 243	Heavy Construction Estimating	3
ENGL 200	Business Communications	3
TOTAL CREDIT HOURS		**15**
TOTAL CERTIFICATE CREDIT HOURS		**49**

Residential Construction Management Certificate

Quarter 1

CMGT 105	Construction Contract Documents	3
CMGT 121	Building Construction Drawings	3
CMGT 253	Residential Construction	3
MATH 148	College Algebra	5
CIT 101	PC Application 1	3
TOTAL CREDIT HOURS		**17**

Quarter 2

CMGT 106	Supervision of Field Operations	3
CMGT 131	Construction Quantity Survey	3
CMGT 281	Computer Estimating Residential	3
ENGL 111	English Composition	5
TOTAL CREDIT HOURS		**14**

Quarter 3

CMGT 135	Safety and Loss Prevention	3
CMGT 241	Planning and Scheduling	3
CMGT 252	Construction Law	3
ENGL 200	Business Communications	3
SURV 141	Basic Surveying	4
TOTAL CREDIT HOURS		**16**
TOTAL CERTIFICATE CREDIT HOURS		**47**

Vocational Education Transfer Option with Ohio State University College of Education

The Construction Management program at Columbus State has completed an articulation agreement with 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. Interested students should contact their Columbus State department chairperson for curriculum requirements and additional details. Please note that course requirements for this transfer option may differ from the standard plan of study published in the catalog.

Dental Hygiene

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 the 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.

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, dental hygiene diagnosis, 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 require-

ments, 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.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Dental Hygiene program. The application deadline is March 30, yearly. The last mandatory information session is held before February 15 of each year. Students are advised to arrange their schedules so that they attend an information session by February 15. Applications to the Dental Hygiene program are provided at the information session.

Admissions Requirements

Students may obtain an information packet by calling the Allied Health Office at (614) 287-5215 or by sending an email with your name and complete mailing address to: afrank01@cscc.edu.

- 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 based upon the completion of courses at the college most recently attended or Columbus State Community College.
- Students must complete all General Education (G) and Basic-related (B) courses with a grade of "C" or better.
- Placement into MATH 148 or completion of MATH 104
- Placement into ENGL 101 or completion of ENGL 100 or ESL 100
- Placement into "No Reading Required" or completion of DEV 044
- BIO 161 Human Anatomywith grade "C" or better
- BIO 169 Human Physiology with grade "C" or better
- Mandatory observation (20 hours) of a dental hygienist working in a dental office, clinic, or other dental hygiene setting. Further specific information is given during the information sessions.
- Students applying to the Dental Hygiene Program must submit their official high school and official college transcripts to Columbus State Community College, Records and Registration Office, by January 20 of the year of application so that transcripts may be evaluated and posted.
- International students or students who have international transcripts must submit their official transcripts to an official transcript evaluation agency by November 30. Further information is given during the information session. Records and Registration may have further requirements for international students, thus international students should contact them before November 30.
- Completion of the Nurse Entrance Test (NET) is required for admission to dental hygiene. Further specific information is given during the information session.
- ALL admission criteria MUST be met by March 30 of the application year.

Visit or contact the Allied Health Office, UN 407, (614) 287-5215 to obtain a dental hygiene information packet.

Statement Regarding Infectious Diseases:

Students in any of the Allied Health 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.

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 Dental Hygiene program must be aware of this slight, but real, potential. Students are required to maintain personal health insurance.

Dental Hygiene Program

COURSE		CR
Quarter 1		
PSY 235	Psychology of Adjustment	3
BIO 170	Human Pathophysiology.	5
DHY 101	Preventive Concepts I	1
DHY 110	Introduction to Dental Hygiene	4
DHY 140	Head & Neck Anatomy & Tooth Morphology	3
DHY 145	Head & Neck Anatomy & Tooth Morphology Lab	1
DHY 250	Oral Histology	1
TOTAL CREDIT HOURS		**18**
Quarter 2		
BIO 115	Microbiology	5
DHY 102	Preventive Concepts I I	1
DHY 120	Pre-Clinic	4
DHY 130	Dental Radiography	3
DHY 135	Dental Radiography Lab	1
DHY 260	Periodontology	3
TOTAL CREDIT HOURS		**17**
Quarter 3		
ENGL 101	Beginning Composition	3
CHEM 113	Chemistry/Biochemistry	5
DHY 103	Techniques I	1.5
DHY 121	Clinic I	4
DHY 214	Treatment Planning	0.5
DHY 282	Biostatistics and Research for Dental Hygiene	1.5
DHY 283	Community Dental Health I	1
TOTAL CREDIT HOURS		**16.5**
Quarter 4		
ENGL 102	Essay and Research	3
HOSP 153	Nutrition	5
DHY204	Techniques II	1.5
DHY 220	Clinic II	4
DHY 240	Dental Materials	2
DHY 245	Dental Materials Lab	1
DHY 251	Oral Pathology	3
TOTAL CREDIT HOURS		**19.5**
Quarter 5		
HUM 1xx	Humanities 111,112,113, 151,152, or 224	5
DHY 205	Techniques III	2
DHY 221	Clinic III	4
DHY 270	Pharmacology	2
TOTAL CREDIT HOURS		**13**

Quarter 6		
COMM 105	Speech	3
ENGL 200	Business Communications	3
DHY 206	Techniques IV	1.5
DHY 222	Clinic IV	4
DHY 275	Dental Hygiene In Review	0.5
DHY 284	Community Dental Health II	2
TOTAL CREDIT HOURS		**14**
Quarter 7		
SSCI 10x	Social Science 101, 102, 104 , 105 or SOC 202	5
DHY 207	Techniques V	1.5
DHY 215	Case Studies	0.5
DHY 223	Clinic V	4
DHY 285	Community Dental Health III	1
TOTAL CREDIT HOURS		**12**
TOTAL DEGREE CREDIT HOURS		**110**

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 four quarter (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 programs emphasizes safety and infection control. The Dental Laboratory Technology/Small Business Management seven quarter 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.

New students enter the program in the autumn quarter, but applications to the program may be submitted at anytime.

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.

In addition to the certificate program competencies, the graduate of the Dental Laboratory/Small Business Management ATS 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

Listed below are additional requirements for admission to the Dental Laboratory Technology certificate and ATS programs:

- High school graduate or G.E.D. equivalency
- Contact the Dental Laboratory to schedule an interview by calling (614) 287-2547, or email cbrownfi@cscc.edu. For an information packet, please call Cheryl Trogus at (614) 287-2521 or email at ctrogus@cscc.edu

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

COURSE		CR
Quarter 1		
DENT 101	Materials I	3
DENT 111	Anatomy	3
DENT 121	Complete Dentures I	3
DENT 132	Occlusion	3
TOTAL CREDIT HOURS		**12**
Quarter 2		
ENGL 101	Beginning Composition	3
DENT 142	Removable Partial Dentures I	3
DENT 153	Fixed Partial Dentures I	3
DENT 275	Ceramics I	4
TOTAL CREDIT HOURS		**13**
Quarter 3		
ENGL 102	Essay and Research	3
DENT 285	Orthodontics	2
DENT 296	Applied Lab I	3
DENT 123	Complete Dentures III or	3
DENT 244	Removable Partial Dentures III or	3

DENT 256	Fixed Partial Dentures IV or	3
DENT 276	Ceramics II	3
TOTAL CREDIT HOURS		**11**

Quarter 4

DENT 297	Applied Lab II	7
ENGL 200	Business Communication	3
SSCI 10x	Social Science 101, 102, 104, 105 or SOC 202	5
TOTAL CREDIT HOURS		**15**

Quarter 5

COMM 105	Speech	3
HUM xxx	Humanities, 111, 112, 113, 151, 152, or 224	5
MATH 101	Business Math	5
CIT 101	PC Applications II	3
TOTAL CREDIT HOURS		**16**

Quarter 6

BMGT 101	Principles of Business	5
BMGT 231	Small Business Development	4
ACCT 106	Introduction to Accounting	5
CIT 102	PC Application II	3
TOTAL CREDIT HOURS		**17**

Quarter 7

BMGT 232	Small Business Operations	4
BMGT 102	Managing Interpersonal Skills I	3
MKTG 111	Marketing Principles	5
TOTAL CREDIT HOURS		**12**
TOTAL CERTIFICATE CREDIT HOURS		**97**

Dental Laboratory Technology Certificate

COURSE		**CR**
Quarter 1		
DENT 101	Materials I	3
DENT 111	Anatomy	3
DENT 121	Complete Dentures I	3
DENT 132	Occlusion	3
TOTAL CREDIT HOURS		**12**

Quarter 2

ENGL 101	Beginning Composition	3
DENT 142	Removable Partial Dentures I	3
DENT 153	Fixed Partial Dentures I	3
DENT 275	Ceramics I	4
TOTAL CREDIT HOURS		**13**

Quarter 3

ENGL 102	Essay and Research	3
DENT 285	Orthodontics	2
DENT 296	Applied Lab I	3
DENT 123	Complete Dentures III or	3
DENT 244	Removable Partial Dentures III or	3
DENT 256	Fixed Partial Dentures IV or	3
DENT 276	Ceramics II	3
TOTAL CREDIT HOURS		**11**

Quarter 4

DENT 297	Applied Lab II	7
TOTAL CREDIT HOURS		**7**
TOTAL CERTIFICATE CREDIT HOURS		**43**

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

Early Childhood Development

Early Childhood Development Associate Degree
Child Care Administration Certificate
Infant/Toddler or School Age Child Care or Preschool Education Certificate
Child Development Associate (CDA) credential preparation

Family needs and increased focus on appropriate early education for all young children continues to drive the demand for qualified professionals in early childhood education. Early childhood educators are responsible for planning daily routines and curriculum, utilizing community resources to enrich programs and support the needs of children and their families. The ECD 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 (ECD) 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 child care programs. The Early Childhood course of study exceeds the requirements for staff as outlined in the revised Ohio Child Day Care Licensing Rules.

Upon completion of the Associate Degree in Early Childhood Development, the graduate will be able to:

- Demonstrate knowledge of theories of human growth, development, and learning related to children, birth to age 8.
- Plan appropriate learning experiences for individuals as well as groups of young children, in inclusive settings.
- Demonstrate a competent, respectful, nurturing teaching style, to meet children's needs.
- Develop appropriate educational practices for young children that foster the growth of skills in problem solving, decision-making, critical thinking, communication and emerging literacy.
- Use appropriate teaching strategies to address individual differences in developmental levels, culture and learning styles.
- Recognize and respect unique characteristics of families and demonstrate appropriate strategies to support and address family needs.
- Demonstrate a variety of strategies to evaluate children's growth and development in cooperation with parents and related professionals.
- Design a physically safe environment to facilitate children's independence and competence through constructive experiences.

- Demonstrate knowledge of content areas and familiarity with Ohio Department of Education pre-kindergarten standards and K-3 benchmarks.
- 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.

- High school graduate or G.E.D. equivalency
- Placement into Beginning Composition - ENGL 101
- Completion of the following five courses with a grade of "C" or above:
  - ECD 105 - Self Concept
  - ECD 106 Observing and Recording
  - ECD 107 - Curriculum Planning
  - ECD 108- Creative Curriculum
  - PSY 261 - Introduction to Child Development

Early Childhood Development Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
PSY 100	Introduction to Psychology	5
ECD 105	Self Concept	3
ECD 106	Observing and Recording	1
ECD 107	Curriculum Planning	3
TOTAL CREDIT HOURS		**15**
Quarter 2		
ENGL 102	Essay & Research	3
PSY 261	Child Development	5
ECD 108	Creative Curriculum	3
ECD 201	Health and Safety	3
	OR	
ECD 200	First Aid &	1
ECD 202	Communicable Disease &	1
ECD 204	Child Abuse & Neglect	1
TOTAL CREDIT HOURS		**14**
Quarter 3		
SOC 101	Introduction to Sociology	5
MATH 101	Business Mathematics	5
ECD 112	Physical Development Curriculum	3
ECD 172	ECD Field Experience I	1
ECD 162	ECD Field Seminar I	1
ECD 109	Language Experiences in Early Childhood Programs	3
TOTAL CREDIT HOURS		**18**
For students who plan to transfer, higher math is required.		
Quarter 4		
COMM 105	Speech	3
ECD 114	Cognitive Curriculum	3
ECD 162	Seminar II	1
ECD 172	Field Experience II	1
ECD 120	Interpersonal Communications in Human Services	4
SSCI101	Cultural Diversity	5
TOTAL CREDIT HOURS		**17**
Quarter 5		
ENGL 200	Business Communications	3
ECD 206	Social Development Curriculum	3
ECD 212	Family Ecology	3
ECD 110	Infant/Toddler Curriculum*	3
ECD 163	ECD Seminar III*	1
ECD 173	ECD Field Experience III*	1
*** to be taken concurrently**		
TOTAL CREDIT HOURS		**14**
Quarter 6		
HUM 1xx	Humanities 111, 112, 113, 151, 152 or 224	5
ECD 205	Parent Involvement in Early Childhood Programs	3
ECD xxx	Technical Elective	3
ECD 208	Young Children with Special Needs	3
ECD 264	ECD Seminar IV	1
ECD 274	ECD Field Experience IV	1
TOTAL CREDIT HOURS		**16**
Quarter 7		
NSCI 101	Natural Science	5
ECD 207	Guidance/Discipline in Early Childhood	3
ECD 265	ECD Seminar V and	1
ECD 275	ECD Field Experience V	1
	OR	
ECD 267	Student Teaching Seminar and	2
ECD 277	Student Teaching Practicum	3
TOTAL CREDIT HOURS		**10**
TOTAL DEGREE CREDIT HOURS		**104-107**
Student Teaching is required for transfer to Otterbein or Capital University		
***Technical Electives**		
ECD 209	Early Childhood Staff	3
ECD 211	Child Care Administration	4
ECD 101	Intro to Child Development Associate	1
ECD 115	School Age Child Care	3
ECD 151	ECD Media Resource I	1
ECD 152	ECD Media Resource II	1
ECD 190	Activity Plan Seminar	1
ECD 221-230	Contemporary Issues in Early Childhood	1-3
ECD 231	Phonics and the Structure of Language	5
	(ECD 231 is for ECD Majors who plan to attend Otterbein)	
ECD 270	Administration Practicum	1
	(must be concurrent with ECD 211)	

Child Care Administration Certificate

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
ECD 105	Self Concept	3
ECD 106	Observing and Recording	1
ECD 107	Curriculum Planning	3
ECD 201	Health and Safety	3
TOTAL CREDIT HOURS		**13**
Quarter 2		
PSY 261	Child Development	5
ECD 190	Activity Plan Seminar	1
ECD 108	Creative Curriculum	3
ECD 120	Interpersonal Communications in Human Services	4
TOTAL CREDIT HOURS		**13**
Quarter 3		
MATH 101	Business Mathematics	5
ECD 109	Language Exp. Early Childhood Programs	3
ECD 162	ECD Field Seminar I or II	1
ECD 172	ECD Field Experience I or II	1
ECD 205	Parent Involvement in Early Childhood Programs	3
ECD 208	Young Children with Special Needs	3
TOTAL CREDIT HOURS		**16**

Quarter 4		
ENGL 200	Business Communications	3
ECD 110	Infant/Toddler Curriculum	3
ECD 206	Social Development Curriculum **OR**	3
ECD 207	Guidance/Discipline in Early Childhood	3
ECD 211	Child Care Administration	4
ECD 270	Administration Practicum	1
TOTAL CREDIT HOURS		**17**
TOTAL CERTIFICATE CREDIT HOURS		**59**

Infant/Toddler or School Age Child Care or Preschool Education Certificate

COURSE		**CR**
Quarter 1		
ECD 105	Self Concept	3
ECD 106	Observing and Recording	1
ECD 107	Curriculum Planning	3
ECD 108	Creative Curriculum	3
PSY 261	Child Development	5

Depending on your own interests and goals, add one of the following courses:

Infant and Toddlers Care Givers

ECD 110	Infant/Toddler Curriculum	3

Preschool Education

ECD 109 Language Exp. Early Childhood Programs **or**		3
ECD 114 Cognitive Curriculum		3

School Age Child Care Personnel

ECD 115	School Age Child Care	3
TOTAL CREDIT HOURS		**18**
TOTAL CERTIFICATE CREDIT HOURS		**18**

Child Development Associate CDA/credentialing preparation

COURSE		**CR**
Quarter 1		
ECD 102	Introduction to CDA	1
ECD 105	Self Concept	3
ECD 106	Observing and Recording	1
ECD 107	Curriculum Planning	3
ECD 108	Creative Curriculum	3
ECD 104	CDA Competencies	1
TOTAL CREDIT HOURS		**12**
TOTAL CERTIFICATE CREDIT HOURS		**12**

With completion of 18 credit hours in ECD, minimum qualifications to be a child care 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.

Electro-Mechanical Engineering Technology

With the rapid growth occurring in automation, robotics, computer integration, product development, and all new processes for manufacturing, research, material movement, and equipment maintenance support, there is an increased demand for individuals who can apply and perform problem-solving duties associated with the integration of electrical and mechanical devices.

The objective of the Electro-Mechanical Engineering Technology program is to educate and prepare students for career opportunities in manufacturing environments where automated and semi-automated machines and processes are used.

Electro-Mechanical Engineering Technicians perform both preventive and corrective maintenance on electro-mechanical systems as well as aiding in the design of such systems.

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 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.
- Have a basic understanding of how servo-mechanisms work and the parameters that govern their operation.
- 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 controllers to operate simple processes.
- Perform preventive and corrective maintenance on electro-mechanical automated systems.

The 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 section(s) of the Catalog.

Electro-Mechanical Engineering Technology Associate Degree

COURSE		**CR**
Quarter 1		
MATH 111	Technical Mathematics I	4
EET 111	Electronic Circuits I	4
EET 112	Electronic Circuits I Lab	2
MECH 110	Introduction to Manufacturing	3
MECH 112	Computer Applications in Manufacturing	3
TOTAL CREDIT HOURS		**16**

Quarter 2

ENGL 101	Beginning Composition	3
MATH 112	Technical Math II	4
PHYS 181	Technical Physics (Mechanical)	4
EET 120	Electronic Circuits II	4
EET 121	Electronic Circuits II Lab	2
TOTAL CREDIT HOURS		**17**

Quarter 3

ENGL 102	Essay and Research	3
EET 130	Electronic Devices I	4
EET 132	Digital Electronics I	3
EET 131	Electronic Devices I Lab	2
MECH 120	Mechanical Drafting I	3
MECH 131	Hydraulics	3
TOTAL CREDIT HOURS		**18**

Quarter 4

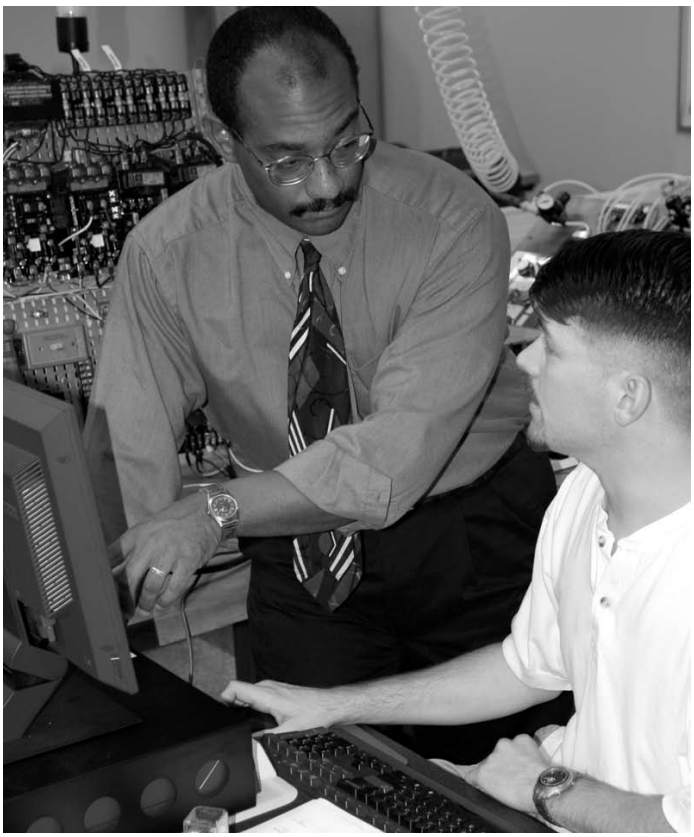
COMM 105	Speech	3
PHYS 183	Technical Physics (Prop. Mat.)	4
EET 243	Digital Electronics II	4
EET 244	Digital Electronics II Lab	2
MECH 243	Robotics	3
EMEC 250	Motors & Controls	3
TOTAL CREDIT HOURS		**19**

Quarter 5

ENGL 204	Technical Writing	3
HUM 1XX	Humanities 111,112,113,151, 152 or 224	5
EMEC 251	Electro-Mech. Controls I	4
MATH 135	Elementary Statistics	5
QUAL 240	Total Quality Management	3
TOTAL CREDIT HOURS		**20**

Quarter 6

SSCI 10X	Social Sciences 101, 102, 104, or 105	5
MECH 240	Machine Tools	4
EMEC 260	Electro-Mech. Controls II	4
MECH 260	Basic Mechanisms	4
TOTAL CREDIT HOURS		**17**
TOTAL DEGREE CREDIT HOURS		**107**



Electronic Engineering Technology

Electronic Engineering Technology Associate Degree Computer Electronics Major

The Electronic Engineering Technology opens numerous doors of opportunity for its graduates. Employment in fields as diverse as avionics, banking, biomedicine, distribution, telecommunications, manufacturing, servicing, radio/TV and audio production await today's graduate. Growth in both the number of positions and variety of opportunities is expected to expand well into the 21st century.

Course work covers the basics of electronics with technical electives available for specialization in computer repair, digital and fiber optic communication, computer aided drafting and control.

Columbus State's Electronic Engineering Technology program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC of ABET). For further information regarding accreditation, contact: Accreditation Director for Engineering Technology, Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202.

Graduates who wish to continue their education may transfer their associate degree credits to a number of four-year institutions that offer baccalaureate degrees in engineering technology.

Graduates of the EET program support the design, building, testing, operation, and maintenance of analog and digital electrical/electronic systems and microprocessors and will be able to:

- Conduct and analyze experiments; interpret and apply experimental results.
- Analyze, interpret, prepare and present electrical/electronic information including reports, engineering specifications, schematics, drawings/diagrams, charts and graphs.
- Apply the principles of physics, chemistry, algebra, and trigonometry to analyze and solve technical problems related to electrical/electronic engineering technology.
- Apply creativity in support of the design of electrical/electronic circuits, equipment, components and systems.
- Select and use a variety of troubleshooting techniques and test equipment to assess electrical/electronic circuits, equipment and systems.
- Build, troubleshoot, and test electrical/electronic circuits, equipment and systems to meet job requirements, functional specifications, and relevant standards.
- Maintain and repair electrical/electronic equipment and systems, adhering to established procedures, to ensure that they function properly.
- Use computers, software and computer programming to support the electrical/electronic engineering environment.
- Adhere to appropriate safety procedures and standard electrical/electronic engineering pactices.

- Perform tasks in accordance with relevant policies, procedures, standards, regulations, and ethical principles.
- Recognize and adapt to emerging applications in engineering technology.

The Electronic Engineering Technology also shares related coursework with the Electro-Mechanical Engineering and Quality Assurance Technologies. For additional information refer to those sections of the Catalog.

Computer Electronics Major

Students interested in combining electronics with computer programming should consider the Computer Electronics Major. This program enables the student to enroll in courses on how to use computers as well as the electronics of the computer. Please contact the chairperson of either the Electronic Engineering Technology or Computer Information Technology for more information.

In addition to the general Electronic Engineering Technology competencies, a graduate majoring in Computer Electronics will be able to:

- Write, debug, test, maintain and document programs in Assembly, and C++ language programs.
- Write Job Control Language (JCL) necessary to execute typical business applications on an IBM mainframe computer using DOS/VSE.
- Use a terminal in an on-line environment (ADR/VOLLIE).
- Use word processing, spreadsheet, and graphic software available for the IBM PC and local area networks.
- Use flowcharting.

Specific Program Admission Information

Listed below are additional requirements for admission to the Computer Electronics Major.

Complete CIT 101 - PC Applications I or equivalent approved by the Chairperson of Computer Information Technology

Electronic Engineering Technology Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 111	Tech Math I	4
EET 110	Electronic Drafting	2
EET 111	Electronic Circuits I	4
EET 112	Electronic Circuits I Lab	2
COMM 105	Speech	3
TOTAL CREDIT HOURS		**18**
Quarter 2		
ENGL 102	Essay & Research	3
MATH 111	Tech Math 2	4
PHYS 181	Physics I (Mechanics)	4
EET 120	Electronic Circuits II	4
EET 121	Electronic Circuits II Lab	2
TOTAL CREDIT HOURS		**17**
Quarter 3		
ENGL 204	Technical Writing	3
MATH 148	College Algebra	5
EET 130	Electronic Devices I	4
EET 131	Electronic Devices I Lab	2
EET 132	Digital Electronics I	3
EET 144	PC Hardware	3
TOTAL CREDIT HOURS		**20**
Quarter 4		
EET 146	Computer Network Communications	3
EET 241	Electronic Devices II	4
EET 242	Electronic Devices II Lab	2
EET 243	Digital Electronics II	4
EET 244	Digital Electronics II Lab	2
TOTAL CREDIT HOURS		**15**
Quarter 5		
PHYS 185	Technical Physics (Heat, Light, Sound)	4
EET 252	Microprocessors	4
EET 253	Microprocessors Lab	2
EET 254	Electronic Fabrication	2
EET 255	Instrumentation and Controls	3
TOTAL CREDIT HOURS		**15**
Quarter 6		
HUM xxx	Humanities 111,112,113,151, 152 or 224	5
EET 260	Capstone Experience	4
SSCI 10x	Social Science 101, 102, 104, or 105	5
TOTAL CREDIT HOURS		**14**
TOTAL DEGREE CREDIT HOURS		**99**

Computer Electronics Major

COURSE		CR
Quarter 1		
MATH 111	Technical Math I	4
ENGL 101	Beginning Composition	3
EET 111	Electronic Circuits I	4
EET 112	Electronic Circuits I Lab	2
EET 144	PC Hardware	3
CIT101	PC Applications 1	3
TOTAL CREDIT HOURS		**19**
Quarter 2		
MATH 112	Tech Math 2	4
CIT 103	Computer Concepts	3
EET 110	Electronic Drafting	2
EET 120	Electronic Circuits II	4
EET 121	Electronic Circuits II Lab	2
ENGL 102	Essay & Research	3
TOTAL CREDIT HOURS		**18**
Quarter 3		
MATH 148	College Algebra	5
EET 130	Electronic Devices I	4
EET 131	Electronic Devices I Lab	2
EET 132	Digital Electronics I	3
ENGL 204	Technical Writing	3
TOTAL CREDIT HOURS		**17**
Quarter 4		
EET 241	Electronic Devices II	4
EET 242	Electronic Devices II Lab	2
EET 243	Digital Electronics II	4
EET 244	Digital Electronics II Lab	2
EET 254	Electronic Fabrication	2
PHYS 181	Technical Physics (Mechanics)	4
TOTAL CREDIT HOURS		**18**
Quarter 5		
EET 252	Microprocessors	4
EET 253	Microprocessors Lab	2
MECH 252	Computer Programming for Technicians	3
CIT 291	Special Topics in CIT	5
HUM 1xx	Humanities 111,112,113,151, or 224	5
TOTAL CREDIT HOURS		**19**

Quarter 6		
EET 146	Computer Network Communications Systems	3
EET 260	Capstone Experience	4
CIT 121	PC Operating Systems	3
SSCI 10x	Social Science 101, 102, 104, or 105	5
COMM 105	Speech	3
TOTAL CREDIT HOURS		**18**
TOTAL DEGREE CREDIT HOURS		**109**

Emergency Medical Services

Emergency Medical Services Associate Degree
EMT-Basic Certificate
EMT-Intermediate Certificate
EMT-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- Basic Certificate, the EMT -Intermediate Certificate and the EMT-Paramedic Certificate accredited by the Ohio Department of Public Safety, Division of EMS (certificate # 311). The EMT-Paramedic Certificate program is also nationally accredited through the Committee on Accreditation of Educational Programs for the EMS Professions. For information on additional certificates see the Emergency Medical Services Technology Coordinator.

Students in the EMT-Basic Certificate program must first complete the EMT-Basic course, and then pass the State/National EMT-B Certification written and practical exams. By state law, a student must be a certified EMT-Basic before enrolling in the EMT-Intermediate or the EMT-Paramedic Certificate programs. By state law a student must be certified as an Ohio EMT-Basic before enrolling in the EMT-Paramedic Certificate program. In addition to EMT-Basic certification as above, students must also complete a prerequisite course EMS 201 (Paramedic Preparation Course) and a pre-testing process, which includes the Health Occupations Basic Entrance Test (HOBET).

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 laboratory 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.

Upon completion of the associate degree requirements in Emergency Medical Services Technology, the graduate will be able to:

- Perform all of the duties included in EMT-Basic and EMT-Paramedic training, after successfully completing State of Ohio/National certification exams in these two areas.
- Demonstrate knowledge of the legal aspects of emergency medical service.
- Prepare for and deal with disasters, including those involving hazardous materials.
- Explain the complexity of emergency medical service.

EMT-Basic Certificate

Students completing the EMT-Basic Certificate will be able to:

- Meet State of Ohio/National requirements to take the EMT-Basic certification examination.
- Evaluate the nature and seriousness of a patient's condition or the state of the patient's injuries and assess requirements for emergency care.
- Administer appropriate emergency care to stabilize the patient's condition, including tracheal intubation and automated external defibrillation.
- Lift, move, position, and otherwise handle the patient in such a way as to minimize discomfort and further injury.

EMT-Intermediate Certificate

Students completing the EMT-Intermediate Certificate will be able to:

- Meet State of Ohio/National requirements to take the EMT-Intermediate certification examination.
- Perform all duties of an EMT-Basic.
- Initiate appropriate intravenous procedures as specifically authorized by medical authority.

EMT-Paramedic Certificate

Students completing the EMT-Paramedic Certificate will be able to:

- Meet State of Ohio/National requirements to take the EMT-Paramedic certification examination.
- Perform all duties of the EMT-Basic.
- Initiate appropriate intravenous procedures as specifically authorized by medical authority.
- Initiate and continue emergency medical care under medical control, including recognizing presenting conditions and initiating appropriate invasive and noninvasive therapies (e.g., surgical and medical emergencies, airway and respiratory problems, cardiac dysrhythmias, cardio pulmonary arrest, and psychological crisis), and assessing the response of the patient to that therapy.

For information on additional certificates see the Emergency Medical Services Technology Coordinator.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Emergency Medical Services Technology.

- High school graduate or G.E.D. equivalency
- 18 years of age or older (contact EMS Coordinator)
- Completed health record required PRIOR TO registration
- Contact EMS Technology Coordinator for additional requirements

Emergency Medical Services Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
XXXX xxx	Basic Science Elective	3
MATH 102	Beginning Algebra I	4
EMS 110	EMT- Basic	8
TOTAL CREDIT HOURS		**18**
Quarter 2		
BIO 115	General Microbiology	5
ENGL 102	Essay & Research	3
COMM 105	Speech	3
EMS 123	Emergency Psych. Intervention	3
EMS 201	Paramedic Preparation	4
TOTAL CREDIT HOURS		**18**
Quarter 3		
ENGL 200	Business Communications	3
EMS 125	Disaster Aid	3
BIO 161	Human Anatomy	5
BIO 169	Human Physiology	5
TOTAL CREDIT HOURS		**16**
Quarter 4		
EMS 211	EMT-P I	7
EMS 281	Hospital Clinical I	2
EMS 291	Field Clinical I	1
EMS 128	Intro to Rescue for the EMS Provider	3
EMS 127	Handling Hazardous Material Situations	2
EMS XXX	Technical Elective	1
TOTAL CREDIT HOURS		**16**
Quarter 5		
EMS 212	EMT-P II	7
EMS 282	Hospital Clinical II	2
EMS 292	Field Clinical II	1
EMS 121	EMS Systems	3
EMS 122	Legal Principles for the EMT	2
TOTAL CREDIT HOURS		**15**
Quarter 6		
EMS 213	EMT-P III	6
EMS 283	Hospital Clinical III	2
EMS 293	Field Clinical III	1
SSCI 10X	Social Science 101, 102, 104, or 105	5
TOTAL CREDIT HOURS		**14**
Quarter 7		
EMS 214	EMT-P IV	4
EMS 284	Hospital Clinical IV	2
EMS 294	Field Clinical IV	2
HUM XXX	Humanities 111, 112, 113, 151, 152 or 224	5
TOTAL CREDIT HOURS		**13**
TOTAL DEGREE CREDIT HOURS		**110**

Technical Elective must be selected from the following list of courses:

EMS 130	River Rescue	3
EMS 131	Special Topics For EMT	3
EMS 132	EMS Dispatcher	2
EMS 133	Ice & Cold Water Rescue	2
EMS 142	Vertical Rescue	2
EMS 143	Search and Rescue	2
EMS 144	Confined Space Rescue	2
EMS 265	12-lead EKG Interpretation & Advanced Cardiac Treatment	3
EMS 275	Critical Care Transport	7

EMT-Basic Certificate

COURSE		CR
EMS 110	EMT - Basic	8
TOTAL CERTIFICATE CREDIT HOURS		**8**

EMT-Intermediate Certificate

COURSE		CR
EMS 111	EMT - Intermediate	8
TOTAL CERTIFICATE CREDIT HOURS		**8**

EMT-Paramedic Certificate

COURSE		CR
Quarter 1		
EMS 211	EMT-P I	7
EMS 281	Hospital Clinical I	2
EMS 291	Field Clinical I	1
TOTAL CREDIT HOURS		**10**
Quarter 2		
EMS 212	EMT-P II	7
EMS 282	Hospital Clinical II	2
EMS 292	Field Clinical II	1
TOTAL CREDIT HOURS		**10**
Quarter 3		
EMS 213	EMT-P III	6
EMS 283	Hospital Clinical III	2
EMS 293	Field Clinical III	1
TOTAL CREDIT HOURS		**9**
Quarter 4		
EMS 214	EMT-P IV	4
MS 284	Hospital Clinical IV	2
EMS 294	Field Clinical IV	2
TOTAL CREDIT HOURS		**8**
TOTAL CERTIFICATE CREDIT HOURS		**37**

Emergency Medical Service/ Fire Science

Associate of Technical Studies degree

In many areas emergency medical services are provided through the 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-Basic Certificate and the EMT -Paramedic Certificate accredited by the Ohio Department of Public Safety, Division of EMS (certificate # 311). The EMT-Paramedic Certificate is also nationally accredited through the Committee on Accreditation of Educational Programs for the EMS Professions.

Students must first complete the EMT-Basic course and then pass the State/National EMT-B Certificate written and practical exams. By state law a student must be certified as an Ohio EMT-Basic before enrolling in the EMT-Paramedic Certificate program. In addition to EMT-Basic certification as above, students must also complete EMS 201 (Paramedic Preparation Course) as a prerequisite, and a prestesting process, which includes the Health Occupations Basic Entrance Test (HOBET)

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.

Upon completion of the Associate of Technical Studies in Emergency Medical/Fire Science, the graduate will be able to:

- Demonstrate effective communication and interpersonal skills with supervisors, peers and the public.
- Perform all duties and responsibilities of the EMT-Basic and EMT-Paramedic, after successfully achieving certification in these areas.
- Explain the history and basic principles of the fire service.
- Recognize and respond to changing fire conditions and potential for collapse in structures.
- Demonstrate the duties and responsibilities of Incident Command.
- Demonstrate knowledge of the legal aspects of the fire service and emergency medical service.
- Demonstrate necessary proficiencies with extinguishment hydraulics and fire protection systems.
- Demonstrate a working knowledge of fire investigation principles.

For student outcomes for EMT-Basic Certificate and EMT-Paramedic Certificate see Emergency Medical Services.

NOTE: PRIOR TO ENROLLING in any Fire Science courses, you must have completed ONE of the following: FIRE 100, FIRE 117, OR have documented Firefighter I & II certification.

NOTE: If you currently have EMT-Basic, Paramedic, Firefighter I & II and/or Journeyman certification, you may qualify for non-traditional credit which may apply toward the degree. Contact the EMS or Fire Science Technology Coordinator to determine your individual status.

Emergency Medical Service/Fire Science (Associate of Technical Studies Degree)

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 102	Beginning Algebra	4
EMS 110	EMT Basic	8
TOTAL CREDIT HOURS		**15**
Quarter 2		
ENGL 102	Essay & Research	3
CHEM 100	Intro to Chemistry	4
FIRE XXX	Fire Elective	3
COMM 105	Speech	3
TOTAL CREDIT HOURS		**13**
Quarter 3		
ENGL 200	Business Communications	3
CHEM 113	General & Biological Chemistry	5
CIT 101	PC Applications 1	3
FIRE XXX	Fire Elective	3
FIRE XXX	Fire Elective	3
TOTAL CREDIT HOURS		**17**
Quarter 4		
PSY 100	Into to Psychology	5
EMS 211	EMT-P I	7
EMS 281	Hospital Clinical	2
EMS 291	Field Clinical	1
FIRE XXX	Fire Elective	3
TOTAL CREDIT HOURS		**18**
Quarter 5		
HUM XXX	Humanities 111, 112, 113, 151, 152 or 224	5
EMS 212	EMT-P II	7
EMS 282	Hospital Clinical II	2
EMS 292	Field Clinical II	1
TOTAL CREDIT HOURS		**15**
Quarter 6		
FIRE xxx	Fire Technical Elective	3
FIRE xxx	Fire Technical Elective	3
EMS 213	EMT-P III	5
EMS 283	Hospital Clinical III	2
EMS 293	Field Clinical III	1
TOTAL CREDIT HOURS		**14**
Quarter 7		
SSCI 1xx	Social Science 101, 102, 104, 105 or SOC 202	5
FIRE xxx	Fire Elective	3
EMS 214	EMT-P IV	4
EMS 284	Hospital Clinical IV	2
EMS 294	Field Clinical IV	2
TOTAL CREDIT HOURS		**16**
TOTAL DEGREE CREDIT HOURS		**107**

Technical Electives (FIRE) must be selected from the following

FIRE 100	Introduction to Firefighting	3
FIRE 102	Fire Inspector I (Prevention Practices)	3
FIRE 104	Fire Investigation Methods	4
FIRE 106	Protection Systems	3
FIRE 108	Fire Fighting Command I	4
FIRE 109	Fire Fighting Command II	3
FIRE 116	Personnel Training Methods	3
FIRE 117	Firefighter I & II	12

FIRE 151	Fire Inspector II (Fire Prevention Codes)	4
FIRE 153	Fire Hydraulics	4
FIRE 202	Hazardous Materials II	4
FIRE 203	Legal Aspects of Fire Protection	3
FIRE 204	Fire Service Rating System (Fire Insurance)	2
FIRE 205	Fire Service Company Officer	3
FIRE 206	Administration of a Fire Department	3
FIRE 207	Customer Services for the Fire Services	3
FIRE 210	Construction/Collapse for Fire Rescue	3
CMGT 121	Building Construction Drawings	3
EMS 201	Paramedic Preparation	3

Environmental Science, Safety and Health

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

Environmental, safety and health technicians work in a wide variety of entry-level 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 environmentally 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 current job placement rates, the job market for environmental 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 engineering technologies. This curriculum provides students with a strong foundation of technical skills necessary for careers in the environmental industry. A summer quarter internship program also offers students hands-on experience in a real work setting.

In additional to providing environmental technicians with entry-level training, the degree provides opportunities for individuals seeking career changes, continuing education and skills enhancement.

The Water/Wastewater Technology Certificate is designed to serve the educational needs of employees that work in water and/or wastewater treatment, such as those who work for municipalities or industry. This certificate will also provide a strong educational foundation for those students that have an interest in entering an occupation in either 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's exams. Most courses in this certificate will also apply towards the Associate of Applied Science Degree in either Environmental Science, Safety and Health or Civil Engineering Technology.

The Occupational Health and Safety Certificate is designed to provide basic supervisory and regulatory skills who are or may wish to have a job responsible for the health and safety of the employees in the workplace.

Sustainable Building Certificate is designed to provide information on sustainable buildings to students of the Construction Sciences Department and to primarily provide training opportunity for current professionals such as 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, see the Environmental Science, Safety and Health Advisor.

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 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.
- Apply basic risk assessment and toxic substances exposure analysis techniques.
- Understands duties requiring knowledge of OSHA regulations in the workplace, including hygiene applications.

Environmental Science, Safety and Health Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
ENVR 101	Introduction to Environmental Science, Safety & Health	3
ENVR 158	Environmental Site Assessment	3
MATH 148	College Algebra	5
BIO 111	Introductory Biology I	5
TOTAL CREDIT HOURS		**19**
Quarter 2		
ENGL 102	Essay & Research	3
ENVR 110	Industrial/Municipal Pollution Control	3
CIT 101	PC Applications I	3

ENVR 130	Environmental Laws and Regulations	5
GEOL 101	Earth Systems I or GEOL 121 Physical Geology	5
TOTAL CREDIT HOURS		**19**

Quarter 3

CHEM 111	Elementary Chemistry I	5
ENVR 111	Hazardous Materials Management	3
ENVR 120	Environmental Aspects of Soils	5
ENVR 224	Environmental Hydrology	3
TOTAL CREDIT HOURS		**16**

Summer Quarter (between 1st and 2nd year)

ENVR 252	Health & Safety Training for Hazardous Waste Operations.	3
TOTAL CREDIT HOURS		**3**

Quarter 4

ENVR 170	General Industry Safety and Health	4
MATH 135	Elementary Statistics	5
ENVR 250	Environmental Sampling	5
ENGL 204	Technical Writing	3
TOTAL CREDIT HOURS		**17**

Quarter 5

ENVR 253	Environmental Systems Analysis	3
COMM 110	Conference & Group Discussion	3
SSCI 104	World Economic Geography	5
ENVR 222	Water Treatment Techniques **or** ENVR 223 Wastewater Treatment Techniques	3
ENVR 255	Air Pollution & Monitoring	3
TOTAL CREDIT HOURS		**17**

Quarter 6

ENVR 254	Subsurface Restoration Techniques	5
HUM 152	American Civilization II recommended or Humanities 111,112,113, 151, or 224	5
xxx xxx	Technical Elective	3
xxx xxx	Technical Elective	4
TOTAL CREDIT HOURS		**17**
TOTAL DEGREE CREDIT HOURS		**108**

Technical elective must be selected from the following list of courses:

SPECIALIZATION TRACKS

ENVR Specialization

ENVR 220	Environmental Chemistry	5
ENVR 256	Hazardous Materials Refresher Training	1
ENVR 282	Sustainable Building Strategies	3
ENVR 283	Ecological Residential Construction	3
ENVR 291	Field Experience	3
ENVR 299	Special Topics on Environmental Science, Safety & Health	1-5

Safety & Health Specialization

ENVR 275	Industrial Hygiene	4
ENVR 160	OSHA 10-Hr Construction Safety & Health	1
ENVR 265	OSHA 30-Hr Construction Safety & Health	4

Water & Wastewater Specialization

CIVL 221	Elementary Hydraulics	3
CIVL 223	Public Utility Systems	3

Field/Support Services Specialization

SURV 141	Basic Surveying or SURV 140 Surveying and GPS	4
ARCH 110	Construction Drafting – Manual I	2
ARCH 112	Construction Drafting – CAD I	2
GEOG 207	Introduction to Geographic Information Systems	5

Health & Safety Training for Hazardous Waste Operations Certificate

COURSE		**CR**
Quarter 1		
ENVR 252	Health & Safety Training for Hazardous Waste Operation	3
TOTAL CERTIFICATE CREDIT HOURS		**3**

Water/Wastewater Technology Certificate

COURSE		**CR**
Quarter 1		
CHEM 111	Elementary Chemistry I	5
ENGL 101	Beginning Composition	3
ENVR 101	Introduction to Environmental Technology	3
MATH 104	Intermediate Algebra	5
TOTAL CREDIT HOURS		**16**

Quarter 2

CIVL 221	Elementary Hydraulics	3
CIVL 125	Heavy Construction Methods **or** CIVL 123 Heavy Construction Drawings	3
ENVR 110	Industrial Pollution Control	3
CIT 101	P.C. Applications I	3
ENVR 252	Health & Safety Training for Hazardous Waste Operations **or** CMGT 135 Safety and Loss Prevention	3
TOTAL CREDIT HOURS		**15**

Quarter 3

CIVL 223	Public Utility Systems	3
ENVR 222	Water Treatment Techniques	3
ENVR 223	Wastewater Treatment Techniques	3
ENVR 224	Environmental Hydrology	3
ENVR 253	Environmental Systems Analysis	3
TOTAL CREDIT HOURS		**15**
TOTAL CERTIFICATE CREDIT HOURS		**46**

Occupational Health and Safety Certificate

COURSE		
Quarter 1		
ENVR 101	Introduction to Environmental Technology	3
ENVR 111	Hazardous Materials Management	3
TOTAL CREDIT HOURS		**6**

Quarter 2

ENVR 160	OSHA 10-Hr Construction Safety & Health	1
ENVR 170	General Industry Safety and Health	4
TOTAL CREDIT HOURS		**5**

Quarter 3

ENVR 252	Health & Safety Training for Hazardous Waste Operation	3
ENVR 275	Industrial Hygiene	4
TOTAL CREDIT HOURS		**7**
TOTAL CERTIFICATE CREDIT HOURS		**18**

Sustainable Building Certificate

COURSE		
Quarter 1		
ENVR 282	Sustainable Building Strategies	3
CMGT 282	Sustainable Building Documents, Drawings & Materials	2
TOTAL CREDIT HOURS		**5**

Quarter 2

ARCH 283	Sustainable Architectural Design	3
CMGT 283	Sustainable Building Methods, Estimating & Marketing	2
TOTAL CREDIT HOURS		**5**
TOTAL CERTIFICATE CREDIT HOURS		**10**

Finance

Today's banking, 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 companies, and insurance companies. Examples of these positions include loan processor, loan officer, mortgage banking trainee, credit analyst, insurance analyst, financial planner, collections manager, stockbroker trainee, and financial analyst.

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

- Explain the key concepts of financial transactions in the macroeconomy.
- Explain operational methods of various financial institutions.
- Demonstrate an understanding of both commercial and consumer credit. Plan credit investigations, analyze credit reports, make credit granting decisions, implement a general collection system, demonstrate an understanding of credit laws, and measure the efficiency of a credit department.
- Analyze financial statements and interpret the results of ratio analysis, and assess the risk/return trade-off.
- Analyze stocks, bonds, and mutual funds and the interrelationship between them. Explain the use of mutual funds to achieve diversification.
- Demonstrate a working knowledge of personal computers, analyze financial problems with spread sheet software, and research financial topics on the Internet.
- Apply capital budgeting techniques for valuing business investments.
- Write financial plans for business entities and individuals.
- Using many sources including the Internet to produce research reports on current topical issues relevant to financial markets.

Finance Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
CIT 101	PC Application I	3
BMGT 111	Management	5
ACCT 106	Introduction to Accounting I	5
TOTAL CREDIT HOURS		**16**
Quarter 2		
ENGL 102	Essay & Research	3
MATH 103	Beginning Algebra II	4
ACCT 107	Introduction to Accounting II	5
FMGT 221	Credit Administration	4
FMGT 101	Personal Finance	4
TOTAL CREDIT HOURS		**20**
Quarter 3		
HUM xxx	Humanities 111,112,113,151, 152 or 224	5
FMGT 201	Business Finance	5
ENGL 200	Business Communications	3
ECON 200	Principles of Microeconomics	5
TOTAL CREDIT HOURS		**18**
Quarter 4		
MATH 135	Elementary Statistics	5
LEGL 264	Legal Environment of Business	4
FMGT 202	Money & Banking	5
xxx xxx	Approved Elective	3
TOTAL CREDIT HOURS		**17**
Quarter 5		
FMGT 211	Investments	4
ACCT 222	Financial Statement Analysis II	3
ECON 240	Principles of Macroeconomics	5
MKTG 111	Marketing Principles	5
TOTAL CREDIT HOURS		**17**
Quarter 6		
xxx xxx	Approved Elective	5
FMGT 251	Finance Research	2
NSCI 101	Natural Science I	5
BMGT 271	Management Decisions	2
COMM 105	Speech	3
TOTAL CREDIT HOURS		**17**
TOTAL DEGREE CREDIT HOURS		**105**

The approved elective may be selected from courses in Math, Computer Information Technology, Accounting, Business Management, and Marketing. Discuss these courses with your faculty advisor.

Fire Science

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 persons in related fields such as construction engineering, insurance investigation and corporate safety.

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 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
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 102	Beginning Algebra	4
FIRE 117	Firefighter I & II	12
TOTAL CREDIT HOURS		**19**
Quarter 2		
ENGL 102	Essay & Research	3
CHEM 100	Intro to Chemistry	4
EMS 110	EMT – Basic	8
FIRE 210	Construction/Collapse for Fire Rescue	3
TOTAL CREDIT HOURS		**18**
Quarter 3		
ENGL 200	Business Communications	3
LAWE 268	Hazardous Materials	3
SSCI 1xx	Social Science 101, 102,104, or 105	5
FIRE 207	Customer Service for the Fire Service	3
TOTAL CREDIT HOURS		**14**
Quarter 4		
HUM xxx	Humanities 111,112,113,151, 152 or 224	5
FIRE 102	Fire Inspector	3
CIT 101	PC Applications	3
FIRE XXX	Technical Elective	3
TOTAL CREDIT HOURS		**14**
Quarter 5		
COMM 105	Speech	3
FIRE 106	Fire Protection Systems	3
FIRE 204	Fire Service Rating System	2
FIRE 209	Fire Fighting Problems	3
TOTAL CREDIT HOURS		**11**
Quarter 6		
FIRE 104	Fire Investigation Methods	4
FIRE 108	Fire Command I	4
FIRE 116	Personnel Training Methods	3
FIRE 205	Fire Service Company Officer	3
FIRE 202	Hazardous Materials (Technician Level)	4
TOTAL CREDIT HOURS		**18**
Quarter 7		
FIRE 109	Fire Command II	3
FIRE 153	Fire Hydraulics	4
FIRE 203	Fire Prevention-Legal Aspects	3
FIRE 206	Administration of a Fire Department	3
TOTAL CREDIT HOURS		**13**
TOTAL DEGREE CREDIT HOURS		**107**
TECHNICAL ELECTIVES:		
FIRE 151	Fire Prevention Codes	4
CMGT 121	Building Construction Drawings	3

NOTE: PRIOR TO ENROLLING in any Fire Science courses, you must complete ONE of the following:
FIRE 100, FIRE 117, OR have documented Firefighter I & II certification.

Note: If you currently have EMT-Basic, Firefighter I & II and/or Journeyman certification, you may qualify for other non-traditional credit which may apply toward the degree. Contact the EMS or Fire Science Technology Coordinator to determine your individual status.

Geographic Information Systems

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 are able to work in diverse industries that use geographic information systems including government agencies, construction, banking, healthcare, land use planning, transportation mapping and analysis, and emergency response to name a few.

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. GIS is expected to be a growth occupation in Ohio and the nation in the years to come. GIS professionals can analyze and match spatial data with geographic location, create maps and make decisions relevant to their industries. They use, edit and manipulate the GIS software in their day-to-day operations.

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 GIS. 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 your own computer or lab facilities on campus.

The GIS program provides students with a solid educational background in communication skills, math, computer literacy and operations, and humanities and behavioral sciences.

Upon completion of the associate degree in GIS, the graduate will be able to:

- Recognize, evaluate, combine and use the different forms of data acquisitions, which are used in GIS mapping including GPS, Surveying, Photogrammetry, Scanning, Digitizing and Remote Sensing.
- Create and formulate techniques for implementing a geographic information system by having the knowledge and skills in creating, editing, using and georeferencing spatial data and GIS softwares.
- Develop strategic, business and implementation plans for GIS projects, budgeting, software and hardware procurement, staffing, training and legal issues.

GIS Associate Degree

COURSE		CR
Quarter 1		
GEOG 207	Introduction to GIS	5
GIS 100	Acquiring GIS Data	3
MATH 148	College Algebra	5
CIT 103	Computer Logic Fundamentals	3
TOTAL CREDIT HOURS		**16**
Quarter 2		
ENGL 101	Beginning Composition	3
GEOG 280	Elements of Cartography	5
GIS 110	Scanning and Digitizing (Second Term)	2
GIS 105	Elements of Photogrammetry (First Term)	2
GIS 251	GIS Software I	3
TOTAL CREDIT HOURS		**15**
Quarter 3		
ENGL 102	Essay and Research	3
MATH 135	Elementary Statistics	5
ARCH 112	Construction Drafting – CAD I	2
GIS 253	GIS Software II	3
HUM 1xx	Humanities 111, 112, 113, 151,152 or 224	5
TOTAL CREDIT HOURS		**18**
Quarter 4		
COMM 110	Conference and Group Discussion	3
ENGL 204	Technical Writing	3
CIT 233	Expert Access	3
SURV 140	Surveying and GPS	4
xxx xxx	Technical Elective	3
TOTAL CREDIT HOURS		**16**
Quarter 5		
GIS 203	Remote Sensing of Environment	4
GIS 280	Advanced GIS Applications	4
SSCI 104	Human Economic Geography	5
xxx xxx	Technical Elective	3
TOTAL CREDIT HOURS		**16**
Quarter 6		
GIS 130	Introduction of Spatial Analysis	4
GIS 291	GIS Practicum	4
GIS 290	Seminar for GIS	1
xxx xxx	Technical Elective	3
TOTAL CREDIT HOURS		**12**
TOTAL DEGREE CREDIT HOURS		**93**

Technical Electives must be selected from the following list of courses:

SPECIALIZATION TRACKS

GIS Specialization

GIS 275	Planning and Implementing GIS	3
GIS 277	Introduction to ArcIMS	3
GIS 278	VBA Programming for GIS	3
GIS 279	Introduction to GIS Databases	3
GIS 299	Special Topics in GIS	1-5

Environmental Specialization

ENVR 101	Introduction to Environmental Technology	3
ENVR 110	Industrial/Municipal Pollution Control	3
ENVR 158	Environmental Site Assessment	3

Landscape Specialization

LAND 152	Site Planning	4
LAND 110	Landscape Computer Application	4
SURV 247	Townsite and Urban Development	3

LIS Specialization

LAND 152	Site Planning	4
SURV 245	Survey Law	3
SURV 249	Land Subdivision Systems	3

GIS Certificate

COURSE		CR
Quarter 1		
GEOG 207	Introduction to GIS	5
GIS 100	Acquiring GIS Data*	3
TOTAL CREDIT HOURS		**8**
Quarter 2		
GIS 251	GIS Software I	3
xxx xxx	Technical Elective[2]	3
TOTAL CREDIT HOURS		**6**
Quarter 3		
GIS 253	GIS Software II	3
GIS 280	Advanced GIS Applications or	4
GIS 290/-291	Seminar for GIS /GIS Practicum*[1]	5
TOTAL CREDIT HOURS		**7-8**
TOTAL CERTIFICATE CREDIT HOURS		**21-22**

Technical Electives must be selected from the following list of courses:

GIS 275	Planning and Implementing GIS	3
GIS 277	Introduction to ArcIMS	3
GIS 278	VBA Programming for GIS	3
GIS 279	Introduction to GIS Databases	3

*** This course maybe taken prior to starting the GIS Certificate**
[1]This course maybe taken during summer quarter
[2]One technical elective required for certificate (any quarter)

Graphic Communications

Desktop Publishing Certificate
Graphic Communications Design Certificate
Photography Certificate
Printing Certificate
Printing Management Certificate

Graphic Communications incorporates all of the processes and industries that create, develop, produce or disseminate ideas, concepts and information utilizing words or images. Graphic Communications includes advertising, printing, publishing, packaging, electronic imaging, and their allied industries. Effective contemporary graphic communication requires a mix of communications technologies including print, computer graphics, and multimedia/ web design technologies.

Graduates of the graphics communications program will have the conceptual, creative and technical skills necessary for a variety of entry-level positions in the printing and publishing industries including electronic pre-press operators, graphic designers, estimators, computer artists, commercial print salespersons, and print operations supervisors.

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

- Specify type styles and sizes, coordinate colors, and employ the elements of design to communicate effectively.
- Be able to handle prepress jobs with bleeds, traps, overprints, reverses, and screen tints.
- Use a densitometer and colorimeter to monitor dot gain, solid ink density, hue error, grayness and LAB.
- Utilize QuarkXPress, InDesign and PhotoShop to generate images consistent with computer-supplied layouts or to correct customer-supplied files.
- Use Illustrator to generate art or to correct customer-supplied files.
- Understand basic aspects of press operations and their importance in the graphic communications process.
- Estimate the production cost for printing a job from customer-supplied specifications.
- Use communication skills (verbal, written, and graphic) to interact effectively with both internal and external customers.
- Be familiar with the application of statistical process control techniques to reduce waste while increasing customer satisfaction and product/service quality.
- Understand the components of and the interrelationship among the various segments within graphic communications.
- Understand the basic concepts of project management including scope definition, resource allocation and scheduling.
- Understand selling theory and the phases of the sales process from initial contact to close.
- Be familiar with the basics of multimedia production as it impacts cross-media projects.
- Understand the business components within the graphic communications industry.
- Understand quantitative measures used for quality control within the graphic communications industry.
- Understand digital camera composition and color correction techniques.

Certificates in Desktop Publishing and Graphic Communications Design combine design and typography basics with focused instruction on industry-standard page layout, image manipulation and computer illustration software. These certificates are designed for working professionals with significant experience in graphic communications.

The Printing Certificate and the Printing Management Certificate provide instruction in skills necessary to enter the printing industry. Areas covered include estimating, image capture and conversion, image assembly, customer service, print buying, quality control and small press operations.

The Photography Certificate is designed to prepare students for employment as photography assistants in the photography industry. This program focuses on the development of skills and competencies in the use of traditional and digital cameras, advanced black and white and color photography, studio photography, lighting and tone control. A course on how to develop and manage a successful photography business is also included.

Graphic Communications Associate Degree

COURSE		CR
Quarter 1		
GRPH 112	Introduction to Computer Graphics	4
GRPH 110	Survey of Graphic Communications	4
GRPH 113	Fundamentals of Storyboarding	4
ENGL 101	Beginning Composition	3
MATH 102	Algebra I	4
TOTAL CREDIT HOURS		**19**
Quarter 2		
GRPH 125	Image Assembly	4
GRPH 122	Digital Publishing	4
ENGL 102	Essay & Research	3
IMMT 121	Introduction to Interactive Multimedia	2
GRPH 114	Digital Photography	4
TOTAL CREDIT HOURS…		**17**
Quarter 3		
GRPH 130	Press Operations	4
GRPH 131	Design and Typography	4
COMM 105	Speech	3
MKTG 111	Marketing Principles	5
MKTG226	Customer Service Principles & Practices	4
TOTAL CREDIT HOURS		**20**
Quarter 4		
GRPH282	Digital Publishing II	4
GRPH 242	Image Capture, Conversion & Management	4
GRPH 241	Estimating	4
ENGL 200	Business Communications	3
BMGT 257	Project Management	3
TOTAL CREDIT HOURS…		**18**

Quarter 5

GRPH 251	Digital Imaging	4
GRPH 287	PreFlight & Digital File Preparation	3
MKTG 223	Sales Principles & Practices	4
IMMT 122	Digital Media Preparation	2
SSCI 10x	Social Science 101, 102, 104, or 105	5
TOTAL CREDIT HOURS		**18**

Quarter 6

GRPH 291	Preparing a Professional Portfolio	4
GRPH 252	Digital Imaging II	3
IMMT 250	File Transfer Using Adobe Acrobat	2
GRPH xxx	Technical Electives	4
HUM xxx	Humanities 111,112,113,151,152 or 224	5
TOTAL CREDIT HOURS		**18**
TOTAL DEGREE CREDIT HOURS		**110**

Technical Electives must be selected from the following list of courses:

GRPH 111	Black & White Photography	4
GRPH 123	Electronic Publishing with InDesign	4
GRPH 243	Computer Graphic Illustration	4
GRPH 260	Graphics Practicum	4
GRPH 261	Graphics Seminar	2
GRPH 269	Lighting and Tone Control	4
GRPH 270	Advanced Black and White Photography	4
GRPH 271	Studio Lighting	3
GRPH 273	Design II	3
GRPH 281	Color Photography	3
GRPH 284	Presentation Production	4
GRPH 279	Estimating II	3
GRPH 278	Photo Lab	1
GRPH 288	Advanced Digital Photography	3
GRPH 289	Buying & Selling Printing	3
GRPH 297, 298, 299	Special Topics in Graphic Communications	1-3

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

Desktop Publishing Certificate

Course

Quarter 1

GRPH 122	Digital Publishing	5

Quarter 2

GRPH 131	Design and Typography	4
GRPH 243	Computer Graphic Illustration	3
CERTIFICATE TOTAL:		**12**

Graphic Communications Design Certificate

Course

Quarter 1

GRPH 131	Design and Typography	4
GRPH 112	Introduction to Computer Graphics	4
IMMT 101	Introduction to Multimedia	4
TOTAL CREDIT HOURS		**12**

Quarter 2

GRPH 114	Digital Photography	4
GRPH 273	Design II	3
TOTAL CREDIT HOURS		**7**

Quarter 3

GRPH 122	Digital Publishing	4
GRPH 284	Presentation Production	4
TOTAL CREDIT HOURS		**8**
CERTIFICATE TOTAL:		**27**

Printing Certificate

Course

Quarter 1

GRPH 112	Introduction to Computer Graphics	4
GRPH 125	Image Assembly	4
TOTAL CREDIT HOURS		**8**

Quarter 2

GRPH 242	Image Capture, Conversion and Management	4
GRPH 130	Press Operations	4
TOTAL CREDIT HOURS		**8**
CERTIFICATE TOTAL		**16**

Printing Management Certificate

Course

Quarter 1

GRPH 241	Estimating	4
MKTG 223	Sales Principles & Practices	4
TOTAL CREDIT HOURS		**8**

Quarter 2

GRPH 289	Buying & Selling Printing	3
TOTAL CREDIT HOURS		**7**

Quarter 3

BMGT 218	Management Training for Supervisors	5
TOTAL CREDIT HOURS		**5**
CERTIFICATE TOTAL		**20**

Photography Certificate

Course

Quarter 1

GRPH 114	Digital Photography	4
GRPH 111	Black & White Photography	4
GRPH 251	Digital Imaging	4
TOTAL CREDIT HOURS		**12**

Quarter 2

GRPH 270	Advanced Black & White Photography	4
GRPH 281	Color Photography	4
GRPH 288	Advanced Digital Photography	4
TOTAL CREDIT HOURS		**12**

Quarter 3

GRPH 269	Lighting and Tone Control	4
GRPH 271	Studio Lighting	4
GRPH 294	The Business of Photography	3
TOTAL CREDIT HOURS		**11**
CERTIFICATE TOTAL		**35**

Health Information Management Technology

Health Information Management Technology Associate Degree
Medical Coding Certificate
Medical Transcription Certificate

The Health Information Management Technology 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; abstract and code clinical data using appropriate classification systems; and analyze health records according to standards. The health information management technician may also be responsible for functional supervision of the various components of the health information system.

The 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 Medical Transcriptionist Certificate program prepares students for entry-level skills needed to become a medical transcriptionist. Certificate completion provides an individual with a basic knowledge in medical science, English and skills in computers, and transcribing medical dictation. Accuracy, clarity, timeliness and displaying professional and ethical conduct are qualities required by employers of medical transcriptionists.

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 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.
- Verify components necessary to ensure 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.
- Code, classify, and index diagnoses and procedures for the purpose of reimbursement, standardization, retrieval and statistical analysis.
- Review, abstract, retrieve, and compile health data for reimbursement, quality assessment, patient care research, clinical registries, and other informational needs.
- 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.

Completion of the associate degree in Health Information Management Technology will permit graduates to transfer to The Ohio State University for a bachelor of science degree majoring in Health Information Management and Systems.

Medical Coding Certificate

Upon completion of the Medical Coding Certificate, the student will be able to:

- Demonstrate knowledge of human 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.
- 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 reimbursement, quality assessment, patient care research, clinical registries, and other identified informational needs.
- Demonstrate ethical practices as outlined in the American Health Information Management Association (AHIMA) Code of Ethics.

Medical Transcription Certificate

Upon completion of the Medical Transcription Certificate, the student will be able to:

- Demonstrate knowledge of human pathophysiology, medical terminology, and pharmacology as it relates to the collection and use of health information.
- Demonstrate a knowledge of the diagnostic techniques, indications, values and significant results used in clinical diagnosis and treatment of patients.
- Demonstrate a knowledge of surgery, radiology and pathology procedures.
- Demonstrate proper English usage, grammar, spelling, punctuation and sentence structure.
- Demonstrate a knowledge of the equipment used in transcribing dictation and the ability to use it.
- Recognize, discriminate, and clarify inconsistencies and appropriately edit while transcribing.
- Demonstrate accuracy and productivity in transcribing dictation.
- Demonstrate ethical practices as outlined in the American Association of Medical Transcriptionists (AAMT) and the American Health Information Management Association (AHIMA) Code of Ethics.
- Demonstrate an awareness of the environment in which the transcriptionist is employed.

Specific Program Admissions Information

Listed below are requirements for admission to the Health Information Management Technology.

- High school graduate or G.E.D. equivalency
- Required high school (or equivalent) courses:
- Biology, with a grade of "C" or above
- Chemistry, with a grade of "C" or above
- Placement into ENGL 101 - Beginning Composition
- Placement into No Reading Required
- Placement into MATH 102 - Beginning Algebra I
- Completion of CPT 101 PC Applications I
- Completion of HIMT 111 – Intro to HIMT with a grade of "C" or higher.
- Students are expected to follow the established plans of study. If a student deviates from the established plan of study, it may take longer to complete a certificate and/or two-year degree. Please note that all plans of study begin with autumn quarter.

Program Information

Please note: Students must earn a "C" or higher in all HIMT courses to earn an associate's of applied science degree in HIMT or to complete either the Medical Coding Certificate program or the Medical Transcription Certificate program.

Health Information Management Technology Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
BIO 121	Anatomy, Physiology, & Pathology I	5
CIT 106	PC Applications II	3
HIMT 121	Advanced Medical Terminology	3
HIMT 135	Health Data Management	5
TOTAL CREDIT HOURS		**19**
Quarter 2		
ENGL 102	Essay and Research	3
BIO 122	Anatomy, Physiology, & Pathology II	5
HIMT 141	Pharmacology for HIMT	3
HIMT 256	Clinical Data Analysis	3
HIMT 267	Principles of Management	3
TOTAL CREDITS HOURS		**17**
Quarter 3		
MATH 102	Beginning Algebra I	4
HIMT 133	Legal Aspects of Health Information	3
HIMT 243	Comparative Health Settings in HIM	3
HIMT 245	ICD-9-CM Coding	5
HIMT 257	Intro. to Health Statistics	3
TOTAL CREDIT HOURS		**18**
Quarter 4		
COMM 105	Speech **or**	
COMM 110	Conference & Group Discussion	3
CIT 095	Computer File Management	1
HIMT 255	CPT-4 Coding	5
HIMT 292	Clinical Practicum I	3
HIMT xxx	Technical Elective	4
TOTAL CREDIT HOURS		**16**
Quarter 5		
ENGL 200	Business Communications	3
CIT 233	Expert Access	3
HIMT 132	Introduction to Medical Transcription	2
HIMT 259	Quality and Resource Management	3
HIMT 265	Medical Reimbursement	3
HIMT 294	Clinical Practicum II	3
TOTAL CREDIT HOURS		**17**
Quarter 6		
SSCI 10x	Social Science 101, 102, 104, 105 or SOC 202	5
HUM xxx	HUM 111, 112, 113, 151, 152 or 224	5
HIMT 275	Intermediate Coding	4
HIMT 296	Clinical Practicum III	3
TOTAL CREDIT HOURS		**17**
TOTAL DEGREE CREDIT HOURS		**104**

Technical Electives must be selected from the following list of courses: (Note: You are required to complete 4 hours of HIMT technical electives.)

HIMT 112	Electronic Health Concepts	2
HIMT 113	Managed Care Trends	2
HIMT 270	Case Management in Health Care	2
HIMT 272	Advanced Medical Transcription Lab	4
HIMT 274	Issues in Health Information Management	2

**** Not open to students that have taken HIM 296**

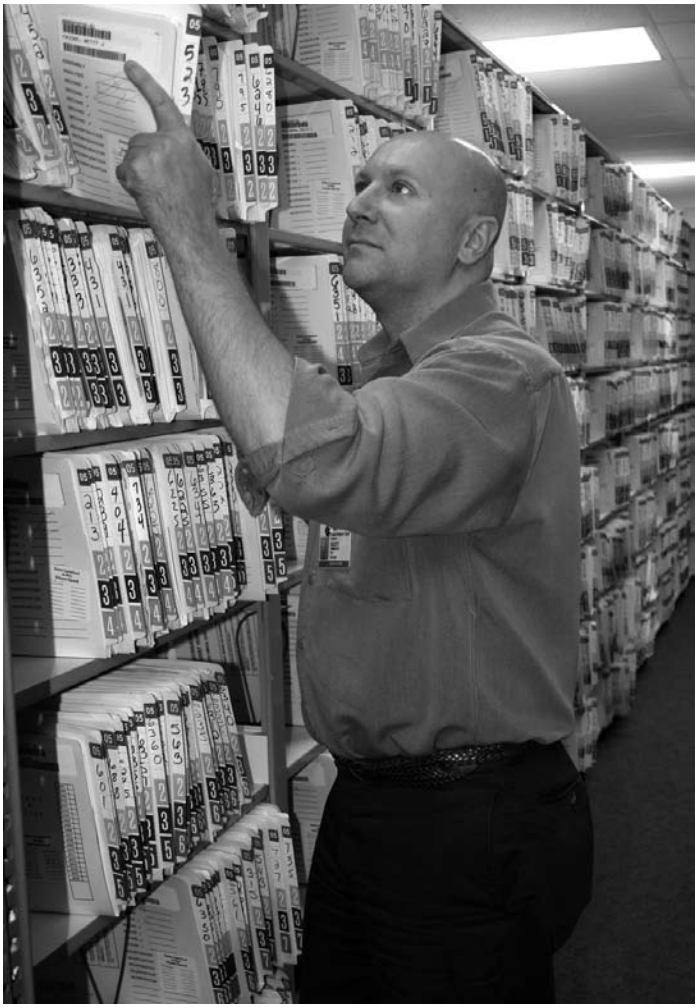
Please Note: BIO 161 – Human Anatomy, BIO 169 – Human Physiology, and BIO 170 – Human Pathophysiology can be taken in place of BIO 121 and BIO 122.

Medical Coding Certificate

COURSE		CR
Quarter 1		
BIO 121	Anatomy, Physiology, & Pathology I	5
HIMT 111	Intro to HIMT	2
HIMT 121	Advanced Medical Terminology	3
HIMT 135	Health Data Management	5
TOTAL CREDIT HOURS		**15**
Quarter 2		
BIO 122	Anatomy, Physiology, & Pathology II	5
HIMT 141	Pharmacology for HIMT	3
HIMT 256	Clinical Data Analysis	3
TOTAL CREDIT HOURS		**11**
Quarter 3		
CIT 101	PC Applications 1	3
HIMT 245	ICD-9-CM Coding	5
TOTAL CREDIT HOURS		**8**
Quarter 4		
HIMT 255	CPT-4 Coding	5
TOTAL CREDIT HOURS		**5**
Quarter 5		
HIMT 265	Medical Reimbursement	3
ENGL 101	Beginning Composition	3
TOTAL CREDIT HOURS		**6**
Quarter 6		
HIMT 275	Intermediate Coding	4
HIMT 276	Medical Coding Practicum	3
TOTAL CREDIT HOURS		**7**
TOTAL CERTIFICATE CREDIT HOURS		**52**

Medical Transcription Certificate

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
CIT 101	PC Applications 1	3
HIMT 121	Advanced Medical Terminology	3
HIMT 111	Introduction to HIMT	2
TOTAL CREDIT HOURS		**11**
Quarter 2		
ENGL 102	Essay and Research	3
BIO 121	Anatomy, Physiology, & Path I	5
OADM 131	Keyboarding I	3
HIMT 256	Clinical Data Analysis	3
TOTAL CREDIT HOURS		**14**
Quarter 3		
BIO 122	Anatomy, Physiology, & Pathology I	5
HIMT 132	Introduction to Medical Transcription	2
HIMT 141	Pharmacology for HIMT	3
TOTAL CREDIT HOURS		**10**
Quarter 4		
OADM 132	Keyboarding II	3
HIMT 272	Advanced Medical Transcription Lab	4
TOTAL CREDIT HOURS		**7**
Quarter 5		
HIMT 273	Medical Transcription Practicum	3
TOTAL CREDIT HOURS		**3**
TOTAL CERTIFICATE CREDIT HOURS		**45**



Heating, Ventilating and Air Conditioning Technology

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

The Heating, Ventilating and Air Conditioning Technology prepares graduates for a wide variety of occupations in the 150 billion dollar 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 large increase in new high-rise buildings and real estate development within all major cities is a clear indication of the rapid increase in job market opportunities available. Also many of our graduates 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 that are facing the HVAC industry today and in the future.

The 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 prepares students to take the State of Ohio High Pressure Boiler Operators License examination. Students will still be required to establish actual work experience around 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.
- Be able to perform designs for commercial and industrial piping systems, including water, steam and refrigeration piping.
- Calculate heat loss and heat gain loads for residential and commercial structures, using National ACCA manuals and computer software.
- Use testing and analyzing instruments; 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 various residential

and commercial HVAC equipment to solve environmental problems.

- Assist in the design of automatic control circuits using electromechanical 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.

Heating, Ventilating and Air Conditioning Technology Associate Degree

COURSE		CR
Quarter 1		
ARCH 110	Construction Drafting - Manual I (First Term)	2
ARCH 112	Construction Drafting - CAD I (Second Term)	2
CIT 101	PC Applications 1	3
ENGL 101	Beginning Composition	3
HAC 152	Instrumentation/Combustion Process	4
HAC 161	Hand Tools Laboratory	4
TOTAL CREDIT HOURS		**18**
Quarter 2		
HAC 116	Piping Systems	3
HAC 141	Principles of Refrigeration	4
HAC 183	HAC Wiring Circuits I	4
HAC 222	Load Calculations I	4
MATH 104	Intermediate Algebra	5
TOTAL CREDIT HOURS		**20**
Quarter 3		
ENGL 102	Essay & Research	3
HAC 231	Load Calculations II	4
HAC 243	Air Conditioning Systems	4
HAC 284	HAC Wiring Circuits II	4
MATH 148	College Algebra	5
TOTAL CREDIT HOURS		**20**
Quarter 4		
BMGT 231	Small Business Development	4
ENGL 200	Business Communications	3
HAC 242	HAC Mechanical Standards/Safety	3
HAC 253	Automatic Controls I	3
HAC 254	Heating Systems	4
TOTAL CREDIT HOURS		**17**
Quarter 5		
BMGT 232	Small Business Operations	4
COMM 105	Speech	3
HAC 256	Automatic Controls II	3
HAC xxx	Technical Elective	4
TOTAL CREDIT HOURS		**14**
Quarter 6		
HAC 244	Heat Pump Systems	4
HAC 266	Advanced Problems	4
HUM xxx	Humanities 111,112,113,151,152 or 224	5
SSCI 10x	Social Science 101, 102, 104, or 105	5
TOTAL CREDIT HOURS		**18**
TOTAL DEGREE CREDIT HOURS		**107**

Technical Elective must be selected from the following list of courses:

HAC 291	Field Experience	4
HAC 258	Pneumatic Controls I	4
HAC 285	HAC Electronic Controls I	4
HAC 287	Boiler Systems	4
HAC 288	Commercial A/C Systems	4
HAC 299*	Special Topics in HAC	1-5

* Please see an advisor before scheduling this class.

High Pressure Boiler License Training Program

COURSE		CR
Quarter 1		
HAC 116	Piping Systems	3
HAC 152	Instrumentation/Combustion	4
HAC 242	HAC Mechanical Standards/Safety	3
HAC 287	Boiler Systems	4
TOTAL CERTIFICATE CREDIT HOURS		**14**

Large Commercial Certificate

COURSE		CR
Quarter 1		
HAC 141	Principles of Refrigeration	4
HAC 183	HAC Wiring Circuits I	4
TOTAL CREDIT HOURS		**8**
Quarter 2		
HAC 152	Instrumentation/Combustion	4
HAC 287	Boiler Systems	4
TOTAL CREDIT HOURS		**8**
Quarter 3		
HAC 288	Commercial A/C Systems	4
HAC 256	Automatic Controls II	3
TOTAL CREDIT HOURS		**7**
Quarter 4		
HAC 285	HAC Electronic Controls I	4
HAC 258	Pneumatic Controls	4
TOTAL CREDIT HOURS		**8**
TOTAL CERTIFICATE CREDIT HOURS		**31**

Residential/Light Commercial Certificate

COURSE		CR
Quarter 1		
HAC 141	Principles of Refrigeration	4
HAC 183	HAC Wiring Circuits I	4
TOTAL CREDIT HOURS		**8**
Quarter 2		
HAC 152	Instrumentation/Combustion	4
HAC 284	HAC Wiring Circuits II	4
TOTAL CREDIT HOURS		**8**
Quarter 3		
HAC 243	Air Conditioning Systems	4
HAC 161	Hand Tools Laboratory	4
TOTAL CREDIT HOURS		**8**
Quarter 4		
HAC 244	Heat Pump Systems	4
HAC 254	Heating Systems	4
TOTAL CREDIT HOURS		**8**
TOTAL CERTIFICATE CREDIT HOURS		**32**

Hospitality Management

Hospitality Management Associate Degree:
Chef Apprenticeship Major
Dietetic Technician Major
Foodservice/Restaurant Management Major
Travel/Tourism/Hotel Management Major
Dietary Manager Certificate
Travel Industry Certificate
Baking 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 Chef Apprenticeship, Dietetic Technician, Foodservice/Restaurant Management, and Travel/Tourism/Hotel Management. The programs are accredited by the Commission on Accreditation for Hospitality Management Programs (CAHM). In addition, Dietary Manager, Travel Industry, and Baking Certificate programs are available.

The Chef 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). Chef apprentices are placed for employment for three years of on-the job training under a professional chef in restaurants, clubs, or hotels or catering businesses. At the same time, the apprentices attend classes at Columbus State one full day each week to work toward the associate in applied science degree. The Columbus State program is accredited by the American Culinary Federation 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 Commission on Accreditation for Dietetics Education (CADE) of the American Dietetic Association. The seven quarter program provides practicums coordinated with classroom instruction. Graduates are eligible for membership in the American Dietetic Association and qualify to take the national examination given by the Commission for Dietetic Registration to be credentialed as a Dietetic Technician Registered (DTR).

The Foodservice/Restaurant 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 foodservice operations. Certificate-bearing courses leading to the completion of the National Restaurant Association Professional Management Development Program are included. This major is accredited by the American Culinary Federation Accrediting Commission, and graduates can qualify as Certified Culinarians by the American Culinary Federation upon successful completion of national written and practical examinations.

The Travel/Tourism/Hotel 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 18-credit Dietary Manager Certificate is approved by the Dietary Managers Association. It is open to persons working in the foodservice operation of a healthcare 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 in applied science degree in the Dietetic Technician major.

The Travel Industry Certificate program consists of four courses that give students a fundamental core knowledge of the travel industry. It prepares students for entry into travel industry positions such as travel agencies, tour companies, airlines, car rental or other travel organizations. Courses satisfactorily completed can be applied to the associate in applied science degree in the Travel/Tourism/Hotel Management major at Columbus State.

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 ingrediaents, mixing scaling, forming, proofing, oven tending, product finishing and presentation.

In addition to CSCC general education outcomes, upon completion of the associate degree in Hospitality Management, the graduate will be able to:

- Maintain appropriate standards of professionalism, including ethical behavior and adherence to dress and grooming codes required for the industry.
- Set and maintain high quality service standards for satisfying diverse customers.
- Demonstrate effective written and oral communication with management, employees and customers.
- Demonstrate skills in team-building, coaching, motivating and supervising employees.
- Demonstrate a knowledge of hiring and training processes.
- Utilize computer software and on-line resources applicable to the industry.
- Perform mathematical calculations necessary for the industry.
- Demonstrate problem solving and critical thinking skills.
- Analyze financial reports and determine appropriate operational procedures.
- Establish and maintain safety and sanitation standards.
- Demonstrate the ability to market and sell products and services.
- Demonstrate a basic knowledge of and an ability to comply with current laws, rules, and regulations governing food service, lodging and tourism.

Chef Apprenticeship Major

In addition to the general Hospitality Management competencies, a graduate majoring in the Chef Apprenticeship program will be able to:

- Produce high quality food products using appropriate ingredients and equipment.
- Apply nutrition principles to menu planning and food production for a variety of customers.
- Define concepts and procedures for purchasing, receiving, storage, and inventory; and develop specifications for purchase of food and non-food items.
- Identify methods for controlling bar/lounge operations including beverage identification and responsible legal beverage service.
- Demonstrate a basic knowledge of meeting planning and catering services.
- Plan, organize, and supervise the production and service of food and beverage to customers.
- Work effectively as a first-line supervisor and trainer in food production.

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.
- Modify diets and menus to meet the needs of persons requiring texture, energy and nutrient modifications.
- Gather and analyze diet history data and apply this information to nutrition care planning for persons on normal and modified diets.
- Provide basic nutrition education for individuals and groups.
- Plan, organize, and supervise the production and service of food and beverage to customers.
- Define concepts and procedures for purchasing, receiving, storage and inventory; and develop specifications for purchase of food and non-food items.
- Produce high quality food products using appropriate ingredients and equipment.
- Monitor and analyze quality of patient care and foodservice operations.

Foodservice/Restaurant Management Major

In addition to the general Hospitality Management competencies, a graduate majoring in Foodservice/Restaurant Management will be able to:

- Produce high quality food products using appropriate ingredients and equipment.
- Apply nutrition principles to menu planning and food production for a variety of customers.
- Define concepts and procedures for purchasing, receiving, storage and inventory; and develop specifications for purchase of food and non-food items.
- Identify methods for controlling bar/lounge operations including beverage identification and responsible legal beverage service.
- Plan, organize, and supervise the production and service of food and beverage to customers.
- Demonstrate a basic knowledge of meeting planning and catering services.

Travel/Tourism/Hotel Management Major

In addition to the general Hospitality Management competencies, a graduate majoring in Travel/Tourism/Hotel Management will be able to:

- Apply destination geography knowledge as required in hotels and tourism.
- Utilize travel industry reference materials and the internet.
- Complete detailed customer travel itineraries for individuals and group tours.
- Demonstrate a working knowledge of lodging operations.
- Demonstrate a basic knowledge of meeting planning and catering services.
- Create a plan for promoting a tourist event or site in the community or region.

Specific Program Admissions Information

Listed are additional requirements for admission to the Chef Apprenticeship Major and the Dietetic Technician Major.

Chef Apprenticeship Major

- High school graduate or G.E.D. equivalency
- Placement into ENGL 101 - Beginning Composition
- Placement into MATH 101 - Business Mathematics
- Supplemental application required by the department (May 15 and November 15 deadlines)

Dietetic Technician Major

- High school graduate or G.E.D. equivalency
- Recommended high school or equivalent courses: Algebra, Chemistry and Biology
- Completed health statement (see Program Coordinator)
- Placement into DEV 031 or higher
- Placement into ENGL 100 or higher

Chef Apprenticeship Major

COURSE		CR
Quarter 1		
HOSP 101	Survey of Hospitality/Tourism Industry	3
HOSP 102	Foodservice Equipment	2
HOSP 122	Hospitality Sanitation and Safety	3
HOSP 293	Hospitality Co-Op Work Experience I	3
TOTAL CREDIT HOURS		**11**
Quarter 2		
HOSP 153	Nutrition for a Healthy Lifestyle	5
ENGL 101	Beginning Composition	3
TOTAL CREDIT HOURS		**8**
Quarter 3		
MATH 101	Business Math	5
HOSP 107	Food Principles	5
TOTAL CREDIT HOURS		**10**
Quarter 4		
HOSP 106	Food Laboratory I	3
CIT 101	PC Applications I	3
COMM 110	Conference & Group Discussion	3
TOTAL CREDIT HOURS		**9**

Quarter 5

HOSP 123	Food Purchasing	3
HOSP 216	Food Laboratory II	3
HOSP 294	Hospitality Co-Op Work Experience II	3
TOTAL CREDIT HOURS		**9**

Quarter 6

HOSP 203	Beverage Management	3
ENGL 102	Essay & Research	3
HOSP 271	Meeting Planning and Catering Services	3
TOTAL CREDIT HOURS		**9**

Quarter 7

HOSP 225	Menu Development	3
SSCI 101	Cultural Diversity	5
ENGL 200	Business Communication	3
TOTAL CREDIT HOURS		**11**

Quarter 8

HOSP 214	International Cuisine	3
NSCI 101	Natural Science I	5
TOTAL CREDIT HOURS		**8**

Quarter 9

HOSP 295	Hospitality Co-Op Work Experience III	3
HOSP 217	Garde Manger	3
HUM xxx	Humanities 111,112,113,151,152 or 224	5
TOTAL CREDIT HOURS		**11**

Quarter 10

ACCT 106	Introduction to Accounting	5
HOSP 218	Fundamentals of Baking	3
TOTAL CREDIT HOURS		**8**

Quarter 11

HOSP 205	Records and Cost Control	4
BMGT 102	Managing Interpersonal Skills I	3
TOTAL CREDIT HOURS		**7**

Quarter 12

HOSP 224	Hospitality Supervision & Quality Management	5
HOSP 286	Apprenticeship Final Project	2
TOTAL CREDIT HOURS		**7**
TOTAL DEGREE CREDIT HOURS		**108**

Dietetic Technician Major

COURSE		**CR**
Quarter 1		
HOSP 102	Foodservice Equipment	2
HOSP 122	Hospitality Sanitation and Safety	3
DIET 191	Dietetic Technician Practicum I	1.5
ENGL 101	Beginning Composition	3
MLT 100	Introduction to Healthcare	3
CIT 101	PC Applications I	3
TOTAL CREDIT HOURS		**15.5**

Quarter 2

HOSP 107	Food Principles	5
HOSP 109	Food Production	3
DIET 192	Dietetic Technician Practicum II	2
MULT 101	Medical Terminology	2
MATH 102	Beginning Algebra I	4
TOTAL CREDIT HOURS		**16**

Quarter 3

HOSP 123	Food Purchasing	3
BIO 161	Human Anatomy	5
DIET 193	Dietetic Technician Practicum III	2
HOSP 153	Nutrition for a Healthy Lifestyle	5
TOTAL CREDIT HOURS		**15**

Quarter 4

BMGT 102	Managing Interpersonal Skills I	3
ENGL 102	Essay & Research	3
BIO 169	Human Physiology	5
COMM 105	Speech	3
TOTAL CREDIT HOURS		**14**

Quarter 5

DIET 261	Community Nutrition: A LifeCycle Approach	2
DIET 297	Dietetic Technician Practicum IV	3
DIET 275	Medical Nutrition Therapy I	5
HOSP 225	Menu Development	3
HOSP 205	Records and Cost Control	4
TOTAL CREDIT HOURS		**17**

Quarter 6

SSCI 101	Cultural Diversity	5
DIET 298	Dietetic Technician Practicum V	2
DIET 276	Medical Nutrition Therapy II	5
HOSP 224	Hospitality Supervision & Quality Management	5
TOTAL CREDIT HOURS		**17**

Quarter 7

ENGL 202	Writing for Health and Human Services	3
DIET 265	Dietetic Technician Seminar	1
DIET 299	Dietetic Technician Practicum VI	2.5
HOSP 219	Food Production Management	4
HUM xxx	Humanities 111,112,113,151, 152 or 224	5
TOTAL CREDIT HOURS		**15.5**
TOTAL DEGREE CREDIT HOURS		**110**

Foodservice/Restaurant Management Major

COURSE		**CR**
Quarter 1		
HOSP 101	Survey of Hospitality/Tourism Industry	3
HOSP 102	Foodservice Equipment	2
HOSP 122	Hospitality Sanitation and Safety	3
HOSP 153	Nutrition for a Healthy Lifestyle	5
CIT 101	PC Applications I	3
TOTAL CREDIT HOURS		**16**

Quarter 2

HOSP 107	Food Principles	5
HOSP 109	Food Production	3
ENGL 101	Beginning Composition	3
MATH 101	Business Math	5
TOTAL CREDIT HOURS		**16**

Quarter 3

HOSP 123	Food Purchasing	3
BMGT 102	Managing Interpersonal Skills	3
NSCI 101	Natural Science I	5
ENGL 102	Essay & Research	3
ACCT 106	Introduction to Accounting I	5
TOTAL CREDIT HOURS		**19**

Quarter 4

HOSP 225	Menu Development	3
HOSP 205	Records & Cost Controls	4
HOSP 143	Hospitality and Travel Law	3
XXX xxx	Technical Elective	3
SSCI 101	Cultural Diversity	5
TOTAL CREDIT HOURS		**18**

Quarter 5

HOSP 203	Beverage Management	3
HOSP 271	Meeting Planning & Catering Services	3
HOSP 291	Hospitality Co-Op Work Experience I	3
HOSP 224	Hospitality Supervision & Quality Management	5
COMM 105	Speech	3
TOTAL CREDIT HOURS		**17**

Quarter 6

HOSP 246	Hospitality Sales and Marketing	3
HOSP 219	Food Production Management	4
HOSP 292	Hospitality Co-Op Work Experience II	3
HUM xxx	Humanities 111,112,113,151, 152 or 224	5
ENGL 200	Business Communications	3
TOTAL CREDIT HOURS		**18**
TOTAL DEGREE CREDIT HOURS		**104**

Technical Electives:
The following courses are approved for technical elective requirements:

HOSP 217	Garde Manger	3
HOSP 218	Fundamentals of Baking	3
BMGT 216	Business Ethics	3
HOSP 214	International Cuisine	3
BMGT 231	Small Business Development	4
HOSP 273	Casino Management	3

Travel/Tourism/Hotel Management Major

COURSE		**CR**
Quarter 1		
CIT 101	PC Applications	3
ENGL 101	Beginning Composition	3
MATH 101	Business Math	5
HOSP 101	Survey of Hospitality/Tourism Industry	3
HOSP 154	Destination Geography	5
TOTAL CREDIT HOURS		**19**

Quarter 2

HOSP 145	Lodging Operations	5
MKTG 111	Marketing Principles	5
HOSP 157	Travel and Tourism Operations	5
ENGL 102	Essay & Research	3
TOTAL CREDIT HOURS		**18**

Quarter 3

PSY 100	Introduction to Psychology	5
MKTG 226	Customer Service Principles and Practices	4
HOSP 122	Hospitality Sanitation and Safety	3
HOSP 143	Hospitality and Travel Law	3
COMM 110	Conference & Group Discussion	3
TOTAL CREDIT HOURS		**18**

Quarter 4

XXX xxx	Technical Elective	3
BMGT 102	Managing Interpersonal Skills I	3
ACCT 106	Introduction to Accounting	5
HOSP 246	Hospitality Sales and Marketing	3
HOSP 291	Hospitality Co-Op Work Experience I	3
TOTAL CREDIT HOURS		**17**

Quarter 5

ENGL 200	Business Communications	3
HOSP 206	Management Accounting for Hospitality	4
HOSP 257	Computer Reservations Systems	3
HOSP 224	Hospitality Supervision & Quality Management	5
HOSP 271	Meeting Planning & Catering Services	3
TOTAL CREDIT HOURS		**18**

Quarter 6

NSCI 101	Natural Science I	5
SSCI 101	Cultural Diversity	5
HUM xxx	Humanities 111,112,113,151, 152 or 224	5
HOSP 292	Hospitality Co-Op Work Experience II	3
TOTAL CREDIT HOURS		**18**
TOTAL DEGREE CREDIT HOURS		**108**

Technical Elective:
The following courses are approved for technical elective requirements:

HOSP 203	Beverage Management	3
BMGT 216	Business Ethics	3
BMGT 281	Business Etiquette	3
BMGT 231	Small Business Development	3
HOSP 273	Casino Management	3

Dietary Manager Certificate

COURSE		**CR**
Quarter 1		
DMGR 101	Dietary Manager Seminar I	4
DMGR 194	Dietary Manager Co-Op/Work Exp. I	2
TOTAL CREDIT HOURS		**6**

Quarter 2

DMGR 102	Dietary Manager Seminar II	4
DMGR 195	Dietary Manager Co-Op/Work Exp. II	2
TOTAL CREDIT HOURS		**6**

Quarter 3

DMGR 103	Dietary Manager Seminar III	4
DMGR 196	Dietary Manager Co-Op/Work Exp. III	2
TOTAL CREDIT HOURS		**6**
TOTAL CERTIFICATE CREDIT HOURS		**18**

Travel Industry Certificate*

COURSE		**CR**
HOSP 154	Destination Geography	5
HOSP 157	Travel and Tourism Operations	5
HOSP 257	Computer Reservations Systems	3
HOSP 246	Hospitality Sales and Marketing	3
TOTAL CERTIFICATE CREDIT HOURS		**16**

***See course descriptions for prerequisites and recommended sequence**

Baking Certificate

COURSE		
Quarter 1		
HOSP 122	Hospitality Sanitation and Safety	3
HOSP 110	Baking Principles	3
HOSP 112	Basic Yeast and Quick Breads	4
HOSP 113	Pies and Pastries	3
TOTAL CREDIT HOURS		**13**

Quarter 2

HOSP 111	Principles of Baking Operations	3
HOSP 114	Advanced Breads	4
HOSP 115	Cakes, Cookies and other Desserts	3
HOSP 116	Bakery Presentation and Decoration	3
TOTAL CREDIT HOURS		**13**
TOTAL CERTIFICATE CREDIT HOURS		**26**

Human Resources Management Technology

Over the last several decades the human resource (personnel) function has evolved from a "hiring/firing paper processing" job to an extremely complex profession. Human resources management requires the ability to understand how all the facets of human resources management impact on one another and on the organization as a whole. The myriad federal and state laws regulating virtually all aspects of the employee/employer relationship, compounded by conflicting judicial interpretations, requires 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; and, these decisions may cripple a company by costing thousands of dollars even if the company wins.

In the last decades senior management has begun to recognize that human resource management professionals, skilled in technical areas such as human resource and labor law, labor relations, policy development and administration, compensation and benefits, and employee relations, are no longer a cost "drag" on the organization, but make a positive impact on the bottom line. Management has also come to realize that the human resource management "professional" is everyone in the human resources department, from the secretary, to the benefits administrator, to the employment interviewer, to the director/manager/vice president of human resources.

Larger companies have human resources management staffs of 5 to 35 people while small and mid-sized companies often have only 1 or 2 people to provide human resources management services. Whether a one-person operation or a large team; both settings need skilled human resources professionals to comply with the governmental aspect of the relationship, minimize the potential for crippling lawsuits, and ensure a competent workforce to achieve the organization's goals.

The purpose of Human Resources Management Technology is to provide a program that teaches human resources management skills and provides hands-on application in a learning environment that bridges the necessity of academic theory with human resources management in "the real world." Throughout, the program provides for a strong legal foundation in each area of human resources management; then provides for application of that foundation to the human resources management functions.

Upon completion of the associate degree in Human Resources Management Technology, the graduate will be able to:

- Research human resources laws, cases, and issues using the Internet and other resources.
- Apply human resources laws impacting private sector employers to day-to-day business operations.
- Write legal human resources policies, procedures, programs and employee handbook summaries for an organization.
- Administer manual and automated records and information management systems 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.
- Discuss the effects of chemical dependency on the work environment and identify the community resources available to the organization, employee, and family.
- 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.
- Provide assistance in the union organizing, negotiating, grieving, and arbitrating processes.

Human Resources Management Technology Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 103	Beginning Algebra II	4
CIT 102	PC Applications 2	3
BMGT 111	Management	5
OADM 101	Business Grammar	3
TOTAL CREDIT HOURS		**18**
Quarter 2		
ENGL 102	Essay and Research	3
MATH 135	Elementary Statistics	5
HRM 121	Human Resources Management	4
CIT 137	Advanced Information Presentation	3
LEGL 261	Business Law I	3
TOTAL CREDIT HOURS		**18**
Quarter 3		
COMM 105	Speech	3
PSY 100	Psychology	5
ECON 200	Microeconomics	5
HRM 122	Human Resources Policy and Procedure Writing	4
HRM 124	Personnel Interviewing	4
TOTAL CREDIT HOURS		**21**
Quarter 4		
HUM xxx	Humanities 111,112,113,151,152, or 224	5
HRM 220	Labor Relations	5
HRM 221	Staffing Under the Law	5
HRM 224	Human Resources Information Systems	3
TOTAL CREDIT HOURS		**18**
Quarter 5		
ENGL 200	Business Communications	3
BMGT 211	Organizational Behavior	4
HRM 222	Monetary Compensation	4
HRM 223	Benefits/Non-Monetary Compensation	4
HRM 225	Alcohol and Drugs in the Workplace	2
TOTAL CREDIT HOURS		**17**
Quarter 6		
NSCI 101	Natural Science I	5
HRM 240	Administration of HRM	5
HRM 242	HRM Practicum	4
HRM 243	HRM Practicum Seminar	2
TOTAL CREDIT HOURS		**16**
TOTAL DEGREE CREDIT HOURS		**108**

Interactive Multimedia

Interactive Multimedia Associate Degree
Digital Audio/Video Production Major
Webtech: Web Design Certificate

The Interactive Multimedia program provides the community with skilled professionals who can create and assemble multimedia products for corporate interactive training, advertising, and marketing purposes. Graduates are able to develop and produce scripts and computer animation, and apply multimedia technology to assemble graphics, text, sound, and video into meaningful productions.

The program supports an industry need to provide multimedia professionals to work in the ever-expanding market of integrated and interactive media communications, with a growing emphasis in web page production.

The Interactive Multimedia program is designed to impart four critical skills to its graduates:

- Design
- Scripting (source code and application). The types of scripting include: HTML, CSS, Javascript, Actionscript and Lingo
- Familiarity with various design-oriented application programs including: Adobe Photoshop, ImageReady, Flash, Dreamweaver, Director, and 3-D Studio, Max
- 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 hierarchical site structure and flowcharting. As a result, program graduates can cross cultural, aesthetic and technical boundaries.

The Audio/Video Production 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 whether it be in a CD-ROM, DVD, interactive websites or other delivery systems.

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 Multimedia, the graduate will be able to:

- Possess a working-level knowledge of the interactive multimedia field and how it affects society and industry.
- Comprehend the relationship between design, marketing, and interactive multimedia projects.
- Understand the purpose and interrelationship between design, scripting and software.
- Be able to evaluate the strengths and weaknesses of project design including storyboarding, diagramming, flowcharting and brand relevance.
- Know the core concepts of scripting as they apply to multimedia and web development
- Be familiar with many of the programming languages used by the multimedia professional (such as, HTML, CSS, Javascript, Lingo and CGI Scripting), by creating sites using various scripting languages.
- Have gained exposure to industry standard digital imaging programs (PhotoShop/Image Ready) by using the software to solve a variety of "real world" design problems.
- Know how to retrieve, enhance, create, optimize, store and otherwise modify images for digital use (web or CD development).
- Be familiar with basic concepts of digital conversion, video coding and processing, and integrating digital audio with video.
- Learn the basic principles of digital video editing using various original or provided video clips.
- Understand the basic principles of 2D design, the elements of design and concepts of forms and structures.
- Use digital design software (such as Freehand or Illustrator) acquired technical skills and aesthetic design skills.
- Comprehend the basic concepts of 3D modeling: model construction, rendering, lighting and animation.
- Create a functional interactive, animated web presence from conceptual stages to finished product.
- Possess working-level knowledge of industry standard web animation software.
- Gain important insights on the actual functioning of working multimedia groups and how those groups function as part of a large system.
- Gain working knowledge of web design software using Microsoft's FrontPage.
- Understand the interrelationship between front-end design and back-end results.
- Gain working knowledge of web design application software using Macromedia's DreamWeaver.
- Use storyboard, flowchart and drawing skills to represent finished versions of a website, an interactive CD or a video.
- Complete an interactive portfolio to market themselves and skills learned.
- Gain real-world experience working as an intern in a multimedia-related company.

In addition to the Interactive Multimedia competencies, graduates completing an Audio/Visual Production 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 productions.
- 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.

The Webtech Web Design Certificate is designed specifically for the needs of the working multimedia professional. It covers the skills required to design effective and attractive web pages including use of color, typography, buttons, and animation, and on the skills required for structuring and implementing the use of multimedia features such as sound, animation, and interactivity. Because of the scope of content covered and the accelerated pace of delivery, certificate courses are recommended for those individuals with significant multimedia experience.

NOTE: For many Interactive Multimedia courses, majors may wish to purchase the relevant software. Interactive Multimedia labs have limited availability outside of class time; access to software outside of the lab will enable students to work on class assignments outside of the lab setting.

Interactive Multimedia Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
GRPH 112	Introduction to Computer Graphics	4
IMMT 101	The World of Multimedia	4
MATH 103	Algebra II	4
HUM1xx	CIV I/II/III or Am. History I, II, III	5
TOTAL CREDIT HOURS		**20**
Quarter 2		
ENGL 102	Essay & Research	3
GRPH 113	Fundamentals of Layout and Storyboarding	4
MKTG 122	Business and the Internet	3
IMMT 111	The Digital Revolution	4
TOTAL CREDIT HOURS		**14**
Quarter 3		
BMGT 257	Project Management	3
COMM 105	Speech	3
GRPH 251	Electronic Imaging	4
IMMT 150	Intro to Audio/Video Production	4
IMMT 231	Creating Vector Graphics	4
TOTAL CREDIT HOURS		**18**
Quarter 4		
ENGL 207	Writing for the Web	3
IMMT 216	Dynamic Graphics	4
IMMT 217	Video Graphics Editing	4
IMMT 236	Designing in 3rd Dimension	4
IMMT 237	Beginning Flash [Design]	4
TOTAL CREDIT HOURS		**19**
Quarter 5		
SSCI 10x	Social Science 101, 102, 104, or 105	5
IMMT 214	Web Database Development	4
IMMT 238	Intermediate Flash [Development]	4
IMMT 262	Building Hierarchical Websites	4
IMMT xxx	Technical Elective	4
TOTAL CREDIT HOURS		**21**
Quarter 6		
IMMT 213	Designing an eCommerce Website	4
IMMT 239	Advanced Flash [Action Scripting]	4
IMMT 251	Multimedia Practicum	4
IMMT 252	Multimedia Seminar	2
IMMT 271	Interactive Portfolio Development	4
TOTAL CREDIT HOURS		**18**
TOTAL DEGREE CREDIT HOURS		**110**
ELECTIVES		
IMMT 250	Document Transfer Using Acrobat	2
IMMT 297	Special Topics in Interactive Multimedia	1-6
GRPH 111	Black and White Photography	4
GRPH 114	Digital Photography	4
GRPH 252	Advanced Digital Imaging	4
MKTG 150	Introduction to eCommerce	3
MKTG 237	Database Marketing	3

Digital Audio/Video Production Major

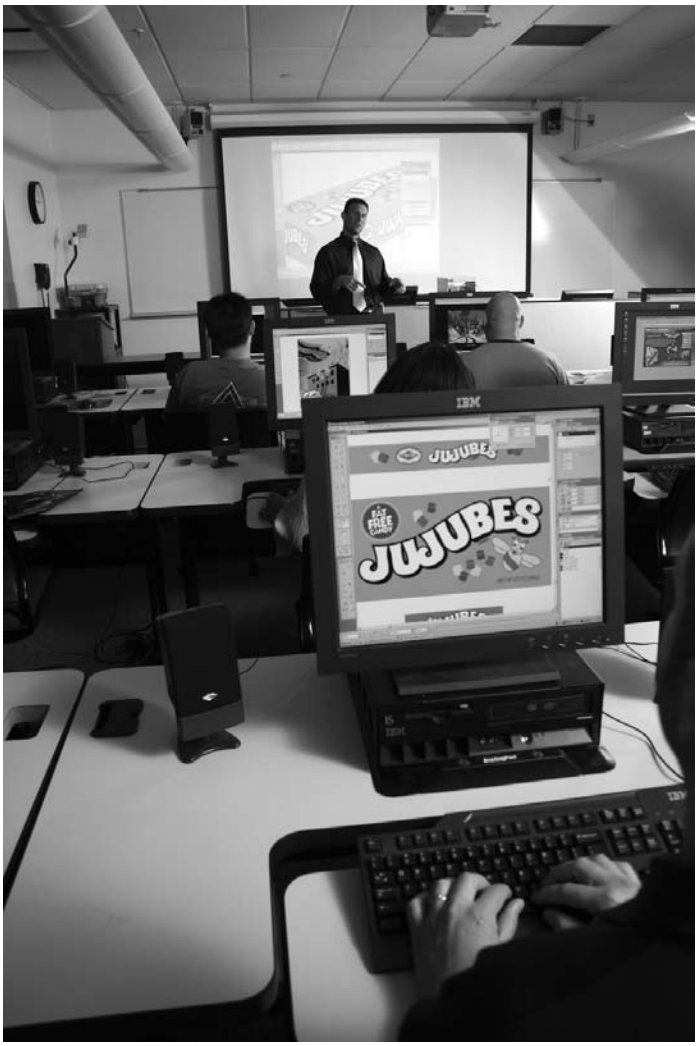
COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 103	Algebra II	4
MKTG 111	Principles of Marketing	5
IMMT 101	The World of Multimedia	4
HUM 1xx	CIV I/II/III or Am. History I, II, II	5
TOTAL CREDIT HOURS		**21**
Quarter 2		
ENGL 102	Essay & Research	3
IMMT 150	Intro to Audio/Video Production	4
IMMT 111	The Digital Revolution	4
GRPH 112	Intro to Computer Graphics	4
GRPH 113	Fundamentals of Layout & Storyboarding	4
TOTAL CREDIT HOURS		**19**
Quarter 3		
COMM 105	Speech	3
IMMT 151	Audio Editing and Voice Over	4
IMMT 153	Formatting & Screenwriting for Audio/Video	3
IMMT 216	Dynamic Graphics	4
IMMT 231	Creating Vector Graphics	4
TOTAL CREDIT HOURS		**18**
Quarter 4		
ENGL 207	Writing for the Web	3
BMGT 257	Project Management	3
IMMT 152	Narrative and Documentary Production	4
IMMT 237	Beginning Flash [Design]	4
IMMT xxx	Technical Elective	3
TOTAL CREDIT HOURS		**17**
Quarter 5		
NSCI 101	Natural Science I	5
GRPH 114	Digital Photography	4
IMMT 155	Foley Art and Sound Design	4
IMMT 238	Intermediate Flash [Development]	4
IMMT 262	Building Hierarchical Websites	4
TOTAL CREDIT HOURS		**21**
Quarter 6		
IMMT 239	Advanced Flash [Action Scripting]	4
IMMT 251	Multimedia Practicum	4
IMMT 252	Multimedia Seminar	2
IMMT 156	Corporate/Instructional Video Production	4
TOTAL CREDIT HOURS		**14**
TOTAL DEGREE CREDIT HOURS		**110**

ELECTIVES

GRPH 111	Black and White Photography	4
GRPH 114	Digital Photography	3
GRPH 252	Advanced Digital Imaging	4
MKTG 150	Introduction to eCommerce	3
MKTG 237	Database Marketing	3
IMMT 250	Document Transfer Using Acrobat	2

Webtech: Graphic Design Certificate

COURSE		CR
Quarter 1		
IMMT 280	Basic Flash	3
IMMT 286	Illustrator	3
TOTAL CREDIT HOURS		**6**
Quarter 2		
IMMT 281	Intermediate Flash	3
IMMT 283	Dreamweaver	3
IMMT 290	Photoshop & ImageReady	3
TOTAL CREDIT HOURS		**9**
Quarter 3		
IMMT 292	Acrobat Professional	3
IMMT 294	ColdFusion	3
TOTAL CREDIT HOURS		**6**
TOTAL FOR CERTIFICATE		**21**



Interpreting/American Sign Language Education

Interpreting/American Sign Language Education Associate Degree
American Sign Language/Deaf Studies Certificate

The Interpreting/ASL Education Associate Degree program prepares graduates for entry-level interpreting/ASL 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. A language lab helps students develop their skills during six core skill-building courses. A three-quarter practicum gives students opportunities to gain first-hand experience applying their interpreting/transliterating 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 ITT 141, 142, 130 and 111), (2) have a good command of spoken English; (3) agree to adhere to the Code of Ethics 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, and (5) agree to complete a minimum number of ITT courses each quarter. Prior to acceptance into the Interpreting 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 ITT program coordinator.

The seven-quarter program is sequential, carefully integrating theory and skills with problem solving and critical thinking. Students must adhere to the Code of Ethics 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 quarter in activities and events outside of class time.

Upon completion of the Associate Degree in Interpreting/ASL Education, the graduate will be able to:

- Demonstrate unique skills required for interpreting in specialized settings (e.g., oral, medical, mental health, deaf-blind, etc.).
- Demonstrate an understanding of the interpreting/transliterating Code of Ethics
- Demonstrate basic competency with American Sign Language (ASL) as well as a basic understanding of signed English.
- Demonstrate ability to interpret from spoken English messages into ASL, and ASL messages into spoken English.
- Demonstrate ability to transliterate spoken English messages into Manually Coded English, and Manually Coded English into spoken English.
- Explain the role of the interpreter/transliterator to both deaf and hearing consumers.
- Demonstrate knowledge of the deaf community and sensi-

tivity toward the cultural traditions of the community.
- Assess the deaf consumer's preferred mode of communication.
- Analyze and adapt the physical aspects of the interpreting setting or be able to adapt to physical aspects that cannot be changed.
- Demonstrate knowledge of various agencies/organizations serving the deaf community.

The CSCC Interpreting/American Sign Language Education Program is approved by the State of Ohio Department of Education. Students who successfully complete the Interpreting/American Sign Language Education Associate Degree are eligible to apply for their Educational Interpreting License from the State of Ohio Department of Education.

Specific Program Admissions Information

Listed below are additional requirements for admission to Interpreting/ASL Education Program.

- High School graduate or GED equivalency
- Entry-level American Sign Language skills equivalent to CSCC's ASL I (ITT 141), ASL II (ITT 142, and Fingerspelling (ITT 130) and Introduction to the Deaf Community (ITT 111) - all with a "C" or better. Individuals with ASL experience may meet this requirement by taking an ASL Placement exam. Contact Chris Evenson at (614) 287-5616 for more information.
- Compass Test Placement into ENGL 101 - Beginning Composition or above, "No Reading Required , and MATH 102.
- Complete the form "Application to Become an Interpreting/ASL Education Major". This form can ONLY be obtained from the coordinator during a Mandatory Information Session. Mandatory Information Sessions tend to be scheduled for early January and July. Contact the Coordinator of the Interpreting/ASL Education program, Chris Evenson at (614) 287-5616, for dates and 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.

Note: American Sign Language/Deaf Studies Certificate candidates do not need to attend a Mandatory Information Session.

Interpreting /ASL Education Associate Degree

Please check course descriptions for prerequisites to all courses in this curriculum

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
CIT 101	PC Application 1	3
ITT 110	Introduction to Interpreting/Transliterating	3
ITT 150	Linguistics of ASL	3
ITT 143	American Sign Language III	5
TOTAL CREDIT HOURS		**17**
Quarter 2		
ENGL 102	Essay & Research	3
ITT 129	Current Research & Theory of Interpreting	3
ITT 144	American Sign Language IV	5
ITT 211	Transliterating I	3
TOTAL CREDIT HOURS		**14**
Quarter 3		
HUM 11X	Humanities 111, 112, 113, 151, 152 or 224	5
ITT 145	American Sign Language V	5
ITT 201	Interpreting I	3
ITT 212	Transliterating II	3
TOTAL CREDIT HOURS		**16**
Quarter 4		
PSY 100	Introduction to Psychology **OR**	
SOC 101	Introduction to Sociology	5
ITT 120	Lexical Analysis & Development	3
ITT 149	Advanced ASL for Interpreters	2
ITT 202	Interpreting II	3
MULT 101	Medical Terminology	2
TOTAL CREDIT HOURS		**15**
Quarter 5		
COMM115	Oral Interpretation	3
ITT 292	Interpreting Practicum I	2
ITT 203	Interpreting III	3
ITT 220	Sign to Voice Interpreting/Transliterating	4
ITT XXX	Technical Elective	3
TOTAL CREDIT HOURS		**15**
Quarter 6		
ENGL 200	Business Communications	3
NSCI 101	Natural Science	5
ITT 204	Interpreting IV	3
ITT 293	Interpreting Practicum II	3
ITT 290	Practicum Seminar II	1
TOTAL CREDIT HOURS		**15**
Quarter 7		
ECD 120	Interpersonal Communications	4
ITT 121	Legal & Ethical Aspects of Interpreting	3
ITT 123	Specialized Interpreting	3
ITT 294	Interpreting Practicum III	3
ITT 291	Practicum Seminar III	1
TOTAL CREDIT HOURS		**14**
TOTAL DEGREE CREDIT HOURS		**106**

Technical Electives (ITT) must be selected from the following:

ITT 170	Conversational ASL	2
ITT 171	Gesturing and Visual Readiness	1
ITT 172	History of the Deaf Community	2
ITT 173	Script Analysis and Translation	2
ITT 174	Religious Interpreting	3
ITT 175	Text Preparation & Analysis	3
ITT 265	Special Topics in Interpreting, ASL, Deaf Studies	1-5

American Sign Language/Deaf Studies Certificate

For those individuals wanting to learn about people who are Deaf, their unique culture and community, and be able to converse with them via American Sign Language (ASL), we offer 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, students apply for the certificate by contacting the Interpreting/ASL Education Coordinator. Individuals successfully completing the following eight courses (35 credit hours) must apply for their certificate within four quarters of completing ASL V.

For additional information about the American Sign Language/ Deaf Studies Certificate, please see the Interpreting/ASL Education Program Coordinator. Individuals who have ASL experience may take an ASL Placement test. Please contact Chris Evenson at (614) 287-5616 for more information.

* Registration for the following eight courses may be restricted to Interpreting/ASL Education majors for the first two weeks of registration. Seats not taken by majors will be released to any non-major students meeting the prerequisites 14 days after the first day of registration. Contact the coordinator for registration dates for non-majors.

COURSE		CR
Quarter 1		
ITT 111	Introduction to the Deaf Community	5
ITT 141	American Sign Language I	5
TOTAL CREDIT HOURS		**10**
Quarter 2		
ITT 130	Fingerspelling	2
ITT 142	American Sign Language II	5
TOTAL CREDIT HOURS		**7**
Quarter 3		
ITT 150	Linguistics of ASL	3
ITT 143	American Sign Language III	5
TOTAL CREDIT HOURS		**8**
Quarter 4		
ITT 144	American Sign Language IV	5
TOTAL CREDIT HOURS		**5**
Quarter 5		
ITT 145	American Sign Language V	5
TOTAL CREDIT HOURS		**5**
TOTAL CERTIFICATE CREDIT HOURS		**35**

Landscape Design/Build

The Landscape Design/Build program prepares graduates for a wide range of careers with landscape design firms, materials wholesalers and retailers, commercial and private landscape facilities, and landscape contractors. Landscape Design/Build 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/Build 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/ Build, 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/Build Associate Degree

COURSE		CR
Quarter 1		
ARCH 110	Construction Drafting – Manual I (First Term)	2
ARCH 112	Construction Drafting - CAD I (Second Term)	2
ENGL 101	Beginning Composition	3
LAND 101	Landscape Principles	3
LAND 111	Survey of Landscape Industry	2
MATH 104	Intermediate Algebra	5
TOTAL CREDIT HOURS		**17**
Quarter 2		
BIO 125	General Botany	5
ENGL 102	Essay & Research	3
LAND 102	Residential Landscape Design	4
LAND 107	Landscape Maintenance	3
SPAN 100	Spanish for the Professions	3
TOTAL CREDIT HOURS		**18**

Quarter 3

LAND 152	Site Planning	4
HUM xxx	Humanities 111,112,113,151,152 or 224	5
LAND 105	Spring Landscape Plants	4
SURV 141	Basic Surveying	4
TOTAL CREDIT HOURS		**17**

Summer Quarter between 1st and 2nd year

LAND 291	Field Experience	4
TOTAL CREDIT HOURS		**4**

Quarter 4

LAND 205	Autumn Landscape Plants	4
LAND 206	Landscape Graphics	4
LAND 207	Landscape Construction	3
LAND 201	Landscape Pest Control	3
ENVR 120	Environmental Aspects of Soils	5
TOTAL CREDIT HOURS		**19**

Quarter 5

BMGT 111	Management	5
COMM 105	Speech or COMM 110 Conf & Group Discussion	3
LAND 202	Planting Design	4
LAND 204	Turf Grass Management	3
LAND 203	Landscape Irrigation	3
TOTAL CREDIT HOURS		**18**

Quarter 6

ENGL 204	Technical Writing	3
LAND 108	Herbaceous Plants	3
LAND 222	Landscape Operations	4
SSCI 10x	Social Science 101, 102, 104, or 105	5
xxxx xxx	Technical Elective	2-4
TOTAL CREDIT HOURS		**17-19**
TOTAL DEGREE CREDIT HOURS		**110**

Technical Elective must be selected from the following list of courses:

CIT 101	PC Application 1	3
ARCH 113	Architectural Drafting - CAD II	2
*LAND 100	The American Landscape	2
LAND 104	Specialty Gardens	3
LAND 109	Landscape Arboriculture	3
LAND 110	Landscape Computer Applications	3
LAND 117	Landscape Maintenance Laboratory	2
LAND 208	Interior Plants	3
LAND 210	Evergreen Landscape Plants	4
LAND 217	Landscape Construction Laboratory	2
*LAND 295, 296, 297 Special Topics		1-5

* does not count for Technical Electives

Law Enforcement

Law Enforcement Associate Degree
Corrections Major
Law Enforcement Major
Law Enforcement Management Major
Law Enforcement Major - Academy Track

Persons trained for the law enforcement field are in high demand in many public and private organizations. Columbus State's Law Enforcement program teaches students the technical skills they need to enter or advance in a wide variety of positions in criminal justice**.** Four Associate Degree majors give students a range of options to meet their personal career goals.

The Law Enforcement major prepares students for a variety of careers in federal, state, or local law enforcement agencies. The Law Enforcement Major - Academy Track offers additional training required by the Ohio Peace Officers Training Council (OPOTC) for certified peace officers. Graduates of the Academy track are eligible to take the OPOTC certification exam.

The Law Enforcement Management Major is intended for students who currently possess Ohio Peace Officer Certification or an Associate Degree or higher. At least one year of law enforcement work experience is highly recommended before entering. This major is designed to prepare in-service officers to assume managerial positions within law enforcement agencies.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Academy Track Program. Applicants must:

- Have a high school diploma or GED certificate.
- Pass a physical.
- Take a personality factor inventory.
- Submit to a criminal history check (students with prior felony convictions may be excluded from the program; contact the department chairperson for more information).
- Possess a valid Ohio drivers license.
- Complete a supplemental application required by the department.

The Corrections major trains students for careers in probation, parole, correctional institutions, community-based correctional programs, and social service agencies.

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

- Locate and apply criminal law correctly.
- Prepare required reports accurately and in a concise, readable style.
- Prepare cases for trial and professionally testify in a court of law.

Corrections Major

In addition to the general Law Enforcement competencies, a graduate majoring in Corrections will be able to:

- Prepare presentence reports and other required reports accurately.
- Demonstrate knowledge of effective correctional institution security measures.

Law Enforcement Major

In addition to the general Law Enforcement competencies, a graduate majoring in Law Enforcement will be able to:

- Demonstrate proper arrest procedures.
- Locate applicable case law.
- Process information at an accident scene and correctly complete required reports.
- Identify hazardous materials and initiate proper response.

Law Enforcement Management Major

In addition to the general Law Enforcement competencies, a graduate majoring in Law Enforcement Management will be able to:

- Develop contingency plans for emergencies or other events requiring rapid and/or extensive deployment of police resources.
- Effectively utilize research in reaching managerial decisions.
- Prepare a community policing strategy to meet the needs of a specific neighborhood.
- Participate in a collective bargaining process.
- Recognize areas of potential legal liability and prepare policies, directives and training programs to minimize exposure to litigation.
- Demonstrate effective managerial decision-making skills.

Law Enforcement Major - Academy Track

In addition to the general Law Enforcement competencies, and the Law Enforcement major competencies, a graduate majoring in Law Enforcement - Academy Track will be able to:

- Understand and handle safely the double action revolver, the semi-automatic pistol, and the shotgun.
- Demonstrate proficiency with the handgun and shotgun to current Ohio Peace Officer Training Council (OPOTC) standards for qualification.
- Perform safe and effective driving maneuvers to current OPOTC standards.
- Demonstrate basic crowd control techniques and riot formations.
- Demonstrate recommended self-defense techniques.

Corrections Major

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
LAWE 101	Introduction to Criminal Justice	3
LAWE 104	Government and the Law	3
LAWE 120	Criminology	3
CIT 101	PC Applications 1	3
TOTAL CREDIT HOURS		**15**
Quarter 2		
ENGL 102	Essay & Research	3
LAWE 208	Community Based Corrections	3
MATH 101	Business Mathematics	5
ANTH 240	Forensic Anthropology	5
LAWE 204	Juvenile Procedures	3
TOTAL CREDIT HOURS		**19**
Quarter 3		
COMM 105	Speech	3
LAWE 121	Juvenile Delinquency	3
LAWE 124	Penology	3
SSCI 101	Cultural Diversity	5
LAWE XXX	Law Enforcement Elective	3
TOTAL CREDIT HOURS		**17**
Quarter 4		
LAWE 268	Hazardous Materials	3
LAWE 212	Ohio Criminal Code	4
LAWE 110	Criminal Investigation I	4
LAWE 210	Crisis Intervention	3
LAWE 128	Special Category Offenders	3
TOTAL CREDIT HOURS		**17**
Quarter 5		
ENGL 204	Technical Writing	
	OR	
ENGL 200	Business Communications	3
LAWE 112	Criminal Investigation II	4
LAWE 219	Correctional Law	4
LAWE 211	Institutional Corrections	3
NSCI 101	Natural Science I	5
TOTAL CREDIT HOURS		**19**
Quarter 6		
HUM XXX	Humanities 111, 112, 113, 151, 152 or 224	5
LAWE 221	Counseling-Probation & Parole	4
LAWE 223	Correctional Administration	3
LAWE 256	L.E. Practicum	2
LAWE 257	L.E. Practicum Seminar	1
LAWE 271	Contemporary Issues in CJ	3
TOTAL CREDIT HOURS		**18**
TOTAL DEGREE CREDIT HOURS		**105**

Technical Electives must be selected from the following list of courses:

LAWE 102	Patrol Procedures	3
LAWE 111	Criminalistics I	3
LAWE 115	Community & Personal Relations	3
LAWE 220	Constitutional Law	4
LAWE 241	Correctional Internship I AND	1
LAWE 249	Corrections Seminar II	1
LAWE 252	Police Administration	3
LAWE 253	Criminal Procedure	3
LAWE 260	Criminal Evidence & Trial	3
LAWE 299	Special Topics in Law Enforcement 3	3
LAWE 214	Cyberlaw	3
SPAN 100	Survival Spanish for the Workplace	3

Law Enforcement Major

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
LAWE 101	Introduction to Criminal Justice	3
LAWE 104	Government and the Law	3
LAWE 120	Criminology	3
LAWE 253	Criminal Procedure	3
LAWE 102	Patrol Procedures	3
TOTAL CREDIT HOURS		**18**

Quarter 2

ENGL 102	Essay & Research	3
CIT 101	PC Applications 1	3
LAWE 115	Community & Personal Relations	3
MATH 101	Business Mathematics	5
	OR	
MATH 102	Beginning Algebra	4
LAWE 204	Juvenile Procedures	3
TOTAL CREDIT HOURS		**16 - 17**

Quarter 3

COMM 105	Speech	3
LAWE 125	Traffic Accident Investigation	3
LAWE 252	Police Administration	3
SSCI 101	Cultural Diversity	
	OR	
ANTH 240	Forensic Anthropology	5
LAWE 271	Contemporary Issues in Criminal Justice	3
TOTAL CREDIT HOURS		**17**

Quarter 4

LAWE 110	Criminal Investigation I	4
LAWE 268	Hazardous Materials	3
LAWE 212	Ohio Criminal Codes	4
LAWE 111	Criminalistics I	3
LAWE 210	Crisis Intervention	3
TOTAL CREDIT HOURS		**17**

Quarter 5

ENGL 204	Technical Writing	
	OR	
ENGL 200	Business Communications	3
LAWE 112	Criminal Investigation II	4
NSCI 101	Natural Science I	
	OR	
CHEM 111	Elem. Chemistry	5
LAWE 260	Criminal Evidence & Trial	3
LAWE XXX	Law Enforcement Electives	3
TOTAL CREDIT HOURS		**18**

Quarter 6

HUM XXX	Humanities 111, 112, 113, 151, 152 or 224	5
LAWE 220	Constitutional Law	3
EMS 100	Crash Injury Management	2
LAWE 136	Terrorism	3
LAWE 256	LE Practicum I	2
LAWE 257	LE Practicum Seminar I	1
LAWE XXX	Law Enforcement Elective	3
TOTAL CREDIT HOURS		**19**
TOTAL DEGREE CREDIT HOURS		**106**

Technical Electives must be selected from the following list of courses:

LAWE 113	Criminalistics II	3
LAWE 121	Juvenile Delinquency	3
LAWE 124	Penology	3
LAWE 128	Special Category Offender	3
LAWE 205	Contemporary Corrections	3
LAWE 208	Community Based Corrections	3
LAWE 211	Institutional Corrections	3
LAWE 219	Correctional Law	3
LAWE 221	Counseling Probation and Parole	4
LAWE 223	Correctional Administration	3
LAWE 260	Criminal Evidence and Trial	3
LAWE 299	Special Topics in Law Enforcement	3
LAWE 214	Introduction to Cyberlaw	3
SPAN 100	Survival Spanish for the Workplace	3
LAWE 276	Criminalistics III	3

Law Enforcement Management Major

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
LAWE 104	Government and the Law	3
LAWE 120	Criminology	3
LAWE 150	Administration of Justice	3
LAWE 252	Police Administration	3
TOTAL CREDIT HOURS		**15**

Quarter 2

ENGL 102	Essay and Research	3
CIT 101	PC Applications 1	3
MATH 101	Business Math	5
LAWE 155	Managing Police Operations	4
LAWE 218	Supervision of Public Service Personnel	3
TOTAL CREDIT HOURS		**18**

Quarter 3

COMM 105	Speech	3
HRM 121	Human Resources Management	4
LAWE 153	Civil Liability in Law Enforcement	4
SSCI 103	Social Problems	5
TOTAL CREDIT HOURS		**16**

Quarter 4

HRM 220	Labor Relations	5
LAWE 273	Legal Computing	2
LAWE 232	Task Force/Major Case Management	3
ACCT 106	Introduction to Accounting	5
TOTAL CREDIT HOURS		**15**

Quarter 5

ENGL 200	Business Communications	
	OR	
ENGL 208	Communications for Mass Media	3
LAWE XXX	Law Enforcement Elective	3
LAWE 231	Criminal Justice Plan and Analysis	3
LAWE 220	Constitutional Law	3
NSCI 101	Natural Science I	5
TOTAL CREDIT HOURS		**17**

Quarter 6

HUM xxx	Humanities 111, 112, 113, 151, 152 or 224	5
LAWE xxx	Law Enforcement Elective	3
LAWE 242	Community Policing	4
LAWE 275	Police Management Assessment	4
LAWE 271	Contemporary Issues in Criminal Justice	2
LAWE 136	Terrorism	3
TOTAL CREDIT HOURS		**21**
TOTAL DEGREE CREDIT HOURS		**102**

Technical Electives must be selected from the following list of courses:

LAWE 243	Forensic Science for Law Enforcement Managers	3
LAWE 244	Budget & Grant Writing for Criminal Justice Administrators	3
LAWE 245	Media and the Police	3
ANTH 240	Forensic Anthropology	5
LAWE 214	Cyberlaw	3
SPAN 100	Survival Spanish for the Workplace	3

Law Enforcement Major - Academy Track

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
LAWE 101	Introduction to Criminal Justice	3
LAWE 104	Government and the Law	3
LAWE 120	Criminology	3
LAWE 253	Criminal Procedure	3
TOTAL CREDIT HOURS		**15**

Quarter 2

ENGL 102	Essay and Research	3
MATH 101	Business Mathematics	5
LAWE 204	Juvenile Procedures	3
SSCI 101	Cultural Diversity or	5
SOC 101	Introduction to Sociology	5
TOTAL CREDIT HOURS		**16**

Quarter 3

COMM 105	Speech	3
NSCI 101	Natural Science I	5
CIT 101	PC Applications 1	3
LAWE 124	Penology	3
TOTAL CREDIT HOURS		**14**

Quarter 4

LAWE 111	Criminalistics I	3
LAWE 271	Contemporary Issues in Law Enforcement	3
SPAN 100	Survival Spanish for the Workplace	3
LAWE 136	Terrorism	3
TOTAL CREDIT HOURS		**12**

Quarter 5

ENGL 200	Business Communications	
	OR	
ENGL 204	Technical Writing	3
LAWE 256	LE Practicum I	2
LAWE 257	LE Practicum Seminar I	1
HUM XXX	Humanities 111, 112, 113, 151, 152 or 224	5
LAWE 260	Criminal Evidence and Trial	3
TOTAL CREDIT HOURS		**14**

Quarter 6

* LAWE 110	Criminal Investigation I	4
* LAWE 220	Constitutional Law	3
* LAWE 102	Patrol Procedures	3
* LAWE 125	Traffic Accident Investigation	3
* LAWE 265	Police Physical Fitness	3
* LAWE 210	Crisis Intervention	3
TOTAL CREDIT HOURS		**19**

Quarter 7

* LAWE 264	Police Firearms	3
* LAWE 263	Arrest and Control	3
* LAWE 212	Ohio Criminal Codes	4
* LAWE 112	Criminal Investigation II	4
* LAWE 115	Community & Personal Relations	3
* LAWE 261	Defensive Driving and Emergency Response	2
TOTAL CREDIT HOURS		**19**
TOTAL DEGREE CREDIT HOURS		**108**

*These classes contain Student Performance Objectives and attendance must be maintained.

Technical Elective must be selected from the following list of courses:

LAWE 113	Criminalistics II	3
LAWE 121	Juvenile Delinquency	3
LAWE 124	Penology	3
LAWE 128	Special Category Offender	3
LAWE 205	Contemporary Corrections	3
LAWE 208	Community Based Corrections	3
LAWE 211	Institutional Corrections	3
LAWE 219	Correctional Law	3
LAWE 221	Counseling Probation and Parole	4
LAWE 223	Correctional Administration	3
LAWE 299	Special Topics in Law Enforcement	3
LAWE 214	Cyberlaw	3

Logistics (See Supply Chain Management)

Marketing

Marketing Associate Degree
Customer Service Major
Direct Marketing Major
Direct Marketing Certificate
e-Commerce Major
e-Commerce Certificate
Retail Management Major

Marketing is at the heart of what every business must do to be successful: get and keep 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, market research, 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 a distance learning format.

The Customer Service, Direct Marketing, e-Commerce and Retail Management majors build on a solid foundation in marketing to provide advanced skills in these specialized areas. The Customer Service major focuses on customer retention, and customer loyalty and the specific financial impact of these areas on corporate profitability. The Direct Marketing major provides graduates 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 e-Commerce major is designed to provide marketing professionals a broad-based understanding of the various components of e-commerce including consumer behavior, electronic payment systems, elements of multimedia design, interactive marketing communications and intellectual property law. The certificate is recommended for students who have significant educational background and/or work experience in general marketing principles, retailing, finance and accounting. 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.

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:

- Demonstrate knowledge of the issues involved in making marketing decisions and the environmental forces that impact these decisions.
- Demonstrate knowledge of the major communications tools used in marketing with particular emphasis on developing a creative brief.
- Understand the market research process and be able to develop valid market research instruments.
- Demonstrate knowledge of how consumer behavior impacts overall marketing strategy and influences the purchaser's decision buying process.
- Comprehend the sales process and understand how it relates to consumer and business-to-business purchasing.
- Identify issues that arise in global marketing and describe the basic mechanisms for doing business in foreign markets.
- Understand various consumer and industrial systems of distribution and supply chain management.
- Demonstrate the interpersonal and supervisory skills necessary for successful communication among employees and between customer service and customers.
- Describe the logistics of dealing with suppliers, merchandise handling, inventory control and all phases of basic store operations.
- Participate in the development of a comprehensive direct marketing campaign.
- Describe the components of successful e-commerce business model and their interrelationship.
- Understand the Internet and its business marketing functionality and demonstrate how its relationship to traditional marketing activity.
- Understand the role of ethical decision making in the business world.

Customer Service Major

In addition to the Marketing competencies, a graduate with a Customer Service major will be able to:

- Analyze customer requirements.
- Handle problem transactions and difficult customers.
- Apply oral and written communication skills to problem solving.
- Describe the elements of effective customer service as they relate to customer acquisition, growth and retention.
- Demonstrate the interpersonal and supervisory skills necessary for successful communication among employees and between customer service and customers.
- Be able to lead, motivate and empower teams of call service representatives.

Direct Marketing Major

In addition to the Marketing competencies, a graduate with a Direct Marketing major will be able to:

- Define and develop a target market and select the most appropriate methods to reach it.
- Select and use the appropriate methodology to assess the costs of direct marketing efforts.
- Understand and be able to utilize interactive direct marketing media.
- Plan and implement telemarketing campaigns for purposes of direct selling, fund-raising, and business-to-business sales.
- Integrate creative activities and outcomes with appropriate direct marketing techniques.

e-Commerce Major

In addition to the Marketing competencies, a graduate with an e-Commerce major will be able to:

- Possess an overview of the technical and marketing aspects of e-commerce.
- Understand the forces impacting consumer decision-making in an online environment.
- Select and use market research methodologies appropriate to an online environment.
- Develop and analyze the effective use of various online marketing communications options including online selling, Web-based promotions and permission marketing.
- Understand the fundamentals of setting up the financial back-end processing required in e-business.
- Plan and implement e-commerce/e-business campaigns.

Retail Management Major

In addition to the Marketing competencies, a graduate with a Retail Management major will be able to:

- Explain all facets of the buying and selling of merchandise.
- Exhibit knowledge of merchandise management including planning, control, and evaluation of the merchandise mix.
- Identify the various types of stock control systems.
- Perform the various functions of store operations.
- Develop and execute sales promotion activities including merchandise presentations.
- Describe the logistics of dealing with suppliers, merchandise handling, receiving and stocking.
- Demonstrate an understanding of all phases of basic store operations.
- Demonstrate an understanding of consumer buying behavior and the psychological factors influencing a customer's decision as to where to shop.
- Comprehend retail information systems and demonstrate the ability to use the data productively in problem solving and decision making.
- Demonstrate an understanding of mathematical tools that aid in merchandise planning, selection and pricing.

Marketing Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 103	Beginning Algebra II	4
MKTG 111	Marketing Principles	5
BMGT 257	Project Management	3
IMMT 100	Digital Literacy	2
TOTAL CREDIT HOURS		**17**
Quarter 2		
ENGL 102	Essay and Research	3
LEGL 264	Legal Environment of Business	4
MKTG 140	Introduction to Advertising & Promotion	4
MKTG 122	Business & the Internet	3
ACCT 106	Introduction to Accounting I	5
TOTAL CREDIT HOURS		**19**

Quarter 3

COMM 105	Speech	3
ACCT 107	Introduction to Accounting II	5
MKTG 101	Introduction to Retailing	
	OR LOGI 100 Principles of Supply Chain Management	5
MKTG 131	Market Research Principles	3
MKTG 141	Integrated Marketing Communications	4
TOTAL CREDIT HOURS		**20**

Quarter 4

ENGL 200	Business Communication	3
HUM xxx	Humanities 111,112,113,151,152 or 224	5
MKTG 221	Consumer Behavior	3
MKTG 229	Organizational Marketing	3
FMGT 201	Business Finance	5
TOTAL CREDIT HOURS		**19**

Quarter 5

MKTG 150	Introduction to eCommerce	3
MKTG 226	Customer Service Principles & Practices	4
MKTG 223	Sales Principles & Practices	4
MKTG 236	Direct Marketing	3
NSCI 101	Natural Science I	5
TOTAL CREDIT HOURS		**19**

Quarter 6

MKTG 270	Global Marketing/IBPF	6
MKTG 241	Marketing Practicum I	4
MKTG 242	Marketing Seminar I	2
MKTG xxx	Approved Elective	3
TOTAL CREDIT HOURS		**15**
TOTAL DEGREE CREDIT HOURS		**109**

Technical Electives

Any advisor approved courses from the following list can be used for the Marketing Elective:

ECON 200	Principles of Microeconomics	5
HRM 121	Human Resources Management .	4
MKTG 142	Media Buying	3
MKTG 146	Non Profit Marketing	3
MKTG 145	Services Marketing	3
MKTG 224	Public Relations	3
MKTG 237	Database Marketing	3
MKTG 251	Practicum II	4
MKTG 252	Seminar II	2
MKTG 285	Advertising/Promotion on the Web	1
MKTG 286	Customer Service on the Web	1
MKTG 287	Public Relations on the Web	1
MKTG 288	Market Research on the Web	1
MKTG 289	Direct Marketing on the Web	1
MKTG 290	Government Marketing on the Web	1
MKTG 292	Non Profit Marketing Using the Web	1

Customer Service Major

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 103	Beginning Algebra II	4
MKTG 111	Marketing Principles	5
BMGT 257	Project Management	3
IMMT 100	Digital Literacy	2
TOTAL CREDIT HOURS		**17**

Quarter 2

ENGL 102	Essay and Research	3
MKTG 140	Introduction to Advertising & Promotion	4
MKTG 122	Business & the Internet	3
MKTG 226	Customer Service Principles & Practices	4
MKTG 229	Organizational Marketing	3
TOTAL CREDIT HOURS		**17**

Quarter 3

COMM 105	Speech	3
ACCT 106	Introduction to Accounting I	5
MKTG 101	Introduction to Retailing	5
MKTG 131	Market Research Principles	3
NSCI 101	Natural Science I	5
TOTAL CREDIT HOURS		**21**

Quarter 4

ACCT 107	Introduction to Accounting II	5
ENGL 200	Business Communication	3
HUM xxx	Humanities 111,112,113,151, 152 or 224	5
MKTG 221	Consumer Behavior	3
MKTG 223	Sales Principles & Practices	4
TOTAL CREDIT HOURS		**20**

Quarter 5

FMGT 201	Business Finance	5
HRM 121	Human Resources Management	4
MKTG xxx	Approved Elective	3
TOTAL CREDIT HOURS		**12**

Quarter 6

MKTG 241	Marketing Practicum I	4
MKTG 242	Marketing Seminar I	2
MKTG 270	Global Marketing International Business Practice Firm	6
TOTAL CREDIT HOURS		**12**
TOTAL DEGREE CREDIT HOURS		**99**

Technical Electives

Any advisor approved courses from the following list can be used for the Marketing Elective:

ECON 200	Principles of Microeconomics	5
MKTG 141	Integrated Marketing Communications	3
MKTG 142	Media Buying	3
MKTG 145	Services Marketing	3
MKTG 146	Non Profit Marketing	3
MKTG 224	Public Relations	3
MKTG 236	Direct Marketing Principles	3
MKTG 285	Advertising/Promotion on the Web	1
MKTG 286	Customer Service on the Web	1
MKTG 287	Public Relations on the Web	1
MKTG 288	Market Research on the Web	1
MKTG 289	Direct Marketing on the Web	1
MKTG 290	Government Marketing on the Web	1
MKTG 292	Non Profit Marketing Using the Web	1
BMGT 272	Case Studies	3
LOGI 100	Principles of Supply Chain Management	5

Direct Marketing Major

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 103	Beginning Algebra II	4
MKTG 111	Marketing Principles	5
BMGT 257	Project Management	3
IMMT 100	Digital Literacy	2
TOTAL CREDIT HOURS		**17**

Quarter 2

ENGL 102	Essay and Research	3
MKTG 140	Introduction to Advertising & Promotion	4
MKTG 122	Business & the Internet	3
MKTG 226	Customer Service Principles & Practices	4
MKTG 229	Organizational Marketing	3
TOTAL CREDIT HOURS		**17**

Quarter 3

COMM 105	Speech	3
ACCT 106	Introduction to Accounting I	5
MKTG 101	Introduction to Retailing or LOGI 100 Supp Chain Mgmt	5
MKTG 131	Market Research Principles	3
NSCI 101	Natural Science I	5
TOTAL CREDIT HOURS		**21**

Quarter 4

ENGL 200	Business Communication	3
MKTG 221	Consumer Behavior	3
ACCT 107	Introduction to Accounting II	5
MKTG 236	Direct Marketing Principles	4
MKTG xxx	Electives	3
TOTAL CREDIT HOURS		**18**

Quarter 5

MKTG 263	Direct Marketing Creative & Financial Analysis	4
MKTG 237	Database Marketing	3
FMGT 201	Business Finance	5
HUM xxx	Humanities 111,112,113,151,152 or 224	5
TOTAL CREDIT HOURS		**17**

Quarter 6

MKTG 241	Marketing Practicum I	4
MKTG 242	Marketing Seminar I	2
MKTG 270	Global Marketing/IBPF	6
TOTAL CREDIT HOURS		**12**
TOTAL DEGREE CREDIT HOURS		**102**

Technical Electives

Any course from the following list can be used to fulfill the marketing elective requirement:

ECON 200	Principles of Microeconomics	5
MKTG 141	Integrated Marketing Communications	3
MKTG 142	Media Buying	3
MKTG 146	Non Profit Marketing	3
MKTG 145	Services Marketing	3
MKTG 223	Sales Principles & Practices	4
MKTG 224	Public Relations	3
MKTG 285	Advertising & Promotion on the Web	1
MKTG 286	Customer Service on the Web	1
MKTG 287	Public Relations on the Web	1
MKTG 288	Market Research on the Web	1
MKTG 289	Direct Marketing on the Web	1
MKTG 290	Government Marketing on the Web	1
MKTG 292	Non Profit Marketing Using the Web	1
HRM 121	Human Resources Management	4

Direct Marketing Certificate

COURSE		**CR**
Quarter 1		
MKTG 236	Direct Marketing	3
Quarter 2		
MKTG 237	Database Marketing	3
MKTG 263	Direct Marketing Creative & Financial Analysis	4
Quarter 3		
MKTG 122	Business and the Internet	3
TOTAL CERTIFICATE CREDITS		**13**

e-Commerce Major

OURSE		**CR**
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 103	Introduction to Algebra II	4
MKTG 111	Marketing Principles	5
IMMT 121	Introduction to Multimedia	2
TOTAL CREDIT HOURS		**14**
Quarter 2		
ENGL 102	Essay & Research	3
LEGL 250	Intellectual Property Law	4
MKTG 150	Intro to E-Commerce	3
MKTG 221	Consumer Behavior	3
ACCT 106	Intro to Accounting I	5
TOTAL CREDIT HOURS		**18**
Quarter 3		
COMM 110	Conf & Group Discussions	3
MKTG 229	Organizational Marketing	3
MKTG 140	Introduction to Advertising & Promotion	4
MKTG 131	Market Research Principles	3
ACCT 107	Intro to Accounting II	5
TOTAL CREDIT HOURS		**18**
Quarter 4		
ENGL 208	Communication for Mass Media	3
HUM 1xx	Civ I/II/III or American History I/II/III	5
FMGT 201	Business Finance	5
IMMT 150	Introduction to Audio/Video Production	4
IMMT 122	Digital Media Preparation	2
TOTAL CREDIT HOURS		**19**
Quarter 5		
BMGT 257	Project Management	3
MKTG 226	Customer Services Principles & Practices	4
MKTG 236	Direct Marketing	3
MKTG 265	Understanding Interactive Users	3
MKTG 141	Integrated Marketing Communications	4
NSCI 101	Natural Science I	5
TOTAL CREDIT HOURS		**22**
Quarter 6		
MKTG 270	Global Marketing	6
MKTG 241	Marketing Practicum I	4
MKTG 242	Marketing Seminar I	2
MKTG 266	Marketing Communications on the Web	3
TOTAL CREDIT HOURS		**15**
TOTAL DEGREE CREDIT HOURS		**106**

Approved Electives

MKTG 142	Media Buying	3
MKTG 145	Services Marketing	3
MKTG 146	Non Profit Marketing	3
MKTG 224	Public Relations	3
MKTG 229	Organizational Marketing	3
MKTG 237	Database Marketing	3
MKTG 251	Marketing Practicum II	4
MKTG 252	Marketing Seminar II	2
MKTG 285	Advertising & Promotion on the Web	1
MKTG 286	Customer Service on the Web	1
MKTG 287	Public Relations on the Web	1
MKTG 288	Market Research on the Web	1
MKTG 289	Direct Marketing on the Web	1
MKTG 290	Government Marketing on the Web	1
MKTG 292	Non Profit Marketing Using the Web	1
MATH 135	Elementary Statistics	5
ECON 200	Principles of Microeconomics	5
HRM 121	Human Resources Management	4

Note: Additional course are required of students interested in transferring to 4-year institutions.

e-Commerce Certificate

Course		**CR**
Quarter 1		
MKTG 150	Introduction to e-Commerce	3
MKTG 236	Direct Marketing	3
Total Credit Hours		**6**
Quarter 2		
MKTG 265	Understanding Interactive Users	3
MKTG 267	Electronic Payment System	3
IMMT 111	The Digital Revolution	4
Total Credit Hours		**10**
Quarter 3		
MKTG 266	Marketing Communications on the Web	3
LEGL 250	Intellectual Property Law	3
Total Credit Hours		**6**
Total Certificate Hours		**22**

Retail Management Major

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 103	Introduction to Algebra II	4
MKTG 101	Introduction to Retailing	5
MKTG 111	Marketing Principles	5
IMMT 100	Digital Literacy	2
TOTAL CREDIT HOURS		**19**
Quarter 2		
ENGL 102	Essay & Research	3
BMGT 257	Project Management	3
MKTG 223	Sales Principles & Practices	4
ACCT 106	Introduction to Accounting I	5
MKTG 150	Introduction to e-Commerce	3
TOTAL CREDIT HOURS		**17**
Quarter 3		
COMM 105	Speech	3
ACCT 107	Introduction to Accounting II	5
MKTG 140	Introduction to Advertising & Promotion	4
MKTG 205	Quantitative Methods in Retail	5
TOTAL CREDIT HOURS		**17**
Quarter 4		
ENGL 200	Business Communication	3
HUM 1xx	Civ I/II/III or American History I/II/III	5
BMGT 218	Management Training for Supervisors	5
MKTG 226	Customer Service Principles & Practices	4
TOTAL CREDIT HOURS		**17**
Quarter 5		
FMGT 201	Business Finance	5
MKTG 131	Marketing Research	3
MKTG 241	Marketing Practicum I	4
MKTG 242	Seminar in Marketing I	2
NSCI 101	Natural Science I	5
TOTAL CREDIT HOURS		**19**
Quarter 6		
MKTG 213	Merchandise Buying and Management	4
MKTG 270	Global Marketing/IBPF	6
MKTG xxx	Approved Electives	6
TOTAL CREDIT HOURS		**16**
TOTAL DEGREE CREDIT HOURS		**106**

Approved Electives

MKTG 142	Media Buying	3
MKTG 146	Non Profit Marketing	3
MKTG 145	Services Marketing	3
MKTG 236	Direct Marketing	3
MKTG 237	Database Marketing	3
MKTG 285	Advertising & Promotion on the Web	1
MKTG 290	Government Marketing on the Web	1
MKTG 292	Non Profit Marketing Using the Web	1
LOGI 100	Principles of Supply Chain Management	5

Massage Therapy

Massage Therapy Associate Degree
Massage Therapy Certificate

The Massage Therapy program meets all requirements to sit for the State of Ohio Medical Board examination for Massage Therapy. It prepares the students to work in the massage therapy field in but not limited to: health and fitness environments, salon and day spas, medical offices, private practices and many other opportunities.

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

- Demonstrate and be able to perform soft tissue manipulation techniques which may be appropriate for the 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 complimentary 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 an understanding of the State Medical Board of Ohio acceptable ethical standards, scope of practice and standards of practice.
- Demonstrate the ability to provide ethical care for their patients.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Massage Therapy Degree Program

- High school graduate or G.E.D. equivalency
- Placement into ENGL 101 - Beginning Composition
- Placement into MATH 101 - Business Math
- Student must obtain a Certificate of Preliminary Education from the State Medical Board of Ohio

Massage Therapy Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
HIMT 121	Advanced Medical Terminology	3
BIO 161	Human Anatomy	5
MULT 171	Current Issues in HIV	1
TOTAL CREDIT HOURS		**12**

Quarter 2

MASS 271	Massage Anatomy & Physiology I	5
MASS 261	Massage Techniques I	6
MASS 235	Massage Law and Business Principles	3
TOTAL CREDIT HOURS		**14**

Quarter 3

MASS 236	Medical Ethics for Massage Therapist	3
MASS 262	Massage Techniques II	6
MASS 272	Massage Anatomy & Physiology II	5
TOTAL CREDIT HOURS		**14**

Quarter 4

MASS 292	Massage Practicum I	5
MASS 273	Massage Anatomy & Physiology III	5
TOTAL CREDIT HOURS		**10**

Quarter 5

MASS 294	Massage Practicum II	5
MASS XXX	Massage Elective Course	2-5
MASS 274	Massage Anatomy and Physiology IV	5
TOTAL CREDIT HOURS		**12-15**

Quarter 6

MULT 176	Fundamentals of Herbology	4
ENGL 102	Essay & Research	3
HUM xxx	Humanities 111, 112, 113, 151,152 or 224	5
TOTAL CREDIT HOURS		**12**

Quarter 7

SSCI XXX	101, 102, 104, 105 or SOC 202	5
ENGL 200	Business Communications	3
MATH 101	Business Math	5
TOTAL CREDIT HOURS		**13**

Quarter 8

MASS 298	Special Topics in Massage	3
COMM 105	Speech	3
MULT 177	Introduction to Holistic Healing	4
TOTAL CREDIT HOURS		**10**
TOTAL DEGREECREDIT HOURS		**97-100**

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

Massage Therapy Certificate

Specific Program Admissions Information

Listed below are prerequisite requirements for admission to the Massage Therapy Certificate Program.

PREREQUISITE COURSES:

Placement into ENGL 101

HIMT 121	Advanced Medical Terminology	3
BIO 161	Human Anatomy	5
MULT 171	Current Issues in HIV	1

COURSE		**CR**
Quarter 1		
MASS 261	Massage Technique I	6
MASS 271	Massage Anatomy & Physiology I	5
TOTAL CREDIT HOURS		**11**

Quarter 2

MASS 262	Massage Technique II	6
MASS 272	Massage Anatomy & Physiology II	5
MASS 235	Massage Law and Business Principles	3
TOTAL CREDIT HOURS		**14**

Quarter 3

MASS 236	Medical Ethics for Massage Therapists	3
MASS 273	Massage Anatomy & Physiology III	5
MASS 292	Massage Practicum I	5
TOTAL CREDIT HOURS		**13**

Quarter 4

MASS XXX	Massage Elective Course	2-5
MASS 294	Massage Practicum II	5
MASS 274	Massage Anatomy and Physiology IV	5
TOTAL CREDIT HOURS		**12-15**
TOTAL CERTIFICATE CREDIT HOURS		**50-53**

Technical Electives for Massage Therapy Associate of Applied Science Degree Program and Massage Therapy Certificate Program

MASS 298	Special Topic in Massage Therapy	2
MULT 103	Responding to Emergencies	2
MULT 175	Principles of Homeopathy	4
MULT 176	Fundamentals of Herbology	4
MULT 177	Holistic Healing Methods	4
MULT 275	Advanced Homeopathic Theories	4
SES 231	Exercise Physiology	5
SES 241	Kinesiology	5

STUDENTS MUST RECEIVE A LETTER GRADE OF C OR BETTER IN ALL MASSAGE THERAPY COURSE WORK.

Mechanical Engineering Technology

The Mechanical Engineering Technology program is designed to train students in technology based, entry-level, occupations related to the mechanical and manufacturing engineering fields. Many diverse occupations find their origins in the mechanical field. These occupations include a variety of titles in the areas of drafting, production, testing, design, and analysis, to name but a few. Students graduating with an Associate of Applied Science Degree in the Mechanical Engineering Technology are qualified to play a support role in engineering professions in the industrial, consulting, scientific research, and manufacturing communities.

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 the manufacturing area and other applicable work situations to improve any and all quality measures.

Mechanical Engineering Technology Associate Degree

COURSE		CR
Quarter 1		
MATH 111	Technical Math I	4
MECH 110	Introduction to Manufacturing Technology	3
MECH 111	Manufacturing Processes	4
ENGL 101	Beginning Composition	3
MECH 112	Computer Applications in Manufacturing	3
TOTAL CREDIT HOURS		**17**
Quarter 2		
MATH 112	Technical Math II	4
PHYS 181	Physics (Mechanics)	4
EET 103	Investigating Electricity	4
MECH 120	Mechanical Drafting I	3
TOTAL CREDIT HOURS		**15**
Quarter 3		
ENGL 102	Essay and Research	3
COMM 105	Speech	3
MATH 135	Elementary Statistics	5
MECH 131	Hydraulics	3
MECH 250	Materials Science	3
TOTAL CREDIT HOURS		**17**
Quarter 4		
ENGL 204	Technical Writing	3
MECH 240	Machine Tools	4
MECH 251	Computer Aided Drafting I	3
MECH 243	Robotics	3
MECH 130	Statics	3
TOTAL CREDIT HOURS		**16**
Quarter 5		
HUM xxx	Humanities 111,112,113,151, 152 or 224	5
MECH 252	Computer Programming for Technicians	3
MECH 253	Numerical Control	3
MECH 244	Statistical Process Control	3
MECH 242	Strength of Materials	3
MECH 262	Computer Aided Drafting II	3
TOTAL CREDIT HOURS		**20**
Quarter 6		
SSCI 10X	Social Science 101, 102, 104, or 105	5
MECH 260	Basic Mechanisms	4
MECH 261	Machine Design	4
MECH 263	Computer Aided Manufacturing	4
MECH 264	Computer Aided Drafting III	3
TOTAL CREDIT HOURS		**20**
TOTAL DEGREE CREDIT HOURS		**105**

Medical Assisting

The Medical Assisting program prepares graduates to work as medical assistants primarily in ambulatory settings such as medical offices and clinics. Medical assistants are multi-skilled professionals who assist in patient care management. They perform a broad range of clinical and administrative duties, including scheduling and receiving patients, establishing and maintaining medical records, performing secretarial skills, handling telephone calls, writing correspondence and managing finances. Medical assistants are a valuable member of the health-care team, and job opportunities are numerous in central Ohio and nationwide. Graduates of the program are eligible to take the National Certification examination which is administered three times a year.

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, and 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 including preparation and administration of oral and parenteral medications.
- Maintain and perform inventory of administrative and clinical supplies and equipment following office policy.

Specific Program Admissions Information

Students who wish to be admitted to the Medical Assisting Program must contact a health advisor for pre-program advising. Students who wish to attend school part-time must complete non-Medical Assisting courses prior to entering the program and are expected to stay on schedule with their program of study requirements. Currently, admission is open to all interested and qualified students. Students must apply to the program by June 30th of each year. Students are admitted during the summer quarter of each year for the following autumn quarter.

Listed below are additional requirements for admission to the Medical Assisting program.

- High school graduate or G.E.D. equivalency
- Placement into MATH 102 – Beginning Algebra I OR completion of DEV 031 with a grade of "C" or higher.
- Placement into ENGL 101 - Beginning Composition or completion of ENGL 100 with a grade of "C" or higher.
- Placement OUT of reading requirements or completion of DEV/ESL courses
- Attend a Medical Assisting Program information session. Program applications are available ONLY at the information sessions.
- At least two-years documented full-time equivalent work experience in a physician's office or hospital, OR completion of MULT 101 with a "C" or better.
- Proficiency in physician's office computer applications or health-care computer application OR CIT 101.
- Current Heart Association Health-Care Provider CPR certification AND current Red Cross First Aid certification OR completion of MULT 103 with a "C" or better.
- BIO 121 and 122 require completion of high school biology and chemistry OR BIO 100 AND CHEM 100 within the last five years. Contact the Biological and Physical Sciences Department for the most current information at (614) 287-2522 or 5107, They are located in Nestor Hall, 4th Floor.

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 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, Tuberculosis, mumps, rubella, rubeola, etc.

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 Medical Assisting program must be aware of this slight, but real, potential. Students are required to maintain personal health insurance.

Statement Regarding Pregnancy:
Student disclosure of her pregnancy status to program personnel is strictly voluntary. While the college does not require that a pregnant student disclose her pregnancy, the college encourages any student who is pregnant or may become pregnant to discuss with her advisor any potential risks and limitations.

Pregnancy does not preclude a student from remaining in a health-related program. Students disclosing a pregnancy are encouraged to have their health-care practitioner document any restrictions that may assist the college in providing reasonable accommodations when required.

Should the student's health-care provider indicate that there are restrictions, once notified, the college is required to abide by the restrictions. If a student is placed on restrictions by her health-care provider and these restrictions are significant enough to compromise the student's ability to continue in a laboratory course or clinical placement, the student may be required to withdraw from the course and re-enter the program at a later date, following delivery. If a health-care provider indicates there are no restrictions, the student may continue in her laboratory or clinical course without any changes.

Medical Assisting Certificate Program

COURSE		CR
Quarter 1		
MAT 100	Introduction to Medical Assisting	3
BIO 121	Anatomy, Physiology & Pathophysiology I	5
MULT 190	Radiation Protection for General Machine Operator	2
MAT 111	Clinical Procedures-Lecture	3
MAT 113	Clinical Procedures-Lab	2
TOTAL CREDIT HOURS		**15**
Quarter 2		
ENGL 101	Beginning Composition	3
MATH 100	Calculations and Dosages	2
BIO 122	Anatomy, Physiology & Pathophysiology II	5
MAT 121	Advanced Medical Assisting	5
MAT122	Advanced Office Procedures – Lect	2
MAT123	Advanced Office Procedures – Lab	1
TOTAL CREDIT HOURS		**18**
Quarter 3		
PSY 100	Introduction to Psychology	5
MAT236	Computer Applications in the Medical Office –Lecture	1
MAT237	Computer Applications in the Medical Office – Lab	2
MAT 230	Pharmacology	4
MAT 240	Physician's Office Laboratory	5
TOTAL CREDIT HOURS		**17**
Quarter 4		
MAT 290	Practicum	3
MAT 296	Seminar	1
MAT 260	Ethical and Professional Principles of the Medical Office	2
TOTAL CREDIT HOURS		**6**
TOTAL CERTIFICATE CREDIT HOURS		**56**

Medical Assisting Associate of Technical Studies Degree

COURSE		CR
Quarter 1		
MAT 100	Introduction to Medical Assisting	3
BIO 121	Anatomy, Physiology & Pathophysiology I	5
MULT 190	Radiation Protection for General Machine Operator	2
MAT 111	Clinical Procedures-Lecture	3
MAT 113	Clinical Procedures-Lab	2
TOTAL CREDIT HOURS		**15**
Quarter 2		
ENGL 101	Beginning Composition	3
MATH 100	Calculations and Dosages	2
BIO 122	Anatomy, Physiology & Physiology II	5
MAT 121	Advanced Medical Assisting	5
MAT122	Advanced Office Procedures – Lecture	2
MAT123	Advanced Office Procedures - Lab	1
TOTAL CREDIT HOURS		**18**
Quarter 3		
PSY 100	Introduction to Psychology	5
MAT236	Computer Applications in the Medical Office – Lecture	1
MAT237	Computer Applications in the Medical Office – Lab	2
MAT230	Pharrmacology	4
MAT 240	Physician's Office Laboratory	5
TOTAL CREDIT HOURS		**17**
Quarter 4		
MAT 290	Practicum	3
MAT 296	Seminar	1
MAT 260	Ethical and Professional Principles of the Medical Office	2
TOTAL CREDIT HOURS		**6**
Quarter 5		
ENGL 102	Essay and Research	3
HUM XXX	Humanities	5
BMGT 111	Management	5
HIMT 113	Managed Care Trends	2
BMGT 102	Managing Interpersonal Skills I	3
TOTAL CREDIT HOURS		**18**
Quarter 6		
ENGL 200	Business Communications	3
COMM 105/110	Speech **or** Group Discussion	3
BMGT 216	Business Ethics	3
LEGL 264	Legal Environment of Business	4
BMGT 103	Managing Interpersonal Skills II	3
TOTAL CREDIT HOURS		**16**
Quarter 7		
SSCI XXX	Social Science	5
BMGT 218	Management Training for Supervisors	5
BMGT 201	Creative Problem Solving	3
TOTAL CREDIT HOURS		**13**
TOTAL DEGREE CREDIT HOURS		**103**

Medical Laboratory Technology

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 six quarters 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 seventh quarter 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 in and surrounding Columbus within an approximate sixty-mile radius will be utilized for this ten-week clinical practicum.

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). Graduates are also eligible to take the certification examination administered by the National Credentialing Agency for Laboratory Personnel and become a certified clinical laboratory technician (CLT). 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 8410 West Bryn Mawr Ave, Chicago, IL 60631-3415, 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 Ohio Board of Regents recognizes Columbus State's MLT program as a "Program of Excellence."

Distance learning options for MLT lecture and MLT laboratory components are available for students currently working in a laboratory setting upon approval by the MLT program director.

Upon completion of the Associate Degree in Medical Laboratory Technology, the graduate should be able to demonstrate entry-level competencies in the following areas of professional practice:

- Collection and processing of biological specimens for analysis.
- Performance of analytical tests and statistical calculations on body fluids, cells, and products related to all routine areas of the clinical laboratory.
- Recognition of factors that affect procedures and results, and take appropriate action within predetermined parameters.
- Performance and monitoring quality control to evaluate analytical procedures within predetermined parameters.
- Performance of operation and preventive and corrective maintenance of routine laboratory equipment and instruments by referring to appropriate sources/reference materials for repairs.
- Relationship of laboratory findings to common disease processes.
- Utilization of the keyboard to interact with computerized instruments and laboratory information systems to keep accurate records, prepare reports, and transmit reports clearly and completely.
- Follow prescribed safety procedures in all areas of laboratory work.
- Meet requirements to take a national certifying examination for medical laboratory technicians.
- Application of basic scientific principles in learning new techniques and procedures.
- Recognition and adherence to established safety policies.
- Recognition of the responsibilities of other laboratory and health care personnel and interacting with them with respect for their jobs and patient care.
- Demonstration of professional conduct and interpersonal communication skills with patients, laboratory personnel, other health care professionals, and the public.
- Recognition and action upon one's need for continuing education as a function of growth and maintenance of professional competence.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Medical Laboratory Technology:

- Required high school courses with a grade of "C" or better or Columbus State equivalent courses with a grade of "C" or better within the last five years: Biology or BIO 100, Chemistry or CHEM 100.
- Placement into ENGL 101, or ENGL 111 or completion of ENGL 100 with a grade of "C" or better.
- Placement into MATH 135, or completion of MATH 103, with a grade of "C" or better.
- Completion of CHEM 113, CHEM 111, or CHEM 171 with a "C" or better.
- Completion of COMM 105 with a grade of "C" or better (admission criteria for ESL students only).
- Completion of MLT 100 with a grade of "C" or better.
- Demonstration of computer literacy (High School, work related, or CIT 101).
- Completed health record on file in the Health Records Office.
- Minimum GPA of 2.500 or better through most recently completed course work.

Medical Laboratory Technology Associate Degree

COURSE		CR
Quarter 1		
MLT 141	Hematology I (Admission to Program)	3
MLT 142	Hematology I Lab	3
ENGL 101	Beginning Composition	3
BIO 161	Human Anatomy	5
TOTAL CREDIT HOURS		**14**
Quarter 2		
MLT 130	Immunology	3
MLT 131	Immunology Lab	2
BIO 169	Human Physiology	5
MLT 120	Role & Responsibility of the MLT	1
MLT 121	Role & Responsibility of the MLT Lab	1
MATH 135	Elementary Statistics	5
TOTAL CREDIT HOURS		**17**
Quarter 3		
MLT 260	Clinical Chemistry	3
MLT 261	Clinical Chemistry Lab	3
BIO 115	General Microbiology	5
ENGL 102	Essay & Research	3
TOTAL CREDIT HOURS		**14**
Quarter 4		
MLT 250	Clinical Microbiology	4
MLT 251	Clinical Microbiology Lab	4
COMM 105	Speech	3
SSCI 10x	SSCI 101,102,104,105 or SOC 202	5
TOTAL CREDIT HOURS		**16**
Quarter 5		
MLT 220	Immunohematology	4
MLT 223	Immunohematology Lab	3
HUM xxx	HUM 111, 112, 113, 151 152, or 224	5
MULT 116	Venipuncture for Health Care Providers	2
XXX	Basic Studies Elective	2
TOTAL CREDIT HOURS		**16**
Quarter 6		
MLT 240	Hematology II	2
MLT 245	Hematology II Lab	2
MLT 242	Body Fluids	2
MLT 243	Body Fluids Lab	2
MLT 244	Case Studies	2
ENGL 200	Business Communications	3
TOTAL CREDIT HOURS		**13**
Quarter 7		
MLT 270	Clinical Practicum	5
MLT 271	Clinical Seminar	2
TOTAL CREDIT HOURS		**7**
TOTAL DEGREE CREDIT HOURS		**97**

Mental Health/Chemical Dependency/Mental Retardation

Mental Health Track
Chemical Dependency Track
Mental Retardation Track
Substance Abuse Prevention Track
Prevention Specialist Certificate
Community Living Specialist Certificate
Advanced Chemical Dependency Certificate
Advanced Mental Health Certificate
Advanced Mental Retardation Certificate

With social, economic, and moral issues constantly changing, society is faced with increasingly complex problems which require professional, caring helpers. This has created a high demand for human service specialists. These human service specialists have a professionally and personally challenging role in providing services to both children and adults with a variety of problems and/or disabilities. Graduates work with persons with mental retardation and/or developmental disabilities, emotional/mental difficulties, chemical dependency as well as individuals who have co-occurring disorders. Specialists also work in consultation with psychologists, educators, psychiatrists and social workers.

Innovative educational approaches including videotaping, simulated situations, role-playing, marathon group lab participation and discussion in small group seminars, are used to help students develop the knowledge, therapeutic skills and necessary attitudes 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 enables students to specialize in one of the following educational tracks during their second year: Mental Health, Chemical Dependency/Substance Abuse Prevention or Mental Retardation. The six-quarter, three-track program includes 560 hours of hands-on experience under the direct supervision of professionals in local agencies. Practicum experiences are available in a variety of community agencies which include mental health centers, group homes, state psychiatric hospitals, schools, workshops, private hospitals, rehabilitation facilities, drug and alcohol treatment centers, homeless shelters, supported living environments, youth treatment programs and treatment programs within the criminal justice system

Graduates who complete the Associate Degree program 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/Chemical Dependency and Mental Retardation program is accredited by the Council for Standards in Human Service Education.

The program also offers the following certificate programs:

Prevention Specialist Certificate
This 38-credit-hour certificate is open to students with an associate, bachelor or master's degree. Completion of this certificate meets educational practicum hours requirements for substance abuse prevention professional certification in the state of Ohio.

Community Living Specialist Certificate
A 54-58-credit-hour program for students who have, in the past, struggled with their own severe mental illness. Students make use of their coping skills to work effectively with persons with severe mental illness. Students participate in two to three clinical practicum experiences on a mental health community treatment team.

Advanced Chemical Dependency Certificate
A 59-credit-hour program for students with an associate, bachelor or master's degree in a related field. Completion of this certificate meets the 270 hours of acceptable chemical dependency training for CD licensure. Students have three or four supervised clinical practicum experiences including one with clients who have co-occurring disorders.

Advanced Mental Health Certificate
This 51-credit-hour program is open to students with an associate, bachelor or master's degree. The curriculum provides courses focused on knowledge and skills necessary to work in the mental health field. Students participate in four clinical practicum experiences in a variety of human service agencies.

Advanced Mental Retardation Certificate
This 52-credit-hour program is designed for students with an associate, bachelor or master's degree. The curriculum offers courses focused on knowledge and skills necessary to work with clients with MR/DD issues. Students participate in four clinical practicums in a variety of human service agencies.

Courses MHCR 112, MHCR 115, MHCR 135, MHCR 191, MHCR 241, MHCR 247, MHCR 258, MHCR 291 and MHCR 298 are approved by Ohio Department of Mental Retardation and Developmental Disabilities in obtaining adult service certification.

All technical courses in the chemical dependency track are accepted by ODADAS Credentialing Services and for renewal of social work licensure.

Upon completion of the Associate Degree in Mental Health/ Chemical Dependency/Mental Retardation, the graduate will be able to:

- Describe the philosophy and benefits of community support groups in the recovery process.
- Collect data and monitor progress.
- Use counseling skills.
- Plan for, lead and process groups.
- Apply conflict resolution and anger management skills.
- Formulate assessments.
- Demonstrate an awareness of and involvement in community advocacy activities.

- Interact effectively with diverse populations.
- Make appropriate referrals.
- Demonstrate ethical behavior.
- Develop and/or implement treatment/service plans.
- Develop and/or implement strategies to meet treatement/service goals.
- Apply service coordination/case management skills.
- Apply computer literacy skills.
- Demonstrate self-assessment skills.

In addition to the general outcomes listed above a graduate in the Chemical Dependency track will be able to:

- Identify and demonstrate the 12 Core Functions of a chemical dependency counselor.
- Recognize and identify significant signs and symptoms of chemical dependency using a variety of assessment tools.
- Identify varying levels of care for chemical dependency treatment and common criteria for appropriate referral.
- Identify relapse dynamics/triggers and utilize a variety of intervention strategies.

MH/CD/MR has articulation agreements with the following four-year colleges/universities: Ohio Dominican University, Otterbein College, Capital University, Franklin University, and 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 and prevention.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Mental Health/Chemical Dependency/Mental Retardation program.

- Submission of an official copy of high school transcript verifying graduation or GED to Records and Registration
- Attendance at a (voluntary) MH/CD/MR Program Orientation.
- Placement out of or completion of DEV 031 and 044.
- Completion of ENGL 101 and PSY 100 with a "C" or higher.
- Completion of the following five courses with a grade of "C"or higher:
    - MHCR 111 - Introduction to Mental Health
    - MHCR 112 - Introduction to Mental Retardation/Developmental Disabilities
    - MHCR 114 - Introduction to Chemical Dependency
    - MHCR 115 Introduction to Counseling
    - MHCR 117 Introduction to Documentation Skills
- Compliance with and completion of all additional program requirements outlined in the program's admission policy.
- Mandatory attendance at a group admissions interview with the Mental Health/Chemical Dependency/Mental Retardation admissions coordinator and clinical coordinator following satisfactory completion of all of the above.

Mental Health and Mental Retardation Tracks

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
PSY 100	Introduction to Psychology	5
MHCR 111	Introduction to Mental Health	4
MHCR 112	Introduction. to Mental Retardation	3
MHCR 114	Introduction. to Chemical Dependency	4
TOTAL CREDIT HOURS		**19**

Note: MHCR Introductory courses may betaken in any order

Quarter 2		
ENGL 102	Essay & Research	3
HUM xxx	Humanities 111,112,113,151,152 or 224	5
CIT 101	PC Applications 1	3
MHCR 115	Introduction to Counseling	4
MHCR 117	Introduction to Documentation Skills	2
TOTAL CREDIT HOURS		**17**

Note: MHCR Introductory courses may be taken in any order

Quarter 3		
PSY 230	Abnormal Psychology	5
PSY 240	Human Growth & Dev. Through the Life Span	4
MHCR 135	Intervention Strategies	3
MHCR 191A	Fundamentals in Human Service Practice	4
MHCR 191B	Fundamentals in Human Service Practice/ Practicum	4
MHCR 150	Pharmacology in Human Services	2
TOTAL CREDIT HOURS		**22**

Quarter 4		
SSCI 101	Cultural Diversity	5
*MHCR 241	Counseling Skills	4
*MHCR 247	Teaching and Supporting Strategies	4
*MHCR 291	Practicum in Teaching/Supporting Strategies	4
TOTAL CREDIT HOURS		**17**

* Offered only during the day Autumn Quarter and only during the evening Winter Quarter

Quarter 5		
COMM 105	Speech	3
ENGL 202	Writing for Health and Human Services	3
*MHCR 251	Social Policy	4
*MHCR 253	Therapeutic Group Work Skills	4
***MHCR 295**	**Practicum in Therapeutic Group Work Skills**	**4**
TOTAL CREDIT HOURS		**18**

* Offered only during the day Winter Quarter and only during the evening Spring Quarter

Quarter 6		
BIO 111	Intro to Biology I	5
*MHCR 258	Service Coordination/Case Management	4
*MHCR 298	Practicum in Service Coordination/Case Mgmt.	4
*MHCR 299	Portfolio Completion/Capstone	1
TOTAL CREDIT HOURS		**14**

* Offered only during the day Spring Quarter and only during the evening Summer Quarter

TOTAL CREDIT HOURS **107**

Chemical Dependency Track

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
PSY 100	Introduction to Psychology	5
MHCR 111	Introduction to Mental Health	4
MHCR 112	Introduction to Mental Retardation	3
MHCR 114	Introduction to Chemical Dependency	4

Note: Introduction courses may be taken in any order

TOTAL CREDIT HOURS **19**

Quarter 2		
ENGL 102	Essay & Research	3
CIT 101	PC Applications 1	3
HUM xxx	Humanities 111,112,113,151,152 or 224	5
MHCR 115	Introduction to Counseling	4
MHCR 117	Introduction to Documentation Skills	2

Note: Introduction courses may be taken in any order

TOTAL CREDIT HOURS **17**

Quarter 3

PSY 230	Abnormal Psychology	5
PSY 240	Human Growth & Development Through the Life Span	4
MHCR 135	Intervention Strategies	3
MHCR 191A	Fundamentals in Human Services Practice	4
MHCR 191B	Fundamentals in Human Service Practice/Practicum	4
MHCR 150	Pharmacology in Human Services	2
TOTAL CREDIT HOURS		**22**

Quarter 4

SSCI 101	Cultural Diversity	5
*MHCR 241	Counseling Skills	4
*MHCR 245	Chemical Dependency I	4
*MHCR 293	Practicum in Chemical Dependency I	4

* Offered only during the day Autumn Quarter and only during the evening Winter Quarter

TOTAL CREDIT HOURS 17

Quarter 5

COMM 105	Speech	3
ENGL 202	Writing for Health and Human Services	3
*MHCR 251	Social Policy	4
*MHCR 253	Therapeutic Group Work Skills	4
*MHCR 295	Practicum in Therapeutic Group Work Skills	4

* Offered only during the day Winter Quarter and only during the evening Spring Quarter

TOTAL CREDIT HOURS 18

Quarter 6

BIO 111 or 112	Intro to Biology I or Human Biology	5
*MHCR 265	Chemical Dependency II	4
*MHCR 296	Field Practicum in Chemical Dependency II	4
*MHCR 299	Portfolio Completion/Capstone	1

* Offered only during the day Spring Quarter & only during the evening Summer Quarter

TOTAL CREDIT HOURS 14

TOTAL CREDIT HOURS 107

Substance Abuse Prevention Track

COURSE		**CR**
Quarter 1		
ENGL 101	Beginning Composition	3
PSY 100	Introduction to Psychology	5
MHCR 111	Introduction to Mental Health	4
MHCR 112	Introduction to Mental Retardation	3
MHCR 114	Introduction to Chemical Dependency	4
TOTAL CREDIT HOURS		**19**

Quarter 2

ENGL 102	Essay & Research	3
CIT 101	PC Applications 1	3
PSY 240	Human Growth and Development Through the Life Span	4
MHCR 115	Introduction to Counseling	4
MHCR 117	Introduction to Documentation Skills	2
TOTAL CREDIT HOURS		**16**

Quarter 3

PSY 230	Abnormal Psychology	5
MHCR 236	Foundations in Prevention	4
MHCR 135	Intervention Strategies	3
MHCR 191A	Fundamentals in Human Service Practice	4
MHCR 191B	Fundamentals in Human Service Practice/Practicum	4
MHCR 150	Pharmacology in Human Services	2
TOTAL CREDIT HOURS		**22**

Quarter 4

SSCI 101	Cultural Diversity	5
*MHCR 241	Counseling Skills	4
*MHCR 247	Teaching and Supporting Strategies	4
*MHCR 291	Practicum in Teaching and Supporting Strategies	4
*MHCR 231	Ethics in Substance Abuse Prevention	1

* Offered only during the day Autumn Quarter and only during the evening Winter Quarter

TOTAL CREDIT HOURS 18

Quarter 5

COMM 105	Speech	3
ENGL 202	Writing for Health and Human Services	3
*MHCR 251	Social Policy	4
*MHCR 253	Therapeutic Group Work Skills	4
*MHCR 295	Practicum in Therapeutic Group Work Skills	4

* Offered only during the day Winter Quarter & only during the evening Spring Quarter

TOTAL CREDIT HOURS 18

Quarter 6

BIO 111 or112	Intro to Biology I or Human Biology	5
HUM XXX	Humanities 111,112, 113, 151, 152 or 224	5
*MHCR 237	Program Planning and Evaluation	3
*MHCR 239	Advanced Prevention Practicum	3
*MHCR 299	Portfolio Completion/Capstone	1

* Offered only during the day Spring Quarter and only during the evening Summer Quarter

TOTAL CREDIT HOURS 17

TOTAL CREDIT HOURS 110

Prevention Specialist Certificate

COURSE		**CR**
Quarter 1		
MHCR 114	Introduction to Chemical Dependency	4
MHCR 117	Introduction to Documentation Skills	2
MHCR 135	Intervention Strategies	3
MHCR 150	Pharmacology in Human Services	2
TOTAL CREDIT HOURS		**11**

Quarter 2

MHCR 236	Foundations in Prevention	4
MHCR 191B	Fundamentals in Human Service Practice/ Practicum	4
TOTAL CREDIT HOURS		**8**

Quarter 3

MHCR 231	Ethics in Substance Abuse Prevention	1
*MHCR 247	Teaching and Supporting Strategies	4
*MHCR 291	Practicum in Teaching and Supporting Strategies	4

* Offered only during the day Autumn Quarter and only during the evening Winter Quarter

TOTAL CREDIT HOURS 9

Quarter 4

MHCR 237	Program Planning and Evaluation	3
MHCR 151	Social Policy	4
MHCR 239	Advanced Prevention Practicum	3
TOTAL CREDIT HOURS		**10**
TOTAL CERTIFICATE CREDIT HOURS		**38**

For current Prevention Certificates, an Associate, Baccalaureate or Masters degree is required. Certification requirements currently under review by the Ohio Dependency Professionals Board and are subject to change.

Students who wish to pursue additional and CD specific education may take the following: MHCR 280 and MHCR 270 Special Topics in Chemical Dependency Counseling MCH 290 Special Topics in Prevention.

Community Living Specialist Certificate

COURSE		**CR**
Quarter 1		
ENGL 101	Beginning Composition	3
PSY 100	Introduction to Psychology	5
CIT 101	PC Applications I	3
TOTAL CREDIT HOURS		**11**

Quarter 2

PSY 240	Human Growth & Development Through the Life Span	4
MHCR 111	Introduction to Mental Health	4
MHCR 112	Introduction to Mental Retardation	3
TOTAL CREDIT HOURS		**11**

Quarter 3

SSCI 101	Cultural Diversity	5
MHCR 115	Introduction to Counseling	4
MHCR 117	Introduction to Documentation Skills	2
MHCR 114	Introduction to Chemical Dependency	4
TOTAL CREDIT HOURS		**15**

Quarter 4

MHCR 135	Intervention Strategies	3
MHCR 191A	Fundamentals in Human Service Practice	4
MHCR 191B	Fundamentals in Human Service Practice/Practicum	4
MHCR 150	Pharmacology in Human Services	2
TOTAL CREDIT HOURS		**13**

Quarter 5

MHCR 284	Special Studies/Clinical Practicum	4
TOTAL CREDIT HOURS		**4**

Quarter 6

*MHCR 284	Special Studies/Clinical Practicum	4
TOTAL CREDIT HOURS		**4**
TOTAL CERTIFICATE CREDIT HOURS		**54-58**

*Optional placement quarter contingent on individualized student learning plan.

Advanced Chemical Dependency Certificate

COURSE		**CR**
Quarter 1		
MHCR 114	Introduction to Chemical Dependency	4
MHCR 115	Introduction to Counseling	4
MHCR 117	Introduction to Documentation Skills	2
TOTAL CREDIT HOURS		**10**

Quarter 2

MHCR 135	Intervention Strategies	3
MHCR 191A	Fundamentals in Human Service Practice	4
MHCR 191B	Fundamentals in Human Service Practice/Practicum	4
MHCR 150	Pharmacology in Human Services	2
TOTAL CREDIT HOURS		**13**

Quarter 3

*MHCR 241	Counseling Skills	4
*MHCR 245	Chemical Dependency I	4
*MHCR 293	Practicum in Chemical Dependency I	4

* Offered only during the day Autumn Quarter & only during the evening Winter Quarter

TOTAL CREDIT HOURS 12

Quarter 4

MHCR 230	Supervision and Ethics in CD	2
*MHCR 253	Therapeutic Group Work Skills	4
*MHCR 295	Practicum in Therapeutic Group Work Skills	4
MHCR 270	Special Topics in Chemical Dependency	2
OR		
MHCR 280	Special Topics in Chemical Dependency	2

* Offered only during the day Winter Quarter and only during the evening Spring Quarter

TOTAL CREDIT HOURS 12

Quarter 5

MHCR 235	Diagnosis and Treatment in CD	4
*MHCR 265	Chemical Dependency II	4
*MHCR 296	Practicum in Chemical Dependency II	4

* Offered only during the day Spring Quarter and only during the evening Summer Quarter

TOTAL CREDIT HOURS		**12**
TOTAL CERTIFICATE CREDIT HOURS		**59**

Associate, Baccalaureate or Masters degree in a related field is required. Students who wish to pursue additional and CD specific education may take the following: MHCR 280 and MHCR 270 Special Topics in Chemical Dependency Counseling.

Advanced Mental Health Certificate

COURSE		**CR**
Quarter 1		
MHCR 111	Introduction to Mental Health	4
MHCR 115	Introduction to Counseling	4
MHCR 117	Introduction to Documentation Skills	2
TOTAL CREDIT HOURS		**10**

Quarter 2

MHCR 135	Intervention Strategies	3
MHCR 191A	Fundamentals in Human Service Practice	4
MHCR 191B	Fundamentals in Human Service Practice/Practicum	4
MHCR 150	Pharmacology in Human Services	2
TOTAL CREDIT HOURS		**13**

Quarter 3

*MHCR 241	Counseling Skills	4
*MHCR 247	Teaching and Supporting Strategies	4
*MHCR 291	Practicum in Teaching/Supporting Strategies	4

* Offered only during the day Autumn Quarter & only during the evening Winter Quarter

TOTAL CREDIT HOURS 12

Quarter 4

*MHCR 253	Therapeutic Group Work Skills	4
*MHCR 295	Practicum in Therapeutic Group Work Skills	4

* Offered only during the day Winter Quarter and only during the evening Spring Quarter

TOTAL CREDIT HOURS 8

Quarter 5

*MHCR 258	Service Coordination/Case Management	4
*MHCR 298	Practicum in Service Coor/Case Man	4

* Offered only during the day Spring Quarter and only during the evening Summer Quarter

TOTAL CREDIT HOURS		**8**
TOTAL CERTIFICATE CREDIT HOURS		**51**

Associate, Baccalaureate or Masters degree in a related field is required

Advanced Mental Retardation Certificate

COURSE		**CR**
Quarter 1		
MHCR 112	Introduction to Mental Retardation	3
MHCR 115	Introduction to Counseling	4
MHCR 117	Introduction to Documentation Skills	2
TOTAL CREDIT HOURS		**9**

Quarter 2

MHCR 135	Intervention Strategies	3
MHCR 191A	Fundamentals in Human Service Practice	4
MHCR 191B	Fundamentals in Human Service Practice/Practicum	4
MHCR 150	Pharmacology in Human Services	2
TOTAL CREDIT HOURS		**13**

Quarter 3

*MHCR 241	Counseling Skills	4
*MHCR 247	Teaching and Supporting Strategies	4
*MHCR 291	Practicum in Teaching/Supporting Strategies	4

* Offered only during the day Autumn Quarter and only during the evening Winter Quarter

TOTAL CREDIT HOURS 12

Quarter 4

*MHCR 253	Therapeutic Group Work Skills	4
*MHCR 295	Practicum in Therapeutic. Group Work Skills	4
*MHCR 270 or MHCR 280	Special Topics in CD	2

* Offered only during the day Winter Quarter and only during the evening Spring Quarter

TOTAL CREDIT HOURS 10

Quarter 5
*MHCR 258 Service Coordination/Case Management……4
*MHCR 298 Practicum in Service Coor/Case Man……4
* Offered only during the day Spring Quarter and only during the evening Summer Quarter
TOTAL CREDIT HOURS……8
TOTAL CERTIFICATE CREDIT HOURS…… 52
Associate, Baccalaureate or Masters degree in a related field is required.

Multi-Competency Health

EMT-Paramedic Degree Track
Patient Care Degree Track
Animal Assisted Therapy in Education Certificate
Basic Electrocardiography Certificate
Health Care Manager Certificate
Histology Certificate (Accredited by NAACLS)
Nurse Aide Training Program Certificate
Phlebotomy Certificate (Approved by NAACLS)
Registered Nurse First Assistant Certificate
Train the Trainer Certificate

Many health care facilities have reorganized. The job roles within these systems have adjusted to provide care and services based on patient needs. Many 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 Degree in Multi-Competency Health can be obtained by:

a) Completing one of two established tracks, Emergency Medical Technician/Paramedic. Along with the identified technical courses, the student must complete the required general education courses, the required basic related courses, the technical core courses and at least six hours of technical options courses.

b) A student may also choose the Patient Care Track. This track was designed to allow the student to build a degree by choosing two or more Multi-Competency certificate programs and at least six hours of technical options courses for a minimum of 49 technical hours. The student also completes the required general education courses, the required basic related courses and the required technical core courses. This track allows the student to choose the multi-skill grouping of certificates and courses that best suits his/her interest or employer needs.

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 administer necessary first aid and/or CPR.
- Demonstrate an understanding of medical ethics, medical legal responsibilities, and safety procedures, as well as professional attitudes.
- Demonstrate entry level competence in a major and a technical elective.

*Curriculum plans are available in the Multi-Competency Health offices.

Option 2: Certificate Programs

Many certificate programs are offered through Multi-Competency Health. 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. Many area health care employers are interested in students who have successfully completed one or more of these certificates.

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 for each course vary. Many of these courses are open to all students and have no prerequisites. Others require completion of a health record.
For information on additional certificates see the Multi-Competency Health Coordinator.

EMT-Paramedic Degree Track

A student completing the EMT-Paramedic Degree Track will be able to:
- Meet the requirements for the Associate Degree in Multi-Competency Health.
- Meet State of Ohio requirements to take the EMT-Paramedic certification examination.
- Perform all duties of the EMT-Basic.
- Initiate appropriate intravenous procedures as specifically authorized by medical authority in advance. Initiate and continue emergency medical care under medical control, including recognizing presenting conditions and initiating appropriate invasive and noninvasive therapies (e.g., surgical and medical emergencies, airway and respiratory problems, cardiac dysrhythmias, cardiac pulmonary arrest, and psychological crisis) and assessing the response of the patient to that therapy.

Patient Care Degree Track

A student completing the Patient Care Degree Track will be able to:
- Meet the requirements for the Associate Degree in Multi-Competency Health.
- Work in a health care organization under professional supervision in the role of a patient care technician. Understand and

work with various patient populations.
- Practice multiple patient skills, interpersonal communications and infection control.

Animal Assisted Therapy in Education Certificate

A student completing the Animal Assisted Therapy in Education Certificate will be able to:

- Promote understanding of the mutually nurturing relationship between people and animals and to explore services by animals to aid people with physical, cognitive, and emotional challenges.
- Complete the Delta Society's Pet Partners introductory animal handler skills course.
- Explore the techniques for the therapeutic use of companion animals and the conduct of Animal Assisted therapist in a variety of settings.

Basic Electrocardiography (EKG) Certificate

A student completing the EKG Certificate will be able to:

- Position leads and use electrocardiographic equipment correctly.
- Obtain and prepare an electrocardiography recording for analysis by a physician.
- Recognize and correct technical errors in an electrocardiography recording.
- Recognize and call attention to life-threatening abnormalities of an electrocardiograph.
- Provide safe, professional direct patient contact, specifically in the areas of infection control, electrical safety, privacy and environmental safety.

Health Care Manager 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.

Histology Certificate

A student completing the Histology Certificate will be able to:

- Receive and accession tissue specimens.
- Prepare tissue specimens for microscopic examination, including all routine procedures.
- Assist with frozen section procedures in histopathology.
- Identify tissue structures and their staining characteristics.
- Perform preventive and corrective maintenance of equipment and instruments or refer to appropriate sources for repairs.
- Recognize factors that affect procedures and results, and take appropriate action within predetermined limits when corrections are indicated.
- Perform and monitor quality control within predetermined limits.
- Apply principles of safety.
- Demonstrate professional conduct and interpersonal communication skills with patients, laboratory personnel, other health care professionals, and with the public.
- Recognize responsibilities of other laboratory and health care personnel and interact with them with respect for their jobs and patient care.
- Recognize and act upon individual needs for continuing education as a function of growth and maintenance of professional competence.
- Exercise principles of management, safety, and supervision.
- Complete eligibility requirements to sit for American Society for Clinical Pathology certification exam.

Nurse Aide Training Program Certificate

A student completing the Nurse Aide 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.

Phlebotomy Certificate

A student completing the Phlebotomy certificate will be able to:

- Communicate (verbally and nonverbally) effectively and appropriately in the workplace.
- Demonstrate knowledge of the health care delivery system and medical terminology.
- Demonstrate knowledge of infection control and safety.
- Demonstrate basic understanding of the anatomy and physiology of the main body systems, and demonstrate basic knowledge of the circulatory, urinary, and other body systems necessary to perform specimen collection tasks.
- Demonstrate understanding of the importance of specimen collection and specimen integrity in the delivery of patient care.
- Demonstrate knowledge of collection equipment, various types of additives used, special precautions necessary and substances that can interfere in clinical analysis of blood constituents.
- Follow standard operating procedures to collect specimens.
- Demonstrate understanding of requisitioning, specimen transport and specimen processing.
- Demonstrate understanding of quality assurance and quality control in phlebotomy.
- Complete eligibility requirements to sit for American Society for Clinical Pathology certification exam.

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

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.

Specific Program Admissions Information

Listed below are additional requirements for admission to the degree programs in Multi-Competency Health Technology.

- High school graduate or G.E.D. equivalency
- Recommended high school (or equivalent) courses:
  Algebra , grade of "C" or better
  Biology, grade of "C" or better
  Chemistry, grade of "C" or better
- Completed health statement (See Coordinator for detailed requirements)

Multi-Competency Health Associate Degree

General Education Requirements

COURSE		CR
ENGL 101	Beginning Composition	3
ENGL 102	Essay & Research	3
COMM 105	Speech	3
HUM xxx	Humanities 111, 112, 113, 151, 152 or 224	5
SSCI 10x	Social Science 101, 102, 104, 105 or SOC 202	5
ENGL 200	Business Communications	3

Basic Studies Requirements (specific to degree track)

COURSE		CR
MATH 102	Beginning Algebra I	4
BIO 115	Microbiology	5
BIO 161	Human Anatomy OR	5
BIO 121	Anatomy, Physiology & Pathology I	5
BIO 169	Human Physiology OR	5
BIO 122	Anatomy, Physiology & Pathology II	5
CHEM 113	General & Biological Chemistry	5
BIO 170	Human Pathophysiology	5

*These requirements may vary according to major/plan of study.

Technical Studies Core - Required

COURSE		CR
MULT 101	Medical Terminology	2
MULT 102	Cardiopulmonary Resuscitation (CPR)	1

Students must select a minimum of 6 credit hours from technical options courses.

Technical Option Course

Any Multi-Competency course will be accepted as a Technical Options course (when not used as part of a student's identified certificate program).

MULT 103	Responding to Emergencies	2
MULT 110	Basic Electrocardiography	6
MULT 114	Phlebotomy Practicum II	1.5
MULT 115	Phlebotomy	4.75
MULT 116	Venipuncture for Health Care Providers	2
MULT 120	Nurse Aide Training Program	5
MULT 121	Nurse Aide to Home Health Aide	2
MULT 126	Patient Care Skills I	4
MULT 127	Patient Care Assistant	5
MULT 128	Introduction to Patient Care Assistant	5
MULT 129	Patient Care Skill: Restorative Techniques	4
MULT 135	Basic PCA/MSP Training	4
MULT 136	Advanced Patient Care Assistant	2
MULT 137	Phlebotomy Training	4
MULT 138	EKG Training	2
MUTL 139	Basic PCA Training	4
MULT 140	Patient Care Technician Training	3
MULT 150	Histologic Techniques	3
MULT 151	Histologic Techniques Clinical	2
MULT 152	Tissue Identification	2
MULT 149	Tissue Identification Clinical	1
MULT 154	Chemistry of Stains I	3
MULT 155	Chemistry of Stains Clinical I	2
MULT 156	Chemistry of Stains II	2
MULT 157	Chemistry of Stains Clinical II	2
MULT 171	Current Issues: HIV	1
MULT 175	Principles of Homeopathy	4
MULT 176	Fundamentals of Herbology	4
MULT 177	Holistic Healing Methods	4
MULT 178	Animals and Nature - Therapeutic Programs	3
MULT 179	Companion Animals and Health	2
MULT 181	Introduction to the Human-Animal Interaction	2
MULT 190	Radiation Protection for General Machine Operator	1
MULT191	Radiographic Positioning for the General Machine Operator	2
MULT 245	RN First Assistant Program	5
MULT 246	RNFA Experience in the Operating Room	4
MULT 250	N.A.T.P. Train the Trainer	3
MULT 270	Human Resources Management for Health Services	4
MULT 272	Health Care Resources Management	4
MULT 274	TQM/UM Accreditation	4
MULT 275	Advanced Homeopathic Theories	4
MULT 276	Legal Aspects and Risk Management	3
MULT 290	Special Topics in Health Care	1-5
MULT 291	Special Topics in Health Care Facilities	1-5
SSRV 104	CHAPS Basic Core Course	7
SSRV 106	CHAPS Special Topics Course	7
SSRV 108	CHAPS Field Experience	7

EMT-Paramedic Degree Track Requirements

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 102	Beginning Algebra I	4
BIO 121	Anatomy, Physiology & Pathology I	5
MULT 101	Medical Terminology	2
TOTAL CREDIT HOURS		**14**
Quarter 2		
ENGL 102	Essay and Research	3
BIO 122	Anatomy, Physiology & Pathology II	5
EMS 110	EMT-Basic	8
TOTAL CREDIT HOURS		**16**
Quarter 3		
COMM 105	Speech	3
BIO 115	General Microbiology	5
HUM xxx	Humanities 111,112,113,151,152 or 224	5
MULT 102	Cardiopulmonary Resuscitation	1
TOTAL CREDIT HOURS		**14**
Quarter 4		
EMS 281	Hospital Clinical	2
SSCI 10x	SSCI 101, 102, 104, 105 or SOC 202	5
EMS 211	EMT-P I	7
EMS 291	Field Clinical I	1
TOTAL CREDIT HOURS		**15**
Quarter 5		
BIO xxx	Biological & Physical Science Elective	5
EMS 212	EMT-P II	7
EMS 282	Hospital Clinical II	2
EMS 292	Field Clinical II	1
TOTAL CREDIT HOURS		**15**

Quarter 6

EMS 213	EMT-P III	5
EMS 283	Hospital Clinical III	2
EMS 293	Field Clinical III	1
ENGL 200	Business Communications	3
MULT xxx	Technical Option	2-6
TOTAL CREDITS HOURS		**13-17**

Quarter 7

EMS 214	EMT-P IV	2
EMS 284	Hospital Clinical IV	2
MULT xxx	Technical Studies Core Course	6
EMS 294	Field Clinical IV	2
TOTAL CREDIT HOURS		**12**
TOTAL DEGREE CREDIT HOURS		**97**

*Curriculum plans are available in the Multi-Competency Health Office

Patient Care Degree Track Requirements

Two or more Multi-Competency Health certificate programs and at least six hours of Technical Options courses for a minimum of 49 technical hours. Suggested curriculum plans are available.

COURSE		**CR**
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 102	Beginning Algebra I	4
CHEM 113	General & Biological Chem.	5
MULT 101	Medical Terminology	2
MULT xxx	Technical Certificate Course	3
TOTAL CREDIT HOURS		**17**

Quarter 2

ENGL 102	Essay and Research	3
BIO 121	Anatomy, Physiology & Path I **or**	
BIO 161	Human Anatomy	5
MULT xxx	Technical Certificate Course	5
MULT xxx	Technical Certificate Course	3
TOTAL CREDIT HOURS		**16**

Quarter 3

MULT xxx	Technical Certificate Course	3
HUM xxx	111, 112, 113, 151, 152, or 224	5
MULT 102	CPR	1
BIO 122	Anatomy, Phys. and Path. II or BIO 169 Human Physiology	5
MULT xxx	Technical Options Course	3
TOTAL CREDIT HOURS		**17**

Quarter 4

SSCI xxx	Social Science 101, 102, 104, 105 or SOC 202	5
BIO 115	Microbiology	5
MULT xxx	Technical Certificate Course	3
MULT xxx	Technical Options Course	3
TOTAL CREDIT HOURS		**16**

Quarter 5

COMM 105	Speech	3
MULTxxx	Technical Certificate Course	5
MULT xxx	Technical Certificate Course	3
MULT xxx	Technical Certificate Course	3
TOTAL CREDIT HOURS		**14**

Quarter 6

MULT xxx	Technical Certificate Course	5
MULT xxx	Technical Certificate Course	5
MULT xxx	Technical Options Course	3
ENGL 200	Business Communications	3
TOTAL CREDIT HOURS		**16**
TOTAL DEGREE CREDIT HOURS		**96**

Animal Assisted Therapy in Education Certificate

COURSE		**CR**
Quarter 1		
MULT 181	Introduction to Human-Animal Interaction	2
TOTAL CREDIT HOURS		**2**

Quarter 2

MULT 179	Companion Animals and Health	2
TOTAL CREDIT HOURS		**2**

Quarter 3

MULT 178	Animals & Nature - Therapeutic Programs	3
TOTAL CREDIT HOURS		**3**
TOTAL CERTIFICATE CREDITS HOURS		**7**

Basic Electrocardiography (EKG) Certificate

COURSE		**CR**
Quarter 1		
MLT 110	Basic Electrocardiography (EKG)	6
TOTAL CREDIT HOURS		**6**
TOTAL CERTIFICATE CREDITS HOURS		**6**

Health Care Manager Certificate*

*This program is offered online.

COURSE		**CR**
Quarter 1		
CIT 101	PS Applications 1	3
BMGT 218	Management Training for Supervisors	5
TOTAL CREDIT HOURS		**8**

Quarter 2

MULT 270	Human Resource Management in Health Services Organizations	4
TOTAL CREDIT HOURS		**4**

Quarter 3

MULT 276	Legal Aspects and Risk Management	3
TOTAL CREDIT HOURS		**3**

Quarter 4

MULT 272	Health Care Resource Management	4
TOTAL CREDIT HOURS		**4**

Quarter 5

MULT 274	TQM/UM/Accreditation	4
TOTAL CREDIT HOURS		**4**
TOTAL CERTIFICATE CREDIT HOURS		**23**

Histology Certificate

COURSE		**CR**
Quarter 1		
MULT 150	Histologic Techniques	3
MULT 151	Histologic Techniques Clinical	2
MULT 152	Tissue Identification	2
MULT 149	Tissue Identification Clinical	1
TOTAL CREDIT HOURS		**8**

Quarter 2

MULT 154	Chemistry of Stains I	3
MULT 155	Chemistry of Stains Clinical I	2
TOTAL CREDIT HOURS		**5**

Quarter 3

MULT 156	Chemistry of Stains II	2
MULT 157	Chemistry of Stains Clinical II	2
TOTAL CREDIT HOURS		**4**

TOTAL CERTIFICATE CREDIT HOURS 17

*Curriculum plans are available in the Multi-Competency Health Office

Nurse Aide Certificate

COURSE		**CR**
Quarter 1		
MULT 120	Nurse Aide Training Program	5
TOTAL CERTIFICATE CREDIT HOURS		**5**

Phlebotomy Certificate

COURSE		**CR**
Quarter 1		
MULT 115	Phlebotomy	4.75
TOTAL CREDIT HOURS		**4.75**

Quarter 2		
MULT 114	Phlebotomy Practicum II	1.5
TOTAL CREDIT HOURS		**1.5**
TOTAL CERTIFICATE CREDIT HOURS		**6.25**

Registered Nurse First Assistant Certificate

COURSE		
Quarter 1		**CR**
MULT 245	Registered Nurse First Assistant	5
TOTAL CREDIT HOURS		**5**

Quarter 2		
MULT 246	RNFA Experience in the Operating Room	4
TOTAL CREDIT HOURS		**4**
TOTAL CERTIFICATE CREDIT HOURS		**9**

Train the Trainer Certificate

COURSE		**CR**
Quarter 1		
MULT 250	NATP Train the Trainer	3
TOTAL CERTIFICATE CREDIT HOURS		**3**

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 and safety regulations to limit radiation exposure, prepare and administer radiopharmaceuticals, use radiation detection devices and other kinds of laboratory equipment that measure 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.

Technology classes begin once per year. Admission to the program is competitive with completed applications received annually. Because students and health care workers 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 Degree in Nuclear Medicine Technology, the graduate will be able to:

- Apply knowledge of anatomy, physiology, , and positioning techniques to accurately show anatomical structures on a nuclear medicine image.
- Act as an agent through observation and communication to obtain pertinent information for the physician to aid in diagnosis and treatment management of the patient.
- Evaluate nuclear medicine images for appropriate positioning and image quality.
- Apply the principles of radiation protection for the patient, staff and others.
- Provide patient care and comfort during procedures.
- Recognize emergency patient conditions and, if necessary, initiate lifesaving first aid and basic life-support procedures.
- Evaluate the 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 in the performance of nuclear medicine imaging procedures.
- Participate in nuclear medicine quality assurance programs.

Specific Program Admissions Information

Prospective students are required to attend an advising session to learn detailed program requirements and career opportunities. These sessions are held beginning summer quarter and are very helpful in answering students' questions.

Applications will be available in an information packet which may be obtained by calling the Allied Health Office at (614) 287-5215 beginning summer quarter OR by sending an email with your name and complete mailing address to: afrank01@cscc.edu.

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

- High school graduate or G.E.D. equivalency.
- Required high school (or equivalent) courses:
  Biology, grade of "C" or better, or completion of BIO 100, grade of "C" or better.
  Chemistry, grade of "C" or better, or completion of CHEM100, grade of "C" or better.
- Placement into ENGL 101 - Beginning Composition, or completion of ENGL 100.
- Completion of PHYS 100 with a grade of "C" or better.
- Placement into MATH 148 - College Algebra, or completion of MATH 104.
- Placement into "No Reading Required" or completion of DEV 040.
- Observation hours.
- Attend nuclear medicine technology advising session.

NOTE: Individuals who have been convicted of, plead guilty to, or plead nolo contendre to a crime may be ineligible to take the credentialing exams. For additional information, contact the Allied Health Office.

Nuclear Medicine Technology Associate Degree

COURSE		CR
Quarter 1		
NUC 200	Introduction to Nuclear Medicine.	3
NUC 232	Radiation Safety & Protection	2
BIO 161	Human Anatomy	5
MATH 148	College Algebra	5
MULT 101	Medical Terminology	2
TOTAL CREDIT HOURS		**17**
Quarter 2		
NUC 149	Introduction to Clinical Nuclear Medicine	3
NUC 213	Physics & Nuclear Imaging I	3
NUC 214	Physics & Nuclear Imaging I Lab	1
NUC 234	Nuc Med Radiochemistry & Radiopharmacology I	3
ENGL 101	Beginning Composition	3
BIO 169	Human Physiology	5
TOTAL CREDIT HOURS		**18**
Quarter 3		
NUC 215	Physics & Nuclear Imaging II	3
NUC 216	Physics & Nuclear Imaging II Lab	1
NUC 235	Radiochemistry & Radiopharmacy II	4
NUC 251	Clinical Theory & Procedures I	5
NUC 260	Clinical Practicum I	3
TOTAL CREDIT HOURS		**16**
Quarter 4		
NUC 217	Physics & Nuclear Imaging III	3
NUC 218	Physics & Nuclear Imaging III LAB	1
NUC 252	Clinical Theory & Procedures II	5
NUC 261	Clinical Practicum II	2
BIO 170	Pathophysiology	5
TOTAL CREDIT HOURS		**16**
Quarter 5		
NUC 240	Seminar I	1
NUC 254	Clinical Theory III	5
NUC 262	Clinical Practicum III	3
NUC 270	Case Studies I	1
SSCI 10x	Social Science 101, 102, 104, 105 or SOC 202	5
TOTAL CREDIT HOURS		**15**
Quarter 6		
NUC 241	Seminar II	1
NUC 263	Clinical Practicum IV	3
NUC 271	Case Studies II	1
COMM 105	Speech **or**	
COMM 110	Conference and Group Discussion	3
ENGL 102	Essay & Research	3
TOTAL CREDIT HOURS		**11**
Quarter 7		
NUC 242	Seminar III	1
NUC 264	Clinical Practicum V	3
NUC 273	Projects in Nuclear Medicine	1
ENGL 200	Business Communications	3
HUM 1xx	Humanities 111, 112, 113, 151, 152, 224	5
TOTAL CREDIT HOURS		**13**
TOTAL DEGREE CREDIT HOURS		**106**

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

Nursing

Nursing Associate Degree
Vocational Education Transfer Option with Ohio State University College of Education

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. Opportunities are available to complete the nursing program in seven, nine, or eleven quarters depending on the student's needs. 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 seminar content are done using an online format, but as with the traditional track, laboratory practice and clinical experiences 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 54credit hours of nursing courses and 51 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. Two nursing outcome exams are given

during the nursing program. Students must achieve a minimum percentile score on these exams in order to continue to the next nursing course or to graduate.

Students who successfully complete the Associate Degree program are qualified to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN). The Nursing program at Columbus State is accredited by the National League for Nursing Accrediting Commission at 61 Broadway New York, N.Y. 10006, telephone (212)363-5555 and 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:

- Value the role of the Associate Degree nurse.
- Plan care for persons of all ages using the nursing process.
- Demonstrate safe, competent, nurturing care in the practice of nursing.
- 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.
- Account for 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, Counseling and Advising Services, Admissions Offices and the nursing home page within Columbus State Community College website. Advising services are available in Aquinas Hall to help guide new students through the admission process. A separate application is required for nursing and is available on the internet at www.cscc.edu/nursing.

- Required high school courses with a grade of "C" or better or CSCC equivalent courses with a grade of "C" or better:
    - Biology or BIO 100–Introduction to Biological Sciences
    - Chemistry or CHEM 100–Introduction to Chemistry
- Placement into ENGL 101- Beginning Composition or ENGL 111–English Composition or completion of ENGL 100–Language Development with a grade of "C" or better.
- Placement above Math 103–Beginning Algebra II or completion of MATH 103 - Beginning Algebra II, with a grade of "C" or better.
- Completion of the following college courses with a grade of "C" or better:
    - MULT 120 - Nurse Aide Training Program
    - MULT 126 - Patient Care Skills
    - CHEM 113 - General and Biological Chemistry
    - PSY 240 credit or complete PSY 100
- Completion of Nurse Entrance Test (NET) with a reading comprehension score of 50% or above
- Grade point average of 2.0 or better through most recently completed course work.
- The online program track is available only to those students who have a bachelors degree in another field of study.

All admission criteria must be completed prior to applying to the program

Application Process

The applications for the online program track will be available each mid-November through December 30 to fill the following autumn class (one class start per year). The traditional program track admits two classes per year, autumn and spring. Applications are available mid-January through March 1 to fill the following autumn class and mid-July through September 1 to fill the following spring class. All applications can be found online at www.cscc.edu/nursing.

Nursing Associate Degree

COURSE		CR
Quarter 1		
*NURS 110	Introduction to Nursing	3
*NURS 100	Health Assessment in Nursing	3
ENGL 101	Beginning Composition	3
*BIO 161	Human Anatomy	5
TOTAL CREDIT HOURS		**14**
Quarter 2		
*NURS 111	Health Promotion of Women and Families	6
*NURS 123	Nursing Skills I	2
*NURS 132	Nursing Concepts of Pharmacology I	2
*BIO 169	Human Physiology	5
*PSY 240	Human Growth and Development Through the Life Span	4
TOTAL CREDIT HOURS		**19**
Quarter 3		
*NURS 112	Introduction to Nursing Concepts of Health Maintenance and Restoration	6
*NURS 124	Nursing Skills II	2
*NURS 133	Nursing Concepts of Pharmacology II	2
*BIO 170	Human Pathophysiology	5
TOTAL CREDIT HOURS		**15**
Quarter 4		
*NURS 210	Nursing Concepts of Health Maintenance and Restoration I	6
ENGL 102	Essay and Research	3
*BIO 115	General Microbiology	5
**NURS 19X	Nursing elective 188,189, 190, 191, 192, 193 194, 197, 198, or 199	2-3
TOTAL CREDIT HOURS		**16-17**
Quarter 5		
*NURS 211	Nursing Concept of Health Maintenance and Restoration II	6
ENGL 200 or ENGL 202	Business Communication or Writing for Health and Human Services	3
SSCI 10x	Social Sciences 101, 102, 104, 105 or SOC 202	5
TOTAL CREDIT HOURS		**14**
Quarter 6		
*NURS 212	Nursing Concepts of Health Maintenance and Restoration III	6
*MATH 135	Elementary Statistics	5
COMM 105 or COMM 110	Speech **or** Conference and Group Discussion	3
TOTAL CREDIT HOURS		**14**
Quarter 7		
NURS 213	Concepts of Nursing Management	8
HUM xxx	Humanities 111,112, 113, 151, 152, or 224	5
TOTAL CREDIT HOURS		**13**

Vocational Education Transfer Option with Ohio State University College of Education

The Nursing program at Columbus State has completed an articulation agreement with the Technical Education and Training Program of the Ohio State University College of Education. This agreement allows nursing 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. Interested students should contact their Columbus State department chairperson for curriculum requirements and additional details. Please note that course requirements for this transfer option may differ from the standard plan of study published in the catalog.

Office Administration

Office Administration Associate Degree
Administrative Assistant Major
Administrative Assistant Medical Cognate
Administrative Assistant Legal Cognate
Office Skills Certificate

The *Occupational Outlook Handbook* printed by the United States Department of Labor, has forecast that there will be a shortage of office workers well into the new millennium. This handbook indicates that these office workers will need technical skills as well as management skills in order to be successful. The Business Management/Office Administration Department is now offering an Associate Degree in Office Administration with an Administrative Assistant Major that would enable students to have not only keyboarding skills and software knowledge but also management and team-building skills. Students also receive instruction in personalized/interpersonal skills so that they may become an integral part of any management team. These skills will enable an employee to assume responsibility without direct supervision, display initiative, exercise judgment, and prepare written/oral presentations.

The Legal Cognate prepares students to work in law offices, various courts or the legal departments of corporations, by providing specialized knowledge of legal procedures and court structure. The Medical Cognate prepares students to work in medical settings such as hospitals, physician offices, nursing homes, clinics, dental offices, and insurance companies.

An Office Skills Certificate program is also available. The three-quarter Office Skills Certificate program prepares students for entry-level positions in word processing centers and general offices. Students develop skills and knowledge in keyboarding, word processing basics, information management, and accounting.

Columbus State is accredited as an associate degree granting institution offering business programs by the Association of Collegiate Business Schools and Programs (ACBSP).

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

- Maintain a filing system (alphabetic, numeric, geographic, and/or by subject).
- Write or draft responses to routine correspondence, use correct grammar, and use punctuation rules accurately.
- Perform basic accounting tasks.
- Prepare written and oral presentations using currently accepted presentation software.
- Demonstrate knowledge of management theory, function, and skills.
- Demonstrate a working knowledge of current legal, ethical, social, financial, and economic environmental factors as they apply to business.
- Work effectively as a member of a team.

Administrative Assistant Major

In addition to the general Office Administration competencies, a graduate in the Administrative Assistant Major will be able to:

- Understand and use Excel software to create and revise spreadsheets.
- Use Windows commands to operate microcomputers effectively.
- Prepare graphics and present information.
- Research information using a variety of resources including the Internet.
- Use computers to integrate graphics into documents.
- Transcribe a variety of documents accurately and at an acceptable production rate.
- Use Microsoft Office software efficiently.

Administrative Assistant Legal Cognate

In addition to the general competencies, a graduate choosing the Legal Cognate will be able to:

- Demonstrate a basic knowledge of court structure and court proceedings at the federal, state, and local levels.
- Demonstrate knowledge of law office procedures and management.
- Demonstrate an understanding of the rules and documents involved in litigation.
- Demonstrate an understanding of criminal law OR the basics of legal research, depending on which additional class the student chooses.

Administrative Assistant Medical Cognate

In addition to the general competencies, a graduate choosing the Medical Cognate will be able to:

- Demonstrate an understanding of the structure and organization of current health care systems.
- Demonstrate the ability to spell, pronounce, and define basic medical terminology.

(Non-traditional credit may be given to any Columbus State Community College student enrolled as an Office Administration Major with submission of appropriate documentation of successful completion of the Certified Professional Secretaries Exam.)

Administrative Assistant Major

COURSE		CR
Quarter 1		
OADM 101	Business Grammar	3
OADM 111	Accounting Basics	4
OADM 115	Desktop Management (MS Outlook)	3
OADM 121	Records Management	3
OADM 132	Keyboarding II	3
TOTAL CREDIT HOURS		**16**
Quarter 2		
BMGT 101	Principles of Business*	5
BMGT 102	Managing Interpersonal Skills	3
OADM 102	Editing Business Documents	3
OADM 133	Keyboarding III	3
OADM 191	Word I	3
OADM 188	Introduction to PowerPoint	1
TOTAL CREDIT HOURS		**18**
Quarter 3		
MATH 101	Business Math	5
ENGL 101	Beginning Composition	3
OADM 134	Keyboarding IV	3
OADM 151	Computer Transcription	3
OADM 192	Word II	3
TOTAL CREDIT HOURS		**17**
Quarter 4		
BMGT 111	Management*	5
OADM 172	Excel	3
OADM 261	Electronic Office Procedures	4
OADM 167	Desktop Publishing	3
BMGT 211	Organizational Behavior*	4
TOTAL CREDIT HOURS		**19**
Quarter 5		
NSCI 101	Natural Science I	5
OADM 164	WordPerfect	3
ENGL 102	Essay & Research	3
LEGL 264	Legal Environment of Business	4
xxx xxx	Technical Elective	3
TOTAL CREDIT HOURS		**18**
Quarter 6		
BMGT 216	Business Ethics	3
ENGL 200	Business Communications	3
COMM 105	Speech **or**	
COMM 110	Conference & Group Discussion	3
XXX XXX	Business Elective*	3
HUM xxx	Humanities 111, 112, 113, 151,152, or 224	5
TOTAL CREDIT HOURS		**17**
TOTAL DEGREE CREDIT HOURS		**105**

***TECHNICAL COGNATE**
Students specializing in legal or medical will substitute from the cognate lists for this course.

Technical Electives

OADM 113	Quickbooks	1
OADM 114	Quickbooks II	1
OADM 139	Keyboarding Improvement	3
OADM 189	Introduction to Access	1
BMGT 103	Managing Interpersonal Skills II	3

Administrative Assistant Legal Cognate

The following 4 courses are required:

LEGL 102	The Legal System	2
LEGL 103	Law Office Procedures and Mgt.	3
LEGL 201	General Practice	4
LEGL 205	Litigation Practice & Procedure	3

Choose 3 or more additional credit hours from the following courses:

LEGL 210	Criminal Law and Procedure	3
LEGL 111	Legal Research and Writing	4

Administrative Assistant Medical Cognate

The following 2 courses are required:

MLT 100	Introduction to Health Care	3
MULT 101	Medical Terminology	2

Choose 10 or more additional credit hours from the following courses:

BIO 161	Human Anatomy	5
HIMT 111	Intro to Health Information Mgmt.	2
HIMT 121	Advanced Medical Terminology	3
HIMT 132	Intro to Medical Transcription*	2
HIMT 135	Health Data Management	3
MULT 183	Intro to Inpatient Coding	1
MULT 184	Intro to Ambulatory Coding	1
MULT 185	Intro to Third-Party Reimbursement	1

*Check prerequisites; signature may be required to enroll in this class.

Office Skills Certificate

COURSE		CR
Quarter 1		
OADM 101	Business Grammar	3
OADM 111	Accounting Basics	4
OADM 115	Desktop Management	3
OADM 121	Records Management	3
OADM 131	Keyboarding I	3
TOTAL CREDIT HOURS		**16**
Quarter 2		
OADM 102	Editing Business Documents	3
OADM 132	Keyboarding II	3
OADM 191	Word I	3
OADM xxx	Technical Elective	3
TOTAL CREDIT HOURS		**12**
Quarter 3		
OADM 133	Keyboarding III	3
OADM 151	Computer Transcription	3
OADM 172	Excel	3
OADM 192	Word II	3
TOTAL CREDIT HOURS		**12**
TOTAL CERTIFICATE CREDIT HOURS		**40**

Technical Electives (Choose one or more):

OADM 139	Keyboarding Improvement	3
OADM 164	WordPerfect	3
OADM 167	Desktop Publishing Using PageMaker	3

Paralegal Studies

Paralegal Associate Degree
Paralegal Certificate (Post Baccalaureate Option)
Workers' Compensation Certificate

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 assisting process. The need for paralegal assistants 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 legal assistant hired for every attorney.

The nature of the paralegal assistants position in the legal community requires individuals with a well rounded educational background. Critical thinking and excellent communication skills are essential competencies of a legal assistant 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 areas of: 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 Legal Assisting Certificate (Post Baccalaureate Option) is designed for persons who currently possess a bachelors, masters or Ph.D. degree, students with an associate degree and work experience in a legal environment will be considered after an interview with the department chairperson.

Paralegal assistants have traditionally been utilized in legal environments that are intensive in both client contact and document preparation. Workers' compensation is an example of a legal arena that has a history of legal assistant employment. The workers' compensation system processes and adjudicates claims, as well as investigates abuses in the system, establishes premiums, and works with self-insured and state fund employers. The Columbus State Community College Legal Studies Department offers a departmental certificate designed to teach paralegal assistants the skills they need to obtain employment from state agencies, third party administrators, attorneys, and employers. In order to enroll for the Workers' Compensation Certificate, the student must have completed an associate or bachelor degree in Paralegal Studies, or apply to the Legal Studies Department chairperson for permission to take courses based on para-legal assisting work experience.

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 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: Legal assistants may not sign legal documents, appear in court or give legal advice. All activities in legal matters must be supervised by a licensed attorney.

Paralegal Studies Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
OADM 131	Keyboarding I **OR** OADM 164 Wordperfect for Windows	3
LEGL 101	Introduction toParalegal Studies	4
LAWE 104	Government and the Law	3
LEGL 102	The Legal System	2
LEGL 103	Law Office Procedures and Management	3
TOTAL CREDIT HOURS		**18**
Quarter 2		
ENGL 102	Essay & Research	3
MATH 101	Business Mathematics	5
CIT 101	PC Applications 1	3
LEGL 111	Legal Research & Writing I	4
LEGL 114	Family Law	3
TOTAL CREDIT HOURS		**18**
Quarter 3		
ENGL 200	Business Communications	3
SOC 101	Introduction to Sociology	5
LEGL 112	Legal Research & Writing II	4
LEGL 119	Real Estate Transactions	3
LEGL 226	Administrative Law	3
TOTAL CREDIT HOURS		**18**
Quarter 4		
COMM 105	Speech OR COMM 110 Conference & Group Discussion	3
HUM XXX	Humanities 111, 112, 113, 151, 152 or 224	5
LEGL 205	Litigation Practices and Procedures I	3
LEGL 201	General Practice	4
LEGL 210	Criminal Law and Procedure	3
TOTAL CREDIT HOURS		**18**
Quarter 5		
NSCI 101	Natural Science I	5
PSY 100	Introduction to Psychology	5
LEGL 251	Computer Assisted Legal Research	3
LEGL 215	Paralegal Practicum I	2
LEGL 216	Paralegal Practicum Seminar I	1
TOTAL CREDIT HOURS		**16**
Quarter 6		
LEGL 224	Probate Law and Practice	3
LEGL 220	Business Organizations	3
LEGL XXX	Electives	5
LEGL 227	Paralegal Practicum II	2
LEGL 228	Paralegal Practicum Seminar II	1
LEGL 243	Alternative Dispute Resolution	3
TOTAL CREDIT HOURS		**17**
TOTAL DEGREE CREDIT HOURS		**102**

Recommended Electives:

LEGL 113	Legal Research and Writing III	5
LEGL 230	Special Problems in Legal Assisting	2
LEGL 234	Litigation II	3
LEGL 238	Insurance Law	3
LEGL 240	Professional Malpractice	3
LEGL 232	Taxation	3
LEGL 244	Debtor/Creditor Relations	3
LEGL 250	Intellectual Property	4
LEGL 252	Survey of Advanced Legal Technology (CALR II)	2
LEGL 253	Legal Assisting Law Journal	2
LEGL 255	Intro to Workers Compensation	4
LEGL 256	Intro to BWL Claims Practice	4
LEGL 272	Mediation	4
LEGL 275	Overview of Bankruptcy Law & Practice	4
LEGL 222	Immigration Law	3
LAWE 220	Constitutional Law	3
LAWE 214	Introduction to Cyberlaw	3
ACCT 106	Introduction to Accounting I	5
ACCT 107	Introduction to Accounting II	5

* LEGL 261, LEGL 262, LEGL 263, LEGL 264, and LEGL 265 are not electives for Paralegal Studies. Credit toward graduation will not be given.

Paralegal Studies Certificate (Post Baccalaureate Option)

COURSE		CR
Quarter 1		
LEGL 101	Intro. to Paralegal Studies	4
LEGL 102	Legal Systems	2
LEGL 103	Law Office Procedures	3
LEGL 111	Legal Research and Writing I	4
TOTAL CREDIT HOURS		**13**
Quarter 2		
LEGL 114	Family Law	3
LEGL 205	Litigation Practice and Procedure	3
LEGL 112	Legal Research and Writing II	4
LEGL 251	Computer Assisted Legal Research	3
TOTAL CREDIT HOURS		**13**
Quarter 3		
LEGL 119	Real Estate Transactions	3
LEGL 226	Administrative Law	3
LEGL 224	Probate Law and Practice	3
LEGL 210	Criminal Law and Procedures	3
TOTAL CREDIT HOURS		**12**
Quarter 4		
LEGL 220	Business Organizations	3
LEGL 201	General Practice	4
LEGL 215	Paralegal Practicum I	2
LEGL 216	Paralegal. Practicum Seminar I	1
TOTAL CREDIT HOURS		**10**
TOTAL DEGREE CREDIT HOURS		**48**

Workers' Compensation Certificate *

COURSE		CR
LEGL 255	Introduction to Workers' Compensation Law	4
LEGL 256	Introduction to BWC Claims Processing	4
LEGL 257	Workers' Compensation Adjudication	4
LEGL 258	Workers' Compensation Rating System	4
LEGL 259	Workers' Compensation Practice and Procedure	4
TOTAL CERTIFICATE CREDIT HOURS		**20**

The Workers Compensation Courses are offered on demand

***Certificate courses may be taken in any sequence when offered**

Note: The Workers Compensation Certificate is available to:

a) students with an associate degree in Legal Assisting

b) students with degrees in other disciplines or more than 60 quarter hours of college credit and permission of the program chairperson.

Practical Nurse Certificate Program

The Practical Nurse 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 seven-quarter, part-time program is designed as a career path for entry-level patient care providers. Nursing assistants and patient care assistants can continue their education to become licensed practical nurses after they successfully pass the program and the licensing examination. Graduates of the PN program will be able to articulate into the associate degree nursing program at Columbus State Community College. The practical nurse certificate program is sequential and will assist 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. 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 32 hours of nursing courses and 23 hours in arts and sciences for a total of 55 credits. Students will participate in clinical experiences in a variety of health care settings under the direction of a registered nurse.

Students who successfully complete the practical nurse program are qualified to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN). The program is approved by the Ohio Board of Nursing.

Upon completion of the Practical Nurse 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 CSCC and adhere to admission criteria. Specific requirements for admission to the Practical Nurse Certificate Program are listed below.

- Practical Nurse Certificate Program application
- High school biology, with a grade of "C" or better, within the past five years or BIO 100 Introduction to Biological Sciences, or a college level biology
- Placement into ENGL 101–Beginning Composition
- Placement into MATH 100–Calculations and Dosages
- Completion of the following college courses with a grade of "C" or better:
- MULT 120–Nurse Aide Training Program
- MULT 101–Medical Terminology
- Completion of Nurse Entrance Test (NET) with a reading comprehension score of 50% or above.
- Grade point average of 2.0 or better in most recently completed course work.
- DEV 090–College Success Skills, is recommended.

Practical Nurse Certificate Program

COURSE		CR
Quarter 1		
*ENGL 101	Beginning Composition	3
*BIO 161	Human Anatomy	5
Total Credit Hour		**8**
Quarter 2		
*BIO 169	Human Physiology	5
**MATH 100	Calculations and Dosages	2
*PNUR 100	Introduction to Practical Nursing	1
Total Credit Hours		**8**
Quarter 3		
*PNUR 101	Foundations of Practical Nursing	2
*PNUR 121	Pharmacology I	2
*SSCI 101	Cultural Diversity	5
Total Credit Hours		**9**
Quarter 4		
*PNUR 102	Introduction to Practical Nursing Concept	6
*PNUR 122	Pharmacology II	3
Total Credit Hours		**9**
Quarter 5		
*PNUR 104	Maternal and Child Health	6
*COMM 110	Conference and Group Discussion	3
Total Credit Hours		**9**
Quarter 6		
*PNUR 103	Health Promotion, Maintenance, and Restoration	6
*PNUR 190	Special Topics in Practical Nursing	1
Total Credit Hours		**7**
Quarter 7		
*PNUR 105	Concepts Relating to Practice	5
Total Credit Hours		**5**
Total Certificate Credit Hours		**55**

*Note: A grade of "C" or better is required to continue in sequence.
** Note: A grade of "B" or better in Math 100 is required to continue in sequence.

Quality Assurance Technology

Increasing requirements for quality in the goods and services consumers buy has created additional demand for trained technicians and supervisors who are responsible for monitoring, testing, and continuously improving the quality of those goods and services. Individuals entering the field of quality assurance must be skilled in the areas of quality transformation, teamwork, statistical process control, product and service improvement, cost reduction, reliability development, and quality planning and management.

This program is designed to meet the employment needs of business and industry. Students work on quality improvement projects for local organizations as part of their course work. They apply the techniques being studied in class, and practice teamwork and communications skills in real life settings while developing a portfolio to demonstrate their expertise. Graduates are qualified for a wide range of positions such as quality control technician, inspector, quality/reliability analyst, value engineering analyst, cost improvement or statistical process control coordinator, or methods planner.

The Quality Assurance program was originally designed to meet increasing needs for quality assurance personnel in manufacturing. Many courses in the program, however, address quality needs of the service industries. Students and prospective students interested in pursuing a quality assurance program in any of the following options: banking, insurance, food processing, chemical processing, or another option not listed are encouraged to contact the Chairperson to set up an individual program which meets their specific needs.

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

- Improve products, processes, and systems in manufacturing and service environments by applying statistical and quality improvement tools according to the Shewhart cycle.
- Apply a variety of teamwork, leadership, and communication 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 systems (such as Lean Manufacturing, Six Sigma, ISO 9000/2000, QS9000 or the Malcolm Baldridge Award criteria) including inspection, traceability/documentation, quality audits, and nonconforming identification and review processes to business elements within an organization.

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.

Quality Assurance Technology Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 111	Technical Math I	4
EET 111	DC Fundamentals	4
EET 112	DC Lab	2
MECH 110	Introduction to Manufacturing	3
MECH 112	Computer Applications in Manufacturing	3
TOTAL CREDIT HOURS		**19**
Quarter 2		
ENGL 102	Essay and Research	3
MATH 112	Technical Math II	4
PHYS 181	Technical Physics (Mechanics)	4
QUAL 240	Total Quality Management	3
MECH 244	Statistical Process Control	3
TOTAL CREDIT HOURS		**17**
Quarter 3		
MATH 135	Elementary Statistics	5
MECH 120	Mechanical Drafting I	3
EET 120	AC Fundamentals	4
EET 121	AC Lab	2
MECH 250	Materials Science	3
TOTAL CREDIT HOURS		**17**
Quarter 4		
COMM 105	Speech	3
PHYS 185	Technical Physics (heat, light & sound)	4
MECH 111	Manufacturing Processes	4
QUAL 150	Quality Transformation	4
EET 132	Digital Fundamentals	3
TOTAL CREDIT HOURS		**18**
Quarter 5		
ENGL 204	Technical Writing	3
HUM xxx	Humanities 111,112,113,151 152, or 224	5
QUAL 251	Value Engineering	3
EET 130	Electronic Devices	4
EET 131	Devices Lab	2
TOTAL CREDIT HOURS		**17**
Quarter 6		
SSCI 10X	Social Science 101, 102, 104, or 105	5
MECH 240	Machine Tools	4
QUAL 260	Reliability and System Maintainability	3
BMGT 257	Project Management	3
QUAL 250	Metrology	3
TOTAL CREDIT HOURS		**18**
TOTAL DEGREE CREDIT HOURS		**106**

Radiography

Radiographers are highly skilled professionals qualified by education to perform imaging examinations and accompanying responsibilities at the request of a physician. A radiographer is able to perform diagnostic imaging, fluoroscopy, trauma, surgical, and portable radiography. Specialized areas in the curriculum include: Computed tomography, vascular and digital imaging and magnetic resonance imaging.

Technology classes begin in the summer quarter. Admission to the program is competitive with completed applications received annually. Because students and health care workers in the health care 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 life-long learning needs of its community. This is achieved by preparing graduates for entry-level employment as a radiography science professional. This is consistent with the Columbus State Community College 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 program goals:

1. Develop graduates who will recognize the need for life-long learning in their chosen profession.
2. To graduate students with the ability to behave in a compassionate, ethical and professional manner.
3. To graduate students who will successfully complete all program requirements, meet entry-level expectations of employers, and successfully complete the ARRT national certification exam.
4. To develop applied skills in effective communication, critical thinking, and problem solving in the practice of the radiography profession.

Specific Program Admissions Information

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 quarter and are very helpful in answering students' questions. Information sessions dates are available by calling (614) 287-5215 or on the web at: www.cscc.edu/AH/.

The yearly deadline for application to the Radiography program is April 1, for admission beginning the following summer. Applications are only available by attending one of the mandatory information sessions.

Listed below are additional requirements for admission to the Radiography program.

- High school graduate, G.E.D. or equivalent
- Required high school (or equivalent) courses:
  - Biology, grade of "C" or better
  - Chemistry, grade of "C" or better
  - Physics, grade of "C" or better
- Placement into ENGL 101 - Beginning Composition.
- Placement into MATH 135/148 - College Algebra/Elementary Statistics.
- Placement into "No Reading Required."
- Written statement relevant to interest and intent in Radiography.
- Health care experience or observation hours.
- Attend radiography mandatory information session.
- *Individuals who have been convicted of, plead guilty to, or plead nolo contendre to a crime may not be eligible to take the American Registry of Radiologic Technologists (ARRT) Radiography Examination according to the ARRT's code of Ethics, Section B.3. Rules of Ethics. For additional information, contact the ARRT. (www.arrt.org)*

Radiography Associate Degree

COURSE		CR
Quarter 1		
RAD 111	Introduction to Radiologic Technology	3
RAD 141	Radiographic Procedures I	4
BIO 121	Anatomy, Physiology and Pathology I	5
MATH 148	College Algebra **or**	
MATH 135	Elementary Statistics	5
MULT 101	Medical Terminology	2
TOTAL CREDIT HOURS		**19**
Quarter 2		
RAD 142	Radiographic Procedures II	4
RAD 261	Clinical I	2
BIO 122	Anatomy, Physiology and Pathology II	5
CIT 101	PC Applications I	3
TOTAL CREDIT HOURS		**14**
Quarter 3		
RAD 113	Radiologic Science	5
RAD 143	Radiographic Procedures III	4
RAD 262	Clinical II	2
ENGL 101	Beginning Composition	3
TOTAL CREDIT HOURS		**14**
Quarter 4		
RAD 118	Radiographic Exposure and Processing	5
RAD 148	Special Radiologic Procedures	4
RAD 263	Clinical III	2
xxx xxx	Technical Elective	3
ENGL 102	Essay & Research	3
TOTAL CREDIT HOURS		**17**
Quarter 5		
RAD 254	Seminar I	1
RAD 264	Clinical IV	3
NUC 230	Venous Access Procedures	2
SSCI 10x	Social Science 101, 102, 104, 105 or SOC 202	5
HUM 1xx	Humanities 111, 112, 113, 151, 152, 224	5
TOTAL CREDIT HOURS		**16**
Quarter 6		
RAD 126	Radiation Biology and Processing	3
RAD 212	Sectional Anatomy	3
RAD 222	Computerized Imaging	1
RAD 255	Seminar II	1
RAD 265	Clinical V	3
ENGL 200	Business Communications	3
TOTAL CREDIT HOURS		**14**
Quarter 7		
RAD 123	Advanced Exposure and Processing	4
RAD 231	Radiographic Pathology	3
RAD 256	Seminar III	1
RAD 266	Clinical VI	3
COMM 105	Speech **or**	
COMM 110	Conference & Group Discussion	3
TOTAL CREDIT HOURS		**14**
TOTAL DEGREE CREDIT HOURS		**108**

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

Technical electives

RAD 100	Health & Safety Guidelines for Allied Health Students	1
RAD 267	Clinical VII - elective	3
MULT 120	Nurse Aid Training	5
HIMT 121	Advanced Medical Terminology	3

Real Estate

The Associate Degree program in Real Estate offers the 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 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 types of 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 daily real estate activity.

Continuing Education

Only courses approved by the Ohio Division of Real Estate qualify for *continuing education credit* for licensed professionals. Please check with the Ohio Division of Real Estate & Professional Licensing for course approval before enrolling. Courses required for licensing do not qualify for continuing education credit. Before students schedule classes, they should contact their advisor if they are interested in taking (1) only the sequence of courses to prepare for specific real estate licensing exam*s*, (2) only selected courses to meet continuing education requirements of the Ohio Division of Real Estate & Professional Licensing .

Real Estate Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
PSY 100	Introduction to Psychology	5
CIT 101	PC Applications 1	3
REAL 101	Real Estate Principles & Practices	4
REAL 102	Real Estate Law	4
TOTAL CREDIT		**19**
Quarter 2		
ENGL 102	Essay & Research	3
HUM xxx	Humanities 111, 112, 113, 151, 152 or 224	5
MATH 101	Business Mathematics	5
REAL 111	Real Estate Finance	2
REAL 112	Real Estate Appraisal	2
TOTAL CREDIT HOURS		**17**
Quarter 3		
ENGL 200	Business Communications	3
LEGL 264	Legal Environment of Business	4
ACCT 106	Intro to Accounting I	5
MKTG 122	Business and the Internet	3
REAL 121	Residential Sales Practices	3
TOTAL CREDIT HOURS		**18**
Quarter 4		
COMM 105	Speech	3
CMGT 253	Residential Construction	3
ENVR 158	Environmental Site Assessment	3
FMGT201	Business Finance	5
REAL 240	Introduction to Entrepreneurship	3
TOTAL CREDIT HOURS		**17**
Quarter 5		
ECON 200	Principles of Microeconomics	5
BMGT 111	Management	5
REAL 270	Real Estate Investing	3
GIS100	Acquiring GIS Data	3
TOTAL CREDIT HOURS		**16**
Quarter 6		
NSCI 101	Natural Science I	5
HRM 121	Human Resources Management	4
REAL 221	Professional Property Management	3
REAL 275	Repair, Restore, Remodel	3
TOTAL CREDIT HOURS		**15**
TOTAL DEGREE CREDIT HOURS		**102**

Pre-licensure courses (included above)

REAL 101	Real Estate Principles & Practices	4
REAL 102	Real Estate Law	4
REAL 111	Real Estate Finance	2
REAL 112	Real Estate Appraisal	2

Respiratory Care

Registered Respiratory Therapist Program

Graduates are eligible to sit for the Certification Examination for Entry-Level Respiratory Therapists and the Registry Examination for Advanced Respiratory Therapy Practitioners offered by the National Board for Respiratory Care, Inc. Graduates are also eligible to apply to become licensed as Respiratory Care Professionals by the Respiratory Care Board.

Respiratory therapists are life support specialists concerned with managing, controlling, and treating problems related to the cardiopulmonary system. Respiratory care practitioners work with the physician, nurse, and other health care personnel.

The complexity of the respiratory care worker's responsibility requires extensive training, dedication, and professionalism. Respiratory care takes place in such settings as the newborn nursery, surgical and medical units, emergency rooms, outpatient departments, and intensive care units of hospitals.

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

Columbus State's program is accredited by the Committee on Accreditation for Respiratory Care.

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

- Review existing data in patient medical record and recommend diagnostic procedures based on available patient information.
- Collect and evaluate pertinent clinical information.
- Perform diagnostic procedures and interpret results.
- Determine appropriateness of prescribed respiratory care plan, recommend modifications where indicated, and participate in the development of respiratory care plan.
- Select and obtain equipment, and assure cleanliness of equipment appropriate to the respiratory care plan.
- Assemble, check for proper function, identify malfunctions of equipment, and take action to correct malfunctions of equipment.
- Explain planned therapy and goals to patient, maintain records and communication; and protect against patient nosocomial infections.
- Conduct therapeutic procedures to achieve maintenance of a patient airway, including the care of artificial airways; to achieve the removal of secretions.
- Conduct therapeutic procedures to achieve adequate spontaneous and artificial ventilation.
- Conduct therapeutic procedures to achieve adequate arterial and tissue oxygenation.
- Evaluate and monitor patient's response to respiratory care.

- Make necessary modifications in therapeutic procedures, and recommend respiratory care plan modifications based on patient response.
- Initiate and conduct, or modify respiratory care techniques in an emergency setting.
- Demonstrate personal and professional behaviors required for successful employment.
- Apply the principles of continuous quality improvement and quality assurance to work situations.

Specific Program Admissions Information

Advanced standing credit may be awarded for previous health care training and/or experience. Please contact Sue Donohue at (614) 287-2633 or sdonohue@cscc.edu. For additional information, please see the departmental homepageat www.cscc.edu/AH/.

Listed below are additional requirements for admission to the Respiratory Care program.

- High school graduate or G.E.D. equivalency
- Official transcripts of all previously attended colleges/universities
- Placement into MATH 135 - Elementary Statistics
- Placement into ENGL 101 - Beginning Composition
- Placement into "No Reading Required"
- High school biology with a "C" or above
- High school chemistry with a "C" or above
- CHEM 113 with a "C" or above
- MULT 120 with a "C" or above (Health Statement required before scheduling)
- RESP102 with a "C" or above
- Completed health statement
- Minimum GPA of 2.50 or above

Statement Regarding Infectious Diseases:

Students in this program, 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 the students may therefore be exposed to many types of communicable diseases. These are not limited to but may include: Hepatitis (A, B, C or D), HIV/AIDS, TB, measles, 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.

Respiratory Care Associate Degree

COURSE		CR
Quarter 1		
BIO 161	Human Anatomy	5
MATH 135	Elementary Statistics	5
HIMT 113	Managed Care Trends	2
RESP 100	Introduction to Respiratory Care	5
RESP 160	Introduction to Respiratory Care Equipment	1
TOTAL CREDIT HOURS		**18**
Quarter 2		
ENGL 101	Beginning Composition	3
BIO 115	General Microbiology	5
BIO 169	Human Physiology	5
RESP 114	Introduction to Pulmonary Disease	4
RESP 150	Introduction to Pharmacology	2
RESP 170	Mechanical Ventilation	1
TOTAL CREDIT HOURS		**20**
Quarter 3		
HUM xxx	Humanities 111,112,113,151, 152 or 224	5
RESP 130	Patient Assessment	2
RESP 152	Case Management I	2
RESP 196	Clinical Practice I	8
TOTAL CREDIT HOURS		**17**
Quarter 4		
ENGL 102	Essay & Research	3
RESP 132	Patient Assessment II	2
RESP 154	Case Management II	2
RESP 198	Clinical Practice II	8
TOTAL CREDIT HOURS		**15**
Quarter 5		
COMM 105	Speech	3
RESP 230	Patient Assessment III	2
RESP 256	Case Management III	2
RESP 290	Clinical Practices III	8
TOTAL CREDIT HOURS		**15**
Quarter 6		
ENGL 200	Business Communications	3
SSCI 10x	Social Science 101, 102, 104, 105 0r SOC 202	5
RESP 270	Current Issues in Respiratory Care	2
RESP 292	Clinical Practices IV	8
TOTAL CREIDT HOURS		**18**
Quarter 7		
RESP xxx	Technical Elective	3
RESP 295	Clinical Experience	4
TOTAL CREDIT HOURS		**7**
TOTAL DEGREE CREDIT HOURS		**110**

Technical Electives

EMS 232	Advanced Cardiac Life Support	1
RESP 232	Pediatric Respiratory Care	3
RESP 238	Pulmonary Functions	3
RESP 251	Respiratory Care Home Care Techniques	3
RESP 260	Respiratory Care Seminar	2
RESP 221	Introduction to Sleep Problems	2
RESP 223	Level I Polysomnography Technician	2
RESP 224	Level I Polysomnography Technician-Clinical	2
RESP 225	Level II Polysomnography Technician	2
RESP 226	Level II Polysomnography Technician-Clinical	2
RESP 227	Polysomnography Current Topics	2

Sport and Exercise Studies

Sport Management Major
Physical & Recreation Instruction Major
Exercise Science Major
Exercise Specialist Certificate

The Sport and Exercise Studies programs 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 gain a managerial or technical position within the sport and fitness field.

Upon completion of the Associate Degree in a Sports and Exercise Studies Program, the graduate will be able to:

- Communicate current information on exercise, nutrition, and health promotion to supervisors, peers, and the public.
- Demonstrate good judgment and professional behavior by applying professional exercise and sport management organizations' codes of ethics.
- Demonstrate skill in planning and administering effective recreational, fitness, wellness, and sport activities in the community.
- Assess readiness for exercise and existing fitness levels in the apparently healthy individual by measuring and evaluating physiological responses and adaptations.
- Design sport and exercise programs for individuals and/or groups by analyzing appropriate physiological assessment data.
- Assess the potential for behavioral change in each client, creating maximal opportunity for success.
- Model lifestyle physical activity.
- Instruct individual(s) in a variety of physical activities by describing, demonstrating, and modifying, when appropriate, acceptable and proper equipment usage and fitness techniques.
- 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.
- Demonstrate proficiency in examining, researching, surveying, assessing, and reporting qualitative and quantitative data related to sport marketing and the target market.
- Design, construct, and present sport marketing principles to include the 5 P sport marketing theory.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Sport and Fitness Management.

- High school graduate or G.E.D. equivalency
- Placement into ENGL 101 - Beginning Composition
- Placement into MATH 101 - Business Math

Sports and Exercise Studies Associate Degree

Sport Management Major

COURSE		CR
Quarter 1		
SES 100	Personal Fitness Concepts	3
SES 190	SES Freshman Seminar	1
MULT 171	Current Issues: HIV/AIDS	1
ENGL 101	Beginning Composition	3
MATH 101	Business Math	5
HOSP 153	Nutrition	5
TOTAL CREDIT HOURS		**18**
Quarter 2		
SES 101	Introduction to Sport & Exercise Studies.	3
ENGL 102	Essay & Research	3
BIO 161	Human Anatomy	5
PSY 100	Psychology	5
SES 102/104/105/106	SES Physical Education Requirement	1
TOTAL CREDITS HOURS		**17**
Quarter 3		
SES 117	Tae Kwon Do	2
SES 222or223	Tennis or Racquetball	2
SES 113	Aquatics Management	2
BIO 169	Human Anatomy	5
BMGT 102	Managing Interpersonal Skills I	3
TOTAL CREDIT HOURS		**14**
Quarter 4		
SES 224	Sport Management Foundations	5
SES 231	Exercise Physiology	5
SES 235	Sport Law	3
SSCI 101	Cultural Diversity	5
TOTAL CREDIT HOURS		**18**
Quarter 5		
SES 234	Sport Marketing	5
SES 114	Aerobic & Group Fitness	2
SES 233	Outdoor Community Recreation	3
SES 292	Sport & Exercise Studies Practicum I	3
COMM 105	Speech	3
SES 116	Golf Management	2
TOTAL CREDIT HOURS		**18**
Quarter 6		
SES 226	Care and Prevention of Athletic Injuries	3
SESxxx	Technical Elective	2
SES 294	Sports & Exercise Studies Practicum II	3
MULT 103	Responding to Emergencies (if needed)	2
HUM xxx	Humanities World Civilization I	5
ENGL xxx	250 or 251 or 252	5
TOTAL CREDIT HOURS		**18/20**
TOTAL DEGREE CREDIT HOURS		**103-105**

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

Technical Electives must be selected from the following list of courses

SES 102	Women's Total Body Conditioning	1
SES 105	Introduction to Resistance Training	2
SES 106	Beginning Golf	1
SES 113	Aquatics Management	2
SES 114	Aerobic & Group Fitness	2
SES 115	Intermediate Resistance Training	2
SES 205	Activities Programming for the Elderly in Long Term Care	9
SES 214	Advanced Dance Exercise	2
SES 215	Advanced Resistance Training	3
SES 237	Corporate Health	3
SES 238	Aging Fitness and Exercise	3
SES 241	Kinesiology	5
SES 280	History of Sport in the United States (1840-Present)	3

Physical & Recreation Instruction Major

COURSE		CR
Quarter 1		
SES 100	Personal Fitness Concepts	3
SES 190	SES Freshman Seminar	1
HOSP 153	Nutrition	5
MULT 171	Current Issues: HIV/AIDS	1
ENGL 101	Beginning Composition	3
MATH 135	Elementary Statistics	5
TOTAL CREDIT HOURS		**18**
Quarter 2		
SES 101	Introduction to Sport & Exercise Studies.	3
ENGL 102	Essay & Research	3
BIO 161	Human Anatomy	5
PSY 100	Psychology	5
SES 102/104/105/106	SES Physical Education Requirement	1
TOTAL CREDITS HOURS		**17**
Quarter 3		
SES 225	Athlete Intervention	3
SES 230	Fitness Concepts for Special Pops	3
SES 280	History of Sport	3
BIO 169	Human Physiology	5
PSY 200	Educational Psychology	5
TOTAL CREDIT HOURS		**19**
Quarter 4		
SES 224	Sport Management Foundations	5
SES 231	Exercise Physiology	5
SES 235	Sport Law	3
SSCI 101	Cultural Diversity	5
SES XXX	Technical Elective	1
TOTAL CREDIT HOURS		**19**
Quarter 5		
SES 241	Kinesiology	5
SES 298	Special Topics in Sport	3
PSY 261	Child Development	5
SES 292	SES Practicum I	3
COMM 105	Speech	3
TOTAL CREDIT HOURS		**19**
Quarter 6		
SES 226	Care and Prevention of Athletic Injuries	3
SES 294	Sports & Exercise Studies Practicum II	3
MULT 103	Responding to Emergencies (if needed)	2
HUM 111	World Civilization I	5
ENGL xxx	250 or 251 or 252 Intermediate Writing	5
TOTAL CREDIT HOURS		**18**
TOTAL DEGREE CREDIT HOURS		**110**

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

Technical Electives must be selected from the following list of courses

SES 102	Women's Total Body Conditioning	1
SES 104	Beginning Yoga	1
SES 105	Introduction to Resistance Training	2
SES 106	Beginning Golf	1
SES 113	Aquatics Management	2
SES 114	Aerobic & Group Fitness	2
SES 115	Intermediate Resistance Training	2
SES 116	Golf Management	2
SES 117	Tae Kwon Do	2
SES 215	Advanced Resistance Training	3
SES 222	Tennis	2
SES 232	Racquetball	2
SES 233	Outdoor Community Recreation	3
SES 234	Sport Marketing	5
CHEM 100	Introduction to Chemistry	4

Exercise Science Major

Quarter 1		
SES 100	Personal Fitness Concepts	3
SES 190	SES Freshman Seminar	1
MULT 171	Current Issues HIV/AIDS	1
HOSP 153	Human Nutrition	5
ENGL 101	Beginning Composition	3
MATH 148	College Algebra	5
TOTAL CREDIT HOURS		**18**
Quarter 2		
ENGL 102	Essay & Research	3
CHEM 100	Introduction to Chemistry	4
SES 101	Introduction to Sport & Exercise Studies	3
BIO 161	Human Nutrition	5
TOTAL CREDIT HOURS		**15**
Quarter 3		
SES 226	Care & Prevention of Athletic Injuries	3
SES 102/104/105/106	SES Physical Education Requirement	1
SES 115	Intermediate Resistance Training	2
SES 237	Corporate Health	3
BIO 169	Human Physiology	5
COMM 105	Speech	3
TOTAL CREDIT HOURS		**17**
Quarter 4		
SES 231	Exercise Physiology	5
SES 238	Aging, Fitness, & Exercise	3
SSCI 101	Cultural Diversity	5
PSY 100	Psychology	5
TOTAL CREDIT HOURS		**18**
Quarter 5		
SES 215	Advanced Resistance Training	3
SES 235	Sport Law	3
SES 292	Sport & Exercise Studies Practicum I	3
SES 298	Special Topics in Sport	3
HUM 111	World Civilization	5
TOTAL CREDIT HOURS		**17**
Quarter 6		
SES 241	Kinesiology	5
SES 294	Sport & Exercise Studies Practicum II	3
SES 298	Special Topics in Sport	3
ENGLxxx	250 or 251 or 252	5
MULT 103	Responding to Emergencies (if needed)	2
TOTAL CREDIT HOURS		**16/18**
TOTAL DEGREE CREDIT HOURS		**101/103**

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

Exercise Specialist Certificate

COURSE		CR
Quarter 1		
SES 100	Personal Fitness Concepts	3
SES 230	Fitness Concepts for Special Populations	3
SES 231	Exercise Physiology	5
TOTAL CREDIT HOURS		**11**
Quarter 2		
SES 101	Introduction to Sport & Fitness Management	3
SES 241	Kinesiology	5
MULT 103	Responding to Emergencies	2
MULT 171	Current Issues: HIV/AIDS	1
TOTAL CREDIT HOURS		**11**
Quarter 3		
SES 215	Advanced Resistance Training	3
SES 234	Sport Marketing	5
SES 292	Sport & Fitness Management Practicum I	3
TOTAL CREDIT HOURS		**11**
Quarter 4		
SES 294	Sport & Fitness Management Practicum II	3
SES 298	Special Topics in Sport	3
TOTAL CREDIT HOURS		**6**
TOTAL CERTIFICATE CREDIT HOURS		**39**

Supply Chain Management
(Formerly Logistics)

Supply Chain Management Associate Degree
Purchasing Major
Global Trade Certificate
Purchasing 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, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, Supply Chain Management integrates supply and demand management within and across companies. The greater Columbus metropolitan area is home to many distribution operations including centers for The Limited Inc., Spiegel, Eddie Bauer, JC Penney, Kraft, Consolidated Stores Corporation, and McGraw-Hill Companies.

The Purchasing 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 National Association of Purchasing Managers certification examination.

Supply Chain Management certificates can be earned in General Supply Chain Management, Purchasing, and Global Trade. 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 Certified Logistics Managers Association (CLM), the Institute for Supply Management (ISM) and The North American Small Business International Trade Educators (NASBITE) respectively, in their certification exams.

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 terminology and technologies including inventory techniques, barcoding systems, picking and delivery processes, and storage and sorting systems.
- Demonstrate knowledge of the function and operation of warehouses and distribution facilities.
- Explain the role of inventory and production control.
- Describe the traffic management function and its role in carrier selection and rate determination and negotiation.
- Demonstrate knowledge of state and federal laws that impact the distribution function, including knowledge of common carrier obligations.
- Participate in the development of an integrated plan of action consistent with established supply chain management goals.
- Understand 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.
- Understand 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.

Purchasing Major

In addition to the Supply Chain Management competencies, a graduate with a Purchasing major will be able to:

- Explain and implement a Lowest Total Cost plan.
- Explain and develop purchasing objectives.
- Explain how Policies and Procedures are utilized to affect purchasing plans.
- Explain how Purchasing Organizations should be utilized.
- Explain how use of specifications, descriptions and standards are utilized to help determine right quality.
- Explain how the industrial purchasing function operates.
- Explain how the not for profit purchasing function operates.
- Explain how and why make vs buy and outsourcing decisions are made.
- Develop a supplier management plant that ensures development of, evaluation of, and selection of right supplier.
- Explain pricing principles and what methods are best utilized for determining the right price.
- Explain the different types of contracts and under what conditions and situations each works best.
- Explain how negotiations can help resolve non-price issues that help support the lowest total cost principle.
- Explain how, why and when international purchasing is best.
- Develop and present a purchasing strategic and tactical plan.
- Develop and present a buying plan and inventory management plan that ensures both right quantity and right time.
- Explain the ethical and legal issues that effect purchasing.
- Explain the what, why and how of negotiation.
- To explain and develop negotiation strategies, tactics and objectives.

Supply Chain Management Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MKTG 111	Marketing Principles	5
LOGI 100	Principles of Supply Chain Management	5
LEGL 264	Legal Environment of Business	4
HRM 121	Human Resources Management	4
TOTAL CREDIT HOURS		**21**
Quarter 2		
ENGL 102	Essay & Research	3
ACCT 106	Introduction to Accounting I	5
LOGI 110	Transportation & Traffic Management.	4
COMM 105	Speech	3
MATH 103	Beginning Algebra II	4
TOTAL CREDIT HOURS		**19**
Quarter 3		
LOGI 151	Purchasing Principles	3
ACCT 107	Introduction to Accounting II	5
HUM xxx	Humanities 111,112,113,151,152 or 224	5
MATH 135	Statistics	5
TOTAL CREDIT HOURS		**18**
Quarter 4		
FMGT 201	Business Finance	5
ENGL 200	Business Communications	3
LOGI 210	Warehouse Management	4
LOGI 229	International Transportation Regulatory Compliance	4
TOTAL CREDIT HOURS		**16**
Quarter 5		
LOGI 211	Inventory Management	4
LOGI 225	International Shipping	5
LOGI 246	Purchasing Negotiation Principles	3
MKTG 226	Customer Service Principles & Practices	4
BMGT 218	Management Training for Supervisors	5
TOTAL CREDIT HOURS		**21**
Quarter 6		
LOGI 260	Performance Management for Logistics Managers	4
LOGI xxx	Elective	3
MKTG 229	Organizational Marketing	3
NSCI 101	Natural Science I	5
TOTAL CREDIT HOURS		**15**
TOTAL DEGREE CREDIT HOURS		**110**

Technical Electives:

ECON 200	Microeconomics	5
LOGI 152	Purchasing Principles II	3
LOGI 205	Freight Claims	2
LOGI 226	Introduction to Export Administration Regulations	4
LOGI 227	Electronic Import/Export Documentation	2
LOGI 228	Importing	4
LOGI 229	International Transportation Regulatory Compliance	4
LOGI 241	Logistics Practicum	4
LOGI 242	Logistics Seminar	2
LOGI 245	Transportation Rates/Pricing	2
LOGI 256	Advanced Purchasing	3
LOGI 250	Transportation of Hazardous Materials	3
LOGI 297	Special Topics in Logistics	1-3
QUAL 240	Total Quality Management	3
ENVR 252	Hazardous Material Handling	3

Purchasing Major

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MKTG 111	Marketing Principles	5
LOGI 100	Principles of Supply Chain Management	5
LEGL 264	Legal Environment of Business	4
TOTAL CREDIT HOURS		**17**
Quarter 2		
ENGL 102	Essay & Research	3
ACCT 106	Introduction to Accounting I	5
LOGI 110	Transportation & Traffic Management	4
COMM 105	Speech	3
MATH 103	Beginning Algebra II	4
TOTAL CREDIT HOURS		**19**
Quarter 3		
MKTG 226	Customer Service Principles and Practices	4
ACCT 107	Introduction to Accounting II	5
HUM xxx	Humanities 111,112,113,151, 152 or 224	5
MATH 135	Statistics	5
TOTAL CREDIT HOURS		**19**
Quarter 4		
FMGT 201	Business Finance	5
ENGL 200	Business Communications	3
LOGI 151	Purchasing Principles	3
LOGI 210	Warehouse Management	4
LOGI 211	Inventory Control	4
TOTAL CREDIT HOURS		**19**
Quarter 5		
LOGI 246	Purchasing Negotiation	3
ECON 240	Principles of Macroeconomics	5
LOGI 152	Purchasing Principles II	3
NSCI 101	Natural Science I	5
LOGI 229	International Transportation Regulatory Compliance	4
TOTAL CREDIT HOURS		**20**
Quarter 6		
LOGI 256	Advanced Purchasing Seminar	3
LOGI xxx	Elective	3
MKTG 229	Organizational Marketing	3
LOGI 260	Performance Management for Logistics Managers	4
TOTAL CREDIT HOURS		**13**
TOTAL DEGREE CREDIT HOURS		**107**

Technical Electives:

ECON 200	Principles of Microeconomics	5
LOGI 205	Freight Claims	2
LOGI 225	International Shipping	4
LOGI 226	Introduction to Export Administration Regulations	4
LOGI 227	Electronic Import/Export Documentation	2
LOGI 228	Importing	4
LOGI 241	Logistics Practicum	4
LOGI 242	Logistics Seminar	2
LOGI 245	Transportation Rates & Pricing	2
LOGI 250	Transportation of Hazardous Materials	3
LOGI 297	Special Topics in Logistics	1-3
ENVR 252	Hazardous Materials Handling	3
QUAL 240	Total Quality Management	3

Supply Chain Management Certificate

Course		CR
Quarter 1		
LOGI 151	Purchasing Principles I	3
LOGI 210	Warehouse Management	4
Total Credit Hour		**7**

Quarter 2

LOGI 110	Transportation and Traffic Management	4
LOGI 211	Inventory Management	4
Total Credit Hours		**8**

Quarter 3

LOGI 225	International Shipping	5
LOGI 229	International Transportation Regulatory Compliance	4
Total Credit Hours		**8**
TOTAL CERTIFICATE CREDITS		**24**

Purchasing Certificate

Course		**CR**
Quarter 1		
LOGI 151	Purchasing Principles I	3
LOGI 211	Inventory Management	4
Total Credit Hours		**7**

Quarter 2

HRM 121	Human Resources Management	4
LOGI 152	Purchasing Principles II	3
Total Credit Hours		**7**

Quarter 3

LOGI 246	Purchasing Negotiation	3
LOGI 256	Advanced Purchasing Seminar	3
Total Credit Hours		**6**
TOTAL CERTIFICATE CREDITS		**20**

Global Trade Certificate

Quarter 1

LOGI 100	Principles of Supply Chain Management	5
LOGI 225	International Shipping	5
Total Credit Hours		**10**

Quarter 2

LOGI 226	Introduction to Export Administration Regulations	4
LOGI 228	Importing	4
LOGI 229	International Transportation Regulatory Compliance	4
BMGT 229	International Management	4
Total Credit Hours		**16**

Quarter 3

LOGI 227	Electronic Import/Export Documentation	2
MKTG 270	Global Marketing	6
Total Credit Hours		**8**
TOTAL CERTIFICATE CREDITS		**34**

Surgical Technology

Surgical Technology Certificate
Surgical Technology Associate Degree

Surgical Technology is a dynamic and exciting allied health profession. The surgical technologist is a vital member of the allied health field of professionals who work closely with surgeons, anesthesiologists, registered nurses, and other personnel delivering surgical patient care.

Columbus State Community College offers a four-quarter academic/laboratory/clinical Certificate Surgical Technology program concurrent with a six-quarter academic/laboratory/clinical quarter 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 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.

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 technique.
- 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.

Specific Program Admission Information
Listed below are additional requirements for admission to the Surgical Technology Program.

- College placement testing
  - Placement testing into MATH 103 or completion of MATH 102. Student who has college algebra course, grade of "C" or better, are not required to take placement test.
  - Placement testing into ENGL 101 or ENGL 111 or completion of ENGL 100. Student who has college transfer credit for ENGL 101 are not required to take placement test.
  - Placement testing above the reading requirements or completion of DEV 044. Student who has college transfer credit for ENGL 101 are not required to take placement test.

- Course completion of the following:
  - High School graduate or GED equivalency
  - High School biology, grade of "C" or better, within the past five years or BIO 100 or equivalent
  - High School chemistry, grade of "C" or better, within the past three years or CHEM 100 or equivalent
  - College course completion, or successful completion of equivalent approved training for:
    MULT 126 Patient Care Skills I
    MULT 102 Cardiopulmonary Resuscitation
    HIMT 121 Advanced Medical Terminology
- Completion of health records on file with the college Health Office

Surgical Technology Certificate

COURSE		CR
Quarter 1		
SURG 102	Surgical Technology I	7
ENGL 101	Beginning Composition	3
BIO 161	Human Anatomy	5
TOTAL CREDIT HOURS		**15**
Quarter 2		
SURG 104	Surgical Technology II	7
BIO 169	Human Physiology	5
ENGL 102	Essay & Research	3
TOTAL CREDIT HOURS		**15**
Quarter 3		
SURG 202	Surgical Technology III	9
HIMT 141	Pharmacology	3
TOTAL CREDIT HOURS		**12**
Quarter 4		
SURG 204	Surgical Technology IV	9
SSCI xxx	Social Sciences 101, 102 , 104, 105 or SOC 202	5
TOTAL CREDIT HOURS		**14**
TOTAL CERTIFICATE CREDIT HOURS		**56**

Surgical Technology Associate Degree

Quarter 1		
SURG 102	Surgical Technology I	7
ENGL 101	Beginning Composition	3
BIO 161	Human Anatomy	5
TOTAL CREDIT HOURS		**15**
Quarter 2		
SURG 104	Surgical Technology II	7
BIO 169	Human Physiology	5
ENGL 102	Essay & Research	3
TOTAL CREDIT HOURS		**15**
Quarter 3		
SURG 202	Surgical Technology III	9
HIMT 141	Pharmacology	3
TOTAL CREDIT HOURS		**12**
Quarter 4		
SURG 204	Surgical Technology IV	9
SSCI xxx	Social Sciences 101 or 102 , 104, 105 or SOC 202	5
TOTAL CREDIT HOURS		**14**
Quarter 5		
SURG 250	Surgical Technology V	7
BIO 115	General Microbiology	5
HUM xxx	Humanities, 111,112, 113, 151, 152, or 224	5
TOTAL CREDIT HOURS		**17**
Quarter 6		
SURG 251	Surgical Technology VI	7
BIO 170	Human Pathophysiology	5
ENGL xxx	200 or 202 or 204	3
COMM xxx	105 or 110	3
TOTAL CREDIT HOURS		**18**
TOTAL DEGREE CREDIT HOURS		**91**

Technical Communication

In the areas of business, industry, government, healthcare, and technology, there is a need to communicate information of a technical nature to different audiences. Technical Communication is the process of translating technical information into forms that different audiences can understand and use. Technical communicators are the translators. They, write, edit, and perform page layout and design on user manuals, textbooks, training materials, press releases, memos, environmental impact statements, video scripts, and online help files. They design Web pages, develop computer-based training (CBT) modules, prepare multimedia presentations, and develop material for delivery on CD-ROM.

The Associate of Applied Science Degree in Technical Communication at Columbus State Community College is the only technical communication degree program in central Ohio. The program provides students with the practical, specific skills and technical knowledge needed to get entry-level jobs as technical communicators. All the courses are taught in a state-of-the-art computer classroom, so students becomes familiar with a variety of computer applications.

The program is designed to be completed within six quarters of full-time study. Students are required to take eleven courses in Technical Communication (TCO courses) and an additional 15-25 credits in a single cognate (specialization) area. The choice of the cognate area is up to the student in consultation with the Technical Communication advisor and the advisor in the cognate area. Currently there are over 20 approved cognates in areas such as accounting, aviation maintenance, computer programming, marketing, microcomputing, and graphic communications. For a complete listing, contact the Technical Communication Program Coordinator.

A technical communicator should be able to discuss projects with a technical expert and know the best way to translate information so the targeted audience will understand it. The cognate area enhances the knowledge and skills of the technical communicator and provides vocabulary and basic knowledge about the chosen field.

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

- Write in the forms most often required of a Technical Communicator (e.g., processes and procedures, reports, manuals, etc.).
- Translate complex material into clear, concise and easy-to-use terms for specific targeted audiences. Participate in the entire technical writing cycle both individually and collaboratively -- planning, researching, and coordinating projects, writing, revising, and editing documents; designing and placing graphics; and producing a final product.
- Prepare and deliver oral presentations both in formal and informal settings.
- Develop basic graphics and integrate them into text.
- Apply the principles learned in technical cognates to technical communication.
- Critically evaluate existing documentation for clarity, completeness, and general effectiveness.
- Operate the word processors and desktop design packages that are most widely used in the technical communication field.
- Incorporate the basic concepts of multimedia production into professional technical presentations.
- Edit documents individually and collaboratively using both hard copy and online methods.
- Carry out, prepare, and produce documented primary or secondary research.
- Demonstrate an understanding of concepts of time/project management both in individual and team projects.

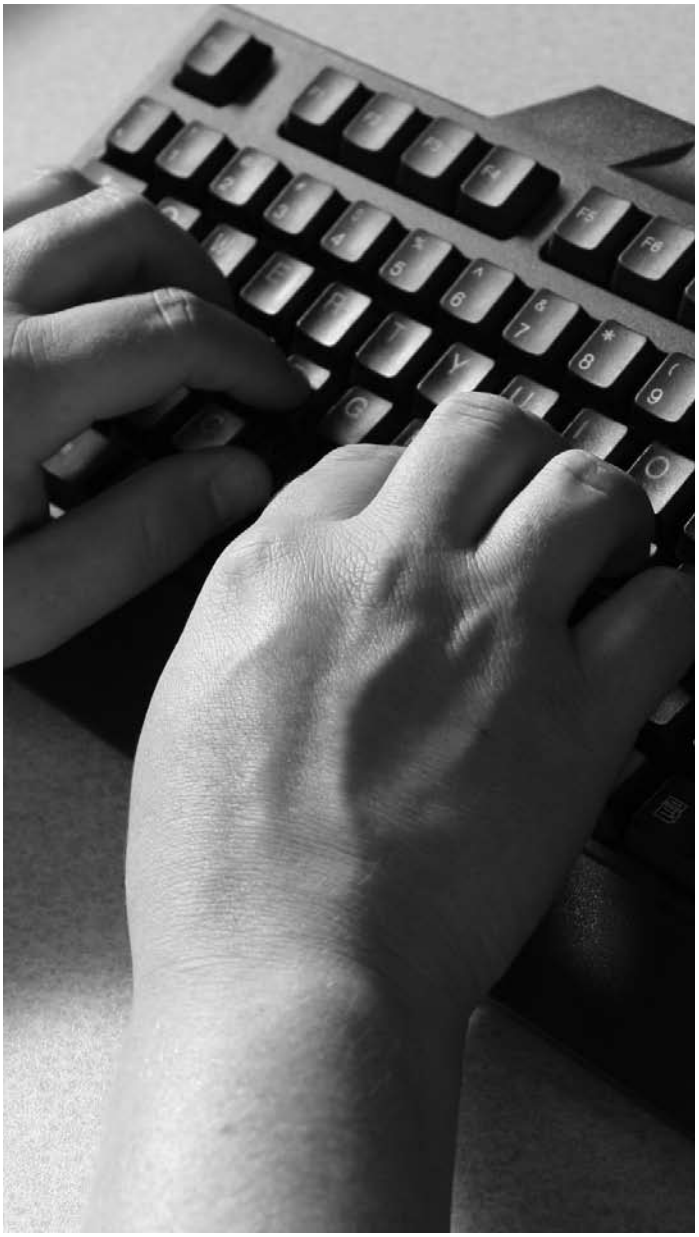
Technical Communication Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
TCO 101	Careers in Technical Communication	2
CIT 101	PC Application 1	3
*	Technical Cognate	3-6
xxxx xxx	Math or Science Elective for Tech Cognate	5
TOTAL CREDIT HOURS		**16-19**
Quarter 2		
ENGL 102	Essay & Research	3
OADM 101	Business Grammar Usage	3
HUM xxx	Humanities 111, 112, 113, 151, 152 or 224	5
TCO 102	Tools and Tips for Technical Communicators	3
TCO 203	Introduction to Technical Communication	3
TOTAL CREDIT HOURS		**17**
Quarter 3		
OADM 167	Desktop Publishing Using PageMaker	3
COMM 105	Speech	3
NSCI 191	Natural Science I	5
TCO 204	Introduction to Technical Editing	3
*	Technical Cognate	3-6
TOTAL CREDIT HOURS		**17-20**
Quarter 4		
ENGL 200	Business Communications	3
TCO 223	Advanced Technical Communication	3
GRPH 251	Electronic Imaging	3
TCO 214	Document Design & Delivery Methods	3
*	Technical Cognate	3-6
TOTAL CREDIT HOURS		**15-18**
Quarter 5		
COMM 110	Conference and Group Discussion	3
TCO 215	Online Documentation	3
TCO 230	Technical Presentations	3
xxx xxx	Technical Writing Elective	3
*	Technical Cognate	3-6
TOTAL CREDIT HOURS		**15-18**
Quarter 6		
SSCI 101	Cultural Diversity	5
TCO 250	Capstone Project	3
TCO 260	Career Development	1
TCO 290	Industry Internship	4
*	Technical Cognate	3-6
TOTAL CREDIT HOURS		**16-19**
TOTAL DEGREE CREDIT HOURS		**93-108**

* **Between 15-25 hours must be completed in a Technical Cognate.**

Technical writing electives may be selected from the following courses:

ENGL 202	Writing for the Health and Human Services	3
ENGL 206	Governmental Communications	3
ENGL 208	Communication for the Mass Media	3
ENGL 215	Magazine Publication	3
ENGL 280	Publishing Practicum	2
TCO 221	Proposal Development	3
TCO 222	Developing Software Documentation	3
TCO 224	Advanced Technical Editing	3
TCO 235	Instructional Design	2
TCO 236	Computer-Based Training	3
TCO 237	Digital Video Production for the Workplace	3
TCO 245	HTML-Based Online Documentation	5
TCO 297, 298, 299	Special Topics in Technical Communication	1-5



Veterinary Technology

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 will also 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 nine quarters with courses starting no earlier than 5:00 p.m. Some daytime availability may be required during the Clinical Experience A-D courses.

For students interested in equine health, a joint program has been developed between Columbus State's Veterinary Technology and Otterbein College'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 Arts Degree in Equine Health Technology from Otterbein College. 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. Special advising with the Program Coordinator is necessary for students who wish to participate in these joint programs.

Please note that there may be changes to the Veterinary Technology Program admission requirements and curriculum periodically. 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 physical examinations and maintain 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 wound dressings, bandages and splints.
- Collect and prepare patient specimens for clinical laboratory procedures including blood samples, urine samples and skin scrapings.
- 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.
- Perform routine procedures on laboratory animals (rats, mice, guinea pigs, rabbits). Other experiences may include avian, zoo and exotic animal medicine based on student clinical internship preference.
- 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.
- Position animals for diagnostic imaging procedures. Expose and develop radiographs using safe and proper technique.

Graduates register with the Ohio Veterinary Medical Licensing Board 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.

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 are held periodically throughout the year, and 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 kfannin@cscc.edu.

The yearly deadline for application and completion of admission requirements is March 23 for admission beginning the following Summer Quarter (evening Plan of Study) or the following Autumn Quarter (day Plans of Study), based on space availability. Students must meet all admission requirements before being considered for admission into the Veterinary Technology.

Listed below are additional requirements for admission to the Veterinary Technology:

- High school graduate or GED equivalency.
- Required high school (or equivalent) courses:
  Biology, grade of "C" or better within the past five years, or BIO 100 or 101, grade of "C" or better.
  Chemistry, grade of "C" or better within the past three years, or CHEM 100, grade of "C" or better.
- Placement into ENGL 101 - Beginning Composition.
- Placement into "No Reading Required" (students with college transfer credit for ENGL 101 or ENGL 111 are not required to take the placement test).
- Completion of MATH 103 - Beginning Algebra II with a grade of "C" or better.
- Attend 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 an information session has been attended).
- Computer literacy (high school, work-related or completion of CIT 101).
- Grade point average of 2.5 or better (most recently completed coursework).

Upon acceptance into the Veterinary Technology, the student will be required to complete the following Health 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.

Veterinary Technology Associate Degree

COURSE		CR
Quarter 1		
BIO 161	Human Anatomy	5
MULT 190	Radiation Protection for the General Machine Operator	2
MATH 100	Calculations and Dosages	2
VET 101	Animal Nutrition	3
VET 102	Laboratory Animal Medicine	2
VET 114	Client Relations	2
TOTAL CREDIT HOURS		**16**
Quarter 2		
BIO 169	Human Physiology	5
VET 122	Veterinary Parasitology	3
VET 126	Principles of Veterinary Anesthesia	3
HIMT 121	Advanced Medical Terminology	3
VET 124	Principles of Veterinary Radiology	2
TOTAL CREDIT HOURS		**16**
Quarter 3		
VET 131	Veterinary Anatomy and Physiology	3
VET 138	Veterinary Surgical Tech.	3
VET 136	Animal Health and Disease I	3
VET 133	Clinical Application I	3
ENGL 101	Beginning Composition	3
TOTAL CREDIT HOURS		**15**
Quarter 4		
ENGL 102	Essay & Research	3
SSCI 10x	Social Science 101, 102, 104, 105 or SOC 202	5
VET 135	Veterinary Hematology	5
CHEM 113	Gen. & Bio. Chemistry	5
TOTAL CREDIT HOURS		**18**
Quarter 5		
COMM 105	Speech or	
COMM 110	Conf. & Group Discussion	3
VET 291	Clinical Experience I	6
VET 254	Clinical Seminar I	2
ENGL 200	Business Communications	3
VET 266	Animal Health & Disease II	3
TOTAL CREDIT HOURS		**17**
Quarter 6		
VET 262	Vet. Pharmacology	3
VET 267	Vet. Urinalysis & Clinical Chemistry	4
VET 269	Vet. Microbiology	5
VET 263	Clinical Application II	3
TOTAL CREDIT HOURS		**15**
Quarter 7		
VET 293	Clinical Experience II	6
VET 274	Clinical Seminar II	2
HUM xxx	Humanities 111,112,113 ,151,152 or 224	5
TOTAL CREDIT HOURS		**13**
TOTAL DEGREE CREDIT HOURS		**110**

* An accelerated plan of study for students with prior college coursework and an evening plan of study are also offered. Students should consult with the office associate regarding these options.

* 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.

Notes

Course Descriptions

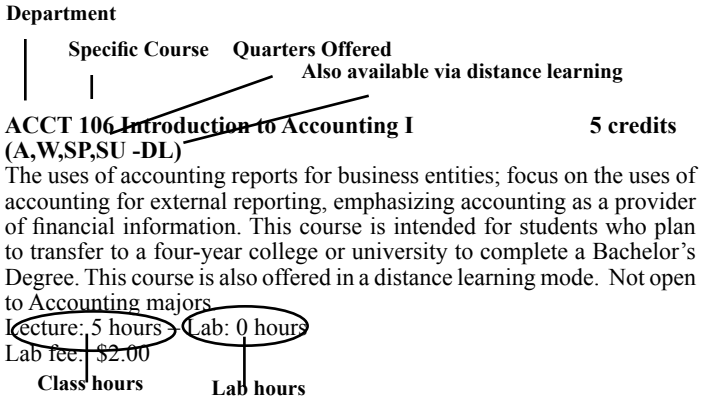
Columbus State's Course Numbering System

No two courses at Columbus State have the same course number. The three or four-letter alpha identifier indicates the department, and the three numbers indicate the specific course within each department.

Listed below are the various departments in alphabetical order. Refer to this chart to find the department in which a given course can be found. For example, ACCT 106 Introduction to Accounting would be found in the Course Descriptions section under Accounting (ACCT).

Accounting.....ACCT
Anthropology.....ANTH
Appraisal.....APPR
Arabic.....ARAB
Architecture.....ARCH
Art.....ART
Automotive Technology.....AUTO
Aviation Maintenance Technology.....AVI
Biology.....BIO
Business Management.....BMGT
Chemistry.....CHEM
Civil Engineering Technology.....CIVL
Communication Skills.....COMM
Computer Information Technology.....CIT
Construction Management.....CMGT
Dance.....DANC
Dental Hygiene.....DHY
Dental Laboratory Technology.....DENT
Developmental Education.....DEV
Dietetic Manager Certificate.DMGR (See Hospitality Management)
Dietetic Technician Major.....DIET (See Hospitality Management)
Early Childhood Development.ECD
Economics.....ECON
Electro-Mechanical Engineering Technology.....EMEC
Electronic Engineering Technology.....EET
Emergency Medical Services Technology.....EMS
English.....ENGL
English Module.....ENG
English as a Second Language...ESL
Environmental Technology....ENVR
Facility Mgmt. Certificate.....FAC
Financial Management Technology.....FMGT
Fire Science.....FIRE
French.....FREN
Geographic Info Systems.....GIS
Geography.....GEOG
Geology.....GEOL
German.....GERM
Graphic Communications.....GRPH
Health Information Management Technology.....HIMT
Health Information Management Module.....HIM
Heating, Ventilating and Air Conditioning Technology.....HAC
History.....HIST
Hospitality Management.....HOSP
Human Resources Mgmt.....HRM
Humanities.....HUM
Interactive Multimedia Production.....IMMT
Interpreting/ASL Education.....ITT
Italian.....ITAL
Japanese.....JAPN
Landscape Design/Build.....LAND
Latin.....LATN
Law Enforcement.....LAWE
Legal Assisting.....LEGL
Legal Medical Asst.....LEGL/HIMT
Literature.....ENGL
Logistics.....LOGI
Marketing.....MKTG
Massage Therapy.....MASS
Mathematics.....MATH
Mechanical Engineering Technology.....MECH
Medical Assisting Tech.....MAT
Medical Laboratory Technology.....MLT
Mental Health/Chemical Dependency/Mental Retardation.....MHCR
Mental Health/Chemical Dependency/Mental Retardation Module.....MHC
Multi-Competency Health.....MULT
Music.....MUS
Natural Science.....NSCI
Nuclear Medicine Tech.....NUC
Nursing.....NURS
Office Administration.....OADM
Office Admin. Module.....OAD
Philosophy.....PHIL
Physics.....PHYS
Political Science.....POLS
Practical Nurse.....PNUR
Psychology.....PSY
Quality Assurance Tech.....QUAL
Radiography.....RAD
Respiratory Care.....RESP
Real Estate.....REAL
Social Sciences.....SSCI
Sociology.....SOC
Spanish.....SPAN
Spanish Module.....SPN
Sports & Fitness Mgmt.....SFMT
Surgical Technology.....SURG
Surveying.....SURV
Technical Communication.....TCO
Theater.....THEA
Veterinary Technology.....VET

Explanation of Course Description Codes



Course Number - the three-or four-letter alpha identifier indicates the department; the three numbers that follow identify the specific course. Three of four letters followed by xxx 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.

Quarter Offered - indicates which quarter or quarters the course is offered during the year. A- Autumn; W-Winter; SP-Spring; SU-Summer.

Prerequisites - any coursework that must be completed before the student is eligible to enroll for the course. For example, if ENGL 101 were listed as a prerequisite for a course, then only students who have completed ENGL 101 would be eligible to register for the course.

Corequisite Courses - any coursework that must be completed during the same quarter as the course in which you are enrolling. For example, if course ACCT 271 is a corequisite with course ACCT 272, both courses must be taken during the same quarter.

Class 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 class hours.

Credits - the number of credits to be awarded to students who successfully complete the course.

Distance Learning - designates course is also available in a distance learning format. Courses taken in the distance learning format may be subject to a different lab fee.

Lab Fee - a 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.

Module - a modular course is defined as a part of the main course that can stand alone. The topics are related and when combined with all parts, become the entire course. Modular courses usually do not exist without the main course. Modules may have various methods of instructional delivery, i.e., faculty lectures, web, self-paced, etc. Modular courses may run on a term basis or be flexibly scheduled. Modular courses are designated as having an alpha letter after the course number, i.e., AVI 324A, AVI 324B. these examples are two modules of the whole main course AVI 324.

Accounting (ACCT)

ACCT 106 Introduction to Accounting I (Financial) 5 credits (A, W, SP, SU -DL)
An introduction to accounting emphasizing how general purpose financial statements communicate information about the business corporation's performance and position for users external to management. Approximately one third of the course emphasizes how the accountant processes and presents the information and includes exposure to recording transactions, adjusting balances and preparing financial statements for service and merchandising firms according to established rules and procedures. The balance of the course examines major elements of the statements such as cash, receivables, inventory, long-lived assets, depreciation, current and long-term liabilities, and capital stock transactions. Concepts of this course are applied to ACCT 107. Students are advised to avoid any time lapse between these courses.
Lecture: 5 hours – Lab: 0 hours
Prerequisites: Placement into ENGL 101 and Completion of MATH 101 or higher
Lab fee: $2.00

ACCT 107 Introduction to Accounting II (Managerial) 5 credits (A, W, SP, SU -DL)
A continuation of ACCT 106 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 costing of products and services, decision analysis, and control and evaluation.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ACCT 106 (Accounting Majors must have "C" or better in ACCT 106)
Lab fee: $2.00

ACCT 108 Introduction To Accounting III (SP) 4 credits
A follow-up course to ACCT 106 and ACCT 107 that develops the mechanical phase of theoretical concepts. This course is oriented toward the accounting major to enable the student to apply double entry accounting methods toward the daily maintenance of accounting records.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: ACCT 107 (Accounting Majors must have "C" or better in ACCT 107)
Lab fee: $2.00

ACCT 121 Data Processing for Accountants (W, SP) 4 credits
As applied to the accounting world, in-depth practice in the varied practical applications of Microsoft Excel electronic spreadsheet.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: CIT 101 and ACCT 106
Lab fee: $5.00

ACCT 126 Accounting Systems (SP, SU) 5 credits
An introduction to systems fundamentals including flowcharting and internal control. A comprehensive application of accounting principles studied in ACCT 106 and ACCT 107 using microcomputers.
Lecture: 3 hours – Lab: 4 hours
Prerequisite: ACCT 107 and ACCT 121
Lab fee: $5.00

ACCT 201 Intermediate Accounting I (A) 5 credits
A continuation of accounting theory. An in-depth study of the accounting process and accounting records; the nature and content of accounting statements: balance sheet, income statement, and retained earnings statement; analysis of working capital; analysis and methods of valuation and statement presentation of the following items: cash and receivables, inventories and property, plant and equipment.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: ACCT 108 with a "C" or better and placement into or completion of MATH 103
Lab fee: $1.00

ACCT 202 Intermediate Accounting II (W) 5 credits
A continuation of ACCT 201 including analysis and methods of valuation and statement presentation of the following items: current liabilities - contractual and contingent items; intangible assets; deferred charges and long-term liabilities, investments, leases, equity transactions, earnings per share, statement of cash flow.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: ACCT 201 with a "C" or better
Lab fee: $1.00

ACCT 203 Advanced Accounting (SP) 5 credits
The study of financial accounting theory and practice relating to Accounting for business combinations, consolidated financial statements, partnerships, segment and interim reports, and foreign operations.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ACCT 202 with a "C" or better
Lab fee: $1.00

ACCT 211 Cost Accounting (SP, SU) 5 credits
A study of the field of job order cost accounting; the cost cycle methods of handling materials, labor costs, and manufacturing overhead expenditures (controllable and uncontrollable); process cost accounting; byproducts and joint products; fundamental cost-volume-profit relationships (break-even analysis); flexible budgeting and standard costs.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: ACCT 107
Lab fee: $2.00

ACCT 221 Financial Statement Analysis I (A) 3 credits
A study of forms of business organization; source and management of working capital; financial statement presentation; tools of analysis; percentages, comparisons to past performance industry standards, and basic ratios including working capital.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: ACCT 106, ACCT 107 and placement into or completion of MATH 103
Lab fee: $1.00

ACCT 222 Financial Statement Analysis II (W) 3 credits
A continuation of course ACCT 221; ratios of equity, return on equity and return on assets; corporate securities; financing through securities; sources and management of long -term assets, debt, and equity including capital budgeting; expansion and combinations, reorganization, receivership, and dissolution.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: ACCT 221 for Accounting Students & for Finance Students the prerequisite is FMGT 201
Lab fee: $2.00

ACCT 231 State and Local Taxation (SP, SU) 3 credits
Payroll taxes (withholding and reports), unemployment taxes, workmen's compensation, franchise taxes, personal property taxes (classified and intangible), city income taxes, Ohio personal taxes, sales and use taxes, real estate taxes, and vehicle and other taxes.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: ACCT 106
Lab fee: $5.00

ACCT 232 Federal Taxation (W, SU) 5 credits
Individual income taxes; returns, income exemptions, deductions, gains and losses, rates, adjustments. Problems of proprietorship, partnerships, corporations, inventories, depreciation accounting, installment and deferred sales treatment. Filing requirements, payments, refunds, claims. Tax planning techniques.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: ACCT 106
Lab fee: $5.00

ACCT 236 Advanced Taxation (SP) 4 credits
A continuation of ACCT 232, including non-liquidating distributions, accumulated earnings, and undistributed income. Sub-chapter S corporations, stock redemption and partial liquidations, corporate reorganization, and estate and gift taxation.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: ACCT 232
Lab fee: $2.00

ACCT 241 Auditing I, Principles (W) 3 credits
A course concerned with identification of professional qualifications and responsibilities of an auditor and study of auditing concepts utilized in the investigation and appraisal of economic information. Topics of study will include the role of the auditor in society, professional ethics, auditing standards, professional liability, audit objectives, relationship of risk and materiality to audit strategies, planning and accepting an engagement, audit sampling, and an auditor's concern with internal control.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: ACCT 201
Lab fee: $3.00

ACCT 242 Auditing II, Applications (SP) 3 credits
A course concerned with practical application of professional qualifications and responsibilities of an auditor utilized in the investigation and appraisal of economic information. Topics of study include how to audit each of the following transaction cycles: revenue, expenditure, personnel services, productive, investing, and financing and cash. The audit report and other special reports will also be studied.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: ACCT 241 and ACCT 202
Lab fee: $3.00

ACCT 256 Final Project (SP) 5 credits
A capstone course for students who are enrolled in the EDP Auditing Major. The course integrates materials presented throughout the curriculum through use of a simulated accounting engagement. Students will design appropriate software in conjunction with both systems analysis and design and apply it to a period of transactions of a hypothetical business enterprise.
Lecture: 2 hours – Lab: 8 hours
Prerequisite: ACCT 202

ACCT 266 Public Administration/Fund Accounting (SP, SU) 4 credits
A course dealing 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 – Lab: 3 hours
Prerequisite: ACCT 201

ACCT 271 Accounting Internship (A, W, SP, SU) 2 credits
A structured employment situation in which the student is introduced into an actual accounting office. The student is expected to perform many of the accounting procedures studied in conjunction with their other classes (i.e., bank reconciliation's, payroll, journal entries, etc.) and to gain relevant experience and a limited work record. Weekly supervision of the intern 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.
Lecture: 0 hours – Lab: 20 hours
Prerequisite: ACCT 201
Corequisite: ACCT 272

ACCT 272 Internship Seminar (A, W, SP, SU) 2 credits
A practical work experience in which the student is expected to perform several operational auditing procedures (i.e., flowcharts, organization charts, analysis of existing internal control, recommendations, etc.) related to an accounting internship position. Emphasis is placed upon analyzing and further understanding the student's working environment.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: ACCT 201
Corequisite: ACCT 271

ACCT 275 Fraud Examination I (SP) 2 credits
This course is designed for the following participants:
-A core course in the proposed Certificate of Internal Audit program.
-An elective course for the accounting major.
-Business executives interested in acquiring additional information about fraud detection, investigation, and prevention.
-Individuals in need of related continuing education credit (please verify that this course qualifies for continuing education credit with your certifying organization).
Lecture: 2 hours
Prequisite: ACCT 106

ACCT 276 Fraud Examination II (SP) 2 credits
This course is designed for the following participants:
-A core course in the proposed Certificate of Internal Audit program.
-An elective course for the accounting major.
-Business executives interested in acquiring additional information about fraud detection, investigation, and prevention.
-Individuals in need of related continuing education credit (please verify that this course qualifies for continuing education credit with your certifying organization).
Lecture: 2 hours
Prerequisite: ACCT 275

ACCT 281 Sarbanes Oxley Act I (SP) 2 credits
This course is designed for the following participants:
-A core course in the proposed Certificate of Internal Audit program.
-An elective course for the accounting major.
-Business executives interested in acquiring additional information about the Sarbanes Oxley Act.
-Individuals in need of related continuing education credit (please verify that this course qualifies for continuing education credit with your certifying organization).
Lecture: 2 hours
Prerequisite: ACCT 106

ACCT 282 Sarbanes Oxley Act II (SP) 2 credits
This course is designed for the following participants:
-A core course in the proposed Certificate of Internal Audit program.
-An elective course for the accounting major.
-Business executives interested in acquiring additional information about the Sarbanes Oxley Act.
-Individuals in need of related continuing education credit (please verify that this course qualifies for continuing education credit with your certifying organization).
Lecture: 4 hours
Prerequisite: ACCT 281

ACCT 291 Internal Audit I (SP) 2 credits
This course is designed for the following participants:
-A core course in the proposed Certificate of Internal Audit program.
-An elective course for the accounting major.
-Business executives interested in acquiring additional information about fraud detection, investigation, and prevention.
-Individuals in need of related continuing education credit (please verify that this course qualifies for continuing education credit with your certifying organization).
Lecture: 2 hours
Prerequisite: ACCT 106 & BMGT 111

ACCT 292 Internal Audit II (SP) 2 credits
This course is designed for the following participants:
-A core course in the proposed Certificate of Internal Audit program.
-An elective course for the accounting major.

-Business executives interested in acquiring additional information about fraud detection, investigation, and prevention.
-Individuals in need of related continuing education credit (please verify that this course qualifies for continuing education credit with your certifying organization).
Lecture: 2 hours
Prerequisite: ACCT 291

ACCT 293 Operational Auditing (SP) 2 credits
This course is designed for the following participants:
-A core course in the proposed Certificate of Internal Audit program.
-An elective course for the accounting major.
-Business executives interested in acquiring additional information about fraud detection, investigation, and prevention.
-Individuals in need of related continuing education credit (please verify that this course qualifies for continuing education credit with your certifying organization).
Lecture: 2 hours
Prerequisite: ACCT 292 & BMGT 272

ACCT 294 Internal Audit – Special Topics 2 credits
This course is designed for the following participants:
-A core course in the proposed Certificate of Internal Audit program.
-An elective course for the accounting major.
-Business executives interested in acquiring additional information about COSO's Internal Control – Integrated Framework and Enterprise Risk Management.
-Individuals in need of related continuing education credit (please verify that this course qualifies for continuing education credit with your certifying organization.
Lecture: 2 hours
Prerequisite: ACCT 293

Anthropology (ANTH)

ANTH 200 Introduction to Physical Anthropology
(A, W, SP, SU - DL) 5 credits
This course introduces students to the basic concepts of biological anthropology. It discusses anthropology's relationship with other biological and social sciences, surveys non-human primates, examines some aspects and examples of non-human behavior in depth, covers topics in current human diversity, and looks at human evolutionary history.
A distance-learning version of Introduction to Physical Anthropology is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101Lab fee: $6.00

ANTH 201 World Prehistory (A, W, SP, SU - DL) 5 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.
A distance-learning version of World Prehistory is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

ANTH 202 Introduction to Cultural Anthropology
(A, W, SP, SU) 5 credits
Cultural anthropology focuses on understanding human cultural diversity, using research techniques such as participant observation to explore the lifeways of groups. Topics include cross-cultural treatments of social systems such as politics, economics, family and marriage, and kinship. General theories of cultural interpretation and change are discussed in a broad geographical context. Students apply concepts and complete a "mini-project" using anthropological research techniques.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

ANTH 240 Introduction to Forensic Anthropology
(A, W, SP) 5 credits
This course introduces students to the field of forensic anthropology. Forensic sciences use methods and applications from anthropology 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. The course covers the development of forensic anthropology, examines the theoretical and methodological bases of forensic anthropology, and considers present applications as well as future directions in this relatively new subfield of anthropology.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ANTH 200 or BIO 161 or LAW 111
Lab fee: $6.00

ANTH 290 Capstone Experience in Anthropology
(on demand) 3 credits
This course is for students completing the two-year Associate of Arts or Associate of Science degree who have a special interest in continuing in a baccalaureate degree program in anthropology. Course requirements include the completion and presentation of a research project that relates to the students' academic interest after reviewing research methodologies and findings in anthropology; assembly of a portfolio that covers their academic career at Columbus State Community College; and participation in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: Completion of AA/AS core requirements and at least 75 hours toward the degree and five credit hours in anthropology
Lab fee: $6.00

ANTH 293 Independent Study in Anthropology
(on demand) 1 - 5 credits
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 to 5 hours – Lab: 0 hours
Prerequisite: Permission of the Instructor and the Chairperson and one course in Anthropology
Lab fee: $6.00

ANTH 299 Special Topics in Anthropology
(on demand) 1 – 5 credits
A detailed examination of selected topics of interest in anthropology.
Lecture: 1 to 5 hours – Lab: 0 hours
Prerequisite: Vary
Lab fee: $6.00

Appraisal (APPR)

APPR 101 Principles of Appraisal (A, W, SP, SU) 5 credits
This is the introductory course to appraisal, establishing a firm foundation for principles, concepts, and procedures for implementation of the valuation process. Coverage includes attributes and necessary skills for the professional appraisal, identification of centers for employment opportunities or establishing individual, independent appraisal practices, the nature of value, basic appraisal principles, 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: 5 hours—Lab: 0 hours
Lab fee: $2.00

APPR 102 Procedures of Appraisal (A, W, SP, SU) 5 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: 5 hours—Lab: 0 hours
Prerequisites: APPR 101
Lab fee: $2.00

APPR 110 Basic Income (A, W, SP, SU) 5 credits
This course lays the foundation for the appraisal of income-producing properties as viewed through the eyes of a typical investor anticipating cash flows and proceeds from resale from ownership. Its focus is on the concepts and reasoning behind both direct capitalization and yield capitalization, using mathematical techniques to derive and analyze market data to develop value estimates. Coverage includes review of financial functions with compound interest, differences between direct capitalization and yield capitalization, potential gross income estimates, total operating expense estimates, derivation and use of overall capitalization rates, derivation and use of income multipliers models for income and value change, valuation of leased fee and leasehold interests and cash equivalency.
Lecture: 5 hours—Lab: 0 hours
Prerequisites: APPR 101 and APPR 102
Lab fee: $2.00

APPR 115 Report Writing (A) 1 credit
This course presents the necessary communication skills for form and narrative report writing integrating each step of the valuation process. Primary focus is on effective organization, style, and grammar without excess verbiage or ambiguity in a logical, objective manner. Coverage includes written and verbal communication skills, organizing facts and conclusions, preparing and presenting the various portions of the appraisal report, and critique of writing style, organization, and grammar.
Students will select a subject property and prepare an appraisal report during the course, form or narrative, following and adhering to the Uniform Standards of Professional Appraisal Practice.
Lecture: 1 hour—Lab: 0 hours
Prerequisites: APPR 101 and APPR 102
Lab fee: $2.00

APPR 201 Advanced Appraisal Applications (W) 3 credits
This course is a culmination of all previous courses, bringing together the three approaches to value in a case study mode with group participation in unique problem solving sessions. It centers around applications for commercial, industrial, and subdivision type properties, focusing on tests of reasonableness for support and documentation of a final conclusion of value. Coverage includes leased/leasehold valuation and respective degrees of risk, subdivision analysis, values for proposed properties to include current, as completed, and as stabilized; occupancy; forecasting supply and demand; highest and best use applications; advanced statistical techniques; and use of demographic and economic information.
Lecture: 3 hours—Lab: 0 hours
Prerequisites: APPR 101 and APPR 102
Lab fee: $2.00

APPR 210 Eminent Domain Appraisal (W) 3 credits
This course introduces the application of the valuation process into solving condemnation problems covering whole takings and partial takings of private property for public use. Models are presented to value a property before and after a taking, isolating total just compensation due the property and allocating between the value of the taking and damage to the residue. Coverage includes role of the appraiser, role of the attorney, estimating before value, estimating after value, estimating the just compensation, estimating value of part taken, estimating damage to residue, pretrial conference, expert testimony, and graphic evidence for trial.
Lecture: 3 hours—Lab: 0 hours
Prerequisites: APPR 101
Lab fee: $2.00

APPR 211 Litigation Support and Expert Testimony (SP) 3 credits
This course demonstrates the numerous opportunities available for the appraiser to offer appraisal services in litigation matters involving real estate taxes, contamination, condemnation, fraud, divorces, construction defects, etc. Coverage includes litigation opportunities, role of the appraiser, role of the attorney, compliance with USPAP, pretrial conference, witness demeanor and effective communication, direct examination, cross examination, and depositions.
Lecture: 3 hours—Lab: 0 hours
Prerequisite: APPR 101
Lab fee: $2.00

APPR 220 Market Analysis and Highest and Best Use (SP) 5 credits
This course steps up from valuation to evaluation, analytically oriented to relate market data to appraisal applications. Heavy concentration is placed on supply and demand relationships for employment with market analysis techniques to enhance highest and best use determinations in terms of the most probable market place. Coverage includes supply and demand relationships, data sources, market area analysis, absorption and capture rates, discounted cash flow analysis, neighborhood and marketability, highest and best use analysis, and application of four tests for highest and best use.
Lecture: 5 hours—Lab: 0 hours
Prerequisite: APPR 101
Lab fee: $2.00

APPR 230 Advanced Income (A, W, SU) 4 credits
This course presents advanced applications for the appraisal of income-producing properties by bringing into play yield capitalization with discounted cash flow analysis as it pertains to mortgage and equity participants highlighting financial leverage, risk and return on investment. Coverage includes review of basic income capitalization techniques, estimating cash flow, estimating reversion, yield analysis concepts, financial leverage, risk analysis, yield capitalization, and supporting the discount rate.
Lecture: 4 hours—Lab: 0 hours
Prerequisites: APPR 110
Lab fee: $2.00

APPR 284 USPAP-Uniform Standards of Professional Appraisal Practice 2 credits
Capstone course for the Ohio appraisal certification. Course user to apply the standards of the industry to the instruments of appraisal process. This course covers the requirements for ethical and competent appraiser performance as set out in materials developed and issued by the Appraisal Foundation. Coverage includes history of the Appraisal Foundation,

functions of Appraisal Standards Board and the Appraisal Qualifications Board, rules of USPAP, and standards of USPAP.
Lecture: 2 hours
Lab fee: $2.00

APPR 290 Appraisal Practicum I (A, W, SP, SU) 1 credit
Prerequisite: APPR 101 and 102

APPR 291 Appraisal Seminar I (A, W, SP, SU) 1 credit

APPR 292 Appraisal Practicum II (A, W, SP, SU) 1 credit
Prerequisite: APPR 290

APPR 293 Appraisal Seminar II (A, W, SP, SU) 1 credit

APPR 294 Appraisal Practicum III (A, W, SP, SU) 1 credit
Prerequisite: APPR 292

APPR 295 Appraisal Seminar III (A, W, SP, SU) 1 credit

Arabic (ARAB)

ARAB 101 Elementary Arabic I (On Demand) 5 credits
Introduction to the fundamentals of the Arabic language with practice in listening, reading, speaking, and writing. Includes studies in Arabic culture. Meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

ARAB 102 Elementary Arabic II (On Demand) 5 credits
Continuation of ARAB 101 with further development of listening, reading, speaking, and writing skills and further study of Arabic culture. Meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. Prerequisite: ARAB 101 with a grade of "C" or better.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ARAB 101 with a grade of "C" or better
Lab fee: $6.00

Architecture (ARCH)

ARCH 100 Introduction to the History of Architecture (A, W, SP) 5 credits
A study of 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. Meets elective requirements in the Associate of Arts and Associate of Science Degree programs.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 101
Lab fee: $9.00

ARCH 110 Construction Drafting -Manual I (A, W, SP, SU) 2 credits
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: 1 hours – Lab: 3 hours
Lab fee: $15.00

ARCH 111 Architectural Drafting -Manual II (A, W, 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: 2 hours – Lab: 6 hours
Prerequisite: ARCH 110
Lab fee: $15.00

ARCH 112 Construction Drafting -CAD I (A, W, SP, SU) 2 credits
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: 1 hour – Lab: 3 hours
Prerequisite: ARCH 110 or permission of instructor
Lab fee: $15.00

ARCH 113 Architectural Drafting -CAD II (A, W, SP, SU) 2 credits
This course introduces students to the intermediate features of AutoCAD and builds upon the basics learned in ARCH 112. Emphasis is placed on advanced dimensioning features, hatching, attributes, external references and paper/model space. Several small projects will be created utilizing these features. Lectures, in-class demonstrations, and hands on work sessions are employed as teaching tools during the course. The course uses current release of AutoCAD.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: ARCH 112
Lab fee: $15.00

ARCH 114 Architectural Drafting -CAD III (A, W, SP, SU) 2 credits
This course introduces students to the advanced features of AutoCAD and builds upon ARCH 113. Emphasis is placed the use of additional two-dimensional drafting commands. The student will learn the tools necessary to create a set of working drawings for a residential project. Lectures, in-class demonstrations, and hands on work sessions are employed as teaching tools during the course. The course uses current release of AutoCAD.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: ARCH 113
Lab fee: $15.00

ARCH 115 MicroStation CAD Drafting I (W) 3 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: 5 hours
Prerequisite: ARCH110 or permission of instructor
Lab fee: $15.00

ARCH 130 Introduction to Interior Design (on demand) 4 credits
An introduction to the design process, focusing on space planning, through the use of project assignments in a design studio. Emphasis is on problem solving and the process of design, exploring the tools and resources available, and presentation. Several projects, small in scope, will be employed to give the student exposure to a wide variety of typical interior design problems. Lecture, discussion, and studio critiques will be employed as teaching methods during the course.
Lecture: 2 hours – Lab: 6 hours
Prerequisite: ARCH 113
Lab fee: $12.00

ARCH 155 Residential Construction/Wood Structures (A, SP) 3 credits
This course outlines the various phases of residential construction for site analysis to finish material installations, including conventional wood fram-

ing, floor and roof truss framing, heavy timber/post and beam construction, and various plywood panel construction techniques. Additional topics discussed include the design and use of floor joist span charts, simple beam and footing design, as well as roof and foundation design. This course concludes with the choice of building a structural/framing model or preparing a powerpoint presentation of a residential construction task.
Lecture: 1 hour – Lab: 5 hours
Prerequisite: CIVL 120
Lab fee: $12.00

ARCH 161 Presentation Drawings (A, SP) 3 credits
A manual drafting course that is designed to serve as a basis for presentation drawings by hand or using the computer. Problems are designed to strengthen the student's understanding of 3D drawing principles, and to use those principles in order to solve drawing and design issues.
Lecture: 1 hour – Lab: 6 hours
Prerequisite: ARCH 111
Lab fee: $15.00

ARCH 214 Electricity (W, SU) 2 credits
This course studies the electrical code, electrical systems, standards, conventional symbols, nomenclature, layouts and fixture and equipment schedules. Coordination of electrical work with the elements of the building is emphasized.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: CMGT 121
Lab fee: $6.00

ARCH 215 Lighting (W, SU) 2 credits
This course deals with the fundamentals of lighting within buildings. The appropriate quantity of lighting is calculated and the appropriate selection and placement of lighting within a space is studied.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: CMGT121
Lab fee: $6.00

ARCH 221 Design Studio I (W) 3 credits
This course is built around the design process and design logic, and will also include an emphasis on working either alone or as part of a team. The design theme may include emphasis on sustainable architecture as the primary design goal. When sustainable architecture is the framework of the course, lectures and research assignments will include lessons on solar energy, conservation practices, building materials, and other aspects of sustainability.
Lecture: 2 hours – Lab: 6 hours
Prerequisite: ARCH111 and ARCH114, or permission of instructor
Lab fee: $20.00

ARCH 223 Design Studio II (SP) 3 credits
This course is built on the foundations laid by ARCH221 and includes discussions of design principles. Students will develop a work on various design projects including a small and complex architectural project..
Lecture: 1 hours – Lab: 6 hours
Prerequisite: ARCH221 or permission of instructor
Lab fee: $20.00

ARCH 232 Building Construction Standards (A, SP) 3 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: 5 hours
Prerequisite: CMGT 121
Lab fee: $12.00

ARCH 237 Structures-Steel, Concrete and Masonry (W, SU) 4 credits
This course presents basic conceptual and practical structural design concepts. Steel, concrete and masonry structures are studied and evaluated mathematically. The student will learn how to evaluate and design beams and columns in both steel and concrete. Other topics include bearing plate/base plate design, bolted and welded connections, concrete and masonry wall design. Drafting projects require the use of CAD and will focus on structural elements.
Lecture: 2 hours – Lab: 6 hours
Prerequisite: MATH 148, ARCH 114 and MECH242
Lab fee: $12.00

ARCH 240 3D Modeling and Rendering - AutoCAD (on demand) 3 credits
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 hours – Lab: 5 hours
Prerequisite: ARCH 113 and ARCH 161
Lab fee: $12.00

ARCH 242 3D Visualization – formZ I (A) 4 credits
This course is an introduction to three-dimensional computer modeling using formZ. 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 hours – Lab: 7 hours
Prerequisite: Associate degree or higher or 50 completed hours within Architecture program or permission of instructor
Lab fee: $15.00

ARCH 243 3D Visualization – formZ II (W) 4 credits
This course builds upon the fundamentals learned in ARCH242 and focuses on more advanced techniques. Emphasis is placed on advanced modeling techniques, the mapping of realistic finishes and the replication of real-world interior and exterior lighting conditions. The fundamentals of architectural animation are also studied..
Lecture: 1 hours – Lab: 7 hours
Prerequisite: ARCH 242
Lab fee: $15.00

ARCH 244 3D Rendering and Lighting – form*Z (on demand) 3 credits
This course presents the fundamentals of the application of materials and lighting to 3D architectural models. Emphasis is placed on mapping realistic finishes as well as replicating real-world interior and exterior lighting conditions.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: ARCH 243
Lab fee: $15.00

ARCH 245 Computer Animation – form*Z (on demand) 3 credits
This course presents the fundamentals of architectural animation through the use of form*Z. Emphasis is placed upon optimizing the model for animation, and establishing the camera path.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: ARCH 244
Lab fee: $15.00

ARCH 246 3D Visualization – 3ds Max I (SP) 4 credits
This course is an introduction to three-dimensional computer modeling using formZ. 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 hours – Lab: 7 hours
Prerequisite: Associate degree or higher or 50 completed hours within Architecture program or permission of instructor
Lab fee: $15.00

ARCH 247 3D Visualization – 3ds Max II (SU) 4 credits
This course builds upon the fundamentals learned in ARCH246 and will focus on more advanced techniques. Emphasis is placed on advanced modeling techniques, the mapping of realistic finishes, and the replication of real-world interior and exterior lighting conditions. The fundamentals of architectural animation are also studied.
Lecture: 1 hours – Lab: 7 hours
Prerequisite: ARCH 246
Lab fee: $15.00

ARCH 248 3D Rendering and Lighting – Autodesk Viz4 (on demand) 3 credits
This course presents the fundamentals of the application of materials and lighting to 3D architectural models. Emphasis is placed on mapping realistic finishes as well as replicating real-world interior and exterior lighting conditions.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: ARCH 247
Lab fee: $15.00

ARCH 249 Computer Animation – Autodesk Viz4 (on demand) 3 credits
This course presents the fundamentals of architectural animation through the use of Autodesk Viz4. Emphasis is placed upon optimizing the model for animation, and establishing the camera path.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: ARCH 248
Lab fee: $15.00

ARCH 250 Building Enclosure Materials (A,SP) 3 credits
This course is designed to expand on the knowledge gained in CIVL 120, with the study of how such materials and others are combined to form the building shell. The courses 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: 2 hours – Lab: 3 hours
Prerequisite: CIVL 120
Lab fee: $12.00

ARCH 252 Post Production (W, SU) 3 credits
This course presents the fundamentals of post-editing computer renderings. Emphasis is placed upon adding people and trees, correcting the lighting levels and applying different filter effects.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: ARCH 242 or ARCH246
Lab fee: $15.00

ARCH 263 Working Drawings I (A, SP) 4 credits
This course introduces the student to the practice of working drawings, and deals with the generation of schedules, details, plans and other drawings necessary, and ADA requirements, with an emphasis on the organization and coordination necessary among the drawings
Lecture: 1 hour – Lab: 7 hours
Prerequisite: ARCH 250 and ARCH 114
Lab fee: $15.00

ARCH 264 Working Drawings II (W, SU) 4 credits
This course uses all of the knowledge obtained from the previous architectural courses. A complete set of working drawings is created as a team effort. The student learns to incorporate consultant information in the final set of working drawings. Independent search for and use of information is encouraged.
Lecture: 1 hour – Lab: 7 hours
Prerequisite: ARCH 232 and ARCH 263
Lab fee: $20.00

ARCH 270 Professional Practice and Management (A, 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: 1 hour – Lab: 5 hours
Prerequisite: ARCH 250 or permission of instructor
Lab fee: $10.00

ARCH283 Sustainable Architectural Design (on demand) 3 credits
This course introduces the student to the issues and concepts related to the sustainable design of buildings. The impact of climate and of the building's site on design decisions is studied. Energy efficient design, renewable forms of energy, use of sustainable and durable materials is evaluated. Students study the need to provide efficient means of recycling within the complete structure and for the reuse and adaptability of the building itself.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: ENVR282 and CMGT282
Lab fee: $10.00

ARCH 291 Field Experience (SU) 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. "N" credit will not be allowed for this course.
Lecture: 0 hours – Lab: 36 hours
Lab fee: $0.00

ARCH 299 Special Topics in Architecture (on demand) 1-5 credits
Detailed examination of selected topics in Architecture.
Lecture and Lab hours vary dependent upon topic.
Prerequisite: varies based upon topic.
Lab fee: $10.00

Facility Management (FAC)

Also see Architecture (ARCH)

FAC 111 Introduction to Facility Management (on demand) 3 credits
A course designed to familiarize the student with the fundamental areas of knowledge comprising facility management, including ethical and legal responsibilities, the relationship of the facilities unit with other organizational units, and the history, concepts, standards and responsibilities of the profession.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $5.00.

FAC 150 Operations & Maintenance (on demand) 3 credits
A course designed to convey to the student, an understanding of the importance, procedures, policies, and practices required to oversee acquisition, installation, operation, maintenance, and disposition of building systems, furniture, equipment, grounds, and other elements of a facility.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: FAC 111
Lab fee: $10.00

FAC 240 Voice and Data Systems (on demand) 3 credits
A study of the techniques, theory, and devices used for communication in computer systems, network, and telecommunications, with an emphasis on facility needs and problems arising with communications and management of the systems.
Lecture: 3 hours – Lab: 0 hours

FAC 250 Computers in Facility Management
(on demand) 2 credits
A study of the computer programs and techniques in current use for Facility Management, including those used in Communication, Engineering and Management.
Lecture: 1 hours – Lab: 2 hours
Prerequisite: CIT 101
Lab fee: $15.00

FAC 260 Problems in Facility Management
(on demand) 4 credits
A comprehensive capstone course for the facility management student, blending academic theory with practical skills. Problem solving and teamwork in reaching solutions to real problems is emphasized. Students will present their reports and findings to an academic panel and/or real clients.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: FAC 150
Lab fee: $10.00

Art (ART)

ART 101 History of Western Art (A, W, SP, SU) 5 credits
A survey of artistic expression in the Western world from the earliest times to the present including the types of media used and their limitations, the role of patronage in artistic development, the relationship of art and the artist to developments in society, and a consideration of the attributes of "great" art in any time or age. Meets elective requirements in the Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in Humanities, and the Arts.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101 Lab fee: $2.00

ART 111 Fundamental Concepts of Art (W, SU) 5 credits
This is a course that specifically explores the principles of artistic communication through the structural devices of line, color, iconography, shape, perspective, collage, montage, etc. Selected major works of art and styles in the history of art, as well as the moving image, film and video will be analyzed in relation to what they were intended to communicate and how this communication is achieved.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

ART 121 Beginning Drawing (A, W, SP, SU) 5 credits
An introduction to the basic techniques of freehand drawing. Emphasis is on media, concepts, drawing from observation and development of technique. Meets elective requirements in the Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in the Arts.
Lecture: 0 hours – Lab: 10 hours
Lab fee: $2.00

ART 122 Two-Dimensional Design (A, W, SP, SU) 5 credits
An introduction to the basic concepts of 2-dimensional design: line, shape, space, hue, value and texture. Use of various media in a variety of problem-solving projects leading toward an awareness of the principles of visual organization.
Lecture: 0 hours – Lab: 10 hours
Lab fee: $2.00

ART 123 Beginning Painting (On Demand) 5 credits
An introduction to studio painting fundamentals utilizing varied subject matter and media.
Lecture: 0 hours – Lab: 10 hours
Lab fee: $2.00

ART 131 Three-Dimensional Design (on demand) 5 credits
Design II is aimed at developing the student's basic understanding of three-dimensional visual communication through the exploration of three-dimensional principles. Students learn through the process of solving visual art problems. Solutions to these problems are achieved through the fabricating of three dimensional art objects. Various techniques and media are also systematically addressed that are common to this area of study.
Lecture: 0 hours – Lab: 10 hours
Prerequisite: ART 122 or permission of instructor.
Lab fee: $2.00

ART 230 Color Composition (A, SP) 5 credits
This course examines the theory and artistic application of basic color principles through student projects and lecture. Such topics as color mixing, interaction, and organization are presented.
Lecture: 0 hours – Lab: 10 hours
Prerequisite: ART 122 or permission of instructor
Lab fee: $2.00

ART 242 World Cinema (on demand) 5 credits
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 the social and philosophical context in which they worked.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $2.00

ART 215 Time Arts Foundation (on demand) 4 credits
An introductory course exploring the visual and audio tools necessary for the production of time art works. The course will also introduce students to thematic, motivic, concrete, symbolic and other structural elements used in such works. Students will create original works utilizing digital camera, tape recorder, video camera, and digital audio composition.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: Hum 111, 112, 113, 151 or 152, or Permission of Instructor
Lab fee: $4.00

ART 216 The Temporal Image (on demand) 4 credits
This course will simultaneously explore the history of independent filmmaking (beginning with Dali and Duchamp and ending with the works of Paik and Viola), as well as the techniques for independent film/video production. Building on the concepts and techniques learned in Art 215, students will create their own explorations of images in time.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: Hum 245 and Art 215
Lab fee: $4.00

HUM 245 Art and Music Since 1945 (see Hum 245)

MUS 217 Electronic Sound (see MUS 217

ART 290 Capstone Experience in Art (On Demand) 3 credits
A capstone course focusing on Art. Students will work on developing techniques and methodologies in the field of art. Students will apply these techniques to a project of their own design, complete a personal portfolio covering their studies at Columbus State, and participate in summative testing of their academic skills.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: Open only to AA and AS students preparing to graduate within 2 academic quarters.
Lab fee: $2.00

ART 299 Special Topics in Art (on demand) 1 to 5 credits
Detailed examination of selected topics of art.
Lecture: variable hours – Lab: hours
Prerequisite: Permission of Instructor.
Lab fee: $2.00

Arts & Sciences (ASC)

ASC-150 Individual Learning and Motivation: Strategies for Success in College (A, W, SP, SU) 3 credits
This course examines theory and practice about learning strategies, motivation and thinking, focusing on the application of four major learning strategies to success in college. Course is taught in a computer environment to engage students in active learning. This course has been proven to increase grade point averages and retention rate of college students. Open to all students. May be used as a substitute for ASC 190 for AA/AS students.
Lecture: 1 hour. Computer Lab: 4 hours.
Prerequisite: Admission to ENGL 101
Lab Fee: $4.00

ASC-190 Freshman Seminar (A, W, SP, SU) 2 credits
The freshman Seminar is designed to familiarize first time Arts and Science students at Columbus State with the academic environment. Students will use various support systems, set personal academic goals, map their course of study at Columbus State to meet theses goals. The course is designed to enhance critical reading and thinking skills through selected reading of primary materials. Optional for students having completed ESL 100.: required for all Associate of Arts and associate of Science dgre seeking students. Students are advised to take this course in conjunction with ENGL 101 or ENGL 111.
Lecture: 2hours - Lab 2 hours
Prerequisite; AS or AA major; ENGL 100
Lab fee $4.00

ASC-290 Capstone Experience in Arts and Science (on demand) 3 credits
Lecture 2 hours – lab 2hours
Prerequisite 75 hours completed toward the degree
Lab Fee: $10.00

ASC-299 Special Topics in Arts and Sciences (on demand) 1-5credits
Special Topics in Arts and Sciences designed to meet specific needs.
Lecture hours vary – lab hours vary
Prerequisites; vary

Automotive (AUTO)

AUTO 061 Basic Automotive Systems & Theories of Operation (A,W,SP,SU) 4 credits
This course covers the basic systems of an automobile and their theory of operation. Includes the physical, hydraulic, and electrical theoretical basics, as applied to cars and light trucks. This course and AUTO 062 are prerequisites for all other automotive courses. Credit for this course can be obtained by satisfactory completion of the course, documented previous training and/or experience, or by satisfactory results of a proficiency exam administered by the department. .
Lecture: 3 hours – Lab: 3 hours
Concurrent: It is recommended that this course be taken the same quarter as AUTO 062.
Lab fee: $15.00

AUTO 062 Auto Shop Orientation & Service (A, W, SP, SU) 4 credits
This course covers the operation of an automotive shop. Includes use of hand and power tools and basic maintenance operations on cars and light trucks. This course and AUTO 061 are prerequisites for all other automotive courses. Credit for this course can be obtained by satisfactory completion of the course, documented previous training and/or experience, or by satisfactory results of a proficiency exam administered by the department.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: AUTO 061
Concurrent: It is recommended that this course be taken the same quarter as AUTO 061.
Lab fee: $15.00

AUTO 101 Autocare (on demand) 3 credits
This course is designed for the non-automotive student who is interested in obtaining a familiarity with the fundamentals of automotive systems and preventative maintenance. Also included is information on choosing a repair shop, tips and techniques for dealing with minor breakdowns, and vehicle purchasing strategies.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $20.00

AUTO 110 Engine Operation & Overhaul (A, SU) 4 credits
A basic course in the theory of operation and automotive engines. All engine mechanical systems are explored during teardown and assembly of a current automotive engine. Common in-car repairs are covered. Credit for this course can be obtained by satisfactory completion of the course, ASE certification in this area, or by satisfactory results of a proficiency exam administered by the department.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: AUTO 061 and AUTO 062
Concurrent: It is recommended that this course be taken the same quarter as AUTO 115.
Lab fee: $20.00

AUTO 115 Engine Diagnosis & In-Car Repair (A, SU) 3 credits
An advanced engine course including minor cylinder head and valve machining, component service, and engine removal and installation. Prepares student to achieve national ASE certification in engine repair.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO 110
Concurrent: It is recommended that this course be taken the same quarter as AUTO 110.
Lab fee: $20.00

AUTO 120 Automatic Transmissions Operation & Overhaul (W, SP) 4 credits
A basic course in automatic transmission theory of operation. Hydraulic and electrical systems are emphasized during a complete teardown and assembly. Credit for this course can be obtained by satisfactory completion of the course, ASE certification in this area, or by satisfactory results of a proficiency exam administered by the department.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: AUTO 061 and AUTO 062
Concurrent: It is recommended that this course be taken the same quarter as AUTO 125.
Lab fee: $15.00

AUTO 125 Automatic Transmissions Diagnosis & In-Car Repair (W, SP) 3 credits
An advanced course in automatic transmission and transaxle service and diagnostics. Emphasis on field diagnostics and repairs. Prepares student to achieve national ASE certification in automatic transmissions.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO 120

Concurrent: It is recommended that this course be taken the same quarter as AUTO 120.
Lab fee: $15.00

AUTO 130 Manual Transmissions/Driveline Operation & Overhaul (A, SU) 4 credits
This course provides a working knowledge of manual transmissions, transaxles, and differentials. Repair and diagnostics are covered during complete teardown and assembly. Credit for this course can be obtained by satisfactory completion of the course, ASE certification in this area, or by satisfactory results of a proficiency exam administered by the department.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: AUTO 061 and AUTO 062
Concurrent: It is recommended that this course be taken the same quarter as AUTO 135.
Lab fee: $15.00

AUTO 135 Manual Transmissions Diagnosis & In-Car Repair (A, SU) 3 credits
An advanced course in clutch, manual transmission, transaxle, and differential diagnostics. Includes clutch and transmission removal and installation. Prepares student to achieve national ASE certification in manual transmissions.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO 130
Concurrent: It is recommended that this course be taken the same quarter as AUTO 130.
Lab fee: $15.00

AUTO 140 Suspension and Steering System Theory & Operation (SP, SU) 4 credits
This course provides a working knowledge of the diagnosis and repair of wheels, tires, suspension systems, steering systems, and wheel alignment diagnosis and adjustment. Credit for this course can be obtained by satisfactory completion of the course, ASE certification in this area, or by satisfactory results of a proficiency exam administered by the department.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: AUTO 061 and AUTO 062
Lab fee: $15.00

AUTO 145 Suspension and Steering Diagnosis & Repair (A,W,) 3 credits
An advanced course covering detailed diagnostics and service of suspension components. Includes instruction on both two-wheel and four-wheel alignment. Prepares student to achieve national ASE certification in suspension and steering.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO 140
Lab fee: $15.00

AUTO 150 Brake Systems Theory & Operation (W,SP) 4 credits
This course provides a working knowledge of the diagnosis and repair of the hydraulic system, drum brake systems, disc brake systems, power assist units, and associated systems including wheel bearings, parking brakes and related electrical circuits. Credit for this course can be obtained by satisfactory completion of the course, ASE certification in this area, or by satisfactory results of a proficiency exam administered by the department.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: AUTO 061 and AUTO 062
Lab fee: $20.00

AUTO 155 Brake Systems Diagnosis & Repair (SP) 3 credits
An advanced course covering detailed diagnostics and repair of automotive brake systems including anti-lock systems. Prepares student to achieve national ASE certification in brake systems.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO 150
Lab fee: $15.00

AUTO 160 Electrical Systems Theory & Operation (W, SU) 4 credits
This course provides a working knowledge of the diagnosis and repair of general electrical systems: the battery, starting, charging, and lighting systems. Also included are gauges, warning devices, wiper systems, and other electrical accessories. Credit for this course can be obtained by satisfactory completion of the course, ASE certification in this area, or by satisfactory results of a proficiency exam administered by the department.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: AUTO 061 and AUTO 062
Lab fee: $15.00

AUTO 165 Electrical/Electronic Diagnosis & Repair (A, SP) 3 credits
An advanced course designed to provide students with a knowledge of electronic components, circuits and diagrams, and testing and service of automotive computer systems. Prepares student to achieve national ASE certification in electrical systems. .
Lecture: 2 hours – Lab: 2 hours
Prerequisite : AUTO 160
Lab fee: $15.00

AUTO 170 Heating and Air Conditioning Systems Theory & Operation (SP) 4 credits
This course provides a working knowledge of the diagnosis and repair of air conditioning systems, refrigeration systems, heating and engine cooling systems, and control units. Credit for this course can be obtained by satisfactory completion of the course, ASE certification in this area, or by satisfactory results of a proficiency exam administered by the department.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: AUTO 061 and AUTO 062
Lab fee: $15.00

AUTO 175 Heating and Air Conditioning Diagnosis & Repair (SP, SU) 3 credits
An advanced course designed to provide the knowledge necessary to diagnosis and repair automotive air conditioning systems, including the diagnosis and repair of automatic temperature controls and related electronic systems. Prepares student to achieve national ASE certification in heating and air conditioning systems.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO 170
Lab fee: $20.00

AUTO 180 Engine Performance Theory & Operation (A, SP) 4 credits
This course provides the opportunity to gain a working knowledge of engine performance diagnostics. Includes diagnosis and repair of the ignition system, fuel and exhaust systems, emission control systems, and an introduction to engine electrical and computer control systems. Credit for this course can be obtained by satisfactory completion of the course, ASE certification in this area, or by satisfactory results of a proficiency exam administered by the department. It is recommended that students complete AUTO 110 and AUTO160 prior to registering for this course.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: AUTO160
Lab fee: $15.00

AUTO 181 Fundamentals of Alternative Fuel Systems (on demand) 3 credits
This course provides a working knowledge of the predominate alternate fuel systems currently in use in automotive applications. These include

CNG, LNG, propane, ethanol, methanol, electric, oxygenated gasoline, and gasohol. The unique characteristics of each fuel along with the systems used to adapt automobiles to its use is explored along with the federal legislation that is mandating and controlling this technology.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO 180
Lab fee: $20.00

AUTO 185 Computerized Engine Performance (W, SU) 3 credits
The course is designed to provide students with a working knowledge in the area of advanced engine diagnostics. Diagnosis and repair of fuel injection and computerized engine control systems are included. Prepares student to achieve national ASE certification in engine performance.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO 180
Lab fee: $15.00

AUTO 186 Advanced Alternative Fuel Systems (on demand) 3 credits
An advanced course designed to provide students with background knowledge and experience on current alternate fuel conversion systems and proper installation procedures. Symptom analysis, diagnosis, and repair of alternate fuel related engine performance problems are covered. Prepares student to achieve national ASE certification in alternate fuels.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO 181 and 185
Lab fee: $20.00

AUTO 190 Automotive Business Management (on demand) 3 credits
An introduction to automotive management principles. Topics covered include: A systems approach to management, management styles, financial measures, MBO and quality, time management, customer and employee relations, marketing and the legal environments.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO 061 and AUTO 062
Lab fee: $10.00

AUTO 191 Service Advising (on demand) 3 credits
The primary responsibilities of a Service Advisor: Writing a proper repair order, scheduling, selling maintenance and customer relations are covered in depth in this course. Estimating, repair order tracking and time management skills are also presented.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO 190
Lab fee: $10.00

AUTO 192 Automotive Service Management (on demand) 3 credits
This course covers the variety of duties of the service manager. Principles presented in AUTO 190 are further developed along with practical implementation strategies. Facilities and equipment planning and management along with financial management and analysis are covered.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO 190
Lab fee: $10.00

AUTO 193 Automotive Service Merchandising (on demand) 3 credits
Principles of marketing, merchandising and advertising and their application in the automotive repair industry will be covered in this course. Upon completion of this course the student will be able to demonstrate the ability to develop specific merchandising and advertising items and to develop a departmental marketing plan.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO 190
Lab fee: $10.00

AUTO 195 Auto Parts - Sales (on demand) 2 credits
The duties and responsibilities of a parts department counter-person are covered in this course. The use of catalogs and locator systems, as well as outside sales, are included.
Lecture: 1 hours – Lab: 2 hours
Prerequisite: AUTO 190
Lab fee: $10.00

AUTO 196 Auto Parts - Inventory Control (on demand) 2 credits
This course covers the various inventory control systems that are commonly used in automotive parts departments and stores. Determining inventory levels is an integral part of this course.
Lecture: 1 hours – Lab: 2 hours
Prerequisite: AUTO 190
Lab fee: $10.00

AUTO 197 Auto Parts - Management (On Demand) 3 credits
This course covers the various management duties of a parts department manager. Pricing, inventory merchandising, forecasting, and purchasing are included.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO 190
Lab fee: $10.00

AUTO 210 Current Trends in Engine Repair (on demand) 2 credits
The content of this course reflects recent technological advances and changes in engine design and repair made by the automobile industry during the current model year.
Lecture: 1 hours – Lab: 2 hours
Prerequisite: AUTO 115
Lab fee: $15.00

AUTO 220 Current Trends in Automatic Transmissions (on demand) 2 credits
The content of this course reflects recent technological advances and changes in automatic transmission design and repair made by the automobile industry during the current model year.
Lecture: 1 hours – Lab: 2 hours
Prerequisite: AUTO 125
Lab fee: $15.00

AUTO 230 Current Trends in Manual Transmissions (on demand) 2 credits
The content of this course reflects recent technological advances and changes in manual transmission design and repair made by the automobile industry during the current model year.
Lecture: 1 hours – Lab: 2 hours
Prerequisite: AUTO 135
Lab fee: $15.00

AUTO 240 Current Trends in Suspension Steering (on demand) 2 credits
The content of this course reflects recent technological advances and changes in steering and suspension system design and repair made by the automobile industry during the current model year.
Lecture: 1 hours – Lab: 2 hours
Prerequisite: AUTO 145
Lab fee: $15.00

AUTO245 Steering, Suspension and Brakes Diagnosis and Evaluation (on demand) 3 credits
This course prepares students to service and repair Ford steering, suspension, and brake systems and pass the written and hands-on evaluations required to earn Ford STST General Brakes Certification and Base Steering and Suspension Certification.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO140 and AUTO150

AUTO 250 Current Trends in Brake Systems (on demand) 2 credits
The content of this course reflects recent technological advances and changes in brake system design and repair made by the automobile industry during the current model year.
Lecture: 1 hours – Lab: 2 hours
Prerequisite: AUTO 155
Lab fee: $15.00

AUTO 260 Current Trends in Electrical Systems (on demand) 2 credits
The content of this course reflects recent technological advances and changes in electrical system design and repair made by the automobile industry during the current model year.
Lecture: 1 hours – Lab: 2 hours
Prerequisite: AUTO 165
Lab fee: $15.00

AUTO265 Electrical Diagnosis and Evaluation (on demand) 3 credits
This course prepares students to service and repair Ford electrical systems and pass the written and hands-on evaluations for the Ford STST Basic Electrical Certification.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO160

AUTO 270 Current Trends in A/C Systems (on demand) 2 credits
The content of this course reflects recent technological advances and changes in heating air conditioning system design and repair made by the automobile industry during the current model year.
Lecture: 1 hours – Lab: 2 hours
Prerequisite: AUTO 175
Lab fee: $15.00

AUTO 280 Current Trends in Engine Systems (on demand) 2 credits
The content of this course reflects recent technological advances and changes in engine control system design and repair made by the automobile industry during the current model year.
Lecture: 1 hours – Lab: 2 hours
Prerequisite: AUTO 185
Lab fee: $15.00

AUTO 297 Special Topics in Automotive Technology (on demand) 1 credit
Advanced level course electives. This course will address current issues in the automotive industry.
Lecture: 1 hours – Lab: 0 hours
Prerequisite: AUTO 061 and AUTO 062
Lab fee: $15.00

AUTO 298 Special Topics in Automotive Technology (on demand) 2 credits
Advanced level course electives. This course will address current issues in the automotive industry.
Lecture: 1 hours – Lab: 2 hours
Prerequisite: AUTO 061 and AUTO 062
Lab fee: $15.00

AUTO 299 Special Topics in Automotive Technology (on demand) 3 credits
Advanced level course electives. This course will address current issues in the automotive industry.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: AUTO 061 and AUTO 062
Lab fee: $15.00

AUTO 300 Shop Experience (SP) 4 credits
This course is taken during a student's final quarter. It includes a final assessment of skills and knowledge. Skills are measured in a shop condition with the students performing diagnostics and repairs. A review of the eight ASE areas is also included.
Lecture: 1 hours – Lab: 8 hours
Prerequisite: Permission of instructor
Lab fee: $25.00

Aviation Maintenance Technology (AMT)

AMT 101 Introduction to Aviation (A, SP) 4 credits
The unique concept of an intricate machine that operates primarily in an environment where an essential system or catastrophic failure can be met with grave results makes aircraft maintenance different from any other type of maintenance. As in all maintenance fields, before the first wrench is turned, the technician needs to know how the particular machine is supposed to work. This starts with the basic knowledge of the science and physics involved with the operation and environment the machine works in. Students will be exposed to an introduction of aerodynamics for the aviation maintenance technician. Focus will be on principles of simple machines, sound, fluid dynamics, heat, and pressure as they pertain to fixed wing aircraft, rotary wing aircraft, aircraft powerplants, and propellers. Students will also learn the principled of primary and secondary flight controls and aircraft nomenclature.
Lecture: 3 hours - Lab: 2 hours
Prerequisite: Placement into MATH 102 and ENGL 101
Lab fee: $12.00

AMT 110 AMT Regulations, Privileges, & Documentation (A, SP) 4 credits
A critical part of an aircraft maintenance technician's job is to make sure that all the work performed on an aircraft is in accordance with the manufacturer's technical data and the applicable government regulations. In order to do this, the technician needs extensive reference skills to know where to acquire this information and background in the regulations pertaining to aircraft maintenance. This course is an in-depth study of Title 14 of the Code of Federal Regulations, Aeronautics and Space, as they pertain to the Aviation Maintenance Technician. Focus will be on history of the FAR's, certification of mechanics, certification of aircraft, engines and propellers. In addition students study the regulatory maintenance requirements of aircraft and regulatory requirements of aircraft records. The format of FAA and manufacturers publications is studied with emphasis on aircraft technical publication research.
Lecture: 3 hour – Lab: 2 hours
Prerequisite: Placement into MATH 102 and ENGL 101
Lab fee: $12.00

AMT 115 Aircraft DC Electricity (A, SP) 5 credits
With the sophisticated aircraft that are being manufactured today, an understanding of basic DC concepts is essential to the success of the modern aircraft maintenance technician. In this course, students will develop a fundamental understanding of basic 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: 5 hours
Prerequisite: Placement into MATH 102 and ENGL 101
Lab fee: $20.00

AMT 130 Aircraft Ground Handling & Safety (W, SU) 2 credits
Aircraft Maintenance cannot be safely performed unless there is a complete understanding of the hazards and handling procedures involved with aircraft in a hangar, shop, or outdoor ramp environment. In this class, students will study and engage in practices involving aircraft in these situations. Emphasis will be placed on accomplishment of tasks while preserving a safe environment for personnel as well as the equipment. Students will

become proficient while 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
Prerequisite: Placement into MATH 102 and ENGL 101
Lab fee: $16.00

AMT 140 Aircraft Tools, Hardware & Materials (W, SU) 5 credits
As in any technical field, aircraft maintenance requires basic practical skills to creat a foundation to build on. With its placement at an early point in the program, this course is where students will begin to build these basic skills. Focus will be placed on common hand tools usage 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. Students will be instructed in the methods of safety wiring hardware. In addition, welding techniques, inspection of welds and heat-treatment of metals will be examined and applied.
Lecture: 3 hours – Lab: 6 hours
Prerequisite: Placement into MATH 102 and ENGL 101
Lab fee: $26.00

AMT 145 Aircraft AC Electricity (W, SU) 5 credits
Many modern aircraft avionic and passenger comfort systems need to be supplied with AC power. In this class, the basics of AC power will be discussed along with its uses on aircraft. How the electron is controlled and manipulated will be examined. Elementary logic functions and their operators will be discussed and put to practical use. Basic troubleshooting techniques with the use of wiring diagrams, schematics, and other useful tools will be emphasized.
Lecture: 3 hours Lab: 4 hours
Prerequisite: AMT 115
Lab fee: $20.00

AMT 150 Basic Aircraft Inspection Systems (W, SU) 2 credits
One of the most important roles of the aircraft maintenance technician is the inspection of aircraft and their components. Superior skills in this area are essential in determining airworthiness. Students in this technology need to start practicing proper inspection techniques early and understand the personal barriers that can affect the inspection process. In this course students will begin to learn inspection skills with an introduction to basic aircraft inspection methodology, an introduction to aircraft conformity research practices, applied techniques of visual and functional defect recognition, and an introduction to non-destructive inspection and testing procedures. Maintenance record management and the human factors involved with the performance of these tasks will also be presented.
Lecture: 1 hours Lab: 3 hours
Prerequisite: AMT 110)
Lab fee: $12.00

AMT 160 Aircraft Reciprocating Engine Maintenance 1 (A, SP) 4 credits
The vast majority of general aviation aircraft in service today are powered by reciprocating (piston) engines. An aviation maintenance technician needs a broad understanding of these power plants to provide safe aircraft for flight. 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 is examined. Students learn the proper techniques for ground operational checks of reciprocating engines.
Lecture: 2 hours – Lab: 5 hours
Prerequisite: AMT 110, AMT 140
Lab fee: $20.00

AMT 162 Aircraft Reciprocating Engine Maintenance 2 (A, SP) 5 credits
As with any type of heat engine, an aircraft reciprocating engine has certain requirements beyond the integrity of its own components for operation. It needs delivery systems for air and fuel and some means to ignite this mixture. These sub-systems can vary from simple to very complex. 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
Prerequisites: AMT 110, AMT 115, AMT 140
Lab fee: $20.00

AMT 165 Aircraft Propellers (A, SP) 3 credits
In order to produce thrust and remain aloft, most general aviation and a limited number of commuter and corporate aircraft utilize engine-driven propellers. Aircraft propeller systems can range from the relatively simple to extremely complex machines. 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: 2 hours – Lab: 3 hours
Prerequisite: AMT 140
Lab fee: $20.00

AMT 175 Aircraft Electrical Systems 1 (A, SP) 3credits
With aircraft electrical system integrity becoming such a major factor in the operation of complex aircraft today, the need for extensive understanding of the on-board power sources is essential to the technician. In this course, the design and theory behind some of the most common DC and AC power supply systems and their controls are covered with emphasis placed on maintenance practices and troubleshooting procedures. Extensive hands-on practical study of wire terminations and connector contact techniques including crimping and soldering is also accomplished in this course.
Lecture: 2 hours – Lab: 3 hours.
Prerequisite: AMT 145
Lab fee: $20.00

AMT 180 Aircraft Turbine Engine Maintenance 1 (W, SU) 5 credits
Since the dawn of jet propulsion, turbine powered aircraft have gained in popularity and played a pivotal role in the expansion of the aviation industry. A thorough understanding of turbine engine theory and operation is vital to an aircraft maintenance technician. 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
Prerequisites: AMT 110, AMT 140
Lab fee: $20.00

AMT 182 Aircraft Turbine Engine Maintenance 2 (W, SU) 5 credits
In order to maintain turbine engines, the technician needs to be familiar with the sub-systems needed to operate the engine. A broad understanding of engine ignition, fuel, air bleed, temperature regulation, and starting systems is essential for proper maintenance to be performed. 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
Prerequisites: AMT 110, AMT 115, AMT 140
Lab fee: $20.00

AMT 190 Aircraft Ice/Rain Protection Systems (W, SU) 2 credits
In order for airplanes to fly into known icing conditions, they must have some means to prevent ice formation or to remove the ice. Ice formation on aircraft can add sufficient weight and drag to prevent safe flight. This course will familiarize students with anti-ice, de-ice, ice detection, and rain protections systems used on the airframe, engine, and propeller installations. A large emphasis will be placed on troubleshooting and repair of the systems and associated servicing and inspection techniques.
Lecture: 1 hours Lab: 2 hours
Prerequisites: AMT 145, AMT 165
Lab fee: $12.00

AMT 195 Aircraft Electrical Systems 2 (W, SU) 4 credits
A broad understanding of various aircraft electrical systems is imperative to a technician. Many other on-board systems depend on electrical system integrity to function properly. This course deals with complete DC and AC electrical systems overview including control and monitoring systems. Troubleshooting, inspection and maintenance techniques related to these systems are put to practical use with a high level of expectation.
Lecture: 2 hours Lab: 4 hours
Prerequisites: AMT 175
Lab fee: $24.00

AMT 210 Aircraft Sheet Metal Structures (A, SP) 5 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 or aircraft repairs by complex bending, riveting, and use of structural adhesives. Students will design and layout repairs of metal aircraft. Students will also learn to detect, prevent, and correct corrosion of metals used in the aviation industry.
Lecture: 2 hours Lab: 8 hours
Prerequisites: AMT 120, AMT 140
Lab fee: $28.00

AMT 212 Aircraft Wood, Dope and Fabric (A,SP) 3 credits
Many older aircraft were manufactured with fabric covering wood or metal structure. Although most modern aircraft structures are primarily metal or composite materials, many homebuilt aircraft and new light sport aircraft are reviving the use of fabric and wood. This course is an introduction to aircraft structures constructed using wood and doped fabric materials. The students will become familiar with inspection and repair techniques of wood structures. Students will also study the types aircraft fabric covering with a focus on inspection and repair of polyester based covering.
Lecture: 2 hours – Lab: 3 hours
Prerequisites: AMT 140
Lab fee: $26.00

AMT 215 Aircraft Environmental Controls (A, SP) 3 credits
Aircraft fly at different times of the year, at high altitudes, and in areas of the world where the climate could be hot, cold or temperate. To compensate for these conditions, they carry on board environmental control systems. 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: 2 hours – Lab: 3 hours
Prerequisites: AMT 145, AMT 149
Lab fee: $20.00

AMT 220 Aircraft Fuel Systems (A,SP) 3 credits
Fuel supply and delivery systems play one of the most important roles in the operation of various airframe mounted heating and auxiliary power units, as well as aircraft engines. Proper installation and maintenance of these systems is essential to the safety of flight as it relates to consistent power production for propulsion and hazards associated with system failures. In this course students will develop an understanding of aviation maintenance procedures and the tools used by the aircraft technician in the practice of fabrication and installing fluid lines and fittings and the knowledge the aircraft mechanic needs to properly inspect, service, troubleshoot and repair aircraft fuel systems, associated components, and related systems and subsystems.
Lecture: 2 hours – Lab: 3 hours
Prerequisites: AMT 140, AMT 145
Lab fee: $26.00

AMT 235 Aircraft Instrumentation (W, SU) 4 credits
Aircraft instruments provide an essential part of overall cockpit situational awareness. Sometimes, the information presented from instruments is more reliable than the pilot's senses. Because of this, technicians need a broad understanding of how the instrument systems function and the maintenance required to achieve the high reliability necessary for the pilot's peace of mind and the safety of flight. 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: 3 hours – Lab: 2 hours
Prerequisites: AMT 145, AMT 162, AMT 182
Lab fee: $26.00

AMT 240 Aircraft Composite Structures (W, SU) 3 credits
With the higher strength compounds being used, improvements in shaping and lay-up technologies, and the increased weight savings, the use of composites is an intelligent choice for many components on large aircraft as well as the entire structures of some smaller airplanes. With this increased use of these materials it becomes more important for the aircraft maintenance technician to become familiar with the unique processes involved in fabrication and repairing composites. In this class students will discover the principles of composites aircraft structures. The focus will be on basic composite nomenclature, inspection and repair of non-metallic structures. 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.
Lecture: 1 hours – Lab: 4 hours
Prerequisites: AMT 140, AMT 150
Lab fee: $26.00

AMT 245 Aircraft Landing Gear and Fluid Power Systems (W,SU) 6 credits
One of the most stressed components on any aircraft is the landing gear assembly. Landing gear have to support the weight of the entire aircraft, absorb the forces of impact during landing and taxiing and survive the tremendous localized heat produced during rollout by the brakes. It is for these reasons that the complexity of the retractable landing gear and the nose steering systems that the maintenance technician needs to posses extensive knowledge of landing gear and associated systems. This 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. Students will also learn the principles of inspection, repair, and replacement of hydraulic and pneumatic rigid and non-rigid lines.
Lecture: 4 hours - Lab: 6 hours
Prerequisites: AMT 140, AMT 150
Lab fee: $20.00

AMT 250 Advanced Non Destructive Inspection for Aircraft (W, SU) 3 credits
Constant inspection of aircraft and components is essential to providing aircraft that are safe for flight. In most cases, it is not cost effective or even practical to damage or destroy a component in order to determine the useable life remaining. Also, operational environments vary widely

so it may not be realistic to rely on the original tests performed by the manufacturer to establish time between failures. For these reasons, it is necessary to devise ways of testing and inspecting components without having to replace them every time a technician has to inspect them. In this course, students will be engaged in an advanced study of applied techniques for selecting and performing non-destructive inspection processes involved in the Aviation Industry. Techniques involving the use of sophisticated test equipment will be utilized with a high degree of practical application.
Lecture: 2 hours Lab: 3
Prerequisites: AMT 140, AMT 150
Lab fee: $20.00

AMT 255 Aircraft Navigation & Communication Systems (A, SP) 4 credits
The use of airborne radio equipment is essential to modern day air travel. Without it, the ability to fly to a desired destination, in varying weather conditions, and avoiding other aircraft doing the same would be an impossible task. Familiarization of the technician to aircraft warning, communication, and navigation systems is vital to the concept of safe air travel. This course will examine these systems and allow students to gain practical experience in the testing, troubleshooting, and required inspections associated with them.
Lecture: 3 hours Lab: 2 hours
Prerequisites: AMT 145
Lab fee: $22.00

AMT 260 Aircraft Rigging & Assembly (A, SP) 3 credits
Large and small aircraft utilize correctly rigged cables or electro-hydraulic actuators to transmit the desire of the pilot to the flight controls that cause the airplane to climb, dive, roll or yaw. Also, complex devices such as entry doors, landing gear systems, and lift augmentation devices can require elaborate rigging techniques in order to function properly. In this course students will begin with a review of the basic sciences for the aviation maintenance technician, including aerodynamics, flight stability, and theory of flight for fixed wing aircraft. Then advanced principles and techniques of aircraft rigging, assembly and structure alignment will be studied and put to practical use.
Lecture: 2 hours – Lab: 3 hours
Prerequisites: AMT 110, AMT 140
Lab fee: $24.00

AMT 262 Fundamentals of Helicoter Maintenance (A, SP) 3 credits
Helicopters are one of the many diverse areas the aviation maintenance technician can specialize in. Rotary-wing aircraft have many distinct characteristics, which make the maintenance of these machines different than conventional airplanes. Today, the widespread uses for helicopters and their popularity create the need to train technicians in maintenance practices that are specific to rotary wing aircraft. In this course students will start with a review of the basic sciences for the aviation maintenance technician, including aerodynamics, flight stability, and the theory of flight for rotary wing aircraft. Upon completion of this review, application of advanced principles and techniques of rotary aircraft rigging including tracking and balance of rotor blade assemblies will be accomplished
Lecture: 2 hours – Lab: 3 hours
Prerequisites: AMT 110, AMT 140
Lab fee: $20.00

AMT 270 Aircraft Conformity Inspections (A, SP) 5 credits
Airworthiness deals with whether an aircraft (and its components) conforms to the original type design or properly altered condition and is safe for flight. A crucial role of the Aviation Maintenance Technician is to inspect an aircraft or its components to ensure continued safe operation. In this course aviation maintenance students will hone their 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, powerplant and all related systems will be accomplished.
Lecture: 3 hours – Lab: 7 hours
Prerequisite: AMT 150, AMT 160, AMT 165, AMT 180, and AMT 210
Lab fee: $24.00

AMT 280 Advanced Aircraft Maintenance Practices (W, SU) 6 credits
Once students finish this program and complete the FAA certification process, they will be expected to enter the workforce and eventually master the trade through experience and further training. Starting this journey can seem overwhelming to the new technician. By placing students into real-life situations within a controlled environment, valuable experience can be gained as well as insight into future expectations. In this course, students will first complete the cooling and exhaust portion of their powerplant training, and then they will be subjected to work place scenarios in the hangar. Assignments will include tasks where they will research procedures, perform repairs, and create proper documentation.
Lecture: 4 hours – Lab: 6 hours
Prerequisites: AMT 160, AMT 165, AMT 180, AMT 195, AMT 210, and AMT 260
Lab fee: $24.00

AMT 285 Aircraft Weight & Balance (W, SU) 3 credits
If the weight of an aircraft or the distribution of weight is not held to stringent boundaries, the safety of the aircraft is compromised. An out of limit condition can negatively affect the flight characteristics or cause the aircraft to not lift off the ground. Changes to equipment and the accumulation of debris while the aircraft is in service cause continuous changes to its weight and balance. 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 is emphasized.
Lecture: 2 hours – Lab: 3 hours
Prerequisites: AMT 101, AMT 130
Lab fee: $12.00

AMT 290 Human Factors in Aviation Maintenance (W, SU) 4 credits
Self-awareness of how you or the people around you perform the tasks expected, understanding the caveats surrounding these tasks and identifying areas where mistakes can be made during the process are all a very important part of modern aircraft maintenance. These human factors should be minitored and continual improvement in the detection and perception by individuals can dramatically reduce the errors that occur in the performance of aircraft maintenance. In this course, students will examine the major human causative agent in aircraft accidents; the human being.
Lecture: 3 hours – Lab: 2 hours
Prerequisites: AMT 110, AMT 150
Lab fee: $12.00

AMT 295 Aircraft Systems Review (W, SU) 3 credits
As a student progresses through the AMT program, an overwhelming amount of information spanning a multitude of diverse subject matter is presented. It would be unrealistic to expect the student to retain all this information for such a long time before becoming eligible for formal FAA certificate testing. This course prepares the graduate to take the FAA National Knowledge exam. A series of practice tests are used to determine competency of all subject areas tested. Areas of weakness are reviewed. To successfully complete the course and be given permission to take the FAA exams, an average score of 80% must be achieved in all three areas of testing: General, Airframe and Powerplant.
Lecture: 2 hours – Lab: 3 hours
Prerequisites: AMT 270
Lab fee: $12.00

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 Bookstore. Attendance during the first week of class is mandatory and may affect a student's continuation in these classes. 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. Prerequisite for all Biology courses above Bio 101 is High School Biology completed within the last 5 years or completion of Biology 100 or previous college credit in biology within the last 5 years.

BIO 100 Introduction to Biological Sciences (A, W, SP, SU -DL) 4 credits

A general biology course in which basic principles of the characteristics of life, biochemistry, cell reproduction and genetics are explored. Students who enroll in the distance version of this course will be required to come to campus for exams and orientation meetings.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: Placement into English 100 or higher. Not open to students with credit for Biology 111, Biology 112, Biology 125, Biology 126, Biology 121, Biology 161, Biology 174, Natural Science 101 or subsequent course that this list serves as course prerequisites.
Lab fee: $3.00

BIO 101 Introduction to Anatomy and Physiology (A, W, SP, SU) 3 credits

A general overview of normal human anatomy and physiology. Topics include the cell, tissues, musculo-skeletal, nervous, cardiovascular, genitourinary, digestive, respiratory, and endocrine systems.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Placement into English 100 or higher. Not open to students with credit for Biology 121, Biology 122, Biology 161, Biology 169, Biology 211 or Biology 212.
Lab fee: $3.00

BIO 104 Introduction to Marine Science (SP, SU and on demand) 4 credits

An introductory course in the principles of Marine Science. This course is designed to introduce major concepts in physics, chemistry, geology and biology as they relate to the oceans and marine life. Shore and ocean environments as well as diversity of marine life will be emphasized. This course and Bio 105 fulfill the science requirement for the AAS degree where Natural Science 101 is required. .
Lecture: 3 hours – Lab: 3 hours
Prerequisite: Placement into English 101
Lab fee: $27.00

BIO 105 Field Investigations in Marine Science (SP, SU and on demand) 2 credit

An introductory course-providing laboratory experiences in marine science. This course will be instructed at a marine science laboratory such as Discovery Bay and Port Royal in Jamaica, West Indies. Students will spend 7 to 10 days at a marine laboratory engaged in an intense introduction to coral reefs, coastal environments and marine life. Course will be offered over quarter breaks. Cultural and ecological experiences of the region will be included. Students will be given both snorkeling and diving instruction and thus should be strong swimmers and comfortable in the ocean. Accommodation fees at the marine lab and travel expenses will vary.
Lecture: 0 hours – Lab: 4 hours
Corequisite: Bio 104
Lab fee: $80.00

BIO 111 Introductory Biology I (A, W, SP, SU -DL) 5 credits

An introduction to the biological sciences for the non-major student. Topics included are cell structure and function, bioenergetics, DNA structure and function, cell reproduction, biodiversity, ecology, and evolution. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting, completion of certain exams and laboratories. Laboratories are generally done on an every other week basis on campus. .This course and BIO 112 or BIO 115 or BIO 125 or BIO 126 or BIO 127 provide a two-quarter sequence in biological science that will fulfill the elective requirement for the Associate of Science Degree.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: Placement into English 101,High School biology or Bio 100
Not open to students with credit for Bio 174 or 175.
Lab fee: $19.00

BIO 112 Introductory Biology II; Human Biology (A, W, SP, SU -DL) 5 credits

An introduction to 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. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting, completion of certain exams and laboratories. Laboratories are generally done on an every other week basis on campus. .
Lecture: 4 hours – Lab: 3 hours
Prerequisite: High school biology or BIO 100 or BIO 111
Lab fee: $19.00

BIO 115 General Microbiology (A, W, SP, SU -DL) 5 credits

A general microbiology course for biology majors (non-microbiology majors). Topics covered include taxonomy, morphology and staining, culture techniques, bacterial metabolism and physical and chemical methods for microbial control. General concepts in immunology, including host defense mechanisms and hypersensitivity, are also covered. Related laboratory is required, including identification of unknown bacteria. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting, completion of certain exams and laboratories. Laboratories are generally done on an every other week basis on campus.
Lecture: 3 hours – Lab: 4 hours
Prerequisite: high school chemistry and biology, or CHEM 100 and BIO 100 or NSCI 103 and placement into ENGL101.
Lab fee: $26.00

BIO 116 Microbial Diseases (on demand) 3 credits

A basic study of the concepts of microbial disease. Topics covered are host-parasite interactions and resistance and immunity to disease, including the development of the immune system and mechanics of antigen-antibody reactions. Additional topics for detailed discussion are human airborne, foodborne and waterborne infections and human contact diseases.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: BIO 115, ENGL 101
Lab fee: $ 3.00

BIO 121 Anatomy, Physiology and Pathology I (A, W, SP, SU) 5 credits

An integrated organ systems approach to the anatomy, physiology and pathology of the human body. Topics include cell biology, histology, and integumentary, skeletal, muscular and nervous systems. The cat and human cadavers are used for demonstrations in the laboratory. .
Lecture: 4 hours – Lab: 3 hours
Prerequisite: High school biology and chemistry or BIO 100 and CHEM 100 or NSCI 103 and placement into ENGL101. Not open to students with credit for BIO 161, BIO 169, BIO 211 or BIO 212
Lab fee: $19.00

BIO 122 Anatomy, Physiology and Pathology II (A, W, SP, SU) 5 credits
A continuation of BIO 121. Topics include endocrinology, respiratory system hematology, cardiovascular system, metabolism, gastro-intestinal system, thermal regulation, and renal and reproductive systems. The cat and human cadavers are used for demonstrations in the laboratory.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: BIO 121
Lab fee: $19.00

BIO 124 Human Genetics (on demand) 3 credits
Mendelian and classical genetics are presented. Emphasis is also placed on the discovery of the DNA molecule and its structure, genetic mutations and diseases as well as genetic engineering and its implications.
Prerequisite: High school biology or BIO 100 or NSCI 103, and ENGL 101.
Lab fee: $3.00

BIO 125 General Botany (W) 5 credits
This course covers the biology of the major plant groups. Topics include diversity, physiology, reproduction, ecology, and economic significance.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: Placement into ENGL 101; high school chemistry and biology, or CHEM 100 and BIO 100, or NSCI 103.
Lab fee: $18.00

BIO 126 Introduction to Ecology (on demand) 5 credits
This course provides an introduction to ecology. Topics include population dynamics, distribution of species, and energetics.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: BIO 111 or BIO 174, high school chemistry, CHEM 100, or NSCI 103.
Lab fee: $16.00.

BIO 127 Environmental Science (on demand) 5 credits
This course provides a survey of current issues in the study of environmental science. Topics include scientific principles and concepts, human population dynamics, resources and resource management, pollution, world problems, and environment and society. Emphasis will be placed on how individual actions, and economic and political policies can affect the environment. Proposed solutions to environmental problems will be considered.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: placement into ENGL 101, high school biology or BIO 100.
Lab fee: $19.00

BIO 161 Human Anatomy (A,W,SP,SU -DL) 5 credits
The gross anatomy of the human body will be presented in detail. Thorough study will include: head and neck, thorax, abdomen, pelvis, upper and lower limbs, and back regions. The laboratory study will include an in-depth study of the human cadaver.
Lecture: 3 hours – Lab: 4 hours
Prerequisite: High school biology or BIO 100 or BIO 101 or BIO 111 or equivalent.
Lab fee: $ 26.00

BIO 169 Human Physiology (A,W,SP,SU -DL) 5 credits
An introductory course in human physiology designed to cover the normal physiology of all organ systems. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting, completion of certain exams and laboratories. Laboratories are generally done on an every other week basis on campus.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: BIO 161 or equivalent, placement into ENGL 101. Not open to students with credit for BIO 122 or Bio 211 or BIO 212.
Lab fee: $13.00

BIO 170 Human Pathophysiology (A, W, SP, SU) 5 credits
This course deals with the disordered functioning of the human body due to disease. It is designed for students or practitioners in nursing or other allied health professions who wish to increase their understanding of the changes occurring in physiology due to an abnormality.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: BIO 169 or BIO 211 and 212 or equivalent; CHEM 112 or CHEM 113 or equivalent or permission of instructor.
Lab fee: $3.00

BIO 174 Biological Sciences I (A, W, SP, SU -DL) 5 credits
A biology course designed for biology majors that provides an in-depth coverage of cell biology, genetics and embryology. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting, completion of certain exams and laboratories. Laboratories are generally done on weekly basis on campus. . This course and BIO 175 provide a two-quarter sequence in biological science that will fulfill the elective requirement for the Associate of Science Degree.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: High school chemistry or Chemistry 100, high school biology or Biology 100.
Corequisite: CHEM 111 or CHEM 171.
Lab fee: $26.00.

BIO 175 Biological Sciences II (A, W, SP, SU) 5 credits
A continuation of BIO 174. A biology course designed for biology majors that provides an in-depth coverage of evolution, diversity of life, animal behavior, and ecology.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: BIO 174
Lab fee: $25.00

BIO 201 General Zoology: Animal Diversity and Systematics (on demand) 5 credits
A survey of the diversity of organisms in the animal kingdom. Emphasis will be placed on evolutionary interrelationships, locomotory, nutritional, and reproductive strategies of the major groups. . This course and BIO 174 provide a two-quarter sequence in biological science that will fulfill the elective requirement for the Associate of Science Degree.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: BIO 174
Lab fee: $26.00

BIO 205 Introduction to Biotechnology (on demand) 4 credits
A molecular biology course designed to introduce major concepts in: DNA structure and function, gene expression, recombinant DNA, biotechnology, techniques and applications of genetic engineering, medical biotechnology (gene therapy), forensics and DNA profiling, impact and potential of the human genome project.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: BIO 111 or BIO 115 or BIO 124 or BIO 174
Lab fee: $5.00

BIO 206 Introduction to Biotechnology Lab (on demand) 1 credit
A general laboratory course designed to introduce students to the principles of biotechnology. Topics include: sterile techniques; DNA isolation and purification; bacterial culture techniques, transformation, purification and isolation of plasmid DNA; DNA restriction analysis; Gel electrophoresis, PCR and RFLP analysis and animal cell and plant tissue culture techniques. This course may require additional hours outside of scheduled times.
Lecture:0 hours – Lab: 4 hours
Prerequisite: BIO 205
Lab fee: $27.00

BIO 211 Principles of Human Physiology I (on demand) 5 credits
First course of a two-quarter sequence offering a detailed, in-depth exploration of neuromuscular physiology, brain and special senses, and the cardiovascular/circulatory and respiratory systems. This class and BIO

212 are suitable as transfer prerequisites for BS Nursing/Allied Health and pre-professional programs.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: BIO 161 or equivalent, CHEM 111 and 112 and placement into ENGL 101, not open to students with credit for BIO 121 or BIO 169.
Lab fee: $6.00

BIO 212 Principles of Human Physiology II (on demand) 5 credits
Second course of a two-quarter sequence, continuation of Biology 211, offering a detailed, in-depth exploration of renal, endocrine, reproductive and digestive physiology, thermal regulation and metabolism.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: BIO 211
Lab fee: $6.00

BIO 250 General Genetics (on demand) 5 credits
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: 5 hours – Lab: 0 hours
Prerequisite: CHEM 252 or equivalent and BIO 111 or BIO 174 plus 5 additional hours in biology.
Lab fee: $5.00

BIO 253 Fundamentals of Human Nutrition (SU, W) 5 credits
Nutrient and food energy needs of the human biological systems throughout the life cycle with consideration of socio-psychological factors. Consideration of the role of nutrition in preventive health care and various alterations in health and disease states.
Lecture: 5 hours
Prereqisite: CHEM 112 or CHEM 113 or CHEM 253 or CHEM 261
Lab Fee: $ 3.00

BIO 290 Capstone Experience in Biology (A, W, SP, SU) 3 credits
An integrated science course blending elements of chemistry, physics and biology. Topics include the historical development of the sciences, ethical issues in science and how they affect the advancement of scientific thought, and the scientific method as it relates to experimental design and interpretation of scientific results. The laboratory utilizes an investigative approach taking students through the process of identifying a research problem, conducting a literature review, writing a research proposal, collecting and analyzing data, writing a scientific paper and presenting results.This course is required for all biological science majors seeking either the Associate of Arts or Associate of Science degree.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: 75 hours or more of course work completed with a minimum of 20 credit hours within the sciences.
Lab fee: $19.00

BIO 293 Independent Study in Biology (on demand) 1 to 5 credits
Detailed examination of selected topics of interest in Biology.
Lecture: 1 to 5 hours – Lab: 0 to 6 hours
Prerequisite: permission of instructor.

BIO 299 Special Topics in Biology (on demand) 1 to 5 credits
Detailed examination of selected topics of interest in biology.
Lecture: 1 to 5 hours – Lab: 0 to 6 hours
Prerequisite: Permission of the instructor.

Business Management (BMGT)

Note: Courses taught a distance [Distance Learning (DL)] may have higher lab fees than traditionally taught courses.

BMGT 101 Principles of Business (A, W, SP, SU - DL) 5 credits
A discussion of all significant activities in the field of business including the interaction of business with internal and external forces, ownership, management, marketing, production, human resources, finance, and control. These areas are discussed as they relate to the basic principles of management and economics.
Lecture: 5 hours – Lab: 0 hours
Lab fee: $5.00

BMGT 102 Managing Interpersonal Skills I (A, W, SP, SU - DL) 3 credits
This course introduces the student to management themes and the five primary skill sets required to be a successful manager. The course provides opportunities for students to begin to learn, develop, and apply managerial skills through personal assessment and an introduction to various skill concepts and behavior models.
Lecture: 1hour – Lab: 4 hours
Lab fee: $5.00

BMGT 103 Managing Interpersonal Skills II (W, SP) 3 credits
This course builds upon BMGT 102 and expands the students understanding of Temperament and Type theory. Students also learn the basics of Emotional Intelligence and how to apply these management tools to motivate and improve performance.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: BMGT 102
Lab fee: $5.00

BMGT 104 Stress Management (on demand – DL) 1 credit
This course will help students learn how to recognize work related stress and stress related problems, how to evaluate their optimal stress levels, and develop strategies to deal with work related stress.
Lab: 2 hours
Lab fee: $5.00

BMGT 105 Time Management (on demand – DL) 1 credit
This course will help students learn how to evaluate, organize, and manage their time and projects more efficiently and effectively.
Lab: 2 hours
Lab fee: $5.00

BMGT 106 Budgeting (on demand – DL) 1 credit
This course introduces the student to basic concepts in budgeting for profit organizations.
Lab: 2 hours
Lab fee: $5.00

BMGT 111 Management (A, W, SP, SU - DL) 5 credits
The basic management functions of planning, organizing, leading, controlling and staffing business organizations are covered. The organization is viewed as a system of interdependent parts which interacts with the outside environment. Topics include leadership, motivation, communication and problem solving.
Lecture: 5 hours – Lab: 0 hours
Lab fee: $5.00

BMGT A111 Management History and Environment (on demand, DL) 1 credit
This course will explore the history of management and environmental factors which impact on the management function. Students will learn the historic evolution of management, the environmental factors which

impact on management, the importance of ethical behavior in management, and the global perspective of management.
Lab: 2 hours
Lab fee: $5.00

BMGT B111 Planning (on demand, DL) 1 credit
This course presents the basics of the management function of planning. Students will learn why managers plan, how organizations plan, the different types of plans, the decision making process, and what is strategy planning.
Lab: 2 hours
Lab fee: $5.00

BMGT C111 Organizing (on demand, DL) 1 credit
This course presents the basics of the management function of organizing. Students will learn organizational structure design techniques, how companies organize, and how communication and human resources management impact organizational management.
Lab: 2 hours
Lab fee: $5.00

BMGT D111 Leading (on demand, DL) 1 credit
This course presents the basics of the management function of leadership. Students will learn how human behavior, groups, and motivational theories impact leadership.
Lab: 2 hours
Lab fee: $5.00

BMGT E111 Controlling (on demand, DL) 1 credit
This course presents the basics of the controlling function of management. Students will learn the importance of the control process and the value of operations management.
Lab: 2 hours
Lab fee: $5.00

BMGT 201 Creative Problem Solving; Applications in the Workplace (A, SP) 3 credits
This course will provide an exploration of the foundations of creativity skills and methods for application in an organizational environment. The application to problem solving, decision-making, and planning will be taught through various models and best practices currently utilized in organizations. Case studies and various creativity methodologies will be explored and practiced during the class sessions.
Lecture: 1 hour – Lab: 4 hours
Lab fee: $5.00

BMGT 202 Facilitating Organizational Processes (W, SU) 3 credits
This course introduces students to the importance and value of effective group facilitation skills within the daily operation of organizational functions. Student will learn how to select and evaluate tools, methods, and techniques that impact group business outcomes. Specific organizational practices which enhance facilitation techniques include coaching, use of audiovisual technology, diversity awareness and systems analysis. Lab work will include the exploration and practice of facilitating different types of groups.
Lecture: 1 hour – Lab: 4 hours

BMGT 208 Organization Communication (A, SP,) 3 credits
The organizational communication emphasis provides student with knowledge and skills necessary to pursue careers dependent on human interaction in business, industry, or government. Bridging the gap between the classroom and the workplace is an objective of the organizational communication course. Emphasis will be placed on communication structure and process within organizations and the need for individual and group communication skill development.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $5.00

BMGT 211 Organizational Behavior (A, W, SP, SU - DL) 4 credits
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 – Lab: 2 hours
Prerequisite: BMGT 111
Lab fee: $5.00

BMGT 216 Business Ethics (A, W, SP, SU - DL) 3 credits
A comprehensive and practical study of ethical systems designed to explore, analyze and evaluate the organizational values , strategic policies and expected behaviors required to develop high ethical standards both on a personal and organizational level. Emphasis will be placed on case studies and exercises in ethical behaviors.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $5.00

BMGT 218 Management Training for Supervisors (A, W, SP, SU - DL) 5 credits
A comprehensive examination of management functions, techniques and the role of a supervisor. This course will increase awareness of the role and present proven methods and techniques to do a better job. Major areas covered include: setting objectives, problem identification techniques, decision-making, time management, management styles, motivation, training subordinates, performance evaluation, verbal and non-verbal communications, interviewing techniques, and a look at the challenge of leadership in an organizational setting. Emphasis is placed on actual on-the-job problems.
Lecture: 5 hours – Lab: 0 hours
Lab fee: $5.00

BMGT 219 International Business (A, SP - DL) 3 credits
The course focuses on the economic, social and cultural considerations in doing business overseas. The globalization of markets and the growth of overseas business ventures is explored. The need to develop varied techniques for managing people from other cultural backgrounds, the means of minimizing risks in financial transactions, and development of systems for coordinating and controlling operations is stressed. Techniques to overcome international business barriers are examined.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $5.00

BMGT 220 Leadership Fundamentals (A, W, SP, SU-DL) 3 credits
This course provides an in-depth study of leadership styles, skills, roles, and the functions of leaders in organizations. The course integrates writings from the humanities, military leaders, political leaders, religious leaders, and business leaders with basic leadership principles. The course provides the opportunity for the student to explore the concept of leadership and to develop and improve his/her leadership skills.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: BMGT 102.
Lab fee: $5.00

BMGT 229 International Management (on demand) 4 credits
This course focuses on the concepts and skills needed to achieve organizational goals, and achieve strategic initiatives in a multicultural environment as affected by political/legal, economic and technological issues. Strategic use of cultural and language diversity is stressed as a competitive advantage in achieving global organizational goals. The student will be introduced to a global business vocabulary or glossary to aid them in doing business overseas. Concepts are applied to not only those who go to another country to manage local citizens but also to those in this country who manage people from other countries. Emphasis is placed on the changing nature of the international management challenge. Emphasis will be placed on developing and managing various types of

strategic alliances and or human resource management, as well as conflict resolution and negotiation techniques
Lecture: 3 hours – Lab: 2 hours
Prerequisite: BMGT 111 or BMGT 219
Lab fee: $5.00

BMGT 230 Organizational Development and Change Management (A, SP) 5 credits
This course explores contemporary organizational development which is defined as the application of knowledge, skills, and tools to improve organizational performance, enhance organizational functioning, and maximize human potential. This course adopts a strategic perspective, and provides concepts and tools related to diagnosing an organization's problems or intentions, designing interventions to help them overcome obstacles and/or achieve their goals, leading and managing the resulting change process, and evaluating and institutionalizing new organizational strategies.
Lecture: 5.0 hours
Prerequisite; BMGT 211 and BMGT 219
Lab fee: $5.00

BMGT 231 Small Business Development (A, W, SP, SU - DL) 4 credits
First of a two-quarter sequence that introduces the fundamental considerations in planning and executing the start-up of a new small business venture. Concentrates on planning selected critical aspects of a business plan in the areas of: Orientation to Small Business, Strategic Planning, Financial Considerations, Location, Layout and Beginning Inventory.
Lecture: 4 hours – Lab: 0 hours
Lab fee: $5.00

BMGT 232 Small Business Operations (A, W, SP, SU - DL) 4 credits
This course is a sequel to BMGT 231 and completes the basic instruction necessary for competence in managing a small business enterprise. Topics covered will include effective operation of an established business with emphasis on strategic planning, market analysis, pricing, inventory control and credit collections.
Lecture: 4 hours – Lab: 0 hours
Lab fee: $5.00

BMGT 234 Case Studies in Small Business (A, SP) 4 credits
Cases covering all functional areas of small business management are analyzed and presented. Emphasis is placed on the problem-solving process as a tool for developing and implementing small business management strategies and operational techniques
Lecture: 4 hours – Lab: 0 hours
Prerequisites: BMGT 231 and BMGT 232
Lab fee: $5.00

BMGT 235 Strategic Business Planning (A, W, SP, SU) 5 credits
Preparation and presentation of a formal business plan using the latest computer software. Presentation of the business plan is delivered to a team of observers, including local business people and faculty.
Lecture: 2 hours – Lab: 6 hours
Prerequisite: Permission of instructor
Lab fee: $5.00

BMGT 236 Franchising (on demand) 3 credits
This course introduces the fundamentals of franchising from both the franchisee and the franchiser points of view. The focus of the course is the franchise as a tool for those buying a business and those wanting to expand an existing business. Contractual arrangements covering the establishment and the operation of a franchise as well as the relationship between the franchisee and the franchiser including the subjects of distributorships and licensing.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: BMGT 231 or Permission of instructor
Lab fee: $5.00

BMGT 237 Home Based Business (A, SP) 4 credits
This course is designed specifically for individuals who strive to commence their own business or have currently established a venture. The goal is to prepare students for the challenges of their business with full awareness of potential situations and to have the knowledge of how to handle them effectively. Focus is on the realities of beginning, growing, and leaving your business. This course also includes a student field study of an existing business or a concentration on an area of concern in the student's established business.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: BMGT 231 or Permission of instructor
Lab fee: $5.00

BMGT 238 Small Business Management Internship (A, W, SP, SU) 4 credits
Supervised cooperative work experience with on-the-job application of knowledge and skills acquired in the classroom.
Lecture: 0 hours – Lab: 40 hours
Prerequisite: Permission of instructor
Corequisite: BMGT 239
Lab fee: $2.00

BMGT 239 Small Business Management Seminar (A, W, SP, SU) 2 credits
On-campus seminar which allows students to report on small business management knowledge gained in specific areas of the internship. The course may include a market research survey, case reports or other special projects.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: Permission of instructor
Corequisite: BMGT 238
Lab fee: $1.00

BMGT 245 Introduction to Non-Profit Management (A) 5 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. More specifically, it explores the fundamental challenges to effective leadership including defining and articulating the organization's mission, formulating relevant organizational strategy, crafting an aligned organizational structure, identifying and understanding the multiple "customers" served, and identifying and prioritizing the critical strategic managerial tasks that must be successfully executed. As such, it examines the roles of the executive director, the board, staff, and volunteers.
Lecture: 5 hours – Lab 0 hours
Lab fee: $5.00

BMGT 246 Operational Management of Nonprofit Organizations (W) 5 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?" As such, this course explores human resource development and supervision, program planning, managing volunteers, outcome assessment and measurement, board and committee development, and risk management.
Lecture: 5 hours – Lab 0 hours
Lab fee: $5.00

BMGT 247 Legal and Financial Issues in Nonprofit Management (SP) 5 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
Lecture: 5 hours – Lab 0 hours
Lab fee: $5.00

BMGT 248 Leadership Seminar in Nonprofit Management
(SU) 5 credits
This course is a project-based capstone learning experience that will facilitate the application of knowledge acquired in BMGT 245, 246, and 247 to a contemporary problem or initiative in a non-profit organization. Leadership strategies relevant to a nonprofit organizational context and an exploration of professional motivation and commitment will also be explored.
Lecture: 4 hours – Field Experience: 7 hours

BMGT 253 The Art and Science of Conflict Resolution
(A, W, SP, SU – DL) 4 credits
This course provides students with a basis and a context for effectively managing conflict. The course covers: fundamentals of emotional intelligence and emotional intelligence competencies; a critical thinking model; various models of conflict management; dealing with disruptive and antagonistic behaviors; and the eight elements of effective conflict management. The course focuses on both 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 – Lab: 2 hours
Lab fee: $10.00

BMGT 257 Project Management Principles (A, SP) 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 to tasks. Students use matrix management principles and tools as a way to facilitate project planning and monitoring. Students are required to plan a project from inception to completion.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $5.00

BMGT 258 Planning and Process Improvement Tools (A, SP) 3 credits
This course provides students with a variety 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 4 hours
Lab fee: $5.00

BMGT 261 Business Management Internship I
(A, W, SP, SU) 4 credits
Supervised on-the-job application of knowledge and skills acquired in the classroom. Advisor approval required the quarter before the student actually begins the internship.
Lecture: 0 hours – Lab: 40 hours
Prerequisite: Permission of instructor
Corequisite: BMGT 262
Lab fee: $2.00

BMGT 262 Special Problems in Business Management I
(A, W, SP, SU) 2 credits
Application of business management knowledge to specific areas of on-the-job internship visa a report.
Lecture: 0 hours – Lab: 4 hours
Prerequisite: Permission of instructor
Corequisite: BMGT 261
Lab fee: $1.00

BMGT 263 Business Management Internship II
(A, W, SP, SU) 4 credits
Continuation of BMGT 261.
Lecture: 0 hours – Lab: 40 hours
Prerequisite: BMGT 261
Corequisite: BMGT 264
Lab fee: $2.00

BMGT 264 Special Problems in Business Management II
(A, W, SP, SU) 2 credits
Continuation of BMGT 262.
Lecture: 0 hours – Lab: 4 hours
Prerequisite: BMGT 262
Corequisite: BMGT 263
Lab fee: $1.00

BMGT 271 Management Decisions (A, W, SP, SU - DL) 2 credits
A practical experience integrating the application of fundamental accounting, marketing, and operations management principles to the decision making process in business. The course is presented via computer simulation.
Lecture: 0 hours – Lab: 4 hours
Prerequisites: ECON 200, FMGT 201, MKTG111, BMGT 111 and ACCT 107
Lab fee: $10.00

BMGT 272 Case Studies in Business Seminar
(A, W, SP, SU - DL) 3 credits
As a part of the capstone experience this course requires the student to draw on and integrate knowledge learned in all previous classes. The fundamentals of problem solving and decision-making are applied using the case study approach in a variety of organizational situations. Note: Open to Business Management students only in their last two quarters after course prerequisites have been met. Course expectations for non-Business Management students include mastery skills in Basic Business, Accounting, Finance, Marketing, and Business Law.
Lecture: 3 hours – Lab: 0 hours
Prerequisites: ACCT 107 and ENGL 200
Lab fee: $5.00

BMGT 273 Management Service Project (A, W, SP, SU) 3 credits
This course requires the student to serve in a leadership role as a member of an external team in a community-based project setting in a private industry, public sector agency, or not-for-profit organization; or to serve as a facilitator for a team in the Managing Interpersonal Skills course. In a community-based project setting the student will lead the team in the identification, analysis, and development of potential solutions to one or more problem situations. As a team facilitator, the student will facilitate the team in developing and accomplishing assigned tasks.
Lecture: 1 hour – Lab: 4 hours
Lab fee: $10.00

BMGT 276 Assessment, Analysis and Evaluation Skills (A, SU)
4 credits
This course provides students with the opportunity to develop their knowledge and skills in the basics of training assessment and evaluation. Course topics include needs assessment, data collection, data analysis, performance assessment, levels of evaluation, testing, and evaluation methods. This course will emphasize application of assessment and evaluation techniques on projects from students' personal or work experiences.
Lecture: 3 hours – Lab: 2 hours
Lab fee: $10.00

BMGT 277 Instructional Design and Development Skills (A, W) 4 credits
This course provides the basic knowledge and skills necessary for the systematic design, development and evaluation of instruction and training by focusing on the design of instruction/training programs, development of effective strategies and materials, and the evaluation of instruction/training. Emphasis is placed on application of instructional design methodology. Students will demonstrate skills through the development of and delivery of training materials related to their area of work or personal interest.
Lecture: 3 hours – Lab: 2 hours
Lab fee: $10.00

BMGT 278 Training Delivery Skills (W, SP) 4 credits
This course provides basic knowledge and skills required to conduct effective training. Topics include the training and development process, effective training competencies, adult learning practices, on-the-job training process, the learning environment, facilitation skills, presentation skills, feedback guidelines, visual aids, and reinforcement for transfer of learning to the workplace. Application of effective training delivery skills is emphasized. Students will demonstrate skills through the development and delivery of training materials related to their area of work or personal interest.
Lecture: 3 hours – Lab: 2 hours
Lab fee: $10.00

BMGT 279 The Trainer's Tool Kit (SP, SU) 3 credits
This course provides students with creative ideas, knowledge and technical skills necessary for creating innovative training materials, programs and environments to stimulate learning improve retention and improve participants' performance. Students will use various multi-media tools available from Microsoft, WebEx, GameShow Pro and others. Emphasis will be placed on group activity, creative labs, and the demonstration of skills and knowledge through the design, development, and delivery of training related projects.
Lecture: 1 hour – Lab: 4 hours
Lab: $5.00

BMGT 280 Business Etiquette (A, W, SP, SU) 3 credits
Business Etiquette provides students with a competitive advantage in a variety of situations. Students learn to use business etiquette to improve communication through e-mail, letter writing, and on the telephone. Students learn how to improve relations with customers, employees, supervisors, and peers by learning how to accept gifts and compliments, and use social graces while eating or attending social activities. Students learn appropriate dress, posture, hand-shakes, and non-verbal communication. The course explores cultural differences in global etiquette.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $10.00

BMGT 281-285 Studies in Contemporary Business (A, W, SP, SU) 1-5 credits
Studies in Contemporary Business is a specially designed course offering to meet the needs of the constantly changing business community and student population.
Lecture hours: may vary – Lab hours: may vary
Prerequisite: Permission of instructor

Chemistry (CHEM)

A mandatory safety lesson must be completed before the student is admitted to any other chemistry laboratory sessions. Approved Chemical Splash Resistant goggles are required and may be purchased through the 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 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. High school chemistry must have been completed within the last 3 years in order to meet the prerequisite requirement.

CHEM 100 Introduction to Chemistry (A, W, SP, SU–DL) 4 credits
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. 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, completion of certain exams and laboratories. Laboratories are generally done on an every other week basis on campus.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: MATH 102 or higher, placement into ENGL 100 or higher, not open to students with credit for CHEM 111, CHEM 112, CHEM 113, CHEM 171, CHEM 172, or CHEM 173
Lab fee: $13.00

CHEM 111 Elementary Chemistry I (A, W, SP, SU) 5 credits
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. This course and CHEM 112 provide a two-quarter sequence in physical science that will fulfill the elective requirement for the Associate of Science Degree.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: High school chemistry or CHEM 100; MATH 102 or equivalent; placement into ENGL 101, not open to students with credit for CHEM 171, CHEM 172, or CHEM 173
Lab fee: $19.00

CHEM 112 Elementary Chemistry II (A, W, SP, SU) 5 credits
An introductory course in fundamental organic chemistry and laboratory techniques. The study of carbon compounds organized according to functional groups including carbohydrates, lipids, proteins, enzymes, and vitamins. Emphasis is placed on physiological function. Safety training and goggles are required for laboratory sessions.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: CHEM 111, not open to students with credit for CHEM 171 or CHEM 251
Lab fee: $19.00

CHEM 113 General and Biological Chemistry (A, W, SP, SU – DL) 5 credits
This is a course in elementary chemical concepts designed primarily for allied health students. It includes the study of principles of general chemistry as applied to physiological principles; basic organic chemistry, especially related to functional groups; and biochemistry including carbohydrates, lipids, proteins, enzymes and nucleic acids. Emphasis is placed on physiological function. 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, completion of certain exams and laboratories. Laboratories are generally done on an every other week basis on campus.
Lecture: 4 hours – Lab: 3 hours

Prerequisite: High school chemistry completed within the last three years or CHEM 100 or successfully completing a chemistry placement exam; MATH 102 or equivalent, and placement into ENGL 101. Not open to students with credit for CHEM 112 or CHEM 251
Lab fee: $19.00

CHEM 171 General Chemistry I (A, W, SP, SU – DL) 5 credits
A course in fundamental chemical principles for chemistry majors and pre-professionals. Topics include chemical calculations, the mole concept, atomic structure, periodic classification, bonding, and acid-base chemistry. Laboratory sessions provide bench experiences. Safety training and goggles are required for laboratory sessions. This course and CHEM 172 provide a two-quarter sequence in physical science that will fulfill the elective requirements for the Associate of Science Degree. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting, completion of certain exams and laboratories. Laboratories are generally done on an every other week basis on campus.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: High school chemistry or CHEM 100, MATH 148 or equivalent, and placement into ENGL 101
Lab fee: $19.00

CHEM 172 General Chemistry II (A, W, SP, SU – DL) 5 credits
A continuation of CHEM 171. Topics include solutions, oxidation-reduction reactions, kinetics, gases and kinetic theory, thermodynamics, kinetics, and equilibrium. Laboratory sessions provide bench experiences. 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, completion of certain exams and laboratories. Laboratories are generally done on an every other week basis on campus.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: CHEM 171
Lab fee: $19.00

CHEM 173 General Chemistry III (A, W, SP, SU – DL) 5 credits
A continuation of CHEM 172. Topics include acid-base and solubility equilibrium, electrochemistry, nuclear chemistry, the representative and transition elements, and qualitative analysis. Laboratory sessions provide bench experiences. 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, completion of certain exams and laboratories. Laboratories are generally done on an every other week basis on campus.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: CHEM 172
Lab fee: $19.00

CHEM 251 Organic Chemistry I (A, W, SP, SU) 5 credits
The first course in a three-course sequence in organic chemistry. Structure, nomenclature, physical properties, bonding and reactions of alkanes, alkenes, and alkyl halides.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: CHEM 173
Lab fee: $6.00

CHEM 252 Organic Chemistry II (A, W, SP, SU) 5 credits
The second course in a three-course sequence in organic chemistry. This course includes the study of physical and chemical properties of aromatic compounds, alcohols, thiols, ethers, epoxides, sulfides, carbonyl compounds, carboxylic acids and their derivatives, and carbohydrates.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: CHEM 251
Lab fee: $6.00

CHEM 253 Organic Chemistry III (A, W, SP, SU) 5 credits
The third course in a three-course sequence in organic chemistry. This course includes the study of spectroscopic methods, molecular orbital theory, polymers, the chemical and physical properties of amines, amino acids, proteins, lipids, and nucleic acids.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: CHEM 252
Lab fee: $6.00

CHEM 254 Organic Chemistry Laboratory I (A, W, SP, SU) 3 credits
The first course in a two-course sequence in organic chemistry laboratory. This course introduces the student to laboratory techniques of organic chemistry, including synthesis, isolation, purification, and identification of organic compounds.
Lecture: 1 hours – Lab: 8 hours
Prerequisite: CHEM 251
Lab fee: $39.00

CHEM 255 Organic Chemistry Laboratory II (A, W, SP, SU) 3 credits
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.
Lecture: 1 hours – Lab: 8 hours
Prerequisite: CHEM 252 and CHEM 254
Lab fee: $39.00

CHEM 261 Introduction to Biochemistry (A, W, SP, SU) 5 credits
This is an introductory course in biochemistry dealing with the molecular basis of structure and metabolism of plants, animals, and microorganisms.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: CHEM 252 and two quarters of biological science
Lab fee: $5.00

CHEM 290 Capstone Experience in Chemistry (on demand) 3 credits
An integrated science course blending elements of chemistry, physics and biology. Topics include the historical development of the sciences, ethical issues in science and how they affect the advancement of scientific thought, and the scientific method as it relates to experimental design and interpretation of scientific results. The laboratory utilizes an investigative approach taking students through the process of identifying a research problem, conducting a literature review, writing a research proposal, collecting and analyzing data, writing a scientific paper and presenting results. This course is required for all science majors seeking either the Associate of Arts or Associate of Science degree.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: 75 hours or more of course work completed with a minimum of 20 credit hours within the sciences
Lab fee: $18.00

CHEM 293 Independent Study in Chemistry (on demand) 1 to 5 credits
Detailed examination of selected topics of interest in chemistry.
Prerequisite: Permission of instructor
Lab fee: varies

CHEM 299 Special Topics in Chemistry (on demand) 1 to 5 credits
Detailed examination of selected topics of interest in chemistry.
Lecture: 1 to 5 hours – Lab: 0 to 6 hours
Prerequisite: Permission of the instructor
Lab fee: varies

Civil Engineering Technology (CIVL)

Also see Surveying (SURV)

CIVL 120 Basic Construction Materials (A, W, SP, SU) 3 credits
A 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 basic common construction industry materials testing procedures and comparison of results to industry standards and specifications.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: MATH 102 or placement into a higher level mathematics course
Lab fee: $20.00

CIVL 121 Heavy Construction Materials (W) 3 credits
A comprehensive study and application of the material testing methods of soils, aggregates, asphalt and Portland Cement concrete required in the heavy construction industry. The laboratory exercises provide fundamental hands-on experience in preparation for the American Concrete Institute (ACI) Grade 1 Concrete Field Technician. Preparation in the ACI Grade 1 Contract Field Technician test is a course requirement.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIVL 120
Lab fee: $55.00

CIVL 123 Heavy Construction Drawings (A, W, SP) 3 credits
Reading and interpretation of construction drawings as related to highway and public works construction projects. Interpretation of the relationships of plans, elevations, sections and details, and the coordination with published specifications. A basic method of material quantity take-off will be explained.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $15.00

CMGT 125 Heavy Construction Methods (A, W) 3 credits
A study of methods used to build horizontal projects, such as highways, dams, airports, bridges and utility lines. The various pieces of equipment and materials used in these type projects will be explained as well as the processes used.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $5.00

CIVL 221 Elementary Hydraulics (A, W) 3 credits
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.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: MATH 104 or MATH 112
Lab fee: $12.00

CIVL 223 Public Utility Systems (W) 3 credits
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. Detail plan preparation using CAD systems is also emphasized.
Lecture: 2 hours – Lab: 3 hours
Prerequisites: CIVL 221 and CIVL 123
Lab fee: $12.00

CMGT 243 Heavy Construction Estimating (A, SU) 3 credits
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
Prerequisites: CIVL 123, CMGT 125 and CMGT 131
Lab fee: $9.00

CIVL 291 Field Experience (SU) 3 credits
Off-campus work experience in civil engineering, consulting engineering or surveying industry that augments formal education received in the technology, with actual work conditions and job experience. "N" credit will not be allowed for this course.
Lecture: 0 hours – Lab: 36 hours
Lab fee: $5.00

CIVL 299 Special Topics in Civil Engineering Technology (on demand) 1-5 credits
Special topics in civil engineering technology industry designed to meet specific needs.
Lecture: 1 hour – Lab: 1-15 hours
Prerequisite: Permission of instructor
Lab fee: $10.00

Communication Skills (COMM)

(Also see English, Technical Communication, and Theater)

Note: Courses taught at a distance [Distance Learning] may have a higher lab fee than traditionally taught courses.

COMM 105 Speech (A, W, SP, SU – DL) 3 credits
Emphasis is placed on both verbal and nonverbal communication techniques in public speaking. Individual presentations, including at least three major speeches, are required. The fundamental principles of interpersonal communications and small group discussion are introduced. Audio and/or video taping of selected projects will occur. This course, or its equivalent, is required for all degrees.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 101 or ENGL 111
Lab fee: $3.00

COMM 110 Conference and Group Discussion (A, W, SP, SU – DL) 3 credits
Through role play, discussion, and participation, students will develop attitudes, skills, and knowledge of methods necessary to effectively participate in discussion at conferences, in committees, and in other small groups. This course is recommended as a substitute for COMM 105 in some technologies. Check with your academic advisor.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 101 or ENGL 111
Lab fee: $3.00

COMM 115 Oral Interpretation (A, W, SP, SU – DL) 3 credits
Students will read literature orally and listen critically. They will then practice techniques for presenting literature dramatically. The cultural and social functions of oral literature will be discussed. Emphasis will be placed on analyzing literary works, recognizing their emotional and dramatic values, and projecting those qualities through oral presentations. Writing assignments include response journals and short critical papers.

This course is recommended as a substitute for COMM 105 for all Associate of Arts and Associate of Science students.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 101 or ENGL 111
Lab fee: $3.00

COMM 150 Video Art Production (W, SU) 5 credits
This course introduces students to the art of independent film and video through analysis of independent short films and through the production of digital video shorts. Students will analyze independent films and videos to develop a descriptive definition of video as a collaborative art form. Students will learn digital video photography, conversion of VHS to digital form, script writing, editing, and post production in iMovies (Macintosh non-linear editing software for non professionals). Students will create short videos in selected genre, such as biographical narrative, the parody, or the community-interest documentary.
Lecture: 4 hours- Lab: 2 hours
Prerequisite: ENGL 102 or equivalent with a grade of "C" or higher required; and ENGL 245 Introduction to Film is recommended
Lab Fee: $ 25.00

COMM 220 Introduction to Mass Communications (A – DL) 5 credits
Students will become better consumers of news and other mass media through the study and discussion of the history, roles, and impact of mass media in American society. Principal ethical, policy, and legal questions confronting reporters and media are reviewed. Students are introduced to news writing, advertising, and public relations techniques.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 102 or ENGL 111
Lab fee: $3.00

COMM 250 Advanced Video Art Production (A, W, SP) 5 credits
This course is a continuation of COMM 150 Video Art Production. Students will further develop their skills in digital video photograph, script-writing, editing, and post-production in iMovie and Final Cut Pro. Students will create short videos in selected genres, such as the biographical narrative, the parody, or community-interest documentary.
Lecture: 4 hours – Lab: 2 hours
Prerequisite: COMM 150
Lab fee: $25.00

COMM 297-298-299 Special Topics in Communications (on demand) 1-5 credits
Lecture hours: vary – Lab hours: vary
Prerequisite: vary

Computer Information Technology (CIT)

CIT 089 Introduction to FrontPage (W, SP - DL) 1 credit
This course introduces the student to Web page creation. The student will create a simple homepage using Microsoft Front Page. Distance Learning students are responsible for the required software.
Lecture: 0 hours – Lab: 2 hours
Prerequisite: CIT 094
Lab fee: $10.00

CIT 092 Introduction to HTML (A, SU - DL) 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.
Lecture: 0 hours – Lab: 2 hours
Prerequisite: none
Lab fee: $10.00

CIT 093 Project Management (W, SU) 1 credit
Learn to develop, plan, schedule, and chart project information, and balance workloads for people working on several projects at once, tracking all phases of the project to meet deadlines and stay on budget. Uses Microsoft approved text.
Lecture: 0 hours – Lab: 2 hours
Prerequisite: none
Lab fee: $10.00

CIT 094 Web Learning Tools (A, W, SP, SU - DL) 1 credit
This one-credit-hour course provides students with an introduction to Blackboard and to the Internet. Students will learn how to use Blackboard, find information, and explore the World Wide Web. An e-mail account is required. Not open to students who have taken CIT 139.
Lecture: 0 hours – Lab: 2 hours
Lab fee: $10.00

CIT 095 Computer File Management (A, W, SP, SU) 1 credit
This one-credit-hour course is an introductory course on the Windows operating system. The objective of the course is to teach fundamental skills in working with the desktop, drives, folders, files, and applications. Not open to students who have taken CIT 121.
Lecture: 0 hours – Lab: 2 hours
Lab fee: $10.00

CIT 096 Business Excel (A, W, SP, SU - DL) 1 credit
Introduces business-oriented features of Excel such as lists, filters, pivot tables and charts, 3-D formulas, data validation, auditing tools, and IF functions. A bridge course designed to prepare students for CIT 231, Expert Excel.
Lecture: 0 hours – Lab: 2 hours
Lab fee: $10.00

CIT 097 Business Access (A, W, SP, SU - DL) 1 credit
Introduces business-oriented features of Access such as creating and manipulating forms and form data, creating and manipulating reports and report data, creating complex reports, relating tables, refining table design, using Access database tools, and integrating Access with other applications. A bridge course to prepare students for CIT 233, Expert Access.
Lecture: 0 hours – Lab: 2 hours
Lab fee: $10.00

CIT 098 Word Integration (A, W, SP, SU - DL) 1 credit
Introduces business-oriented features of Word such as merging letters, merging labels, page layout for newsletters, columns, object linking and embedding, outlines, Web pages, and creating master and subdocumenets. This course offers advanced features of Word including integration with Excel, Access, and Powerpoint.
Lecture: 0 hours – Lab: 2 hours
Lab fee: $10.00

CIT 100 Computer Literacy (A, W, SP, SU - DL) 1 credit
This one-credit-hour course provides students with an introduction to computer technology, computer hardware and software, and relates how computers can be used to produce meaningful information.
Lecture: 0 hours – Lab: 2 hours
Lab fee: $10.00

CIT 101 PC Applications 1 (A, W, SP, SU- DL) 3 credits
In this course, the student will learn introductory concepts and techniques used in word processing, spreadsheet, database, and presentation graphics software. Hands-on lab experience using the Windows operating system and Microsoft Office software is emphasized. This course is not designed

for beginning computer users. Beginning computer users should take CIT 100, Computer Literacy, before taking this course. Recommended: OADM 131. Distance Learning students are responsible for the required software.
Lecture: 2 hours – Lab: 2 hours
Prerequisites: DEV 030 and completion of ENGL 100 or ESL 100 or placement into ENGL 101 or ENGL 111
Lab fee: $10.00

CIT 102 PC Applications 2 (A,W, SP, SU - DL) 3 credits
This course covers advanced concepts and techniques used in word processing, spreadsheet, and database software. Microsoft has approved the textbooks used in CIT 101 and CIT 102, when used in a two-quarter sequence, as courseware for the Microsoft Office Specialist certification. Distance Learning students are responsible for the required software.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 101
Lab fee: $20.00

CIT 103 Computer Concepts & Logic (A, W, SP, SU) 3 credits
This course is an introduction to computer information systems, computer concepts, and programming logic. Along with general computing concepts, this course will cover command line interaction, file management, programming logic using pseudo code, flowcharts, and decision tables.
Lecture: 2 hours – Lab: 3 hours
Prerequisites: MATH 102 and completion of ENGL 100, ESL 100, or placement into ENGL 101
Lab fee: $25.00

CIT 121 PC Operating Systems (A, W, SP, SU) 3 credits
This course covers in-depth DOS functions and Windows operating systems.
Lecture: 2 hours – Lab: 3 hours
Prerequisites:
Lab fee: $25.00

CIT 123 Workstation Installation/Configuration (A, W, SP, SU) 3 credits
This course provides students with the necessary skills and knowledge to identify and perform tasks involved in supporting networks. The course is designed to prepare students to perform essential network administration tasks.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 121
Lab fee: $30:00

CIT 125 PC Maintenance (W, SU) 3 credits
This course focuses on maintaining, troubleshooting, and upgrading PCs. Discussion emphasizes the analysis and design of PC systems as well as installation of expansion cards, hard drives, video cards, memory upgrades, loading drivers, disk maintenance, and loading application and system software.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 121
Lab fee: $25.00

CIT 135 E Publishing (A, W, SP, SU) 3 credits
Learn to create effective, high-impact publications and Web sites. Activities create awareness of professional layouts by developing brochures, newsletters, flyers, business forms, business cards, logos, and more using Microsoft Publisher and Adobe Photoshop.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: none
Lab fee: $25.00

CIT 137 Advanced Information Presentation (A, W, SP, SU) 3 credits
Learn how computer graphics are used to communicate information effectively. Computer lab assignments include chart format and data content. Students will learn how to create effective business presentations complete with graphs, organization charts, graphics, sound, movies, and Web links. Students will research a topic and develop presentations. Uses Microsoft approved text. Covers skill set for PowerPoint Expert certification.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 101
Lab fee: $25.00

CIT 139 Web Essentials (A, W, SP, SU - DL) 3 credits
Students will learn the dynamics of the Web environment, explore World Wide Web (WWW) sites, transfer files, and create a simple home page using basic HTML tags. Hands-on experience using the Internet will be emphasized. An Internet email account is required. The course is taken entirely on the Internet with the exception of the midterm and final examinations which will be taken in the Testing Center at Columbus State
Lecture: 2 hours – Lab: 3 hours
Prerequisite: none
Lab fee: $10.00

CIT 141 Web Publishing (A, W, SP, SU - DL) 3 credits
This course offers Web page layout, implementation, maintenance, and creation of a recognized presence on the Internet. Hands-on lab experience using the IBM PC and web development software (MS Front Page) is emphasized. Distance Learning students are responsible for the required software.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 139
Lab fee: $25.00

CIT 145 HTML (A, SP – DL) 3 credits
This course provides an in-depth study of Hypertext Markup Language and its use in Web pages. Student will receive experience in TCP/IP, HTTP, and HTML in a web server environment.
Lecture: 2 hours—Lab: 3 hours
Prerequisite: none
Lab fee: $25.00

CIT 147 Java Script Fundamentals (W, SU) 3 credits
The course provides an in-depth study of JavaScript and other scripting languages that add interactivity to Web sites. JavaScript is an extension to Hypertext Markup Language (HTML) that enables one to get data stored in Web page forms. With JavaScript, one may make intelligent Web pages that verify input, calculate it, and make presentation decisions based on it. Students will be introduced to programming concepts, including flowcharting and pseudo code to provide planning logic for programs.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 145
Lab fee: $40.00

CIT 149 Groupware (W, SU) 3 credits
Intranets, portals, and group work tools that integrate information technology and business and governmental processes are examined. In addition, the student will investigate collaboration software, digital objects management software and digital search tools that support work system processes. Computing project planning activities tie these tools and activities to any user's computing and messaging devices.
Lecture: 2 hours – Lab: 3 hours
Prerequisites: CIT 101
Lab fee: $25.00

CIT 151 Networking 1 (A,W, SP, SU) 3 credits
An introductory course to Local Area Networks (LANs). This course will explore the current technology available for LANs including both hardware and software.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 121
Lab fee: $25.00

CIT 163 Visual Basic 1 (A, W, SP, SU – DL) 4 credits
Emphasizes the essential aspects of creating the graphical user interface of a Visual Basic Windows program. The student will also 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: 5 hours
Prerequisite: CIT 103
Lab fee: $40.00

CIT 165 COBOL 1 (on demand) 5 credits
An introduction to the concepts and techniques of batch COBOL programming using structured programming techniques. Index access methods are stressed.
Lecture: 2 hours – Lab: 8 hours
Prerequisite: CIT 163
Lab fee: $40.00

CIT 167 C++ Programming 1 (A, W, SP, SU) 4 credits
An introductory course in ANSI-Standard C++ Language Programming. Lab problems are targeted towards writing programs with business applications. Computer lab projects will provide hands-on experience in developing programs with an ANSI-Standard C++ compiler environment.
Lecture: 2 hours – Lab: 5 hours
Prerequisite: CIT 103
Lab fee: $40.00

CIT 169 Java Programming 1 (A, SP) 3 credits
This course is an introduction to the art of computer programming in Java. Included are features needed to construct Java Applets, Java Applications, control structures, methods, arrays, character and string manipulation, graphics, and object-oriented programming.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 103
Lab fee: $30.00

CIT 171 Database Administration/SQL (A, SP) 4 credits
This course provides the student with the necessary skills and knowledge to identify and perform the tasks involved in implementing and managing databases on MS SQL Server.
Lecture: 2 hours – Lab: 6 hours
Prerequisites: CIT 151 and either CIT 233 or CIT 173
Lab fee: $10.00

CIT 173 Database Programming (A, W, SP, SU) 3 credits
This course presents an overview of Database Management Systems (DBMS) programming techniques and systems. The student will write programs using ORACLE.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 103
Lab fee: $25.00

CIT 175 Systems Analysis 1 (A, W, SP, SU) 4 credits
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.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: CIT 103
Lab fee: $15.00

CIT 200 Certification Test Review (A, W, SP, SU) 1 credit
Students will review the material necessary to become certified with popular network operating system software. Students will complete a series of practical exercises designed to enhance their ability to successfully complete a popular vendor certification program.
Lecture: 0 hours – Lab: 3 hours
Prerequisite: CIT 252
Lab fee: $15.00

CIT 225 PC Troubleshooting And Diagnosing (W, SP) 3 credits
This course is a hands-on application of job skills necessary in the PC Help Desk, PC Support, and PC Bench Technician fields.
Lecture: 3 hours – Lab: 2 hours
Prerequisites: CIT 121 and CIT 125
Lab fee: $30.00

CIT 231 Expert Excel (A, W, SP, SU - DL) 3 credits
Advanced features and formats in the spreadsheet application MS Excel with an emphasis placed on VB application. Uses Microsoft approved text. Covers skill set for Microsoft Expert certification. Distance Learning students are responsible for the required software.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 102 or CIT 096, and MATH 102
Lab fee: $25.00

CIT 233 Expert Access (A, W, SP, SU - DL) 3 credits
A continuation from CIT 102 presenting database software, including file creation, screen and report generators. Emphasis is placed on VB applications. Enterprise Developer and Object- Oriented Developer students must take CIT 173 and CIT 273 instead. Uses Microsoft approved text. Covers skill sets for Access Expert certification.
Lecture: 2 hours – Lab: 3 hours
Prerequisites: CIT 102 or CIT 097, and MATH102
Lab fee: $25.00

CIT 250 Network Communication Systems (A, W, SP, SU - DL) 3 credits
Students will learn the fundamentals of data communication and computer networks. To include basic communication theory as applied to both digital and analog communication networks. Also students will learn the basics of the OSI layered network model and characteristics of the wide area, and local area data communication networks.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 151
Lab fee: $40.00

CIT 251 Networking 2 (A, SP) 3 credits
A continuation of CIT 151. Students will learn advanced local area network concepts and how they can be applied to support enterprise-wide information management of a large organization. The student will learn to install and use a LAN operating system.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 151
Lab fee: $40.00

CIT 252 Enterprise Networking (A, W) 4 credits
A continuation of CIT 251. Students will learn to use Microsoft Windows Server environment to support small and enterprise wide information management systems. Students will complete a series of laboratory assignments using the Windows Server environment.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: CIT 251
Lab fee: $40.00

CIT 253 TCP/IP (SP, SU - DL) 3 credits
This course demonstrates the concepts and analyzes the results using utilities provided by Windows. The course covers the aspects of TCP/IP such as history, client/server model/addressing/bridging and routing/DHCP, Windows domains and name services.
Lecture: 2 hours - Lab: 3 hours
Prerequisite: CIT 252
Lab fee: $25.00

CIT 255 Server Administration I (W, SU) 4 credits
Students will learn how to perform administration tasks using MS Windows networks. Elements include management of data storage, monitoring event logs, designing and administering Windows security model, and designing and developing a security needs analysis. The student will also utilize the client and server technologies used in designing and implementing Web services such as network address translators, proxy servers, firewalls, and Internet Information Services.
Lecture: 2 hours – Lab: 5 hours
Prerequisite: CIT 252
Lab fee: $25.00

CIT 257 Network Security (W, SU) 3 credits
This course focuses on the underlying theory of computer security which will cover topics such as e-security, cryptography, security architecture and management, laws and ethics, telecommunications, network and Internet security, risk assessment and auditing, and firewalls.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: CIT 255
Lab fee: $40.00

CIT 258 Wireless Networking (on demand) 3 credits
This course is designed to provide students and network administrators with an in-depth knowledge of wireless LAN basics including IEEE 802.11, Wi-Fi, Bluetooth, WiMax technologies, encryption techniques, site surveys, securing, troubleshooting, monitoring, and managing wireless LANs, while preparing the students for CWNA certification.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 255
Lab fee: $25.00

CIT 259 Advanced Network Security (on demand) 3 credits
This course is designed to provide students and network administrators with comprehensive and advanced topics related to network security. This course is an extension to the Network Security course and includes concepts related to network firewall security, intrusion detection techniques VPNs, IP security, installation and troubleshooting firewall technology while preparing the student towards an industry-standard certification.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 257
Lab fee: $25.00

CIT 260 Web Security (on demand) 3 credits
This course is designed for students, web developers, and net work administrators who want to gain knowledge related to Internet/Intranet security while learning how to protect web sites from internal and external threats. This course will teach students about the concepts and techniques related to securing web sites, while exploring common vulnerabilities of web sites as well as implementing secure communications across unsecured networks. Students gain hands-on experience implementing web security using a network server-based operating system.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 259
Lab fee: $25.00

CIT 263 Visual Basic 2 (W, SU) 4 credits
A continuation of CIT 163. Emphasizes advanced topics in VB.net such as database programming, including SQL, Active X controls, and object-oriented programming. Software is provided to students.
Lecture: 2 hours – Lab: 5 hours
Prerequisite: CIT 163
Lab fee: $40.00

CIT 264 Visual Basic 3 (on demand)
A continuation of CIT 263, Visual Basic 2. Emphasis is on advanced topics, including 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.
Lectrue: 2 hours – Lab: 5 hours
Prerequisite: CIT 263
Lab fee: $25.00

CIT 265 COBOL 2 (on demand) 4 credits
A continuation of CIT 165. Sort procedures, sequential access, table handling, and SQL with COBOL are stressed.
Lecture: 2 hours – Lab: 5 hours
Prerequisite: CIT 165 Lab fee: $40.00

CIT 266 Interactive COBOL (on demand - DL) 4 credits
Interactive programming using applicable software.
Lecture: 2 hours – Lab: 5 hours
Prerequisite: CIT 165
Lab fee: $40.00

CIT 267 C++ Programming 2 (A, W, SP) 4 credits
An advanced course in ANSI-Standard C++ Language programming. Lab problems are targeted towards writing programs that explore data structures using object-oriented techniques. Computer lab projects will provide further hands-on experience in developing programs with an ANSI-Standard C++ compiler environment including debugging techniques.
Lecture: 2 hours – Lab: 5 hours
Prerequisite: CIT 167
Lab fee: $40.00

CIT 268 Object-Oriented COBOL (A) 4 credits
Introduction to object-oriented COBOL using classes and objects are discussed. Object analysis and object design concepts are introduced for COBOL programming. Programs written are runable on personal computers using and ANSI-standard COBOL compiler.
Lecture: 2 hours – Lab: 5 hours
Prerequisite: CIT 163
Lab fee: $40.00

CIT 269 Java Programming 2 (W, SU) 3 credits
This course is a continuation of Java Programming 1. More advanced work in Java applets, applications, structures, methods, and arrays will be included.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 169
Lab fee: $30.00

CIT 270 Advanced Web Programming (A, SP) 4 credits
This course focuses on using the Common Gateway Interface (CGI) and Active Server Pages (ASP) to create dynamic, interactive web content. Both Perl and VBScript are taught in this course. Although no prior experience with either programming language is required, students are expected to understand basic programming concepts. Practical, real-world lab exercises provide students with hands-on experience, including working with the Apache Web Server and Microsoft Personal Web Server.
Lecture: 2 hours – Lab: 5 hours
Prerequisite: CIT 147
Lab fee: $40.00

CIT 271 Data Mining and Warehousing (W, SU) 4 credits
This course provides students with the necessary skills and knowledge to design and develop relational databases and an introduction to data mining and data warehousing concepts.
Lecture: 2 hours – Lab: 6 hours
Prerequisite: CIT 171
Lab fee: $25.00

CIT 273 Database Systems (W, SU) 3 credits
An introduction to database systems in theory and application. Students will design and build a database on IBM personal computers using ORACLE.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 173
Lab fee: $25.00

CIT 274 Distributed Database Management Systems (W, SU) 4 credits
Students will learn the characteristics and types of distributed DBMS currently available for use on distributed data networks. Additionally, students will learn to design and create an enterprise wide database (ORACLE) that will be maintained on a distributive network system in a laboratory environment.
Lecture: 2 hours – Lab: 5 hours
Prerequisite: CIT 251
Lab fee: $40.00

CIT 275 Systems Analysis 2 (A, SP) 4 credits
Students will use techniques learned in Systems Analysis 1 to produce various flow diagrams, project schedules, and timetables. Exploration of object-oriented design and unified modeling language (UML). Students will work in teams to learn to prepare and present a systems proposal and how to implement and complete a software project.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: CIT 175
Lab fee: $15.00

CIT 276 Information Security Audit (on demand) 3 credits
This course 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: CIT 259
Lab fee: $25.00

CIT 277 Computer Forensics (on demand) 3 credits
This course 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: CIT 259
Lab fee: $25.00

CIT 278 Business Continuity and Disaster Recovery (on demand) 3 credits
This course is designed for students, network administrators that 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: CIT 276
Lba fee: $25.00

CIT 280 ACP Examination (A, W, SP, SU - DL) 1 credit
Students will review topics covered in all previous technical courses. Students will be eligible to take the Associate Computer Professional (ACP) examination administered by the Institute for the Certification of Computer Professionals (ICCP). All Enterprise Developer and Object-Oriented Developer students in the Computer Information Technology will take CIT 280 during their graduating quarter.
Lecture: 0 hours – Lab: 3 hours
Lab fee: $20.00

CIT 281 Capstone for Software Developer (SP, SU) 5 credits
As the capstone course for the Computer Information Technology, students will work in assigned groups to convert a manual business process to a computer-based solution. Using project management techniques, students will design, present, and program their solution using a web user interface and database technology. Emphasis will be placed on the ability to demonstrate technical expertise and soft skills required for employment
Lecture: 2 hours – Lab: 8 hours
Prerequisite: Object-Oriented Developer - CIT 263 and CIT 275
Lab fee: $40.00

CIT 282 Capstone for Net Admin/User Support/Web Dev (A, W, SP) 5 credits
This is the capstone course for the PC Technician, Networking Technician, and Web Developer tracks. Students will work in small groups or individually to design and develop a typical business system. Students in the Enterprise Developer and Object Oriented Developer tracks take CIT 281.
Lecture: 2 hours – Lab: 8 hours
Prerequisites: See list below
Lab fee: $40.00

PC Tech.	Networking Tech.	Web Dev.
CIT 125	CIT 123	CIT 141
CIT 135	CIT 253	CIT 169
CIT 137	CIT 255	CIT 233
CIT 139	CIT 271	CIT 270
CIT 151		
CIT 175		

CIT 291 Special Topics in CIT 1 (on demand) 1-5 credits

CIT 292 Special Topics in CIT 2 (on demand) 1-5 credits

CIT 293 Special Topics in CIT 3 (on demand) 1-5 credits

CIT 294 Special Topics in CIT 4 (on demand) 1-5 credits

CIT 295 Special Topics in CIT 5 (on demand) 1-5 credits

CIT 296 Special Topics in CIT 6 (on demand) 1-5 credits

Special Topics in CIT is a series of courses specifically designed to meet the needs of the constantly changing business community and student population. Courses will be designed with the advice of the particular group requesting the course and approval by the department chairperson.
Lecture: 0 hours – Lab: 1-5 hours
Lab fee: $30.00

CIT 297 CIT Internship/Field Experience 1 (on demand) 1 credit
The student works 12 hours per week in an activity that relates to the student's occupational objective.
Lecture: 0 hours – Lab: 12 hours

CIT 298 CIT Internship/Field Experience 2 (on demand) 2 credits
The student works 24 hours per week in an activity that relates to the student's occupational objective.
Lecture: 0 hours – Lab: 24 hours

CIT 299 CIT Internship/Field Experience 3 (on demand) 3 credits
The student works 36 hours per week in an activity that relates to the student's occupational objective.
Lecture: 0 hours – Lab: 36 hours

Construction Management (CMGT)

CMGT 101 Managing a Construction Company (A, W, SP) 3 credits
An overview of the operations of a construction firm with a simulation of the management process by student teams demonstrating skills and competencies required.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $5.00

CMGT 105 Construction Contract Documents
(A, W, SP, SU) 3 credits
Intensive study of all documents related to a project with emphasis on the important legal aspects of each, and the role of the contractor in the final project.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $5.00

CMGT 106 Supervision of Field Operations (W, SP) 3 credits
An overview of the principles of field supervision which includes leadership skill, problem solving, motivation techniques, problem solving processes, communication methods and useful supervisory aids for construction projects.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $4.00

CMGT 115 Building Construction Methods (A, W) 3 credit
A study of the methods used in work-site preparation, materials handling systems, assembly of construction materials and systems as related to building projects such as offices, schools, stores, industrial buildings and hospitals, along with the strategies employed to control and coordinate these activities.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $3.00

CMGT 121 Building Construction Drawings (A, W, SP, SU) 3 credits
Reading and interpretation of construction drawings and project manuals as related to residential, commercial, and industrial construction projects. Interpretation of the relationship between plans, elevations, sections, details, and the coordination of these drawings with materials specifications. The use of basic construction math will be explained along with the interpretation of construction terms and symbols.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $20.00

CMGT 131 Construction Quantity Survey (A, W, SP, SU) 3 credits
Development of the use of construction math relative to linear, square and cubic measures of common construction materials. The computation and organization of basic material quantities used in a typical building construction project including the site preparation.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: CMGT 121 or higher or permission of instructor
Lab fee: $15.00

CMGT 135 Safety and Loss Prevention (W, SP) 3 credits
Identification of work hazards and unsafe practices, safety codes and standards, safety programs and training with the role of O.S.H.A. and insurance companies in safety programs. Basic first aid and CPR are included. How to develop theft reduction programs with the cooperation of local law enforcement departments and insurance companies will also be studied.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $7.00

CMGT 141 Building Estimating (SP, SU) 3 credits
Development of topics such as material price extensions, equipment requirements, labor requirements, and time requirements as related to building construction projects. Involving the take-off procedure used.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CMGT 131 and CMGT 115
Lab fee: $9.00

CMGT 231 Computer Estimating Buildings (W, SU) 3 credits
A continuation of the study for the skills required to "take-off" the amount of materials from a set of construction plans in an orderly manner. The course will develop the general background information for the process of bidding a construction project utilizing computer software and discussing the most current software applications.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CMGT 131
Lab fee: $20.00

CMGT 241 Planning and Scheduling (A, SU) 3 credits
A study of project control and coordination through systematic planning and scheduling, including operational adjustments for resource changes and alterations. Computer computation of critical path methods and analysis.
Lecture: 2 hours – Lab: 3 hours
Prerequisites: CMGT 115, CMGT 131 or CMGT 141
Lab fee: $10.00

CMGT 251 Construction Cost Controls (A, W) 3 credits
Methods and techniques of cost analysis used to develop skills in controlling construction computer computation of costs, budgets, and related critical path analysis and adjustment, operating costs and cost forecasting of completed production.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CMGT 241
Lab fee: $10.00

CMGT 252 Construction Law (A, W) 3 credits
Analysis of the special conditions of construction law as applied to contractual on-site conditions, document usage, negotiations of disputes, change orders and master contracts.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CMGT 105
Lab fee: $5.00

CMGT 253 Residential Construction (A, W, SU) 3 credits
The basic construction of a single family residence from the ground up, emphasizing construction methods, equipment used, structural design theory, materials and terminology.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $2.00

CMGT 261 Project Management (W, SP) 3 credits
Tracking a project through a construction firm which includes job start, control assignments, control structures, organization, and move-out phases of the construction project. Computer simulation of project activities and management processes.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CMGT 251
Lab fee: $10.00

CMGT 281 Computer Estimating Residential (A, SP) 3 credits
A comprehensive study of the skills required to "take-off" the amount of materials from a set of construction plans in an orderly manner. The course will develop the general background information for the process of bidding a residential construction project utilizing computer software.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CMGT 131 or permission of instructor
Lab Fee: $20.00

CMGT 282 Sustainable Building Documents, Drawings and Materials (on demand) 2 credits
This course is a study of sustainable building drawings and specifications, bidding procedures, and material selection as applied to new construction and existing facilities. Codes and regulations are also discussed.
Lecture: 1 hour – Lab: 3 hours
Lab Fee: $10.00

CMGT 283 Sustainable Building Methods, Estimating and Marketing (on demand) 2 credits
This course is the study of sustainable building methods, estimating and sales and marketing of construction management services for sustainable building as applied to new construction and existing facilities.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: CMGT 282 and ENVR 282
Lab fee: $10.00

CMGT 291 Field Experience (SU) 4 credits
Off-campus work experience in construction, consulting engineering or construction related industry that augments formal education received in the technology, with actual work conditions and job experience. "N" credit will not be allowed for this course.
Lecture: 0 hours – Lab: 48 hours
Lab fee: $15.00

CMGT 299 Special Topics in Construction Management (on demand) 1 - 5 credits
Course provides flexibility to allow for special topics in the Construction industry to be presented.
Lecture and Lab hours vary dependent upon topic
Prerequisite: varies upon topic
Lab Fee: $10.00

Dance (DANC)

All studio classes are held at Ballet Met, 322 Mount Vernon Ave.

DANC 101 Classical Ballet I (A, W, SP) 2 credits
Classical ballet at the beginning level. Fundamentals of classical ballet technique, coordination, strength and flexibility with an emphasis on proper execution and comprehension. Repeatable for up to 6 total credits.
Lecture: 1 hours – Lab: 2 hours
Lab fee: $8.00

DANC 102 Classical Ballet II (A, W, SP) 2 credits
A continuation of Classical Ballet I, following through on the development of basic skills and their incorporation into combinations of movements. Repeatable for up to 6 total credits.
Lecture: 1 hours – Lab: 2 hours
Prerequisite: 6 hours of Ballet I or permission of instructor
Lab fee: $8.00

DANC 121 Beginning Tap I (A, W, SP) 1 credit
Tap techniques at the beginning level. Tap classes emphasize precession in sound, rhythm, movement, gesture and expression. Repeatable for up to 3 total credits.
Lecture: hours – Lab: 2 hours
Lab fee: $8.00

DANC 122 Beginning Tap II (A, W, SP) 1 credit
Fundamentals of tap developed to include more complex movement combinations and interpretations. Emphasis on quick and efficient learning skills. Repeatable for up to 3 total credits.
Lecture: hours – Lab: 2 hours
Prerequisite: 6 hours of Tap I or permission of instructor
Lab fee: $8.00

DANC 131 Beginning Jazz I (A, W, SP) 1 credit
Jazz dance techniques at the beginning level. Jazz classes combine classic Broadway theatre dance with contemporary movement styles, elementary body part isolations and basic combinations. Repeatable for up to 3 total credits.
Lab: 2 hours
Lab fee: $8.00

DANC 132 Beginning Jazz II (A, W, SP) 1 credit
Fundamentals of Jazz dance developed to include more complex movements combinations and interpretations. Repeatable for up to 3 total credits.
Lab: 2 hours
Prerequisite: 6 hours of Jazz I or permission of instructor.
Lab fee: $8.00

DANC 150 Afro-Caribbean/Jazz Dance I (on demand) 2 credits
Students will learn basic ethnic dance history and vocabulary in the context of the wider social and cultural movements, and will also learn and practice dance movements themselves in the studio.
Lecture: 1 hours – Lab: 2 hours
Lab fee: $8.00

DANC 151 Afro-Caribbean/Jazz Dance II (on demand) 1 credit
Continuation of the studio portion of DANC 150. Repeatable for up to 3 total credits.
Lab: 2 hours
Prerequisite: DANC 150 or permission of instructor.
Lab fee: $8.00

DANC 299 Special Topics in Dance (on demand) 1-5 credits
Examination of types and styles of dance other than those regularly offered.
Lecture hours varies – Lab hours varies
Lab fee: $8.00

Dental Hygiene (DHY)

DHY 101 Preventive Concepts I (A) 1 credit
This course involves the introduction to the concepts of individualized oral hygiene instruction.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: Admission to Dental Hygiene Program

DHY 102 Preventive Concepts II (W) 1 credit
This course is an introduction to the concepts and principles of instrumentation techniques.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: DHY 101

DHY 103 Techniques I (SP) 1.5 credits
This 1.5 hour lecture course is designed to expand the student's knowledge of dental hygiene practice including ultrasonic instrumentation, instrument sharpening, treatment planning, dental charting and care of the special needs patient.
Lecture: 1.5 hour – Lab: 0 hours
Prerequisite: DHY 110

DHY 110 Introduction to Dental Hygiene (A) 4 credits
This four credit-hour course is designed to acquaint the dental hygiene student with the role of the dental hygienist and provide background knowledge, information and the necessary foundation required for subsequent didactic and clinical dental hygiene course work. Observation

sessions at The Ohio State University College of Dentistry are included to acquaint and orient the students to the clinical setting.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: Admission to Dental Hygiene Program
Lab fee: $60.00

DHY 120 Dental Hygiene Pre-Clinic (W) 4 credits
This four-credit, 12-contact-hour clinical course is designed to apply the basic principles of instrumentation, instrument design, instrument utilization, and fundamental clinical dental hygiene skills. The method of evaluation is competency-based and guided by mastery of skills.
Lecture: 0 hours – Lab: 12 hours
Prerequisite: DHY 110
Lab fee: $300.00

DHY 121 Dental Hygiene Clinic I (SP) 4 credits
This four-credit, 12-contact-hour clinical course continues the clinical experience of total patient care emphasizing instrumentation skills, radiographic techniques, patient education, periodontal charting and calculus detection.
Lecture: 0 hours – Lab 12 hours
Prerequisite: DHY 110
Lab fee: $300.00

DHY 130 Dental Radiography (W) 3 credits
This three credit-hour lecture course provides the fundamental theory for safe and effective use of radiography as it relates to dentistry. It encompasses: history, production and uses of radiation; film exposure; operation techniques for exposure; and radiographic interpretation.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: DHY 110

DHY 135 Dental Radiography Laboratory (W) 1 credit
This 1. credit, three contact hour laboratory course places emphasis on proficiency in exposing and developing diagnostically acceptable dental radiographs. The course provides experience in the use of x-ray equipment, exposure projections and techniques, processing, mounting and evaluation of radiographs.
Lecture: 0 hours – Lab: 3 hours
Prerequisite: DHY 110
Lab fee: $75.00

DHY 140 Head and Neck Anatomy/Tooth Morphology (A) 3 credits
This three credit-hour course includes the study of skeletal, muscular, circulatory, nervous and glandular structures of the head, neck and oral cavity. The study of anatomy and morphology of the head and soft tissues of the oral cavity will also be included in this course.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Admission to Dental Hygiene program

DHY 145 Head and Neck Anatomy, Tooth Morphology Lab (A) 1 credit
This 1 credit, three contact-hour course involves the identification and reproduction of teeth and orofacial structures, morphology of hard and soft tissues of the oral cavity and head and neck with special emphasis on clinical application.
Lecture: 0 hours – Lab: 3 hours
Prerequisite: Admission to Dental Hygiene Program
Lab fee: $175.00

DHY 204 Techniques II (SU) 1.5 credits
This one hour lecture course is designed to introduce the foundational theories and clinical techniques of root planing in relation to periodontal therapy and advanced instrumentation techniques.. In addition, instruction will be provided on the practical aspects of nutritional need of the dental patient and nutritional counseling.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: DHY 110

DHY 205 Techniques III (A) 2 credits
This two credit hour lecture course is designed to provide knowledge and understanding regarding dental hygiene care and management for patients with special needs, including but not limited to, pediatrics, geriatrics and the handicapped.
Lecture: 2 hour – Lab: 0 hours
Prerequisite: DHY 110

DHY 206 Techniques IV (W) 1.5 credits
This 1.5 credit hour lecture course is designed to introduce the foundational principles of enhanced therapeutics for nonperiodontal therapy, instrument management, expanded functions, licensure requirements, and advanced computer technology enhancement for dental practices. Dental forensics and other emerging professional issues in dental hygiene will be discussed.
Lecture: 1.5 hour – Lab: 0 hours
Prerequisite: DHY 110

DHY 207 Techniques V (SP) 1.5 credits
This two hour lecture course is designed to provide the student with knowledge of professional ethics, legal responsibilities of the dental hygienist, and the role of organized dental hygiene. In addition, office management skills, alternate practice settings and securing employment will be emphasized. The student will create a Dental Hygiene Portfolio including a prepared resume.
Lecture: 1.5 hours – Lab: 0 hours
Prerequisite: DHY 110

DHY 214 Dental Hygiene Treatment Planning (SP) 0.5 credits
This 0.5 credit-hour course introduces the philosophy, techniques of treatment planning and provides the student with an opportunity to apply the principles of treatment planning.
Lecture: 0 hours – Lab: 1.5 hour
Prerequisite: DHY 110

DHY 215 Case Studies and Presentations (SP) 0.5 credits
This 0.5 credit-hour course provides the student with the opportunity to assess, plan, implement and evaluate a complete patient case study. The student will present a 30-minute oral report on each case study.
Lecture: 0 hours – Lab: 1.5 hour
Prerequisite: DHY 110

DHY 220 Dental Hygiene Clinic II (SU) 4 credits
This four credit-hour, 12-contact-hour clinical course continues clinical experience of total patient care, instrumentation skills, radiographic techniques, patient education, assessment and treatment planning. In addition, new treatment modes will include: alginate impression, nutritional counseling and the introduction to ultrasonic scaling, root planning, Intraoral photography and topical fluoride application.
Lecture: 0 hours – Lab: 12 hours
Prerequisite: DHY 110
Lab fee: $300.00

DHY 221 Dental Hygiene Clinic III (A) 4 credits
This four credit-hour, 12-contact-hour clinical course builds upon previous clinical course work involving dental hygiene total patient care. The course will expand student knowledge in instrumentation skills, radiographic techniques, patient education assessment and treatment planning, sealant placement, alginate impressions, amalgam polishing, study casts, periodontal therapies and NERB calculus detection.
Lecture: 0 hours – Lab: 12 hours
Prerequisite: DHY 110
Lab fee: $300.00

DHY 222 Dental Hygiene Clinic IV (W) 4 credits
This four –credit-hour, 12-contact-hour clinical course will provide ongoing experience in total patient care. Treatment parameters from previous

clinic course work will be increased to include expanded function duties as well as intraoral imaging, alginate impressions, and NERB calculus detection.
Lecture: 0 hours – Lab: 12 hours
Prerequisite: DHY 110
Lab fee: $300.00

DHY 223 Dental Hygiene Clinic V (SP) 1 to 4 credits
This four-credit-hour, 12-contact-hour clinical course is the final course in the clinical dental hygiene sequence. It is designed to enable the student to incorporate all the techniques and treatment modalities previously acquired involving total patient care. Emphasis will be placed on refinement of treatment, professional decision making, case study presentation, intraoral imaging and peer teaching.
Lecture: 0 hours – Lab: 12 hours
Prerequisite: DHY 110
Lab fee: $300.00

DHY 240 Dental Materials (SU) 2 credits
This two hour lecture 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: 2 hours – Lab: 0 hours
Prerequisite: DHY 110

DHY 245 Dental Materials Laboratory (SU) 1 credit
This one credit, three hour laboratory course places emphasis on the manipulative techniques and practical application of various materials used in the practice of dentistry.
Lecture: 0 hours – Lab: 3 hours
Prerequisite: DHY 110
Lab fee: $150.00

DHY 250 Oral Histology (A) 1 credit
This one-credit hour course involves the study of tissues comprising the oral cavity along with the embryonic development of these tissue and facial structures.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: DHY 110

DHY 251 Oral Pathology (SU) 3 credits
This three-credit hour course involves the study of oral pathology with emphasis placed upon the recognition of normal and abnormal conditions.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: DHY 110

DHY 260 Periodontology (W) 3 credits
This three-hour lecture course is designed to place emphasis on the etiology, assessment, evaluation, classification, treatment and maintenance of the periodontally involved dental patient.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: DHY 110

DHY 270 Dental Pharmacology (A) 2 credits
This two-hour lecture course surveys the drugs commonly encountered in the dental office. Emphasis is given to drugs and drug actions which can affect dental treatment.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: DHY 110

DHY 275 Dental Hygiene in Review (W) 0.5 credits
This 0.5 credit lab course is a comprehensive review of dental hygiene courses to aid students in the preparation for both clinical and written examinations for licensure.
Lecture: 0 hours – Lab: 1.5 hours
Prerequisite: DHY 110

DHY 282 Biostatistics and Research for the Dental Hygienist (SP) 1.5 credits
This 1.5 credit hour lecture course introduces the student to biostatistics, dental indices and research methods in dentistry.
Lecture: 1.5 hour – Lab: 0 hours
Prerequisite: DHY 110

DHY 283 Community Dental Health I (SP) 1 credit
This one hour lecture course introduces the philosophy, techniques, attitudes and behaviors necessary to promote oral disease prevention through organized community-based programs. The student will be responsible for completing and presenting an oral health prevention or health promotion lesson plan.
Lecture: 1 hours – Lab: 0 hours
Prerequisite: DHY 110

DHY 284 Community Dental Health II (W) 2 credits
This two hour lecture 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.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: DHY 283

DHY 285 Community Dental Health III (SP) 1 credit
This one credit laboratory course is designed to provide the student with the opportunity to apply the principles of public and community dental health in a practical setting. Projects that involve needs assessment, planning, implementation, and evaluation of publicdental health programs will be included.
Lecture: 0 hours – Lab: 3 hours
Prerequisite: DHY 284
Lab fee: $40.00

Dental Laboratory Technology (DENT)

DENT 101 Materials I (A) 3 credits
This course involves a comprehensive study of the chemical and physical properties of materials used by the dental technician.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Acceptance into program

DENT 111 Anatomy (A) 3 credits
This course provides the student with an introduction to the masticatory system. The student will be exposed to the significant structures and landmarks of the oral cavity, with extensive study of the permanent dentition.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: Acceptance into program

DENT 121 Complete Dentures I (A) 3 credits
This course involves an introduction to complete dentures and includes a study of the procedures from preliminary impressions through wax contouring, with special emphasis upon artificial tooth arrangement.
Lecture: 1 hour – Lab: 6 hours
Prerequisite: Acceptance into program
Lab fee: $65.00

DENT 122 Complete Dentures II (W) 2 credits
This course is a continuation of the study of complete dentures and includes procedural material from flasking through patient remount and occlusal adjustments.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: Acceptance into program
Lab Fee: $65.00

DENT 123 Complete Dentures III (SP) 3 credits
This course involves a study of procedures required to solve specific post insertion problems, e.g. repair, rebase, and reline. In addition, the student is introduced to the immediate denture technique.
Lecture: 1 hour – Lab: 6 hours
Prerequisite: Acceptance into program
Lab fee : none

DENT 132 Occlusion (A) 3 credits
This course will entail a study of occlusal morphology, the temporomandibular joint and mandibular movements.
Lecture: 1 hour – Lab: 6 hours
Prerequisite: Acceptance into program

DENT 142 Removable Partial Dentures I (W) 3 credits
This course is a basic study of removable partial dentures, and presents principles such as survey, design, and fabrication.
Lecture: 1 hour – Lab: 6 hours
Prerequisite: Acceptance into program

DENT 143 Removable Partial Dentures II (SP) 2 credits
This course will involve an intensification of the study of survey, design and fabrication of removable partial dentures.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: Acceptance into program

DENT 153 Fixed Partial Dentures I (W) 3 credits
This course will introduce the student to the fixed appliance. The content will be limited to the single unit crown.
Lecture: 1 hour – Lab: 6 hours
Prerequisite: Acceptance into program
Lab fee: $65.00

DENT 224 Complete Dentures IV (SU) 2 credits
In this course, the student will fabricate an overdenture and will concentrate upon characterization of complete dentures.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: Acceptance into program
Lab fee: none

DENT 244 Removable Partial Dentures III (SP) 3 credits
During this course, the student will apply acquired knowledge and skills by fabrication of removable partial dentures. The didactic portion will encompass the specialized designs such as stressbreakers, precision attachments and the RPI technique.
Lecture: 1 hour – Lab: 6 hours
Prerequisite: Acceptance into program

DENT 256 Fixed Partial Dentures IV (SP) 3 credits
This course will involve a study of crown and bridge cases not covered previously as well as the use of attachments. The student will construct multiple unit appliances and construct one piece castings.
Lecture: 1 hour – Lab: 6 hours
Prerequisite: Acceptance into program
Lab fee: none

DENT 275 Ceramics I (W) 4 credits
This course is an introduction to dental ceramics and will involve a study of porcelain fused to metal restorations. The students will construct porcelain veneers and full coverage single unit crowns.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: Acceptance into program
Lab Fee: none

DENT 276 Ceramics II (SP) 3 credits
This unit will entail a continuation of the study of the porcelain fused to metal restoration. It will also include the study of the Maryland bridge and the porcelain jacket crown and other multiple unit appliances.
Lecture: 1 hour – Lab: 6 hours
Prerequisite: Acceptance into program
Lab Fee: none

DENT 285 Orthodontics (SP) 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

DENT 296 Applied Laboratory I (SP) 3 credits
This course consists of laboratory and is intended to simulate a working laboratory. The student will fabricate fixed and removable appliances.
Lecture: 1 hour – Lab: 6 hours
Prerequisite: Acceptance into program
Lab fee: $65.00

DENT 297 Applied Laboratory II (SU) 7 credits
This course consists entirely of laboratory and is intended to stimulate a working laboratory situation with regard to work schedules, case flow, and coping with real problems.
Lecture: 1 hour – Lab: 18 hours
Prerequisite: Acceptance into program
Lab fee: $75.00

Developmental Education Department (DEV)

DEV 006 Basic Grammar Skills (A, W, SP, SU) 2 credits
This course covers grammar skills including the correct use of verb tenses and forms; simple, compound, and complex sentences; fragments, run-ons, and comma splices.
Lecture: 2 hours – Lab: 0 hours
Lab fee: $2.00

DEV 007 Basic Punctuation Skills (A, W, SP, SU) 2 credits
This course covers punctuation skills including the correct use of commas, semicolons, quotation marks, apostrophes, and other marks.
Lecture: 2 hours – Lab: 0 hours
Lab fee: $2.00

DEV 015 Spelling and Vocabulary (A, W, SP, SU) 3 credits
This course is designed to improve vocabulary and spelling skills through the use of memorization, phonics, the application of rules, and personal word lists.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $2.00

DEV 028 Algebra Foundations (A, W, SP, SU) 3 credits
This course is designed for students who need special assistance to **re-enter** DEV 031, Pre-Algebra. The course is structured to develop students' critical thinking and problem solving in relation to basic algebra concepts. Methods of instruction will include collaborative activities, lecture, and writing activities involving terminology, simplifying expressions, solving equations, and signed number operations. In order to **re-enter** DEV 031, a C" or higher in DEV 028 is required. The course is not open to students with credit for DEV 031 or higher.
Lecture: 3 hours – Lab: 0 hours
Lab Fee: $3.00

DEV 029 Math Foundations (A, W, SP, SU) 3 credits
This course is designed for students who need special assistance with basic math to **re-enter** DEV 030, Basic Mathematics. This course includes whole number operations, problem-solving strategies, estimation and number sense, Order of Operations, math study skills, and fractions

operations. DEV 029 is taught through lectures, group activities, tutorial exercises, and small group instruction. In order to **re-enter** DEV 030, a "C" or higher in DEV 029 is required This course is not open to students with credit for DEV 030 or higher.
Lecture: 3 hours – Lab: 0 hours
Lab Fee: $3.00

DEV 030 Basic Mathematics (A, W, SP, SU) 5 credits
Basic Mathematics offers a review of arithmetic concepts including whole numbers, fractions, decimals, percents, proportions, formulas and data interpretation. The course is structured to develop students' critical thinking, problem solving, math and study skills through collaborative activities, writing assignments, real-life applications, and the use of modern technology in the classroom. Traditional and web-based mastery sections are available.
Prerequisite: By placement exam. This mastery learning course is not open to students with credit for DEV 031, MATH 101, MATH 102 or higher.
Lecture: 5 hours – Lab: 0 hours
Lab fee: $6.00

DEV 031 Pre-Algebra (A, W, SP, SU) 5 credits
Pre-Algebra is designed for students who have no experience with algebra and for those who need to strengthen their abilities to work with algebraic mathematics. Topics include simplifying algebraic expressions, solving equations, working with exponents, formulas, signed number operations, monomial operations, and application problems. This course will help to develop students' algebra and study skills and help them to perform successfully in MATH 101, MATH 102, and in the workplace. Traditional, computer-mediated, and web- based mastery sections are available. This course is not open to students with credit for MATH 101, MATH 102 or higher.
Prerequisite: By placement exam or "C" or higher in DEV 030.
Lecture: 5 hours – Lab: 0 hours
Lab fee: $6.00

DEV 040 Reading Improvement (A, W, SP, SU) 5 credits
This course focuses on developing students' basic reading skills. Students will practice strategies for improving reading rate and comprehension. Critical reading skills will be introduced through reading and responding to essays, keeping a journal and vocabulary notebook, and doing workbook activities. In order to take DEV 044, a "C" or higher is required. This course is not open to students with credit for DEV 044.
Lecture: 4 hours – Lab: 2 hours
Lab fee: $4.00.

DEV 041 Basic Communication Skills (A, W, SP, SU) 5 credits
This course combines elements of the writing process with the basic principles of writing clear, coherent, and well-developed paragraphs. Students will review rules of grammar usage and punctuation. Critical thinking skills will be developed through reading, class discussion, and journal writing.
Prerequisite: By placement exam. This course is not open to students with credit for any of the ENGL 100 series or higher.
Lecture: 4 hours – Lab: 2 hours
Lab fee: $5.00

DEV 044 Critical Reading and Thinking (A, W, SP, SU) 3 credits
Critical Reading and Thinking is designed to help students develop higher-order reading skills that will help them become more effective and efficient readers. In this course, students will expand basic reading and critical thinking skills. A variety of reading disciplines will be used for discussion, reading and writing assignments, and projects that will allow students to critique their self-knowledge and evaluate ideas. The course is open to all Columbus State students.
Lecture: 3 hours – Lab 0 hours
Prerequisite: By placement exam
Lab fee: $2.00

DEV 050 Career Life Planning (A, W, SP, SU) 3 credits
Career and Life Planning is designed to help students identify and examine their abilities, interests, values, and personalities relative to educational and career choices. Upon completion of this course, a student will be able to develop a plan of action for gaining employment and/or pursuing a field of study that meets his or her personal needs.
Traditional and web-based sections are available
Lecture: 3 hours – Lab: 0 hours
Lab fee: $11.00.

DEV 090 College Success Skills (A,W,SP,SU) 2 credits
College Success provides students with skills necessary to be successful in their personal, academic, and career-related pursuits. The course focuses on an orientation to the college, study skills, note-taking, test-taking, and time management. This course is required of students who place in two Developmental Education courses.
Lecture: 2 hours – Lab: 0 hours
Lab fee: $6.00

DEV 098 Special Topics in Developmental Education (on demand) 1-5 credits
Special topics in developmental reading, writing, mathematics, or related areas. This course is designed to meet special needs.
Lecture: 1-5 hours; Lab: 0 hours
Prerequisites: will vary
Lab fee: will vary

DEV 099 Special Topics in Developmental Education (on demand) 1-5 credits
Special topics in developmental reading, writing, mathematics, or related areas. This course is designed to meet special needs.
Lecture: 1-5 hours; Lab: 0 hours
Prerequisites: will vary
Lab fee: will vary

Early Childhood Development (ECD)

ECD 102 Introduction to CDA (W, SU) 1 credit
This flex term course focuses on the credentialing process to earn the national Child Development Associate (CDA) credential. Students will study the history of the early childhood profession and discuss the role of professionals in this field. They will complete a written autobiography which is a requirement for the CDA.
Lecture: 1 hour - Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $4.00

ECD 104 CDA Competencies (W, SU) 1 credit
This flex term course focuses on the processes to complete requirements to earn the national Child Development Associate (CDA) credential. Students will select a format for presenting their written competencies and required resource file. They will complete written assignments for CDA competency areas and collect samples for their resource file. Procedures for final steps to earn the CDA will be discussed.
Lecture: 1 hour - Lab: 0 hours
Prerequisite: ECD 108
Lab fee: $4.00

ECD 105 Self-Concept (A, W, SP, SU) 3 credits
Focuses on the importance of individualizing early childhood practices to meet the needs of children in a manner which develops a positive self-image and individual competence. The course explores impact of teacher's self-image, values and attitudes on preschool classroom and also includes dimensions of self, antecedents of self concept, relationship of feelings to self-concept, and teaching strategies and classroom arrange-

ments to foster self-esteem. Finally, the class examines use of positive communication skills for guidance of young children.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Placement into ENGL101
Lab fee: $12.00

ECD 106 Observing and Recording (A, W, SP, SU) 1 credit
This course focuses on appropriate methods of observing young children in group settings. Objective methods for recording children's behavior will be included. Strategies for observing while filling the role of teacher will be addressed. (May be taken concurrently with ECD 105 or ECD 107).
Lecture: 1 hour – Lab: 0 hours
Prerequisite: ECD 105
Corequisite: ECD 105 or ECD 107
Lab fee: $4.00

ECD 107 Curriculum Planning (A, W, SP, SU) 3 credits
This class focuses on strategies to facilitate classroom management and guidance and emphasizes developing goals and objectives as a basis for classroom activities. The course includes preschool curriculum planning and fundamentals of developmentally appropriate practice. Deals with the organization of time and space as it impacts on group child care. This class may be taken concurrently with ECD 105 & 106.
Lecture: 3 hours – Lab: 0 hours
Prerequisites: ECD 105 and ECD 106
Lab fee: $12.00
ECD 105, 106 & 107 may be taken together.

ECD 108 Creative Curriculum (A, W, 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 child's use of creative materials. Techniques for creative arts and music will be explored, demonstrated and implemented. Students will develop and evaluate materials, objectives and activities in these areas.
Lecture: 3 hours – Lab: 0 hours
Prerequisites: ECD 105, 106, 107
Lab fee: $12.00

ECD 109 Language Experiences in Early Childhood Programs (A, W, SP, SU) 3 credits
This course includes theories and sequence of speech/language development, differentiating between normal and atypical language. Focus is on the teacher as facilitator of communication skill development; planning and implementing language arts activities; selecting and using literature to enhance language development and provide emotional support. Literacy in young children is stimulated through interactive speech, listening, reading and print activities. Guidelines for establishing a literacy area in classrooms and working with parents will also be included.
Lecture: 3 hours – Lab: 0 hours
Prerequisites: ECD 105, 106, 107, 108, PSY 261
Lab fee: $12.00

ECD 110 Infant - Toddler Curriculum (A, W, SP, SU) 3 credits
This course presents an overview of care giving for infants and toddlers in group settings. Programming for infants and toddlers is emphasized across developmental areas through appropriate routines environment and experiences. The role of staff and parent relationships is explored, Ohio Child Care Licensing Rules are reviewed. This course is offered every quarter, alternating daytime and evening class times.
Lecture: 3 hours – Lab: 0 hours
Prerequisites: ECD 105, 106, 107, 108, PSY 261, ECD 162, ECD 172
Corequisite: ECD 163, ECD 173
Lab fee: $12.00

ECD 112 Physical Development Curriculum (A, SP) 3 credits
This course includes theoretical foundations for the child's physical and motor development. It includes assessing an individual child's motor skills, sequence for the development of motor skills, perceptual-motor development, as well as implementing small and large motor activities in both indoor and outdoor settings. Health, nutrition and safety education activities and discussion of childhood sexuality are part of this course.
Lecture: 3 hours – Lab: 0 hours
Prerequisites: ECD 105, 106, 107, 108, PSY 261
Lab fee: $12.00

ECD 114 Cognitive Curriculum (W, SP, SU) 3 credits
This course includes the theoretical foundations for the 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. Emphasis is on planning activities which encourage questioning, probing, and problem-solving skills appropriate to individual developmental levels and learning styles. The course also includes studying the effects and use of television, computers and technology in settings for young children.
Lecture: 3 hours - Lab: 0 hours
Prerequisites: ECD 108, PSY 261
Lab fee: $12.00

ECD 115 School Age Child Care (on demand) 3 credits
This course will present principles that are important for developing and administering childcare programs for children in Kindergarten through Grade 5. Developmental characteristics of school aged children will be reviewed and appropriate care, education and guidance practices identified. Information regarding licensing regulations and parent involvement for school age childcare programs in Ohio will be disseminated.
Lecture: 3 hours – Lab: 0 hours
Prerequisites: ECD 105, 106, 107, 108
Lab fee: $12.00

ECD 120 Interpersonal Communications for Human Services (A, W, SP, SU) 4 credits
This course teaches principles of interpersonal communications for individuals working in Human Services. This course is structured on the premise that the most important resource individuals bring to a helping relationship is their ability to remain self-aware and communicate honestly and directly. Also taught are managing anger, conflict resolution, and assertive behavior. This course is participatory and interactive.
Lecture: 4 hours - Lab: 0 hours
Prerequisites: ENGL 101, ECD 162, ECD 172
Lab fee: $12.00

ECD 151 ECD Media Resource I (A, W, SP, SU) 1 credit
This course will provide and overview and orientation to resources, equipment and materials available for creating learning activities and materials to be used with and by children. Students will have opportunities to practice safe, economical and appropriate skills in creative ways.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: ECD 105 or permission of ECD Coordinator
Lab fee: $12.00

ECD 152 ECD Media Resources II (A, W, SP, SU) 1 credit
This course will expand students' opportunities to learn, implement, and evaluate appropriate materials and methods for creating learning activities for children. Emphasis will be on extensions of appropriate classroom activities and environments through the use of media materials.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: ECD 105 or permission of ECD coordinator
Lab fee: $12.00

ECD 161 - 265 ECD Seminars I-V (A, W, SP, SU) 1 credit
Group discussion of experiences related to ECD field experiences, integration of theory and practice. Seminars are taken. Corequisitely with ECD Field Experience I-V. Seminars focus on observing and recording children's play and interactions, basic principles of guidance, and application of knowledge. Expectations, objectives and requirements build with

each successive experience. Successful completion (C or better) of each seminar is a prerequisite for the next seminar.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: ECD 105, 106, 107, 108, PSY 261
Corequisite: ECD 171 - 275
Lab fee: $12.00 for each course

ECD 171 - 275 ECD Field Experiences I-V (A, W, SP, SU) 1 credit
These courses are an integral part of the ECD program, providing students with the opportunity to apply theory and practice under the guidance of early childhood professionals, who guide and assist in the evaluation of student performance. Students in field experience are observed twice during the quarter by an assigned ECD faculty member. Successful completion with a "C" or better is a prerequisite for the next Field Experience.
Lecture: 0 hours – Lab: 7 hours
Prerequisite: Formal admission to ECD
Corequisite: ECD 161 - 265
Lab fee: $20 for ECD 171; $16 for ECD 172 - 275

ECD 190 Activity Plan Seminar (A, W, SP, SU) 1 credit
This seminar is required for ECD students who have received Prior Learning Assessment credit for Field Experience and Seminars I. The class will focus on preparing written documentation of developmentally appropriate activities for preschool aged children. Students will learn to write concepts, objectives, and procedures for developmentally appropriate activities, consistent with ECD program outcomes. Students will be observed in their work with children one time as a requirement for completing this class on a pass/fail basis.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: Successful completion with a "C" or better in ECD 105, 106, 107, 108
Lab fee: $4.00

ECD 200 First Aid (A, W, SP, SU) 1 credit
This course provides the student with training and practice in first aid for infants and young children. It meets requirements of Ohio Child Day Care Licensing Rules for staff in early childhood settings. Prior Learning Assessment credit may be awarded for a current, valid certificate for First Aid.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: Placement into ENGL 100
Lab fee: $4.00

ECD 201 Health and Safety (A, W, SP) 3 credits
Course gives training and practice in first aid, in the recognition and management of communicable diseases, and in child abuse recognition and prevention. This course meets requirements of Ohio Child Day Care Licensing Rules for staff in early childhood settings. Prior Learning Assessment credit may be awarded for current, valid certifications in First Aid, Recognition of Child Abuse and Neglect and Management of Communicable Diseases.
Lecture: 3 hour – Lab: 0 hours
Prerequisite: Placement into ENGL 100
Lab fee: $4.00

ECD 202 Management of Communicable Disease
(A, W, SP, SU) 1 credit
A course designed to provide students with the knowledge and skills in recognition and management of communicable diseases. This class meets requirements for Ohio Child Day Care Licensing. Rules for staff in early childhood settings. Prior Learning Assessment credit may be awarded for a current, valid certificate in Management of Communicable Diseases.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: Placement into ENGL 100
Lab fee: $4.00

ECD 204 Recognition of Child Abuse & Neglect
(A, W, SP, SU) 1 credit
A course designed to provide students with the knowledge and skills in child abuse recognition and prevention. This class meets requirements for Ohio Child Day Care Licensing Rules for staff in early childhood settings. Prior Learning Assessment credit may be awarded for a current, valid certificate in Recognition of Child Abuse and Neglect.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: Placement into ENGL 100
Lab fee: $4.00

ECD 205 Parent Involvement - Early Childhood Programs
(W, SU) 3 credits
This course will present strategies for working effectively with parents of young children, and involving them in child care programs. Emphasis is on how to encourage active participation of parents in early childhood programs, parent conferences and parent education. Family needs, similarities and differences will be discussed as they may affect the teacher's role, in building a partnership with parents.
Lecture: 3 hours – Lab: 0 hours
Prerequisites: ECD 206 and ECD 120
Lab fee: $12.00

ECD 206 Social Development Curriculum (A, SP, SU) 3 credits
This course will include components of social development: recognition of 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. The teacher's role as facilitator of social development will be defined.
Lecture: 3 hours – Lab: 0 hours
Prerequisites: ECD 114, EDC 109
Lab fee: $12.00

ECD 207 Guidance and Discipline in Early Childhood Programs
(W, SP, SU) 3 credits
This course is a study of guidance of young children and social learning theories. Focus is on preventing problem behaviors, and teaching desirable behavior through example, communication and setting limits. Issues of child behavior and analyzing discipline problems will be discussed. Focus is on resolving problem situations, changing behavior and development of moral reasoning. Includes helping children cope with stressful situations, and teaches strategies for working with children in special circumstances.
Lecture: 3 hours – Lab: 0 hours
Prerequisites: ECD 205, 206
Lab fee: $12.00

ECD 208 Young Children With Special Needs (A, SP) 3 credits
This course presents the rationale and skills necessary for educating and caring for young children with special needs in programs that are inclusive. It describes strategies for identifying and assessing children with special needs and appropriate adaptive activities and strategies useful in an integrated classroom. The importance and necessity of collaboration with parents, community professionals and resources is acknowledged.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ECD 206
Lab fee: $12.00

ECD 209 Early Childhood Staff (A, W, SP) 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, team functioning, problem-solving, professional growth and development, evaluation processes, as well as history, traditions and trends in the field. Indicators or quality child care settings will also be discussed.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ECD 206
Lab fee: $12.00

ECD 211 Child Care Administration (W, SU) 4 credits
This course deals with the qualifications and roles required to administer a program for young children. Focus is on planning the philosophy of the program, planning to meet the needs of children, the staff, the parents and community involvement. Establishing and maintaining sound fiscal practices are given special emphasis. The course includes legal requirements and responsibilities of Ohio Child Day Care Licensing procedures. This class will also include discussion related to practicum experience with a director of a child care program. Note: Minimum of one year working in a child care setting is necessary.
Lecture: 4 hours – Lab: 0 hours
Prerequisites: ECD 110, ECD 206 or 207
Corequisite: ECD 270
Lab fee: $12.00

ECD 212 Family Ecology (A, SP) 3 credits
Family ecology views the family as an ecosystem and examines its inter-relationships with the environment (biophysical, psychosocial and technological) through processes of perceiving, valuing, spacing, and deciding. Emphasis is placed on family organizations, family members, and their roles.
Prerequisite: ECD 120 and ECD 205
Lecture: 3 hours - Lab: 0 hours
Lab fee $12.00

ECD 221- 230 Contemporary Issues in Early Childhood (SU) 1–5 credits
These courses will facilitate offerings of special topics related to ECD, on an annual basis. Topics may include: Children's Literature, Diversity and Young Children, Intergenerational Care, Music & Movement, Fitness for Children, Nutrition, Sign Language, Leadership, Advocacy, etc. These topics may be for new students in ECD or meet requirements for Pre-K Associate Licensed teachers for renewal purposes.
Lecture: 1-5 hours – Lab: 0 hours
Prerequisite: ENGL 100 or permission of ECD Coordinator
Lab fee: $4.00 - $12.00

ECD 231 Phonics and the Structure of Language 5 credits

ECD 267 Student Teaching Seminar (A, W, SP, SU) 2 credits
Students have opportunities to discuss their interactions with young children, staff, and parents in their assigned practicum settings. Students will analyze the components of the learning environment, and their inter-relationships in programs for young children and families. They will plan to integrate theory and practice to facilitate learning and promote quality programming, guidance, health and safety of pre-kindergarten children.
Lecture: 2 hours – Lab: 0 hours
Prerequisites: ECD 264, 209
Corequisite: ECD 277
Lab fee: $12.00

ECD 270 Administration Practicum Experience (W, SU) 1 credit
This experience is to be taken corequisitely with ECD 211, Child Care Administration. Students will spend 7 hours a week with an assigned community child care administrator. Objectives related to administration of a child care center, including budgeting, enrolling children, parent involvement, hiring and monitoring staff, and program development will direct student participation in this practicum experience.
Lecture: 0 – Lab: 0 – Clinical: 7 hours
Prerequisite: ECD 206 or ECD 207
Corequisite: ECD 211
Lab fee: $4.00

ECD 277 Student Teaching Practicum (A, W, SP, SU) 3 credits
Provide students with opportunities to develop skills in working with young children (individually and in groups), and to integrate theories of child development with teaching practice. Students will work in assigned pre-kindergarten classrooms five days a week for a total of 21 hours weekly.
Lecture: 0 hours – Lab: 21 hours
Prerequisites: ECD 274, ECD 209
Corequisite: ECD 267
Lab fee: $12.00

Economics (ECON)

Students who enroll in economics courses must have placed in ENGL 101 and are encouraged to either have completed ENGL 101 or be enrolled in that course when scheduling an economics course.

ECON 100 Introduction to Economics (A, W, SP, SU - DL) 5 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, including changes in the minimum wage, environmental controversies, and the actions of the Federal Reserve.
A distance-learning version of Introduction to Economics is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 101, or the equivalent and placement into ENGL 101
Lab fee: $6.00

ECON 200 Principles of Microeconomics (A,W,SP,SU - DL) 5 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. A distance-learning version of Principles of Microeconomics is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 102 or the equivalent and placement into ENGL 101
Lab fee: $6.00

ECON 240 Principles of Macroeconomics (A, W, SP, SU – DL) 5 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. A distance-learning version of Principles of Macroeconomics is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Grade of C or better in ECON 200 and MATH 102 or the equivalent and placement into ENGL 101
Lab fee: $6.00

ECON 290 Capstone Experience in Economics (on demand) 3 credits
This course is for students completing the two-year Associate of Arts or Associate of Science degree who have a special interest in continuing a

baccalaureate degree program in economics. The course presents a basic introduction to economic research methodologies that students apply in researching a social science topic of interest. Course requirements include the assembly of a portfolio that covers their academic career at Columbus State Community College; and participation in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: Completion of AA/AS core requirements and at least 75 hours toward the degree and five credit hours in economics
Lab fee: $6.00

ECON 293 Independent Study in Economics (on demand) 1 - 5 credits
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 to 5 hours – Lab: 0 hours
Prerequisite: Permission of the Instructor and the Chairperson and one course in Economics
Lab fee: $6.00

ECON 299 Special Topics in Economics (on demand) 1 - 5 credits
A detailed examination of selected topics of interest in economics.
Lecture: 1 to 5 hours – Lab: 0 hours
Prerequisite: Vary
Lab fee: $6.00

Electro-Mechanical Engineering Technology (EMEC)

For other related course descriptions, see Electronic Engineering Technology and Mechanical Engineering Technology.

EMEC 250 Motors and Controls (A, SP) 3 credits
A study in the basic elements of single phase and three phase AC motors and generators, DC motors and generators, transformers, motor controls, and motor protection (fuses and overloads). Students learn how to select, size and wire three phase motors and starters as well as do calculations related to sizing, horsepower, and efficiency.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $15.00

EMEC 251 Electro-Mechanical Controls I (W, SU) 4 credits
A study in the basic interface circuitry used in electro-mechanical controls. Students learn about solenoids, relays, ladder logic, ladder diagrams, and how to design and wire controls systems to meet a given set of criteria. Troubleshooting is emphasized at each step.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: EMEC 250
Lab fee: $15.00

EMEC 260 Electro-Mechanical Controls II (AU, SP) 4 credits
An introduction to Programmable Logic Controllers (PLC's). Students gain knowledge and experience in programming the Allen-Bradley SLC 500 series of PLC's. Students are required to design, wire, and troubleshoot programs to meet a given set of criteria. Both discrete and analog devices are examined.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: EMEC 251
Lab fee: $20.00

Electronic Engineering Technology (EET)

EET 103 Investigating Electricity (W, SU) 4 credits
This course introduces the basic concept of electricity, its evolution and interrelationship with other types of energies. Fundamental principles are explained to prepare students for higher-level courses. The relationship of voltage, current, and power are explored in visually demonstrative lab experiences.
Lecture: 3 hours – Lab: 2 hours
Lab fee: $9.00

EET 110 Electronic Drafting (A, W, SP, SU) 2 credits
An introductory drawing course incorporating the use of instruments, instructions, and practice to produce quality schematics and pictorial diagrams using lettering, electronic, and electrical symbols. The student will be given an introduction to computer-aided drafting (CAD).
Lecture: 1 hour – Lab: 2 hours
Lab fee: $4.00

EET 111 Electronic Circuits I (A, SP) 4 credits
An introduction to direct current fundamentals, electron physics, current and voltage, work, power, series and parallel resistances, network theorems, electrical measurement devices, circuit analysis. Microcomputers are introduced and used for problem-solving.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: MATH 103 or placement into MATH 111
Corequisites: MATH 111, EET 112

EET 112 Electronic Circuits I Lab (A, SP) 2 credits
This is an introductory course in the use of power supplies and measurement equipment commonly found in laboratories and industrial situations. The student will gain hands–on experience in the use of this equipment. A lab manual is used by the students as an aid to standardization of notation, reference data, and student reporting throughout the course.
Lecture: 0 hours – Lab: 6 hours
Corequisite: EET 111
Lab fee: $9.00

EET 120 Electronic Circuits II (W, SU) 4 credits
A detailed study of the principles of time varying electrical current and voltage relationships. The course includes an intensive application of vector analysis as applied to AC circuits, power applications, and the resonance phenomenon. Computer solutions are stressed when appropriate.
Lecture: 4 hours – Lab: 0 hours
Prerequisites: EET 111, EET 112
Corequisites: Math 112, EET 121

EET 121 Electronic Circuits II Lab (W, SU) 2 credits
Laboratory study of signal sources, oscilloscopes, reactance, inductance, AC networks, transformers and filter circuits.
Lecture: 0 hours – Lab: 6 hours
Prerequisites: EET 111, EET 112
Corequisite: EET 120
Lab fee: $9.00

EET 122 CAD/Electronics (W, SU) 3 credits
A follow-up to EET 110, this technical elective course will familiarize the student with the concept of computer aided drafting (CAD) systems as used by drafters in the electronics industry. Emphasis will be placed on the Or CAD TM system. A limited number of seats are available to students from outside the technology.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: EET 110 or permission of the instructor
Lab fee: $5.00

EET 130 Electronic Devices I (A, SP) 4 credits
An in-depth investigation of the operating characteristics of basic active devices. The course is designed to explain the approximate electrical equivalence and circuit analysis of devices to the basic AC, DC models, with sample applications of the most frequently used circuits.
Lecture: 4 hours – Lab: 0 hours
Prerequisites: EET 120, EET 121
Corequisites: Math 148, EET 131

EET 131 Electronic Devices I Lab (A, SP) 2 credits
The lab exercises in this course closely follow the EET 130 lecture theory for reinforcement through experimentation and theoretical verification of results. All lab exercises use modern devices, planned experiments and industrial standard equipment.
Lecture: 0 hours – Lab: 6 hours
Prerequisites: EET 120, EET 121
Corequisite: EET 130
Lab fee: $9.00

EET 132 Digital Electronics I (W, SU) 3 credits
An introductory course in digital electronic fundamentals covering number systems, Boolean Algebra, truth tables, Karnaugh maps, basic gates, adders, latches, flip-flops, and counters.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: EET 111, EET 112
Lab fee: $4.00

EET 144 PC Hardware (A, W ,SP, SU) 3 credits
This course provides instruction and hands-on training in Computer Hardware. Students will gain experience through handling, installing and configuring various components such as: motherboards, CPU's, memory, hard disk drives, optical drives and various add-on cards. Students will tear down and reassemble a PC, using established industry standards. This course will aid in acquiring an A+ Certification.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: CIT 101 is recommended
Lab fee: $12.00

EET 146 Computer Network Communications Systems (A,W, SP, SU) 3 credits
This course is a computer networking course combining networking software and hardware. Topics include networking protocols and network configurations, circuit analysis of high-speed modems, packet-switching techniques, pulse code and pulse-width modulation techniques. Investigation of high-speed modern transmission lines, microwave transmission, and cellular radio are included. The lab emphasizes network component installations and making measurements on bit-error-rates, system noise, and analysis of error detection/correction codes, synchronous and asynchronous protocols**.**
Lecture: 2 hours – Lab: 3 hours
Prerequisite: EET 144/ or CIT 125
Lab fee: $40.00

EET 203 National Electrical Code (on demand) 4 credits
This course gives a brief description of each National Electrical Code article and discusses how to reference information in the code. Changes from the previous code and sample calculations are also covered. Not required for students in the Electronic Engineering Technology. Completion of this course does not guarantee eligibility to sit for any licensing examinations and may not meet electrical contractor or Electrical Safety Inspector refresher course requirements. Check with the College or The Ohio Department of Industrial Relations.
Lecture: 3 hours – Lab: 3 hours

EET 241 Electronic Devices II (W, SU) 4 credits
This course covers the concepts of small signal voltage amplification of both low and high frequencies, the concepts of negative and positive feedback, integrated circuit (IC) differential and operational amplifiers, and IC voltage regulation with emphasis on circuit analysis techniques. Computer solution of problems is stressed where practical.
Lecture: 4 hours – Lab: 0 hours
Prerequisites: EET 130, 131
Corequisite: EET 242

EET 242 Electronic Devices II Lab (W, SU) 2 credits
This course is designed to compliment EET 241 by providing physical involvement with the various circuits studied therein. The student will construct the circuits presented in lecture, measure their parameters and compare experimental results with those computed from theory.
Lecture: 0 hours – Lab: 6 hours
Prerequisites: EET 130, EET 131
Corequisite: EET 241
Lab fee: $9.00

EET 243 Digital Electronics II (A, SP) 4 credits
A continuation of the study of digital electronics covering waveforms, the generation of pulses and study of the related circuitry such as multivibrators and one shots. More complex and widely used digital devices such as counters, shift registers, memories, and multiplexers are also presented. The basic units of a computer (bus, ALU) are studied.
Lecture: 4 hours – Lab: 0 hours
Prerequisites: EET 130, EET 131, EET 132
Corequisite: EET 244

EET 244 Digital Electronics II Lab (A, SP) 2 credits
This lab course, corequisite with the lecture course EET 243, gives the student an opportunity to learn and design complex and widely used digital devices. Switching and wave shaping circuits are built using IC chips. Different devices which are used in building a computer are introduced and used in experiments.
Lecture: 0 hours – Lab: 6 hours
Prerequisite: EET 130, EET 131, EET 132
Corequisite: EET 243
Lab fee: $9.00

EET 250 Electronic Communications (W, SU) 4 credits
The electronics communication course is an introductory systems course utilizing conventional modulation and demodulation theories. Emphasis is made on transmission and reception of AM, FM, SSB, wired and wireless digital communication, microwave principles, network communications, transmission lines, wave propagation, antennas, waveguides, radar and microwaves, microwave principles and fiber optic communication.. Laboratory study of modern discrete, integrated circuit and modular circuit configurations using component parts and Electronics Workbench Multisism simulation software.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: EET 241–EET 244
Lab fee: $9.00

EET 252 Microprocessors (W, SU) 4 credits
Different building blocks of a microprocessor and their functions are introduced. Methods of data storage and programming of a microprocessor are studied. Use of a microprocessor as a controller and interfacing it to other devices are also studied. A Motorola 68HCII microprocessor is used throughout the course.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: EET 241–EET 244
Corequisite: EET 253

EET 253 Microprocessor Lab (W, SU) 2 credits
This lab course is the practical version of the corequisite lecture course EET 252. Different blocks of a microprocessor studied in lecture are used and experimented on in the lab course. Along with each lab, programming methods for different blocks of the microprocessor are introduced. The practical aspects of using the microprocessor as a controller for other

devices are also explored. A 68HCII microprocessor is used.
Lecture: 0 hours – Lab: 6 hours
Prerequisite: EET 241–EET 244
Corequisite: EET 252
Lab fee: $9.00

EET 254 Electronic Fabrication (W, SU) 2 credits
An introduction to the fabrication of electronic circuits from assembly through testing, to include soldering/desoldering, use of heat sinks, surface mount device technology testing, documentation and repair/replacement of parts. Credit can be earned by taking the course, life experience or proficiency testing. See your technology faculty advisor for details.
Lecture: 1 hour – Lab: 3 hours
Lab fee: $12.00

EET 255 Instrumentation and Controls (W, SU) 3 credits
This course presents the basic theories and specific methods of measurement of temperatures, pressure, liquid level, and other parameters which may be measured in industrial and scientific applications. The laboratory part of this course enables the student to gain experience with transducers. Major process control schemes as used in industry are covered along with conditions affecting response and stability of control systems
Lecture: 2 hours – Lab: 3 hours
Prerequisites: EET 130–EET 132
Lab fee: $10.00

EET 260Capstone Experience in Electronic Engineering Technology (A, SP) 4 credits
A capstone course focusing on Electronic Systems. Students will master the 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 current emerging technology.
Lecture: 3 hours – Lab: 2 hours
Prerequisites EET 252, EET 253, EET 255
Lab fee: $9.00

EET 262 Digital Communications and Telecommunications (W, SU) 3 credits
A study of the techniques, theory and devices used for communication in computer systems, networks and telecommunications. Modulation methods including PCM, MFM, NRZ, NRZI, and synchronous and asynchronous protocols are presented. Network standards such as token ring, ALOHA, Ethernet and LAN protocols are examined. This course also includes study of devices such as UARTS, MODEMS and CODECS as applied to the subject
Lecture: 2 hours – Lab: 3 hours
Prerequisites: EET 243 and EET 250
Lab fee: $4.00

EET 264 Fiber Optic Communications (A, SP) 3 credits
This is an introductory course on fiber optics. In it, various types of light sources, connectors, optics, fiber wave guides, detectors and distribution systems will be investigated, and the student will learn by laboratory experiment of the problems created by misalignment, attenuation, and lossy connectorization. Practical testing of fiber optic links using light sources and power meters will also be emphasized. Eye safety when working with dangerous power levels will be stressed.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: EET 250
Lab fee: $5.00

Emergency Medical Services (EMS)

EMS 100 First Responder (SP) 2 credits
This course is designed to teach the person (public safety officer or other) who arrives first at the scene of an accident, proper life saving procedures, in terms of emergency victim care, the first responder will provide what is needed until qualified emergency medical technicians arrive.
Lecture: 1 hours – Lab: 3 hours
Lab fee: $ 30.00

EMS 110 EMT- Basic (A, W, SP, SU) 8 credits
This course provides a first phase of training in the career structure of the Emergency Medical Technician (EMT); the course covers all the knowledge and skills required for the state certification examination. This course includes 12 clock hours of clinical experience.
Lecture: 4 hours – Lab: 8 hours
Prerequisite: Placement into ENGL 100 and completed health record required PRIOR TO registration
Lab fee: $180.00

EMS 111 EMT - Intermediate (A, W, SP, SU) 8 credits
In depth study of patient assessment, shock physiology, fluid and intravenous therapy is the direction of this course, and covers the knowledge and skills required to take the state certification exam.
Lecture: 6 hours – Lab: 6 hours
Prerequisite: State Certified EMT Basic and completed health record required PRIOR TO registration
Lab fee: $215.00

EMS 121 E.M.S. Systems (A) 3 credits
This course deals with the history, development, organization, funding, and control of EMS. It will involve the student in current trends in EMS.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $15.00

EMS 122 Legal Principles for E.M.T. (A) 2 credits
This course encompasses the laws and regulations which govern EMTs and their actions. The course also deals with the rights of the patient and professionalism of the EMT.
Lecture: 2 hours – Lab: 0 hours
Lab Fee: $12.00

EMS 123 Emergency Psychiatric Intervention (W) 3 credits
This course deals with the EMT's approach to victims exhibiting abnormal behavior and provides an in-depth look into methods of evaluation and management of people experiencing behavioral crises.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $20.00

EMS 124 Public Health Education (W) 3 credits
This course will involve the EMS professional in the role of public health educator from needs assessment and organizations involved to implementation; the student will be required to do some practical public health education.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Current AHA Healthcare Provider CPR certification or equivalent
Lab fee: $15.00

EMS 125 Disaster Aid (SP) 3 credits
This course will familiarize the EMT with disaster planning, community needs assessment, organization and control of a community disaster plan, and in developing testing procedures for this plan.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $15.00

EMS 127 Handling Hazardous Materials Situations (SU 1st Term) 2 credits
This course encompasses the safety factors and care the paramedic must consider when dealing with victims exposed to hazardous materials, (i.e. toxic fumes, radioactive materials, electrical, explosive and flammable materials).
Lecture: 2 hours – Lab: 0 hours
Lab fee: $10.00

EMS 128 Introduction to Rescue for the EMS Provider (SU 2nd Term) 3 credits
This combination classroom and hands-on course provides a basic overview of the rescue process and the tools required for rescue as it relates to the EMS Provider. The student will learn to effectively manage the initial stages of a rescue incident without becoming a victim themselves.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $70.00

EMS 130 River Rescue (SU 1st Term) 3 credits
This course deals with rescuing victims from the water. It will include, but not be limited to, self-rescue, rescue from shore, boat assisted rescues, rescue from boats and repelling.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: intermediate swimming ability
Lab fee: $20.00

EMS 131 Special Topics for Paramedics (AU) 3 credits
In this course, the paramedic will be required to develop and present an in-depth study in an area of their individual interest.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Permission of instructor
Lab fee: $40.00

EMS 132 Emergency Medical Services Dispatcher (SP) 2 credits
The EMS dispatcher course is designed to prepare EMS dispatch personnel to receive requests for emergency medical services and allocate community resources in response to such request and give pre-arrival instruction.
Lecture: 1 hours – Lab: 2 hours
Lab fee: $240.00 (includes book and certification fee)

EMS 133 Ice & Cold Water Rescue (W) 2 credits
This course deals with rescuing victims from ice covered and cold water, hypothermia and other related medical concerns.
Lecture: 2 hours – Lab: 0 hours
Lab fee: $30.00

EMS 142 Vertical Rescue (SP) 2 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 and/or techniques. Includes rescue of the injured and/or stranded from ledges, cliffs, elevator shafts, etc.
Lecture: 1 hours – Lab: 3 hours
Lab fee: $30.00

EMS 143 Search and Rescue (A) 2 credits
This course includes the introduction to job responsibilities, philosophy and concepts of effective search and rescue management. It describes preplanning, resources, investigation, interviewing, determining urgency, subject behaviors, search strategy, area probability, base camp set up and management, briefing and debriefing. The course also introduces map and compass reading.
Lecture: 1 hours – Lab: 3 hours
Lab fee: $30.00

EMS 144 Confined Space Rescue (SP) 2 credits
This course is designed to present the learner with OSHA regulations and requirements. Also confined space entry procedures to safely and properly perform a rescue from tanks, pipelines, manholes, cave-ins, etc. The course will address necessary rescue shoring and tunneling equipment required for a confined space rescue.
Lecture: 1 hours – Lab: 3 hours
Prerequisite: EMS 142
Lab fee: $15.00

EMS 201 Paramedic Preparation Course 4 credits
This is the course prerequisite for the paramedic certification program. The student will study anatomy, physiology and pathophysiology as they relate to providing paramedic emergency care. The course will cover fluid and electrolyte balance, neuromuscular theory, cardiovascular, respiratory, immune and renal systems, infectious disease and principles of pharmacology.
Lecture: 4 hours Lab: 0 hours
Prerequisite: EMS 110 or permission of instructor
Lab fee: $25.00

EMS 211 EMT-Paramedic I (W, SU) 7 credits
This course encompasses the training of the paramedic in the areas of their role, triage and assessment of victims, care of the victim in the areas of shock, respiratory system, intravenous therapy and trauma as well as principles of communications.
Lecture: 5 hours – Lab:4 hours
Prerequisite: State certified EMT-Basic; EMS 201 OR BIO 101, successful completion of the Health Occupations Basic Entrance Test and the pre-testing process, and completed health record.
Corequisite: EMS 281 and EMS 291
Lab fee: $165.00

EMS 212 EMT-Paramedic II (A, SP) 7 credits
This course encompasses the training of the paramedic in the areas of: cardiovascular, anaphylaxis, and the endocrine and nervous systems.
Lecture: 5 hours – Lab: 4 hours
Prerequisite: EMS 211, EMS 281, and EMS 291
Corequisite: EMS 282 and EMS 292
Lab fee: $165.00

EMS 213 EMT-P III (W, SU) 6 credits
This course encompasses the training of the paramedic in the areas of: central nervous system, musculoskeletal system, soft tissue injuries, obstetric and gynecologic emergencies, neonatal and pediatric emergencies, and rescue.
Lecture: 4 hours – Lab: 4 hours
Prerequisite: EMS 212, EMS 282, and EMS 292
Corequisite: EMS 283 and 293
Lab fee: $165.00

EMS 214 EMT-P IV (SP, A) 4 credits
This course encompasses the training of the paramedic in the areas of: trauma life support and major incident response, and the continuation of training in ob/gyn/neonatal, behavioral emergencies and rescue.
Lecture: 2 hours – Lab:4 hours
Prerequisite: EMS 213, EMS 283, EMS 293
Corequisite: EMS 284 and EMS 294
Lab fee: $165.00

EMS 265 12-lead EKG Interpretation and Advanced Cardiac Treatment 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 interpretation into treatment plans for critical patients.
Lecture: 2 hours—Lab: 2 hours
Prerequisite: ACLS certification or equivalent experience
Lab fee: $75.00

EMS 275 Critical Care Transport **7 credits**
This course deals with the special needs of critical patients during transport, including the use of advanced equipment and procedures. The 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: 6 hours—Lab: 3 hours
Prerequisites: EMT-P or RN with 2 years experience; CPR, ACLS, Trauma Course, Pediatric Course documentation.
Lab fee: $310.00 (includes fee required by UMBC for certification)

EMS 281 Hospital Clinical I (W, SU) **2 credits**
Hospital clinical observation and supervised experience, encompassing the didactic areas covered in EMS 211.
Lecture: 0 hours – Lab: 5 hours
Corequisite: EMS 211 and EMS 291
Lab fee: $65.00

EMS 282 Hospital Clinical II (A, SP) **2 credits**
Hospital clinical observation and supervised experience, encompassing the didactic areas covered in EMS 211 & EMS 212.
Lecture: 0 hours – Lab: 5 hours
Prerequisite: EMS 281
Corequisite: EMS 212 and EMS 292
Lab fee: $65.00

EMS 283 Hospital Clinical III (W, SU) **2 credits**
Hospital clinical observation and supervised experience, encompassing the didactic areas covered in EMS 211, 212 & EMS 213.
Lecture: 0 hours – Lab: 5 hours
Prerequisite: EMS 282
Corequisite: EMS 213 and EMS 293
Lab fee: $65.00

EMS 284 Hospital Clinical IV (A, SP) **2 credits**
Hospital clinical observation and supervised experience, encompassing the didactic areas covered in EMS 211, 212, 213 and EMS 214.
Lecture: 0 hours – Lab: 5 hours
Prerequisite: EMS 283
Corequisite: EMS 214 and EMS 294
Lab fee: $65.00

EMS 291 Field Clinical I (W, SU) **1 credit**
Field clinical observation and experience.
Lecture: 0 hours – Lab: 5 hours
Prerequisite: or Corequisite EMS 281
Corequisite: EMS 211
Lab fee: $65.00

EMS 292 Field Clinical II (A, SP) **1 credit**
Field clinical observation and experience.
Lecture: 0 hours – Lab: 5 hours
Prerequisite: EMS 211, EMS 281 and EMS 291
Corequisite: EMS 212 and EMS 282
Lab fee: $65.00

EMS 293 Field Clinical III (W, SU) **1 credit**
Field clinical observation and experience.
Lecture: 0 hours – Lab: 5 hours
Prerequisite: EMS 292
Corequisite: EMS 213 and EMS 283
Lab fee: $65.00

EMS 294 Field Clinical IV (A, SP) **2 credits**
Field clinical observation and experience.
Lecture: 0 hours – Lab: 10 hours
Prerequisite: EMS 293
Corequisite: EMS 214 and EMS 284
Lab fee: $65.00

English (ENGL)

(Also see Communication Skills, Theater, and Technical Communication)

Note: Courses taught at a distance [Distance Learning (DL)] may have a higher lab fee than traditionally taught courses.

ENGL 100 Language Development (A, W, SP, SU) **5 credits**
Students develop skills in reading and writing in preparation for ENGL 101 by analyzing the writing of students and professionals and by developing paragraphs and short essays using narration, description, and examplification and/or illustration.
Lecture: 5 hours
Prerequisite: Prerequisite: DEV 041 with a grade of "C" or higher plus successful completion of the DEV 041 exit examination, or DEV 042 with a grade of "C" or higher, or placement by test. Credit will not count toward graduation in any degree program.
Lab fee: $3.00

ENGL 101 Beginning Composition (A, W, SP, SU – DL) **3 credits**
Students critically read student and professional writing as well as compose clear, concise expository essays after instruction in the use of a writing process. This course or its equivalent is required for all degrees.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 100 with a grade of "C" or higher or placement by test
Lab fee: $3.00

ENG1 101A MLA/APA Documentation Module (A, W, SP, SU) **1 credit**
Students develop skills in MLA/APA documentation format including quoting, paraphrasing, summarization, works cited, annotated bibliography, and electronic sources. Students will complete several documentation exercises and a final exam testing their knowledge of MLA/APA documentation style.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 101 or transfer credit for ENGL 101 from another school
Lab fee: $2.00

ENGL 102 Essay and Research (A, W, SP, SU – DL) **3 credits**
This course is a continuation of ENGL 101 expanded to include more critical reading, reasoned analysis, research techniques, and research paper writing using documentation format appropriate to the essay's content.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 101 with a grade of "C" or higher
Lab fee: $3.00

ENGL 111 English Composition (A, W, SP, SU-– DL) **5 credits**
This course is an accelerated combination of ENGL 101 and ENGL 102 . Students receive training in the fundamentals of exposition and argumentation through using a writing process. The course stresses critical reading of the students' own and professional writing. It includes units on library research and documentation.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement test score
Lab fee: $3.00

ENGL 119 Tutoring for Literacy (A, W, SP) **3 credits**
Tutoring for Literacy is a methods course that instructs students in basic techniques for teaching reading and writing in community agencies that host programs designed to improve literacy in their respective environments. Students in this course participate in classroom instruction two

hours weekly and provide one-to-one tutoring with assigned agencies six hours per week
Lecture: 2 hours – Lab: 6 hours
Prerequisites: ENGL 101, and either SSCI 101, SSCI 103, PSY 100, or SOC 101

ENGL 190 Freshman Experience in English (See ASC 190)

ENGL 200 Business Communications (A, W, SP, SU – DL) 3 credits
Emphasis is placed on principles of effective business writing. Students practice writing business letters and memos. A problem-solving or technical report related to the student's area of concentration is required. Resume preparation and job search techniques are covered.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher and at least two quarters or equivalent work experience in a technology
Lab fee: $7.00

ENGL 202 Writing for Health and Human Services (A, W, SP, SU) 3 credits
Students specializing in human services and health care fields practice the kinds of writing essential to record keeping and research in their professions. Legal and ethical interdisciplinary communication is emphasized. Using practice and real-life cases, students write descriptions, summaries, and evaluations. Job search techniques and letter, memo and report formats are covered. A short research paper using APA documentation is required. This course may substitute for ENGL 200 or ENGL 204 in certain technologies; check with your academic advisor.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher, admittance to a technical program, and current clinical /field placement
Lab fee: $7.00

ENGL 204 Technical Writing (A, W, SP, SU – DL) 3 credits
Students learn the principles of technical writing and practice those types of writing required of technicians, including letters, memos, and reports as required in a student's technology. A problem-solving report is written. Resume preparation and job search techniques are covered. Oral reports using visual aids are required.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher and at least two quarters or equivalent in the student's technology
Lab fee: $7.00

ENGL 206 Governmental Communications (on demand) 3 credits
The course emphasizes the principles of effective writing done in government settings. The student learns to write various types of correspondence in a variety of formats in addition to researching and writing a report adhering to formatting guidelines. The student will also prepare selected components of a job application package.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or better
Lab fee: $7.00

ENGL 207 Writing for the Web (W, SU – DL) 3 credits
This course introduces students to the fundamentals of writing on the Web. It examines the stylistic and rhetorical dimensions of creating text for the Web, examines which combination of media should be employed to support text, and considers basic issues of design and usability, including how reading strategies on the WWW differ from reading strategies for paper documents.
Lecture: 3 hours- Lab 0 hours
Prerequisite: ENGL 102 or ENGL 111
Lab fee: $8.00

ENGL 208 Communication for the Mass Media (W, SP) 3 credits
This course prepares students to communicate effectively with the mass media including newspapers, magazines, radio, and television through press conferences, news releases, feature stories, research reports, and statements. Students will prepare and present a portfolio that may include news and feature stories, brochures, flyers, research and other assignments completed for the course.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 102 or ENGL 111
Corequisite: COMM 105 or equivalent is recommended
Lab fee: $7.00

ENGL 210 Creative Writing (A, SP – DL) 3 credits
Students are introduced to the fundamental techniques of creative writing. Using peer group analysis and workshop techniques, students will develop short pieces in a variety of genres.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 101 or ENGL 111
Lab fee: $3.00

ENGL 215 Magazine Publication: Literary Criticism, Editing, and Design (W) 3 credits
Through hands-on practice with Spring Street, students learn the processes and techniques involved in the production of a literary magazine.
Lecture: 1 hours – Lab: 4 hours
Prerequisite: ENGL 101 or ENGL 111 with a grade of "C" or higher and instructor's permission.
Lab fee: $3.00

ENGL 220 Literature and Composition (A, W, SP, SU – DL) 3 credits
An intermediate writing course that focuses on producing expository and critical essays about major literary works and genres. Students are introduced to a variety of works by American and British authors as well a works in translation in the process of analyzing and writing about them. This course, or its equivalent in the ENGL 250-253 series, is required for all Associate of Arts and Associate of Science degrees, but this course is designed for A.A. and A.S. students transferring to colleges other than Ohio State.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher
Lab fee: $3.00

ENGL 225 Introduction to Fiction (W, SU) 5 credits
An intensive study of selected short stories and novels. Through critical reading, discussion, and writing, students will become familiar with important themes and methodologies of fiction. In both short stories and novels, emphasis will be placed upon identifying and analyzing authors' particular uses of the traditional elements of fiction (structure, setting, point of view, etc.) to develop plot and character.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or better
Lab fee: $1.00

ENGL 230 Introduction to Dramatic Literature (W, SU) 5 credits
Students will study selected masterpieces of western drama and discuss their social, political, and cultural influences. Students will write critical analyses of drama and of plays attended.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 102 or ENGL 111with a grade of "C" or better
Lab fee: $1.00

ENGL 235 Introduction to Poetry (A, SP) 5 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 will also learn to encounter the poem as a whole piece of written discourse between poet and reader. Students will, therefore, conduct an on-going 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: 5 hours – Lab: 0 hours
Prerequisite ENGL 102 or ENGL 111with a grade of "C" or better
Lab fee: $1.00

ENGL 240 Introduction to Science Fiction (A – DL) 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 – Lab: 0 hours
Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher
Lab fee: $3.00

ENGL 245 Introduction to Film (W,SU,DL) 5 credits
This course introduces students to cinema by analyzing the elements of film technique: literature, story, drama, editing, movement, acting, sound, photography, staging, and theory. Film as a cultural product is also discussed. Class activities include critical viewing, discussion, and writing assignments.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher
Lab fee: $10.00

ENGL 250 Writing About the American Experience (A, W, SP, SU – DL) 5 credits
An intermediate writing course that extends and refines skills in expository and argumentative writing, critical reading, and critical thinking. Students analyze, discuss and write about major topics pertaining to the theme of the *American Experience*, and the ways in which individual writers have articulated this theme. Assigned reading of United States literature will address such issues as race, culture, diversity, class gender, and sexual orientation to stimulate writing and facilitate an awareness of the interplay among purpose, audience, content, structure, and style. Students plan draft, and revise essays that represent a sophisticated application of expository skills and critical analysis. This course also refines skills in the areas of researching a topic, documenting sources , working collaboratively, and preparing and giving oral presentations. The course may substitute for ENGL 220 or meet elective requirements in the Associate of Arts or Associate of Science degree programs and transfer requirements in composition or literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher.
Not open to students who have credit for ENGL 251, ENGL 252, or ENGL 253.
Lab fee: $3.00

ENGL 251 The American Identity (A, W, SP, SU – DL) 5 credits
An intermediate writing course that extends and refines skills in expository and argumentative writing, critical reading, and critical thinking. Students analyze, discuss and write about major topics pertaining to the theme of the identity in the United States, and the ways in which individual writers have articulated this theme. Assigned reading of United States literature will address such issues as race, culture, diversity, class gender, and sexual orientation to stimulate writing and facilitate an awareness of the interplay among purpose, audience, content, structure, and style. Students plan draft, and revise essays that represent a sophisticated application of expository skills and critical analysis. This course also refines skills in the areas of researching a topic, documenting sources, working collaboratively, and preparing and giving oral presentations. The course may substitute for ENGL 220 or meet elective requirements in the Associate of Arts or Associate of Science degree programs and transfer requirements in composition or literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher.
Not open to students who have credit for ENGL 250, ENGL 252, or ENGL 253
Lab fee: $3.00

ENGL 252 Images of Men and Women (A, W, SP, SU – DL) 5 credits
An intermediate writing course that extends and refines skills in expository and argumentative writing, critical reading, and critical thinking. Students analyze, discuss and write about major topics pertaining to the theme of gender in the United States, and the ways in which individual writers have articulated this theme. Assigned reading of United States literature will address such issues as race, culture, diversity, class gender, and sexual orientation to stimulate writing and facilitate an awareness of the interplay among purpose, audience, content, structure, and style. Students plan draft, and revise essays that represent a sophisticated application of expository skills and critical analysis. This course also refines skills in the areas of researching a topic, documenting sources, working collaboratively, and preparing and giving oral presentations. The course may substitute for ENGL 220 or meet elective requirements in the Associate of Arts or Associate of Science degree programs and transfer requirements in composition or literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher. Not open to students who have credit for ENGL 250, ENGL 251, or ENGL 253
Lab fee: $3.00

ENGL 253 Regional American Writing (A, W, SP, SU– DL) 5 credits
An intermediate writing course that extends and refines skills in expository and argumentative writing, critical reading, and critical thinking. Students analyze, discuss and write about major topics pertaining to the theme of regionlism in the United States, and the ways in which individual writers have articulated this theme. Assigned reading of United States literature will address such issues as race, culture, diversity, class gender, and sexual orientation to stimulate writing and facilitate an awareness of the interplay among purpose, audience, content, structure, and style. Students plan draft, and revise essays that represent a sophisticated application of expository skills and critical analysis. This course also refines skills in the areas of researching a topic, documenting sources, working collaboratively, and preparing and giving oral presentations. The course may substitute for ENGL 220 or meet elective requirements in the Associate of Arts or Associate of Science degree programs and transfer requirements in composition or literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher. Not open to students who have credit for ENGL 250, ENGL 251, or ENGL 252
Lab fee: $3.00

ENGL 259 Survey of United States Literature to 1865 (SP) 5 credits
This course examines the works of major writers in U.S. literature from pre-colonial period to 1865. Genres include essays , short fiction, drama, poetry, and the novel. Course activities include reading, discussion, writing assignments, and audience participation.
Lecture: 5 hours – 0 lab hours
Prerequisite: ENGL 220 or equivalent
Lab fee: $ 3.00

ENGL 260 Survey of Modern U.S. Literature (SU – DL) 5 credits
This course examines the works of major writers in U.S. literature from 1865 to the present with attention to revision of the canon. Genres include essays, short fiction, drama, poetry, and the novel. Course activities include reading, discussion, writing assignments, and audience participation.
Lecture: 5 hours – Lab: 0hours
Prerequisite: ENGL 220 or equivalent
Lab fee: $3.00

ENGL 261 Survey of British Literature I (A, W) 5 credits
A survey of canonical British literary works written before 1789. The course activities will include readings, discussions, and audience participation.
Prerequisites: ENGL 220 or equivalent
Lab fee: $3.00

ENGL 262 Survey of British Literature II (SP - DL) 5 credits
Students will study selected master works of nineteenth and twentieth century British literature. The course activities will include reading, discussion, writing assignments, and audience participation. Lab fee: $3.00.
Prerequisite: ENGL 220 or equivalent.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 220 or equivalent
Lab fee: $3.00

ENGL 264 Introduction to Shakespeare (W, SU – DL) 5 credits
This course will examine representative works selected from Shakespeare's History Plays, Comedies, Romances, and Tragedies, concentrating on a critical/analytical approach to both the plays and Elizabethan dramaturgy. Emphasis, therefore, will be placed upon Renaissance/Elizabethan dramaturgy and conventions, upon language and style, upon the elements of History Plays, Comedies, Romances, and Tragedies, and upon analyses of fundamental human experience.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 220 or equivalent
Lab fee: $3.00

ENGL 265 European Literature in Translation (A – DL) 5 credits
The course will examine the works of representative European writers and cultures for the purpose of developing an appreciation of the international nature of literary subjects, themes, and movements. Emphasis will be placed upon developing an understanding of the historical, philosophical, and social contexts of the various cultures within which European Romanticism, Realism, Naturalism, Existentialism, and modern movements developed.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 220 or equivalent
Lab fee: $3.00

ENGL 270 African - American Writers (W, SU – DL) 5 credits
This course is a survey of Black American literature from the eighteenth-century beginnings to the present; it includes a study of slave narratives, folklore, drama, poetry, and short fiction. Activities include reading and writing assignments, oral presentations, special performances, guest speakers, and field trips.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 220 or equivalent
Lab fee: $3.00

ENGL 272 Introduction to Folklore (SU) 5 credits
This course is a study of folklore; it looks at 1) oral folklore (e.g., proverbs, riddles, myths, motifs, legends, folktales), 2) customary folklore (e.g., superstitions, folk customs, folk festivals), 3) material and folk traditions (e.g., folk foods, architecture, costumes). Course activities include field work, reading and writing assignments, and a special project.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 220 or equivalent
Lab fee: $3.00

ENGL 274 Introduction to Non-Western Literatures (A, SP) 5 credits
This course introduces students to selected classic and modern literature of the non-Western world, including Asia, Africa, the Mid-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: 5 hours – Lab: 0 hours
Prerequisite: ENGL 220 or equivalent
Lab fee: $3.00

ENGL 276 Women in Literature (A, SP) 5 credits
This course will explore the history by and about women. The course uses a comparative approach to see how women have treated a variety of themes and how they have worked within the genres of fiction, 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 examinations.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 220 or equivalent
Lab fee: $3.00

ENGL 278 The English Bible as Literature (W) 5 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, as well as parts of the Apocrypha. This is not a course in religion. The approach is literary, historical, 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: 5 hours – Lab: 5 hours
Prerequisite: ENGL 220 or equivalent
Lab fee: $ 3.00

ENGL 280 Publishing Practicum (SP) 2 credits
Students who have satisfactorily completed ENGL 215 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 normally taken immediately after completing ENGL 215.
Lecture: 0 hours – Lab: 4 hours
Prerequisite: ENGL 215 or instructor's permission
Lab fee: $3.00

ENGL 281 Writing Fiction (A – DL) 5 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 quarter. In addition, students will be required to participate in a public reading of their work at least once during the quarter. Course is repeatable to 10 credits.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 210 with a grade of "B" or better or permission of the instructor
Lab fee: $5.00

ENGL 282 Writing Poetry (W) 5 credits
This course introduces students to the art and craft of writing poetry. Emphasis is on the students' 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 me works of other students, create and revise a chapbook of 8-10 finished poems (12-20) pages by the end of the quarter. Students will present selected poems from the chapbook at a public reading. Course is repeatable to 10 credits.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 210 with a grade of "B" or better or permission of the instructor
Lab fee: $5.00

ENGL 283 Writing Plays (SP) 5 credits
This course introduces students to the art and craft of writing plays. Emphasis is on the student's own work; however, students will also be required to study the works and writing processes of established playwrights, male and female, traditional and non traditional, 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 short play (or an Act or Acts of a longer work). . By the ends of the quarter, students will present a public reading or performance of their work. Course is repeatable to 10 credits.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 210 with a grade of "B" or better or permission of instructor
Lab fee: $5.00

ENGL 284 Writing Creative Nonfiction (SU-DL) 5 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 quarter. Students will present a public reading of their work during the quarter. Course is repeatable to 10 credits.
Lecture: 5 hours – Lab: 5 hours
Prerequisite: ENGL 210 with a grade of "B" or better or permission of instructor
Lab fee: $5.00

ENGL 285 Writing to Publish (SP) 5 credits
This course introduces students to procedures for preparing a manuscript for marketing and publication. Students select a work or works for publication from a genre (fiction, poetry, drama, literary nonfiction), submit manuscripts for peer review at least three times during the quarter, and revise and edit their work throughout the quarter. Students research a market for their work, write the appropriate query or cover letter, and prepare the manuscript for submission. Since length requirements for manuscripts vary according to genre and target market, the instructor will determine the length requirement for successful completion of the course. The final exam for the course is a completed and corrected manuscript package ready for mailing. Students will also have the opportunity to give a public performance of their work. Course is repeatable to 15 credits.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 281, ENGL 282, ENGL 283, or ENGL 284 with a "B" or better or permission of the instructor
Lab fee: $5.00

ENGL 290 Capstone Experience in English (on demand) 3 credits
A capstone course focusing on English. Paradigms and their underlying assumptions will be explored. Students will work on developing research techniques and methodologies. Students will apply these techniques to a project of their own design, complete a personal portfolio covering their studies at Columbus State, and participate in a summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: 75 hours completed toward the degree including 10 credits in ENGL courses beyond ENGL 220 or equivalent
Lab fee: $10.00

ENGL 297 - 298 - 299 Special Topics in English (on demand) 1-5 credits
Special topics in English language or literature designed to meet specific needs.
Lecture hours vary– Lab hours vary
Prerequisite: vary

English as a Second Language (ESL)

ESL 044 Fiction for Non-Native Readers 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. The students will explore the settings, structures, plot and character development. Students will build vocabulary as well as analyze cultural settings. Analysis will come through journals, presentations, group discussions and class discussions. Credit will not count toward graduation in any degree program.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: ESL 099 or placement into ESL 100
Lab fee: $4.00

ESL 090 Critical Skills for College Success 3 credits
This course prepares non-native students to achieve their academic goals at a US college or university. They will examine US classroom procedures, professor-student interaction, thinking styles and learning styles. They will also be trained in techniques for effective reading, writing and critical thinking in a variety of academic fields. Student will demonstrate these techniques through the completion of mini-projects derived from a variety of courses currently offered at CSCC. Students' final project will be derived from an entry-level course in their chosen field of study. Credit will not count toward graduation in any degree program.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: ESL 099 or placement into ESL 100
Lab fee: $3.00

ESL 092 Basic Oral Communication 3 credits
This course will introduce students to the American sound system and quickly expand their working oral vocabulary. It will also equip students to perform vital language-based functions on campus and in the community. The course will be based upon daily classroom participation and the satisfactory completion of each language function. Credit will not count toward graduation in any degree program.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: placement into ESL 097
Lab fee: $3.00

ESL 093 Intermediate Oral Communication 3 credits
This course will help students to increase their effectiveness in social, academic and professional interactions in a U.S. setting. Students will expand their working oral vocabulary, master useful American idioms and improve their pronunciation. Students will examine and practice the conventions of contemporary American communication: both verbal and nonverbal. The course will be based upon daily class participation, oral presentations and also evidence of improvement found through a contrast of audio-taped readings. Credit will not count toward graduation in any degree program.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: ESL 098 (may be taken as a corequisite) or placement into ESL 098
Lab fee: $3.00

ESL 094 Advanced Oral Communication 3 credits
Students will increase their awareness of the values and beliefs that underlie cultural norms in the U.S. Readings on various aspects of contemporary American culture will provide the springboards to information gathering outside of class (through additional reading and interviews with native speakers) in-class discussions and four required oral presentations. Students will practice standard American pronunciation and intonation and will master useful vocabulary and idiomatic expressions. Credit will not count toward graduation in any degree program.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: ESL 099 (may be taken as a corequisite) or placement into ESL 099
Lab fee: $3.00

ESL 095 Public Speaking for Non-Natives (A, W, SP, SU) 3 credits
This course will prepare students whose first language is not English to participate effectively in COMM 105, Speech. Students will study and practice public speaking techniques, with particular emphasis on native pronunciation, intonation and delivery. Students will be required to conduct interviews and research in preparation for demonstration and persuasive speeches, presented individually and in groups. Students will receive feedback on their oral production from their instructor and their classmates regularly and will be audio/video taped on occasion. Credit will not count toward graduation in any degree program.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: ESL 100 (may be taken as a corequisite) or placement into ESL 100
Lab fee: $5.00

ESL 097 Basic English as a Second Language
(A, W, SP, SU) 10 credits
Students who already have limited command of the English language build upon their vocabulary and begin to eliminate errors through the study of basic grammar, readings, guided discussions, and written and oral exercises. Credit will not count toward graduation in any degree program.
Lecture: 10 hours – Lab: 0 hours
Prerequisite: Placement test
Lab fee: $5.00

ESL 098 Developmental English as a Second Language
(A, W, SP, SU) 10 credits
Students will continue to develop their reading, writing, listening and speaking skills through the study of intermediate grammar, readings, guided discussions, and written and oral exercises. Credit will not count toward graduation in any degree program.
Lecture: 10 hours – Lab: 0 hours
Prerequisite: "C" in ESL 097 or placement
Lab fee: $5.00

ESL 099 ESL: Reading, Grammar, and Composition
(A, W, SP, SU) 10 credits
Students will prepare for academic course work through the study of advanced grammar, sentence structure, paragraph organization and pre-writing techniques and will respond to college level readings in guided discussions, oral presentations and paragraph length essays. Credit will not count toward graduation in any degree program.
Lecture: 10 hours – Lab: 0 hours
Prerequisite: "C" in ESL 098 or placement
Lab fee: $5.00

ESL 100 English as a Second Language: Composition
(A, W, SP, SU) 5 credits
Students will polish their writing skill through grammar reviews, written exercises and the study of sentence structure, rhetoric and essay organization. Students will respond to both the content and technique of college level readings. Students will write essays using description, narration, cause and effect and comparison/contrast. Credit will not count toward graduation in any degree program.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: "C" in ESL 099 or placement
Lab fee: $5.00

ESL 299 Special Topics in English as a Second Language
(on demand) 1-5 credits
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: Vary
Prerequisite: Vary
Lab fee: $1.00 to $5.00

Environmental Science, Safety and Health (ENVR)

ENVR 101 Introduction to Environmental Science, Safety and Health
(A, SP) 3 credits
An introduction to the environmental technology field. This course provides an overview of environmental laws and regulations, toxicology, ecology, air pollution, water pollution, water treatment, hazardous materials, solid and hazardous waste, waste site investigation and remediation, and occupational safety and health.
Lecture: 3 hours – Lab: 0 hours

ENVR 110 Industrial/Municipal Pollution Control (W) 3 credits
An overview of the management, treatment and disposal practices utilized for pollution control. This course covers the nature of pollution and provides an introduction to air pollution control devices, wastewater treatment techniques, solid and hazardous waste management, treatment and disposal, recycling and pollution prevention.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $18.00

ENVR 111 Hazardous Materials Management (A, SP) 3 credits
An overview of the management practices for hazardous materials and hazardous waste. This includes principles of science and technology, occupational health and safety concerns and regulatory compliance. An emphasis will be placed on DOT, OSHA and RCRA requirements.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $20.00

ENVR 120 Environmental Aspects of Soils (A, SP, SU) 5 credits
A multi-disciplinary overview of soil science. Topics include soil formation and development, classification systems, soil mechanics, soil chemistry and contamination, soil hydrology, agricultural aspects of soil, soil erosion, soil microbiology and soil sampling techniques. Soil characteristics will be explored by means of laboratory examination and elementary testing techniques.
Lecture: 4 hours – Lab: 2 hours
Lab fee: $15.00

ENVR 130 Environmental Laws and Regulations (W) 5 credits
A study of American political institutions and a brief history of the American environmental movements and the resulting environmental regulations. A study of local, state, and federal codes and regulations as they apply to the handling, treatment, storage, and disposal of hazardous materials and wastes. Emphasis on NEPA, The Clean Water and Air Acts, the Resource Conservation and Recovery Act (RCRA), and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund).
Lecture: 4 hours – Lab: 2 hours
Lab fee: $15.00

ENVR 158 Environmental Site Assessment (A, SP – DL) 3 credits
A study of 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. Students enrolled in the distance version of this course will be required to come to campus for an orientation meeting, completion of hands-on laboratory exercises and for the exams.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $12.00

ENVR 160 OSHA 10-Hr. Construction Safety and Health
(W, SP) 1 credits
This course covers the approved Occupational Safety and Health Admin-

istration (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: $10.00

ENVR 170 General Industry Safety and Health (A) 4 credits
This course covers the approved Occupational Safety and Health Administration (OSHA) curriculum for the 30-hour Outreach Training Program. 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: 4 hours
Lab fee: $10.00

ENVR 220 Environmental Chemistry (on demand) 5 credits
Effective solutions to environmental problems require an understanding of the chemical processes that occur in the environment. This course provides a basic knowledge of environmental chemistry including water, soil and atmospheric chemistry. The chemistry of the transport and fate of pollutants in the environment, hazardous material chemistry and toxicology are covered. Related laboratory exercises will be performed including utilizing analytical techniques, instrumentation and quality assurance.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: CHEM 111
Lab fee: $18.00

ENVR 222 Water Treatment Techniques (SU on demand) 3 credits
This course is designed to permit the student to attempt the State of Ohio Class One Water Operator's exam. The course will emphasize water quality methods of water treatment, and laboratory processes. Practical experience will be emphasized.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: High school Chemistry or CHEM 100, MATH 104 or equivalent, or permission of instructor
Lab fee: $20.00

ENVR 223 Wastewater Treatment Techniques (W) 3 credits
This course is designed to provide the training to permit the student to attempt the State of Ohio Class One Wastewater Operator exam. The course will emphasize types of treatment, equipment, hygiene and public health aspects, sewer systems, and laboratory processes. Practical experiences will be emphasized.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: High school Chemistry or CHEM 100, MATH 104 or by permission of instructor
Lab fee: $20.00

ENVR 224 Environmental Hydrology (SP) 3 credits
Study of the occurrence, movement, and behavior of water in the hydrologic cycle. Introduction to the concepts of controlling the movement of surface water and ground water, and the ways in which these resources can be exploited and/or contaminated.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: MATH 104
Lab fee: $15.00

ENVR 250 Environmental Sampling (A) 5 credits
A course covering 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 hazardous materials. Topics include the regulatory framework, project coordination, drilling techniques, monitoring well installation, field instrument calibration, decontamination, and supplemental investigative techniques.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: GEOL 101 or GEOL 121
Lab fee: $20.00

ENVR 252 Health and Safety Training for Hazardous Waste Operations (W, SU – DL) (40-Hour OSHA Training) 3 credits
Satisfies 29 CFR Part 1910.120(e) under OSHA. A health and safety training course for individuals who may be involved in the investigation, remediation and operation of hazardous waste sites. Topics include hazardous materials chemistry, toxicology, air monitoring instrumentation, air purifying respirators, self-contained breathing apparatus, supplied air respirator systems, protective clothing, decontamination, simulated hazardous materials response incidents, and appropriate problem sets. Students enrolled in the distance version of this course will be required to come to campus for an orientation meeting, completion of hands-on laboratory exercises and for the final exam.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $100.00

ENVR 253 Environmental Systems Analysis (W) 3 credits
This course introduces engineered environmental systems and practical applications of their operation and maintenance. Topics include flow diagrams, schematics, plumbing and piping, pumps, blowers, electrical systems, instrumentation, flow measurements, process control, troubleshooting and safety for engineered systems.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: ENVR 110
Lab fee: $18.00

ENVR 254 Subsurface Restoration Techniques (SP) 5 credits
This course will address subsurface remediation techniques and treatment technologies used at hazardous waste sites. Course topics include the regulatory framework for subsurface restoration, clean-up goals, basic contaminant chemistry and transport, supplemental subsurface investigative techniques, soil and groundwater remediation techniques and water and air treatment technologies.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: ENVR 250
Lab fee: $20.00

ENVR 255 Air Pollution and Monitoring (W) 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 111
Lab fee: $23.00

ENVR 256 Hazardous Materials Refresher Training (SU – DL) (on demand) 1 credit
This course provides refresher training for site workers and emergency operators who have completed the 24 or 40-hour courses and complies with the 29 CFR 1910.120 refresher training requirements. Emphasis is placed on practical exercises and review of relevant changes in OSHA requirements. Successful completion of the course is based on classroom participation and completion of a written assignment. Students enrolled in the distance version of this course will be required to come to campus to complete the final quiz. This is a repeatable course.
Lecture: 1 hours – Lab: 0 hours
Lab fee: $50.00

ENVR 265 OSHA 30 Hr. Construction Safety and Health (on demand) **4 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: 4 hours
Lab fee: $10.00

ENVR 275 Industrial Hygiene (SP) **4 credits**
This course is an overview of the science of industrial hygiene. This course describes the process of investigating and examining workplace hazards and how those hazards are abated. The laboratory will emphasize the use of instrumentation ad 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: 3 hours – Lab: 2 hours
Lab fee: $10.00

ENVR 282 Sustainable Building Strategies (SP) **3 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: 3 hours
Lab fee: $10.00

ENVR 283 Ecological Residential Construction (on demand) **3 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: 2 hours – Lab: 2 hours
Lab fee: $10.00

ENVR 291 Field Experience (SU) **3 credits**
Off-campus work experience in environmental services industry that augments formal education received in the technology with actual work conditions and job experience. "N" credit will not be allowed for this course.
Lecture: 0 hours – Lab: 36 hours
Lab fee: $15.00

ENVR 299 Special Topics on Environmental Science, Safety and Health (on demand) **1-5 credits**
Special topics from the environmental industry designed to meet specific needs.
Lecture and/or Lab hours: varies

Facility Management (See Architecture)

Finance (FMGT)

FMGT 101 Personal Finance (A, W, SP, SU – DL) **4 credits**
This course presents a lifetime program of money management for the individual. Such topics 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: 4 hours – Lab: 0 hours
Lab fee: $3.00

FMGT 121 Introduction to Commercial Credit (on demand) **3 credits**
A basic course in commercial credit and collections. Studies will be centered on the establishing of the credit department, nature and function of credit, various types of credit, sources of credit, sources of credit information, analysis of information, factors of risk. This course is offered by the National Association of Credit Management in cooperation with Columbus State Community College.
Lecture: 3 hours – Lab: 0 hours

FMGT 201 Business Finance (A, W, SP, SU – DL) **5 credits**
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: 5 hours – Lab: 0 hours
Prerequisite: ACCT 106
Lab fee: $3.00

FMGT 202 Money and Banking (A, W) **5 credits**
A study of the operation, organization, and economics of U.S. monetary and banking systems. Current trends, the monetary policy process, and the regulation of financial markets is also covered.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ECON 200
Lab fee: $3.00

FMGT 211 Investments (W, SP) **4 credits**
This course examines the investments for the individual with emphasis on the securities markets. Topics presented include: risk and return trade-offs, sources of investment information, stocks, bonds, mutual funds, options, and tax considerations.
Lecture: 4 hours – Lab: 0 hours
Lab fee: $3.00

FMGT 221 Credit Administration (W) **4 credits**
Analytical study of credit control, and management of collections. Topics include; management and analysis of consumer credit, business credit, government credit, and foreign credit.
Lecture: 4 hours – Lab: 0 hours
Lab fee: $3.00

FMGT 251 Finance Research (A) **2 credits**
The student receives exposure to current developments in finance and economics through projects and research papers. Designed to serve as a capstone course for graduating students. Students can substitute BMGT 272 – Case Studies in Business Seminar for this course.
Lecture: 2 hours – Lab: 0 hours
Lab fee: $3.00

Fire Science (FIRE)

FIRE 100 Introduction to Firefighting (A, W) 3 credits
A broad overview of a career in the fire service, including the basics of firefighter safety, fire behavior, etc. Not available to students with Fire 117 or equivalent Firefighter I & II certification.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 100
Lab Fee: $10.00

FIRE 102 Prevention Practices (on demand) 3 credits
An overview of inspection programs, with emphasis on fire protection procedures and practices. Relationships of prevention programs with government, private sector, codes and arson is discussed.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: FIRE 117

FIRE 104 Fire Investigation Methods (SU, A) 4 credits
A study of the principles of fire investigations including recognition, preservation, collection, and presentation of arson evidence. Arson laws, interrogation of witnesses, application of photography, preparation of reports and adjustment of insured losses. Estimation of loss due to fire, smoke and water.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: FIRE 100 or FIRE 117 or documented Firefighter I & II certification.
Lab fee: $15.00

FIRE 106 Protection Systems (SU) 3 credits
The design and operation of fire protection systems, including water distribution, direction, alarm and watchman services and protection systems for special hazards. Carbon dioxide, dry chemical, foam and water spray systems studied in detail. Standpipes and sprinkler systems and methods of reestablishment after use.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: FIRE 100 or FIRE 117 or documented Firefighter I & II certification.
Lab fee: $5.00

FIRE 108 Fire Fighting Command I (W) 4 credits
Group operations and command strategy for fireground operations. The training of companies and officers to operate as a team. Methods of implementing plans and strategy into tactical operations.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: FIRE 100 or FIRE 117 or documented Firefighter I & II certification.
Lab fee: $5.00

FIRE 109 Fire Fighting Command II (SP) 3 credits
Group operations and command strategy at the chief officer level, preplanning of fire fighting operations, deployment of personnel and equipment. Specific tactical problems analyzed. Operations and tactics including mutual and outside aid in fire fighting.
Lecture: 0 hours – Lab: 6 hours
Prerequisites: FIRE 108; FIRE 117 or documented Firefighter I & II certification..
Lab fee: $15.00

FIRE 116 Personnel Training Methods (on demand) 3 credits
Methods of instruction, application of audio visual equipment, testing and evaluation, and preparation of materials are introduced. Special emphasis is placed upon planning an organizational training program.
Lecture: 1 hours – Lab: 4 hours
Lab fee: $3.00

FIRE 117 Firefighter I & II (A, SP, SU,) 12 credits
The course consists of all the performance and knowledge objectives in the current NFPA Standard 1001 for Firefighter I and II including but not limited to: fire department organization, safety, fire alarm, fire behavior, extinguishers, rope, ladders, hose streams, fire control, salvage and rescue. This course is required for full-time firefighters. The content of this course will enable students to obtain State of Ohio certification for Firefighter I & II levels (240 hour firefighter course).
Lecture: 8 hours – Lab: 14 hours
Lab Fee: $225.00

FIRE 151 Fire Prevention Codes (on demand) 4 credits
A study of important building construction and fire safety codes with emphasis on fire prevention and enforcement.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: FIRE 102, FIRE 117

FIRE 153 Fire Hydraulics (SP) 4 credits
An introduction to hydraulic theory. Drafting of water, velocity and discharge, friction loss, engine and nozzle pressure, fire streams, and pressure loses in flowing hydrants. Practice in application of hydraulic principles. Flow and pump testing as well as study of water distribution.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: FIRE 100 or FIRE 117 or documented Firefighter I & II certification.
Lab fee: $8.00

FIRE 202 Hazardous Materials II (on demand) 4 credits
A study of the properties and behavior of various hazardous chemicals in our environment. An overview of the physical and chemical characteristics of toxic, flammable, and reactive substances in the forms of solids, liquids, and gases combined with practical application of methods for responding to emergencies involving such materials. Emphasis will be placed on safe approach to incident scenes, positive identification of materials, and accurate analysis of the hazards presented by hazardous materials. Simulation and tabletop emergency exercises will be utilized throughout the course.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: LAWE 268
Lab fee: $6.00

FIRE 203 Legal Aspects of Fire Protection (W) 3 credits
Introduction to law, civil and criminal actions, the judicial system. Municipal liability for acts of the fire department and its members. Pensions, salary and compensation and termination. Duty owed by the public to members of the fire department. The initiation, operation, and liability and legal aspects of mutual aid, primary response contracts, and private contracts.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $5.00

FIRE 204 Fire Service Rating System (Fire Insurance) (A) 2 credits
The history of fire insurance. The principles and practices of inspections by the insurance services office. The rating system as used by I.S.O. to determine premium rates. Extensive study of methods used by I.S.O. to classify public protection and individual property fire suppression.
Lecture: 1 hours – Lab: 2 hours
Prerequisite: FIRE 100 or FIRE 117 or documented Firefighter I & II certification
Lab fee: $5.00

FIRE 205 Fire Service Company Officer (Supervisory Methods) (A) 3 credits
Supervision techniques applied to public service personnel. The study of the need for job descriptions and job procedures, reports, oral and written directions, work evaluation, meetings, discipline and conference leaders. Methods of instruction effective in teaching and motivating personnel.
Lecture: 3 hours – Lab: 0 hours

Prerequisite: FIRE 100 or FIRE 117 or documented Firefighter I & II certification
Lab fee: $5.00

FIRE 206 Administration of a Fire Department (SP) 3 credits
The contemporary fire protection agency, its functions, structure, and operational techniques. Principles of organization, staffing, budgeting, controlling, coordinating, planning, research in fire protection. The development and maintenance of liaison and cooperation between fire and police departments.
Lecture: 3 hours – Lab: 0 hours
Prerequisites: FIRE 205, FIRE 100 or FIRE 117 or documented Firefighter I & II certification
Lab fee: $5.00

FIRE 207 Customer Services for the Fire Services (Public Relations) (A) 3 credits
The psychology of relations between public service employees and the general population. Policies and practices of community relations as they apply to public service agencies. Current national and local community problems.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $5.00

FIRE 209 Fire Fighting Problems (on demand) 3 credits
Procedures of fighting aircraft fires. Procedures of fighting fires involving hydrocarbons, and L P gas. Hazards of electrical emergencies and proper procedures of handling them. Examples of disaster and stress involving emergency personnel.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: FIRE 117
Lab fee: $3.00

FIRE 210 Construction/Collapse for Fire/Rescue (W) 4 credits
An introduction to the present and past practices of building construction. Deals with important standard elements of buildings, the hidden dangers of old and new buildings, what influences structural stability of walls in fires, and how to look for and judge hundreds of structural dangers. Relationships between construction materials and fire damage of a building are presented**.**
Lecture: 4 hours – Lab: 0 hours
Prerequisite: FIRE 100 or FIRE 117 or documented Firefighter I & II certification
Lab fee: $8.00

French (FREN)

FREN 101 Elementary French I (A, W, SP, SU – DL) 5 credits
Introduction to the fundamentals of the French language with practice in listening, reading, speaking, and writing. Includes selected studies in French culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

FREN 102 Elementary French II (A, W, SP, SU – DL) 5 credits
Continuation of FREN 101, with further development of listening, reading, speaking, and writing skills and further study of French culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: FREN 101 with a grade of "C" or better or by placement exam
Lab fee: $6.00

FREN 103 Intermediate French I (DL) 5 credits
Continued study of the French language and development of listening, reading, speaking, and writing skills. Readings from contemporary French culture and literature. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: FREN 102 with a grade of "C" or better or by placement exam
Lab fee: $6.00

FREN 104 Intermediate French II (DL) 5 credits
Reading and discussion of French short stories, novels, plays, newspapers, and magazines, emphasizing literary appreciation and the development of French culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: FREN 103 with a grade of "C" or better or by placement exam
Lab fee: $6.00.

FREN 290 Capstone Experience in French (on demand) 3 credits
A capstone course focusing on French. Paradigms and their underlying assumptions will be explored. Students will work on developing research techniques and methodologies. Students will apply these techniques to a project of their own design, complete a personal portfolio covering their studies at Columbus State, and participate in summative testing of their academic skills.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters
Lab fee: $5.00

FREN 299 Special Topics in French (on demand) 1-5 credits
Detailed examination of selected topics in French.
Prerequisite: vary
Lab fee: $2.00

Geographic Information Systems (GIS)

GIS 100 Acquiring GIS Data (A, W, SP, SU – DL) 3 credits
This course introduces students to acquiring geographic data and learns to recognize and understand different data types used in the GIS applications. This course is designed for the beginning student who has limited knowledge in accessing existing databases. Students also develop skills for participating in distance learning courses and submitting class projects using the Internet.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $10.00

GIS 105 Elements of Photogrammetry (W) 2 credits
This course focuses on concepts and uses of photogrammetry in GIS. Students learn about the basic types of photogrammetry; examine ways of obtaining photographic data, finding points and performing measurements on aerial photographs and understanding the limitations and applications.
Lecture: 1 hour – Lab: 3 hours
Lab fee: $10.00

GIS 110 Scanning and Digitizing (W) 2 credits
This course explores data conversion of hard copy drawings, maps, and photographs into data files for use in a GIS using scanning and digitizing operations. Students understand different digitizing and scanning methods and errors associated with each method.
Lecture: 1 hour – Lab: 3 hours
Prerequisites: GEOG 207 or GIS 251 or instructor's permission
Lab fee: $10.00

GIS 130 Introduction to Spatial Analysis (SP) 4 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.
Lecture: 3 hours – Lab: 3 hours
Prerequisites: GEOG 207 or GIS251 or instructor's permission
Lab fee: $20.00

GIS 203 Remote Sensing of Environment (W) 4 credits
This course is designed to give students an understanding of the electromagnetic spectrum as used in remote sensing techniques and applications. Students learn to make decisions with remote sensed data.
Lecture: 3 hours – Lab: 3 hours
Lab fee: $20.00

GIS 251 GIS Software I - ArcGIS (A, W - DL) 3 credits
This course is the first in a two-part series of specific application software usage training using ESRI's ArcGIS. The students will learn the basics of ArcMap, ArcCatalog and ArcToolbox and explore how these applications inter-relate 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: 2 hours – Lab: 3 hours
Lab fee: $20.00

GIS 253 GIS Software II (W, SP - DL) 3 credits
This course is second in a two-part series of specific application software usage training using ESRI's ArcGIS. The students will learn the basics of ArcMap, ArcCatalog and ArcToolbox and explore how these applications inter-relate 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.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: GIS 251
Lab fee: $20.00

GIS 275 Planning and Implementing GIS (A, SP - DL) 3 credits
This course focuses on the methodology for planning and implementing a GIS. This course examines the procedures and methods for designing a GIS, evaluating data sources, testing, hardware and software planning, cost benefit analysis, staffing, training, legal issues and system implementation.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $20.00

GIS 277 Introduction to ArcIMS (W - DL) 3 credits
This course provides specific application software usage training using ESRI's ArcIMS. The students learn the basics of ArcIMS, how to create and maintain geography Internet sites, how to install and maintain ArcIMS, and explore and customize ArcIMS viewers.
Lecture: 1 hour – Lab: 4 hours
Prerequisites: GEOG 207 or instructor's permission
Lab fee: $20.00

GIS 278 VBA Programming for GIS (SP - DL) 3 credits
This course focuses on object-orientated programming and the unique issues relating to spatial objects, customization and syntax. Students learn how to use, find and modify Visual Basic scripts for use in ArcGIS. MapObjects will be introduced. Students should have some familiarity with ArcGIS.
Lecture: 1 hour – Lab: 4 hours
Prerequisites: GEOG 207 or instructor's permission
Lab fee: $20.00

GIS279 Introduction to GIS Databases (SP-DL) 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 SDE software. Student should have some familiarity with ArcGIS.
Lecture: 1 hour – Lab 4 hours
Prerequisites: GEOG 207 or instructor's permission
Lab fee: $20.00

GIS 280 Advanced GIS Applications (W, SP - DL) 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: 4 hours
Prerequisite: GIS 253
Lab fee: $20.00

GIS 290 Seminar for GIS (SP, SU, on demand – DL) 1 credit
Application of business knowledge to specific areas of on-the job work experience. The student takes this course is taken concurrently with GIS 291.
Lecture: 1 hour – Lab: 0 hours
Lab fee: $5.00

GIS 291 GIS Practicum (SP, SU, on demand) 4 credits
Off-campus work experience in GIS that augments formal education received in the technology, with actual work conditions and job experience. "N" credit will not be allowed for this course. This student takes this course concurrently with GIS 290.
Lecture: 0 hours – Lab: 28 hours
Lab fee: $15.00

GIS 299 Special Topics in GIS (on demand) 1-5 credits
Special topics in GIS to meet needs of the GIS community.
Lecture: 1-5 hour – Lab: 1-5 hours
Lab fee: $15.00

Geography (GEOG)

Students who enroll in geography courses must have placed in ENGL 101 and are encouraged to either have completed ENGL 101 or be enrolled in that course when scheduling a geography course.

GEOG 200 World Regional Geography
(A, W, SP, SU – DL) 5 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 (landforms, climate, population, resources, culture, economic activity, and historical evolution) that affect uneven development within and among all the world's major regions. A distance-learning version of World Regional Geography is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Course content is identical to that presented in a

traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

GEOG 207 Introduction to Geographic Information Systems
(A, W, SP, SU) 5 credits
This course introduces the fundamentals of Geographic Information Systems (GIS) including basic cartographic principles, map scales, coordinate systems, and map projections. The uses of hardware and software elements that emphasize vector-based data structures using ArcView Spatial Analysis extension are explored. Various applications of GIS technology used in science, business, and government are presented. Specific topics addressed include GIS terminology, raster and vector data structures, data sources and accuracy, methods of data conversion and input, requirements for metadata, working spatial databases (map features and attribute tables), spatial analysis (map overlays, buffers, networks). The above topics are reinforced in a laboratory with hands-on exercises on the use of map scales, coordinate systems, data sources and accuracy, data structures, working with spatial data, map features and attributes, map overlays, manipulation of data bases, creation of charts and graphs, and presentation of data in map overlays.
Lecture: 3 hours – Lab: 4 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

GEOG 280 ELEMENTS OF CARTOGRAPHY
(A, W, SP, SU) 5 credits
This course provides an in-depth introduction to the basic concepts and methods of cartography necessary to design and construct digital maps. Upon completion of the course, students should have a basic understanding of maps and how to design and construct them in order to provide a tool useful for other courses and later professional work.
Lecture: 3 hours – Lab: 4 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

GEOG 290 Capstone Experience in Geography
(on demand) 3 credits
This course is for students completing the two-year Associate of Arts or Associate of Science degree who have a special interest in continuing a baccalaureate degree program in geography. *The course presents a basic introduction to social science research methodologies and it is suggested that students take GEOG 299 concurrently so that these methods may be applied to researching a social science topic of interest.* Course requirements include the assembly of a portfolio that covers their academic career at Columbus State Community College; and participation in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: Completion to AA/AS core requirements and at least 75 hours toward the degree and five credit hours in geography
Lab fee: $6.00

GEOG 293 Independent Study in Geography
(on demand) 1 to 5 credits
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 to 5 hours – Lab: 0 hours
Prerequisite: Permission of the Instructor and the Chairperson and one course in Geography
Lab fee: $6.00

GEOG 299 Special Topics in Geography
(on demand) 1 to 5 credits
A detailed examination of selected topics of interest in geography.
Lecture: 1 to 5 hours – Lab: 0 hours
Prerequisite: Vary
Lab fee: $6.00

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 101 Earth Systems I: Geologic Environment
(A, W, SP, SU) 5 credits
A general geology course covering the materials of the Earth's crust, the processes that produce and modify them, and the development of the Earth and its life forms through time. Related laboratory and demonstrations.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: Placement into ENGL 101, not open to students with credit for GEOL 121
Lab fee: $21.00

GEOL 121 Physical Geology (A, W, SP, SU) 5 credits
This course covers geologic processes and the development of land forms. Topics include the development of the Earth, the nature and origin of minerals and rocks, land forms and the agents that produce and modify them, structural features of the Earth's crust, and the environmental effects of changes in the Earth. Related laboratory and demonstrations.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: MATH 103 and placement into ENGL 101
Lab fee: $20.00

GEOL 122 Historical Geology (W, SU) 5 credits
The history of the Earth and its inhabitants through geologic time. Recommended second course in geologic science for two course sequence in physical sciences for the AS degree. Related laboratories and demonstrations. Field trips outside normal class time may be required.
Lecture: 4 hours – lab 3 hours
Prerequisites: Geology 121
Lab fee: $ 26.00

GEOL 293 Independent Study in Geology (on demand) 1 to 5 credits
Detailed examination of selected topics of interest in geology.
Lecture: 1 to 5 hours – Lab: 0 to 6 hours
Prerequisite: Permission of instructor
Lab fee: varies

GEOL 299 Special Topics in Geology (on demand) 1 to 5 credits
Detailed examination of selected topics of interest in geology.
Lecture: 1 to 5 hours – Lab: 0 to 6 hours
Prerequisite: Permission of the instructor
Lab fee: varies

German (GERM)

GERM 101 Elementary German I (A, W, SP, SU) 5 credits
Introduction to the fundamentals of the German language with practice in listening, reading, speaking and writing. Includes selected studies in German culture. Meets elective requirements in the Associate of Arts and

Associate of Science degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

GERM 102 Elementary German II (A, W, SP, SU) 5 credits
Continuation of GER 101 with further development of listening, reading, speaking, and writing skills and further study of German culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: GERM 101 with a grade of "C" or better or by placement exam.
Lab fee: $6.00

GERM 103 Intermediate German I (On Demand) 5credits
Continued study of the German language and development of listening, reading, speaking, and writing skills. Readings from contemporary Germanic culture and literature. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: GERM 102 with a grade of "C" or better or by placement exam
Lab fee: $6.00

GERM 104 Intermediate German II (on demand) 5 credits
Reading and discussion of German short stories, novels, plays, newspapers, and magazines, emphasizing literary appreciation and the development of Germanic culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: GERM 103 with a grade of "C" or better or by placement exam
Lab fee: $6.00

GERM 290 Capstone Experience in German (on demand) 3 credits
A capstone focusing on German. Paradigms and their underlying assumptions will be explored. Students will work on developing research techniques and methodologies. Students will apply these techniques to a project of their own design, complete a personal portfolio covering their studies at Columbus State and participate in summative testing of their academic skills.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters
Lab fee: $5.00

GERM 299 Special Topics in German (on demand) 1-5 credits
Detailed examination of selected topics in German.
Prerequisite: vary
Lab fee: $2.00

Graphic Communications (GRPH)

GRPH 110 Survey of Graphic Communications (A, W – DL) 4 credits
This course provides an overview of the graphic communications 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 and marketing communications will be discussed. Key terminology and related software used in this business will be reviewed. Laboratory time will be used for understanding basic skills.
Lecture: 2 hours – Lab: 4 hours
Prerequisites: None
Lab fee: $10.00

GRPH 111 Black and White Photography (A, W, SP, SU) 4 credits
An introduction to the principles of continuous-tone photography emphasizing composition, lighting, as well as manipulative functions, operative settings, and focus control of cameras and enlargers; students will also learn to develop their film and make prints. A 35 mm camera with manual setting capabilities is needed.
Lecture: 2 hours – Lab: 4 hours
Prerequisites: None
Lab fee: $28.00

GRPH 112 Introduction to Computer Graphics (A, W, SP, SU – DL) 4 credits
This course introduces the student to the three computer software programs most widely used in the graphic communications field. A basic working knowledge of Photoshop, Illustrator and QuarkXpress is the primary goal of this course. The student will learn these skills through basic project development.
Lecture: 2 hours – Lab: 4 hours
Prerequisites: GRPH 110
Lab fee: $29.00

GRPH 113 Fundamentals of Layout & Storyboarding (A, SP) 4 credits
A storyboard is used by graphic artists, web developers, and audio/video professionals to map out visually a series of actions and events. The storyboard graphically outlines in rough format how the project will appear in the final state. This course will introduce students to the fundamental skills in conceptualizing and developing coherent and compelling storyboards. Significant focus will be placed on learning how to communicate ideas into a logical layout that tells the story.
Lecture: 2 hours – Lab: 4 hours
Prerequisites: None
Lab fee: $29.00

GRPH 114 Digital Photography (A, W, SP, SU) 4 credits
An introduction to the principles and applications of digital photography. Students will capture images using digital cameras while emphasizing the manipulation of camera controls, exposure, lighting, on-and-off camera flash, essential imaging tactics, and archiving images. Students are required to have a digital camera.
Lecture: 3 hours – Lab: 3 hours
Prerequisites: None
Lab fee: $12.00

GRPH 122 Digital Publishing (W, SU – DL) 4 credits
This course will expand the students knowledge in QuarkXpress, the most widely used desktop publishing program in the graphic communications industry. By working on various projects, students will learn more about the tools and menu options that will help them produce anything from small ads to multipage documents. Type face manipulation, color control and preparing a document for printing are also covered.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: GRPH 112
Lab fee: $36.00

GRPH 123 Electronic Publishing with InDesign (A, SP) 4 credits
Lecture: 2 hours – Lab: 4 hours
Prerequisite: GRPH 112
Lab fee: $36.00

GRPH 125 Image Assembly (W) 4 credits
This course will focus on taking materials from production through pre-press. This course will give students advanced instruction in Photoshop and QuarkXpress with emphasis on using measurements to insure accuracy of layouts for the printing process. The software program Dynastrip will be used for job imposition.
Lecture: 2 hours – Lab: 4 hours
Prerequisites: GRPH 112
Lab fee: $31.00

GRPH 130 Press Operations (SP) 4 credits
This course covers the lithographic process, press design, press function, basic press operations, and maintenance and repair. Environment and safety considerations are included. Laboratory work revolves around operations of a sheet-fed offset press. An overview of MSDS procedures is included.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: GRPH 110 and GRPH 112
Lab fee: $23.00

GRPH 131 Design and Typography (A, W, SP, SU - DL) 4 credits
This course provides the student with an understanding of how graphic design, advertising and marketing are used together to provide a client with effective visual communications to a specific target market. Elements of design, design philosophy, typography, marketing and color will be discussed in preparation for advertising campaign development.
Lecture: 2 hours – Lab: 4 hours
Prerequisites: GRPH 112, GRPH 122
Lab fee: $25.00

GRPH 241 Estimating (A – DL) 4 credits
This course is a survey of the functions and role of printing estimators, followed by an in-depth study of estimating the costs of paper, ink, one-color sheet fed presswork and flat sheet bindery functions. Calculating wastage and preparing quotations will also be studied. Students will create an efficient production plan for printing a variety of finished products and will be able to estimate the materials and labor costs for performing the operation. Emphasis is on deriving prices from production standards and hourly rates.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: GRPH 110, GRPH 125**,** GRPH 130, and MATH 102
Lab fee: $20.00

GRPH 242 Image Capture, Conversion and Management (A, W) 4 credits
A study of digital image setting, the techniques and procedures of exposure calibration, and tonal manipulation used in the printing industry. The course also includes an in-depth study of densitometry, colorimetry, and the basics of color management including ICC profiles.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: GRPH 110
Lab fee: $25.00

GRPH 243 Computer Graphic Illustration (A, SU – DL) 4 credits
This course provides the student with a comprehensive knowledge of Illustrator. This software will enable the student to produce complex technical drawings, illustrations and creative typographic applications. Individual projects, team projects and project presentation are used for evaluation.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: GRPH 112.
Lab fee: $27.00.

GRPH 251 Digital Imaging (A, W, SP – DL) 4 credits
This course combines the fundamental skills introduced in preliminary courses with the new technologies of desktop scanning and separation. The course incorporates such topics as color separation and photographic manipulation. The software used in this course is Photoshop.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: GRPH 112
Lab fee: $24.00

GRPH 252 Digital Imaging II (SP) 3 credits
Advanced electronic imaging techniques are covered using Photoshop. These techniques are commonly used with images that are going to be printed in a marketing piece. This course is geared toward those who want to learn every aspect of Photoshop and the techniques that are used in the real work world.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: GRPH 251
Lab fee: $24.00

GRPH 258 Photojournalism (SP) 4 credits
This course is designed to provide an introduction to the principles and theories of photojournalism. This course will also increase technical understanding of photography as a medium enabling the student to document newsworthy events with accuracy. This course provides experience in shooting, developing, printing, and editing and will use both conventional methods and digital technology. This course will also cover media ethics, legal issues and the evolving technological impact of photojournalism.
Lecture: 2 hours – Lab: 4 hours
Prerequisites: GRPH 111 or GRPH 114
Lab Fee: $32.00

GRPH 260 Graphics Practicum (A, W, SP, SU) 4 credits
Supervised on-the-job application of knowledge and skills acquired in the classroom.
Lecture: 0 hours – Practicum: 28 clock hours for 4 credits
Prerequisites: Graphic Communications major with the GPA of at least 2.5 and completion of 12 hours in technology or permission of instructor
Corequisite: GRPH 261
Lab fee: $3.00

GRPH 261 Graphics Seminar (A, W, SP, SU) 2 credits
Supervised application of graphic communications knowledge to specific area of internship.
Lecture: 2 hours – Lab: 0hours
Corequisite: GRPH 260
Lab fee: $3.00

GRPH 269 Lighting and Tone Control (A) 4 credits
An introduction to advanced tone control and basic lighting control with the camera. An introduction to the Zone System of exposure, and advanced use of portable flash is also covered.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: GRPH 111, GRPH 270
Lab fee: $28.00

GRPH 270 Advanced Black and White Photography (SU) 4 credits
This course works with small format (35mm) black-and-white film, with emphasis on problem solving and visual communication. This course exposes the student to more extensive use of lighting, Zone System of exposure, films and printing papers. It is required that each student have a 35mm camera with variable shutter speed and aperture as well as a light meter.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: GRPH 111
Lab fee: $28.00

GRPH 271 Studio Lighting (W) 4 credits
This course revolves around the techniques of black-and-white photography under both studio and location conditions using medium and large format cameras. Emphasis is placed on lighting, subject treatment, and camera manipulation.

Lecture: 2 hours – Lab: 4 hours
Prerequisite: GRPH 111 and GRPH 270
Lab fee: $28.00

GRPH 273 Design II (W) 3 credits
This course provides a more extensive and in-depth study of the graphic design process. Using the knowledge students receive in GRPH 131, more complex advertising campaigns and formal presentation options will be emphasized. Individual project presentation and group presentations are a very important part of the business and this class. A class critique will follow each project.
Lecture: 2 hour – Lab: 2 hours
Prerequisite: GRPH112, GRPH 122, GRPH 131, GRPH251
Lab fee: $25.00

GRPH 278 Photo Lab (A, W, SP, SU) 1 credit
The photo lab provides students currently enrolled in other photography courses the opportunity to enhance their film processing and printing technique skills.
Lecture: 0 hours – Lab: 3 hours
Corequisite: GRPH 111
Lab fee: $28.00

GRPH 281 Color Photography (A, SP) 4 credits
An introduction to color photography with emphasis on camera work and color printing. Students will examine color theory, color vision, light and color, filtration, color correcting and color balance. Through reading, practice and class discussion, students will learn elements unique to color photography. A 35 mm SLR camera with manual setting capabilities or a digital camera with at least three megapixels of memory is required.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: GRPH 111 or GRPH 114
Lab fee: $35.00

GRPH 282 Digital Publishing II (A, SP) 4 credits
This course will provide the student with a more comprehensive study of desktop publishing and how it applies to practical project work. This class will deal with issues that give the student an understanding of the processes involved when producing high-end graphic publications.
Lecture: 2 hours – Lab: 4 hours
Prerequisites: GRPH 112, GRPH 122
Lab fee: $36.00

GRPH 284 Presentation Production (SP) 4 credits
The capstone course for the graphic designer, this course provides the student with advanced graphic design techniques and project presentation practices. The student will learn how to produce elements of advertising campaigns in two and three dimensional form. This class will work in a simulated advertising agency environment to develop product advertising from marketing concepts to visual design applications. One formal team presentation is required for completion of this class.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: GRPH 122 and either GRPH 243 or GRPH 251, GRPH 131
Lab fee: $29.00

GRPH 287 Preflight and Digital File Preparation (SP) 3 credits
Preflight focuses on the quality control of commercial graphics reproduction. This course introduces students to InDesign, the mot prevalent software used in the industry. Students are introduced to the preflight process with special emphasis on typographical command sequences and manipulation applications to create professional quality publicatioins.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: GRPH 110, GRPH 112
Lab fee: $26.00

GRPH 288 Advanced Digital Photography (SP) 4 credits
This course provides and in-depth look at the digital camera, its advantages over traditional photography and techniques for taking full advantage of its capabilities. This course assumes that the student has a basic understanding of traditional B & W photography and access to a digital camera.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: GRPH 114
Lab fee: $35.00

GRPH 289 Buying & Selling Printing (SP) 4 credits
This course provides an essential foundation in the technical and commercial skills needed to buy quality print at an economical price. Students will also be introduced to the sales process as it applies to commercial and digital printing companies.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: None
Lab fee: $5.00

GRPH 291 Preparing a Professional Portfolio (W, SU) 4 credits
In this course, the student will develop a traditional portfolio of his/her graphic design and photography work, as well as create a portfolio on CD. The student will develop an effective visual and informative resume. Learning proper presentation skills when showing the portfolio to perspective employers is a very important part of this class.
Lecture: 2 hours – Lab: 4 hours
Prerequisites: GRPH 113, GRPH 273, GRPH 284
Lab fee: $15.00

GRPH 294 The Business of Photography (DL) 3 credits
This course introduces students to the business and marketing practices necessary to establish a professional photography business. 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.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: None
Lab fee: $5.00

GRPH 297, 298, 299 Special Topics in Graphic Communication (on demand) 1-3 credits
Detailed examination of a selected topic in graphic communications.
Lecture: 1 to 3 hours – Lab: 0 hours
Lab fee: $28.00 each Special Topics Course

Health Information Management Technology (HIMT)

HIMT 111 Introduction to Health Information Management Tech (A, SU – DL) 2 credits
The student will be introduced to the various roles of the health information management technician within the health care system and professional organizations in which the health information management technician is affiliated. The student will explore the various functions performed under the auspices of health information management and the technology used to perform these functions. This course must be completed as a prerequisite to starting the HIMT degree program.
Lecture: 2 hours – Lab: 0 hours
Lab fee: $10.00

HIMT 112 Electronic Health Concepts (SU - DL) 2 credits
This course discusses electronic health concepts as they relate to safety and quality of healthcare, homeland security, HIPAA, and escalating healthcare costs. These national concerns have brought the electronic health record (EHR) to the forefront of the healthcare industry and have created several

initiatives that are driving the standardization and implementation of the EHR and EHR systems.
Lecture: 1 hour – Lab: 2 hours
Lab fee: $15.00

HIMT 113 Managed Care Trends (A, SU - DL) 2 credits
This course will provide students with an understanding of various issues regarding managed care that have been instrumental in the redesign and remodeling of patient care delivery. Topics discussed include: types of plans, analysis of data to determine effects of managed care, evaluation of managed care plans, rules and regulations affecting managed care, implementation of plans, and clinical outcomes management.
Lecture: 2 hours – Lab: 0 hours
Lab fee: $10.00

HIMT 121 Advanced Medical Terminology (A, W, SP, SU - DL) 3 credits
The student will study medical terminology as it relates to word parts, human body structure, procedural terms, abbreviations, directional terms, anatomical planes and regions, and the following: integument system, musculoskeletal system, hematology, immune system, endocrine system, nervous system, special senses, respiratory system, cardiovascular system, gastrointestinal system, urinary system, male reproductive system, female reproductive system, obstetrics and neonatology, mental health, and oncology. Recommended completion of MULT 101 - Medical Terminology.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $10.00

HIMT 132 Introduction to Medical Transcription (SP, AU) 2 credits
The student will be introduced to word processing equipment used in the transcription of medical reports. The student will begin to master medical transcription using authentic physician dictations to transcribe various medical reports. Practice in English dictation with an emphasis on accuracy. Strongly suggest typing ability of 35 words per minutes. Note: Recommended completion of HIMT 141.
Lecture: 1 hour – Lab: 2 hours
Prerequisites: MCT 106 or OADM 131 and HIMT 121 with a grade of "C" or higher
Lab fee: $35.00

HIMT 133 Legal Aspects of Health Information (SP-DL) 3 credits
The student will study the policies and procedures for processing health records for legal purposes. The importance of the maintenance of confidentiality of health information (both paper and electronic records and databases), the proper handling of requests for, and the transfer of health information will be discussed.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $10.00

HIMT 135 Health Data Management (A – DL) 5 credits
The student will be introduced to filing systems as well as the computer-based patient record (CPR). The student will study the policies and procedures required to collect, analyze, interpret, report, and maintain health care data. The student will perform clinical pertinence chart reviews and also be introduced to the internal and external requirements for establishing, operating, and maintaining various registers and registries.
Lecture: 4 hours – Lab: 2 hours
Lab fee: $15.00

HIMT 141 Pharmacology for HIMT (W, SP – DL) 3 credits
This course will survey the major classifications of drugs. The indications and contraindications for use will be presented. Emphasis will be placed on the correlation between drug therapy and disease. The student will be required to use various desk references efficiently. Recommended completion of HIMT 121.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: BIO 121 or (BIO 161 and BIO 169) with a grade of "C" or higher

HIMT 243 Comparative Health Settings in HIM (SP – DL) 3 credits
The student will study health information systems in non-hospital health care facilities along with the sources of data for these systems and their uses and users. The appropriate technical aspects and functions within these various systems will be discussed along with the various reporting and accrediting requirements for each of the specific health care facilities discussed. Field trips to various health care facilities will be scheduled.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: HIMT 111 and HIMT 135 with a grade of "C" or higher
Lab fee: $10.00

HIMT 245 ICD-9-CM Coding (A, SP – DL) 5 credits
The student will be introduced to the nomenclature and major classification and indexing systems in ICD-9-CM utilized in coding medical information. Laboratory experiences will emphasize the application of the related skills with accuracy and completeness.
Lecture: 3 hours – Lab: 4 hours
Prerequisite: BIO 122 or (BIO 161, BIO 169, and BIO 170) and HIMT 121 with a grade of "C" or higher
Lab fee: $35.00

HIM1 245 (HIMT 245A) ICD-9-CM Coding- Intro to ICD-9-CM Coding, Module 1 (A, SP – DL) 1 credit
HIMT 245A is the first module of HIMT 245. Combined with subsequent modules, HIMT 245B, HIMT 245C, and HIMT 245D, it is the equivalent of HIMT 245. In this module, students are introduced to basic ICD-9-CM coding guidelines and conventions.
Lecture: 1 hour – Lab: 0 hours
Lab fee: $5.00

HIMT 245B ICD-9-CM Coding – Coding Principles Part I, Module 2 (A, SP - DL) 1.5 credits
HIMT 245B is the second module of HIMT 245. Combined with HIMT 245A and subsequent modules HIMT 245C and HIMT 245D, it is the equivalent of HIMT 245. In this module, students will code from the following areas: V and E codes; symptoms, signs and ill-defined conditions; infectious and parasitic diseases; endocrine, nutritional and metabolic diseases and immunity disorders; mental disorders; diseases of the nervous system and sense organs, respiratory system, digestive system, genitourinary system, and skin and subcutaneous tissue.
Lecture: 1 hour – Lab: 1 hour
Prerequisites: HIMT 245A, BIO 122 or (BIO 161, BIO 169, and BIO 170), and HIMT 121 with a grade of "C" or higher
Lab fee: $10.00

HIMT 245C ICD-9-CM Coding – Coding Principles Part II, Module 3 (A,SP) 1.5 credits
HIMT 245C is the third module of HIMT 245. Combined with HIMT 245A and HIMT 245B and the subsequent module HIMT 245D, it is the equivalent of HIMT 245. In this module, students will code from the following areas: musculoskeletal system and connective tissue; complications of pregnancy, childbirth, and the puerperium; abortion and ectopic pregnancy; congenital anomalies; perinatal conditions; circulatory system, and neoplasms.
Lecture: 1 hour – Lab: 1 hour
Prerequisite: HIMT 245B with a grade of "C" or higher
Lab fee: $10.00

HIMT 245D ICD-9-CM Coding – Practical Applications, Module 4 (A,SP - DL) 1 credit
HIMT 245D if the fourth module of HIMT 245. Combined with HIMT 245A, HIMT 245B, and HIMT 245C, it is the equivalent of HIMT 245. In this module, students will gain practical experience coding from case studies and patient medical records.
Lecture: 0 hours – Lab: 2 hour
Prerequisite: HIMT 245C with a grade of "C" or higher
Lab fee: $10.00

HIMT 255 CPT-4 Coding (W, SU - DL) 5 credits
The student will be introduced to ambulatory coding and payment systems emphasizing CPT-4 coding. Laboratory experiences will emphasize the application of the related skills with accuracy and completeness.
Lecture: 3 hours – Lab: 4 hours
Prerequisite: BIO 122 or (BIO 161, BIO 169, and BIO 170), and HIMT 121 with a grade of "C" or higher
Lab fee: $35.00

HIMT 255A CPT-4 Coding – Intro to CPT-4 and Evaluation and Management, Module 1 (W, SU – DL) 1.5 credits
HIMT 255A is the first module of HIMT 255. Combined with subsequent modules HIMT 255B, HIMT 255C, and HIMT 255D, it is the equivalent of HIMT 255. In this module, students are introduced to basic CPT-4 coding guidelines and Evaluation and Management coding.
Lecture: 1 hour – Lab: 1 hour
Lab fee: $10.00

HIMT 255B CPT-4 Coding – Surgical Coding, Module 2 (W, SU - DL) 1.5 credits
HIMT 255B is the second module of HIMT 255. Combined with HIMT 255A and subsequent modules HIMT 255C and HIMT 255D, it is the equivalent to HIMT 255. In this module, students are introduced to surgical coding.
Lecture: 1 hour – Lab: 1 hour
Prerequisite: HIMT 255A, BIO 122 or (BIO 161, BIO 169, and BIO 170), and HIMT 121 with a grade of "C" or higher
Lab fee: $10.00

HIMT 255C CPT-4 Coding – Ancillary Coding/Modifiers, Module 3 (W, SU – DL) 1 credit
HIMT 255C is the third module of HIMT 255. Combined with HIMT 255A, HIMT 255B and subsequent module HIMT 255D, it is the equivalent of HIMT 255. In this module, students are introduced to ancillary coding and modifiers.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: HIMT 255B with a grade of "C" or higher
Lab fee: $5.00

HIMT 255D CPT-4 Coding – Practical Applications, Module 4 (W, SU - DL) 1 credit
HIMT 255D is the fourth module of HIMT 255. Combined with HIMT 255A, HIMT 255B, and HIMT 255C, it is the equivalent of HIMT 255. In this module, students will gain practical experience from coding case studies and patient medical records.
Lecture: 0 hours – Lab: 2 hour
Prerequisite: HIMT 255C with a grade of "C" or higher
Lab fee: $10.00

HIMT 256 Clinical Data Analysis (W – DL) 3 credits
The student will apply clinical knowledge as it pertains to health care data management in coding for reimbursement of health care services, the evaluation of practice patterns, the assessment of clinical outcomes, and the analysis of cost-effectiveness of services provided.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: HIMT 121 with a grade of "C" or higher

HIMT 257 Introduction to Health Statistics (SP – DL) 3 credits
The student is introduced to procedures for properly collecting, organizing, displaying, and interpreting health care data to meet the needs of various users while complying with the standards of the health care facility. The users of data can include: the patient, medical staff, nursing and allied health staff, state and federal regulatory agencies, JCAHO, and insurance companies.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: MCT 106 and HIMT 135 with a grade of "C" or higher or permission from the instructor for those not enrolled in the HIMT
Lab fee: $5.00

HIMT 259 Quality and Resource Management (A – DL) 3 credits
The student will be introduced to the internal and external requirements for establishing, operating, and maintaining quality improvement and utilization management programs. Methods used in bench marking, credentialing, critical pathways, monitoring and evaluation, occurrence screening, peer review, and risk management will also be discussed.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: MCT 106 and HIMT 257 with a grade of "C" or higher
Lab fee: $5.00

HIMT 265 Medical Reimbursement (A – DL) 3 credits
Students are introduced to basic terminology regarding medical insurance and how coding systems used in outpatient and inpatient health care settings are used to obtain payment for health care services. A discussion of various third party payers will be presented as well as reimbursement methodologies used by these payers. Students are introduced to claims processing in the physicians' office setting. Topics discussed include: CMS 1500, and office procedures for posting payments and claims follow-up.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $35.00

HIMT 265A Medical Reimbursement, Module 1 (A-DL) 1 credit
HIMT 265A is the first module of HIMT 265. Combined with the subsequent module, HIMT 265B, it is the equivalent of HIMT 265. In this module, students are introduced to basic terminology regarding medical insurance and how coding systems used in outpatient and inpatient health care settings are used to obtain payment for health care services. A discussion of various third party payers will be presented as well as reimbursement methodologies used by these payers.
Lecture: 1 hour – Lab: 0 hours
Lab fee: $10.00

HIMT 265B Medical Reimbursement, Module 2 (A-DL) 2 credits
HIMT 265B is the second module of HIMT 265. Combined with HIMT 265A, it is the equivalent of HIMT 265. In this module, students are introduced to claims processing in the physicians' office setting. Topics discussed include: completion of the CMS 1500, and office procedures for posting payments and claims follow-up.
Lecture: 1 hour – Lab: 2 hour
Prerequisite: HIMT 265A with a grade of "C" or higher
Lab fee: $25.00

HIMT 267 Principles of Management (W – DL) 3 credits
The student will be introduced to the functions related to planning, organizing, controlling, and evaluating human resources and health information management services. Other topics include the direction and documentation necessary for the supervision of personnel.
Lecture: 3 hours – Lab: 0 hours

HIMT 270 Case Management in Health Care (W – DL) 2 credits
This course is designed to provide a review for students enrolled in the HIMT or practicing health care professionals and administrators/managers who wish to become certified as a case managers through the Commission for Case Manager Certification. The five major areas of discussion include: coordination and service delivery, physical and psychological factors, benefit systems and cost benefits analysis, case management concepts, and community resources.
Lecture: 2 hours

HIMT 272 Advanced Medical Transcription Lab (SU) 4 credits
The student will receive extensive practice of transcribing operative reports, diagnostic procedures, surgical discharge summaries, radiology, and pathology reports along with other medical reports. Topics discussed include: equipment, home-based transcription, outsourcing, and other management issues relating to medical transcription.

Lecture: 1 hour – Lab: 6 hours
Prerequisite: HIMT 132 with a grade of "C" or higher
Lab fee: $35.00

HIMT 273 Medical Transcription Practicum (A) 3 credits
The student is assigned to a facility to gain practical experience in the area of medical transcription. The student will obtain exposure to actual working conditions and equipment at the assigned facility. Emphasis of the practicum will be the actual transcribing experience.
Lecture: 1 hours – Lab: 14 hours
Prerequisite: Completion of all coursework in the Medical Transcription Certificate with a grade of "C" or higher; completion of a pre-practicum examination with a score of 70% or higher

HIMT 274 Issues in Health Information Management Technology (SP) 1-3 credits
This special topics course is designed to provide presentation of topics pertinent topics and current trends in the health information management field.
Lecture: 1-3 hours – Lab: 0 hours
Prerequisite: Varies with topic offered

HIMT 275 Intermediate Coding (W – DL) 4 credits
This course provides the students with continued experience in ICD-9-CM and CPT-4 Coding. An emphasis is placed on practical applications of professional coders. The students will code from case studies and patient medical records and participate in group discussions regarding code assignment and reimbursement issues. Note: Successful completion of the coursework in the Medical Coding Certificate required for this course.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: HIMT 245, HIMT 255, HIMT 256, and HIMT 265 with a grade of "C" or higher
Lab fee: $35.00

HIMT 276 Medical Coding Practicum (W) 3 credits
The student is assigned to a facility to gain practical experience in the area of medical coding/reimbursement. The student will obtain exposure to actual working conditions at the assigned facility. Emphasis of the practicum will be the actual coding experience.
Lecture: 1 hours – Lab: 14 hours
Prerequisite: HIMT 245, HIMT 255, and HIMT 265, ~~and~~ successful completion of all coursework in the Medical Coding certificate with a grade of "C" or higher and permission from the instructor

HIMT 290 HIM Seminar for Certificate Completers (W) 1 credit
This course is intended for students who have previously completed a practicum experience in either the Medical Coding Certificate program or the Medical Transcription Certificate program. This course is designed to provide a review for students of all the domains, tasks, and subtasks applicable to the Registered Health Information Management Technician (RHIT).
Lecture: 1 hour – Lab: 0 hours
Prerequisite: HIMT 292 and HIMT 294 with a grade of "C" or higher

HIMT 292 Clinical Practicum I (SU) 3 credits
Students are assigned to area health care facilities to work under the supervision of facility personnel. Students will obtain exposure to actual working conditions and gain experience in various aspects of health information management services. Students will meet to share clinical experiences with classmates and prepare for the RHIT certification examination.
Lecture: 1 hours – Lab: 14 hours
Prerequisite: MCT 106, HIMT 111, HIMT 121, HIMT 133, HIMT 135, HIMT 243 and HIMT 245 with a grade of "C" or higher and permission from the instructor
Corequisite: HIMT 255

HIMT 294 Clinical Practicum II (A) 3 credits
Students are provided with practical applications of the knowledge and techniques needed to perform various functions in a health information environment. Students will meet to share clinical experiences with classmates and prepare for the RHIT certification examination.
Lecture: 1 hours – Lab: 14 hours
Prerequisite: HIMT 245, HIMT 255, HIMT 257 and HIMT 292 with a grade of "C" or higher
Corequisite: HIMT 259

HIMT 296 Clinical Practicum III (W) 3 credits
Continued clinical experience in health information services. Students will meet to share clinical experiences with classmates and prepare for the RHIT certification examination.
Lecture: 1 hours – Lab: 14 hours
Prerequisite: HIMT 294 with a grade of "C" or higher

Heating Ventilating & Air Conditioning Technology (HAC)

HAC 116 Piping Systems, (W, SU) 3 credits
A comprehensive study of the UPC, water supply, water treatment, and distribution, to include waste water disposal and sanitation standards. Emphasis will be placed on 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 refrigerator systems will be discussed in detail.
Lecture: 1 hour – Lab 5 hours
Lab fee $12.00

HAC 141 Principles of Refrigeration (A, W) 4 credits
A basic refrigeration cycle theory course covering heat thermodynamics, temperature - pressure relationships, mechanical operations of refrigeration equipment and representative application and selection data for class I refrigerants.
Lecture: 3 hours – Lab: 3 hours
Lab fee: $10.00

HAC 152 Instrumentation/Combustion Process (A, W) 4 credits
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. Instruments used in energy auditing are then explained and preventative maintenance programs written.
Lecture: 2 hours – Lab: 4 hours
Lab fee: $15.00

HAC 161 Hand Tools Laboratory (A, SP) 4 credits
An entry-level course building elementary skills in brazing, soldering, threading, cutting, swaging, and other skills that relate to service, installation and maintenance processes in the HAC field. Basic hand tools and meters will be demonstrated and used in lab exercises.
Lecture: 2 hours – Lab: 4 hours
Lab fee: $15.00

HAC 183 HAC Wiring Circuits I (A, W) 4 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: 2 hours – Lab: 4 hours
Lab fee: $10.00

HAC 222 Load Calculations I (A, W) 4 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 the Right-J, Windows Version 2, computer software program.
Lecture: 2 hours – Lab: 4 hours
Lab fee: $12.00

HAC 231 Load Calculations II (W, SP) 4 credits
A course covering 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. This course is one of six that prepares the student to take the HAC Contractor's License Exam.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: HAC 222
Lab fee: $12.00

HAC 242 HAC Mechanical Standards/Safety (A, SP) 3 credits
A basic introduction to HAC safety considerations, first aid, and CPR as well as emergency procedures for on-the-job accidents. An introduction to the various codes that effect the workplace and jobsite, such as OSHA, NFPA, state and local building codes. NEC, energy codes and ASHRAE standards will also be covered.
Lecture: 2 hours – Lab: 3 hours
Prerequisites: ARCH 116, HAC 141 and HAC 152
Lab fee: $12.00

HAC 243 Air Conditioning Systems (SP, SU) 4 credits
A course 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 are 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
Lecture: 2 hours – Lab: 6 hours
Prerequisites: ARCH 116, HAC 141, HAC 161, HAC 183 and HAC 253
Lab fee: $20.00

HAC 244 Heat Pump Systems (SP, SU) 4 credits
A course designed for the student with a fundamental knowledge of the air conditioning and heating processes. Previous training in refrigeration cycle, wiring diagrams, control circuits, and tools used in the trade are necessary to enroll in this course. The course is structured around hands-on training on the various component parts of an air cycle heat pump system.
Lecture: 2 hours – Lab: 6 hours
Prerequisites: ARCH 116, HAC 141, HAC 161, HAC 183 and HAC 253
Lab fee: $20.00

HAC 253 Automatic Controls I (A, SP) 3 credits
A course introducing HAC residential and light commercial control systems and the components that make up the systems. Emphasis will be placed on operators, sensors, controllers and various pneumatic and electrical devices used in modern control systems along with the logic used to develop their control sequences.
Lecture: 2 hours – Lab: 3 hours
Prerequisites: HAC 141, HAC 152 and HAC 183
Lab fee: $20.00

HAC 254 Heating Systems (A, SU) 4 credits
A course designed for the student with a fundamental knowledge of heat transfer characteristics and air movement properties. The course is designed around 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: 2 hours – Lab: 6 hours
Prerequisites: HAC 152, HAC 161 and HAC 183
Lab fee: $20.00

HAC 256 Automatic Controls II (W, SU) 3 credits
A hands-on laboratory course designed to build practical understanding of control circuit logic and sequence of operation theory. Representative circuits from major environmental control devices employing various forms of energy will be included in the lab exercises.
Lecture: 1 hour – Lab: 5 hours.
Prerequisite: HAC 253
Lab fee: $15.00

HAC 258 Pneumatic Controls I (SU) 4 credits
This course is designed to take a senior level HAC student and teach him/her the fundamentals, installation practices and common application parameters of representative pneumatic controls systems.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: HAC 253
Lab fee: $15.00

HAC 266 Advanced Problems (A, W, SP, SU) 4 credits
A simulation that will allow the student to use their educational knowledge in a problem or problems 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. A tutorial course form must be completed by the student.
Lecture: 0 hours – Lab: 8 hours
Prerequisite: Permission of instructor
Lab fee: $8.00

HAC 284 HAC Wiring Circuits II (W, SP) 4 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: 2 hours – Lab: 4 hours
Prerequisite: HAC 183
Lab fee: $15.00

HAC 285 HAC Electronic Controls I (SU) 4 credits
This course uses basic electronic knowledge from EET 101 and EET 102, plus electrical knowledge from HAC 183 and HAC 284 to build a basic understanding of HAC solid state computer controls. This theory course will cover controllers, sensors, relays and HAC electronic operational devices.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: HAC 284
Lab fee: $10.00

HAC 287 Boiler Systems (W) 4 credits
This course uses basic combustion knowledge from HAC 152 and piping system knowledge from ARCH 116, along with codes from course HAC 242 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: 3 hours – Lab: 2 hours
Prerequisite: ARCH 116 and HAC 152
Lab fee: $10.00

HAC 288 Commercial A/C Systems (W) 4 credits
This course uses basic piping knowledge from ARCH 116, refrigeration cycle theory from HAC 141, codes from HAC 242 and control knowledge from HAC 253 to build a basic understanding of the operational theory and safe operating practices for an industrial Class II ammonia refrigera-

tion system. Entering students should have HAC 161 course content or proficiency credit before enrolling in this class
Lecture: 3 hours – Lab: 2 hours
Prerequisite: ARCH 116, HAC 141, HAC 242 and HAC 253
Lab fee: $10.00

HAC 291 Field Experience (SU) 4 credits
Off-campus work experience in heating, venting and air conditioning industry that augments formal education received in the technology with actual work conditions and job experience. "N" credit will not be allowed for this course.
Lecture: 0 hours – Lab: 40 hours
Lab fee: $15.00

HAC 299 Special Topics in Heating and Air Conditioning (on demand) 1 - 5 credits
A refresher maintenance training class covering refrigeration systems, mechanical tools and methods, heating and boilers, electrical, air handling and ventilation, controls and safety. Please see your advisor before scheduling for this course.
Lecture: varies hours – Lab: varies hours (depends upon topic)

History (HIST)

HIST 290 Capstone Experience in History (on demand) 3 credits
A capstone course focusing on History. Students will work on developing techniques and methodologies in the field of History. Students will apply these techniques to a project of their own design, and participate in summative testing of their academic skills.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: Open only to AA and AS students preparing to graduate within 2 academic quarters
Lab fee: $2.00

Hospitality Management Technology

Dietetic Technician Major (DIET)

DIET 191 Dietetic Technician Practicum I (A) 1.5 credits
Practical application of information presented in the classroom from MLT 100, HOSP 102, and HOSP 122 to related healthcare facilities. Skills are developed through supervised learning situations to understand the organizational structure of healthcare facilities and the regulations that pertain, to define the roles of dietetic practitioners, and to maintain and evaluate standards of sanitation and safety. Student must be enrolled in or have completed MLT 100, HOSP 102, HOSP 122
Lecture: 1 hour – Lab: 3.5 hours
Prerequisite: Permission of instructor
Lab fee: $60.00

DIET 192 Dietetic Technician Practicum II (W) 2 credits
Practical application of information presented in the classroom from HOSP 107 and HOSP 109 in related healthcare facilities. Skills are developed through supervised learning situations to operate and maintain foodservice equipment, to assist in food production and service, and to maintain food quality and portion control. Student must be enrolled in or have completed HOSP 107 and HOSP 109.
Lecture: 1 hour – Lab: 7 hours
Prerequisite: DIET 191 with a " C" grade or higher and permission of instructor
Lab fee: $20.00

DIET 193 Dietetic Technician Practicum III (SP) 2 credits
Practical application of information presented in the classroom from HOSP 123 and HOSP 153 in related healthcare facilities. Skills are developed through supervised learning situations to procure and store food, supplies, and equipment, to calculate food costs, to participate in quantity food production, to develop and/or test products, and to provide for the nutritional needs of customers. Student must be enrolled in or have completed HOSP123 and HOSP 153.
Lecture: 1 hour – Lab: 7 hours
Prerequisite: DIET 192 with a "C" grade or higher and permission of instructor
Lab fee: $15.00

DIET 261 Community Nutrition: A LifeCycle Approach (A) 2 credit
An introduction to community nutrition programs. Nutrition interventions targeted toward various population groups throughout the human lifecycle are identified. Food and nutrition requirements for specific age groups and cultural preferences for foods are examined. The course explores overall program goals, delivery and evaluation, target audiences, funding sources, legislation, and nutrition goals for a variety of community programs. Local, state, and federal food and nutrition programs are addressed. The various roles of the nutritionist/nutrition educator in the community setting are identified.
Lecture: 2 hours
Prerequisite: HOSP 153 with a "C" grade or higher
Lab fee: $10.00

DIET 265 Dietetic Technician Seminar (SP) 1 credit
An in-depth study of recent developments and areas of concern related to providing nutrition care. Each student will select a nutrition topic of current concern, write a research paper and present an oral report. Information about professional organizations and the ethical practice of dietetics will be discussed. A written exam to assess knowledge attained throughout the seven quarter program will be administered. A grade of "C" or higher is required for graduation.
Lecture: 1 hour
Prerequisite: DIET 298 with a "C" grade or higher and permission of instructor
Lab fee: $2.00

DIET 275 Medical Nutrition Therapy I (A) 5 credits
An introduction to the study of nutritional assessment, diet modification, and nutritional 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 and/or lifecycle-related conditions are studied. The student will identify and utilize appropriate nutritional assessment tools and techniques for specific medical and/or lifecycle-related conditions. The student will plan, prepare and/or evaluate menus, meal plans, meals, and nutritional supplements related to these diet modifications. BIO 169 or BIO 122 must be completed or taken as a corequisite.
Lecture: 4 hours – Lab: 2 hours
Prerequisite: HOSP 153 with a "C" grade or higher and permission of instructor
Lab fee: $10.00

DIET 276 Medical Nutrition Therapy II (W) 5 credits
A continuation of the study of nutritional assessment, diet modification, and nutritional care plans. The rationale for nutritional intervention and related medical conditions and terminology is presented. Calorie and protein supplemented and nutrient modified diets for a variety of medical conditions are studied. The student will identify and utilize appropriate nutritional assessment tools and techniques for specific medical conditions. The student will plan, prepare and/or evaluate menus, meal plans, meals, and nutritional supplements related to these diet modifications. BIO 169 or BIO 122 must be completed before enrolling.
Lecture: 4 hours – Lab: 2 hours

Prerequisite: DIET 275 with a "C" grade or higher and permission of instructor
Lab fee: $10.00

DIET 297 Dietetic Technician Practicum IV (A) 3 credits
Practical application of information presented in the classroom from HOSP 153 and DIET 275 in community health programs. Skills are developed through supervised learning situations to understand the services offered by community based organizations, to develop the ability to utilize their services, to meet and serve clients, to obtain and evaluate nutritional data from individuals, and to establish good working relationships with clients and other personnel. Student must be enrolled in or have completed HOSP 205, HOSP 225 and DIET 275.
Lecture: 2 hours – Lab: 7 hours
Prerequisite: DIET 193 with a "C" grade or higher and permission of instructor
Lab fee: $55.00

DIET 298 Dietetic Technician Practicum V (W) 2 credits
Practical application of information presented in the classroom from HOSP 225, DIET 275 and DIET 276 to clients in related healthcare facilities. Skills are developed through supervised learning situations to interview clients, to evaluate nutritional data collected, to understand the rationale for dietary modification for nutrient and consistency modification, to understand associated medical terminology and to assist in the planning, preparation and service of modified diet meals. Student must be enrolled in or have completed DIET 276 and HOSP 224.
Lecture: 1 hour – Lab: 7 hours
Prerequisite: DIET 297 with a "C" grade or higher and permission of instructor
Lab fee: $10.00

DIET 299 Dietetic Technician Practicum VI (SP) 2.5 credits
Practical application of information presented in the classroom from all technical courses to clients in related health care facilities. Opportunities are provided through supervised learning situations to demonstrate proficiency in client interviewing, to evaluate nutritional data, to understand associated medical terminology and the rationale for dietary intervention, and to assist in the planning, preparation and service of modified diet meals. A grade of "C" or higher is required for graduation.
Lecture: 1 hour – Lab: 10.5 hours
Prerequisite: DIET 276 and DIET 298 and permission of instructor
Lab fee: $10.00

Dietary Manager (DMGR)

DMGR 101 Dietary Manager Seminar I (A) 4 credits
A study of the types of healthcare facilities, typical healthcare organizational structures, and roles of the healthcare team members. Regulations and how they affect food service in healthcare facilities are examined. Methods and records used in purchasing, receiving, storing, preparing and serving food are explained. Management principles and employment issues are discussed. The student must have passed the ServSafe examination before enrolling.
Lecture: 4 hours
Corequisite: DMGR 194 and permission of instructor

DMGR 102 Dietary Manager Seminar II (W) 4 credits
A study of the principles for planning menus to meet the nutritional needs of people in healthcare operations. Nutrient requirements, functions and sources of nutrients, and digestion and absorption of food are studied. Diet modification for a variety of health conditions is studied.
Lecture: 4 hours
Prerequisite: DMGR 101 with a "C" grade or higher
Corequisite: DMGR 195 and permission of instructor

DMGR 103 Dietary Manager Seminar III (SP) 4 credits
Methods and records used to gather nutrition histories, to determine food needs and preferences, to establish care plans and to do charting are presented. Control measures for maintaining quality, quantity, and cost of nutrition care are discussed. Supervisory characteristics are reviewed. Facility evaluation and plans for improvement are presented. Continued professional development is emphasized. The student must earn a grade of "C" or higher to receive a certificate of completion.
Lecture: 4 hours
Prerequisite: DMGR 102 with a "C" grade or higher
Corequisite: DMGR 196 and permission of instructor

DMGR 194 Dietary Manager Cooperative Work Experience I (A) 2 credits
Supervised work related learning experiences to be performed on the job following material presented in the classroom from DMGR 101. Employment in a healthcare facility with a qualified preceptor on the staff is required.
Lab: 20 hours/week
Corequisite: DMGR 101 and permission of instructor.
Lab fee: $12.00

DMGR 195 Dietary Manager Cooperative Work Experience II (W) 2 credits
Supervised work related learning experiences to be performed on the job following materials presented in the classroom from DMGR 102. Employment in a healthcare facility with a qualified preceptor on the staff is required.
Lab: 20 hours/week
Prerequisite: DMGR 194 with a "C" grade or higher
Corequisite: DMGR 102 and permission of instructor
Lab fee: $12.00

DMGR 196 Dietary Manager Cooperative Work Experience III (SP) 2 credits
Supervised work related learning experiences to be performed on the job following materials presented in the classroom from DMGR 103. Employment in a healthcare facility with a qualified preceptor on the staff is required. The student must earn a grade of "C" or higher to receive a certificate of completion.
Lab: 20 hours/week
Prerequisite: DMGR 195 with a "C" grade or higher
Corequisite: DMGR 103 and permission of instructor
Lab fee: $12.00

Hospitality Management (HOSP)

HOSP 101 Survey of the Hospitality/Tourism Industry (A, W, SP, SU) 3 credits
A comprehensive look at the fascinating and challenging related fields in the hospitality industry: travel and tourism, lodging, food service, meeting, conventions and expositions, leisure and recreation. Customer service is emphasized, while guest speakers, field trips, and study of trade publications provide information on industry trends and career opportunities.
Lecture: 3 hours

HOSP 102 Foodservice Equipment (A, W, SP, SU) 2 credits
A course in which students will learn to operate, clean and describe preventive maintenance of commercial foodservice equipment and appy that knowledge in a laboratory setting. 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.
Lecture: 1 hour – Lab: 2 hours
Lab fee: $17.00

HOSP 106 Food Laboratory I (W, SU) 3 credits
A laboratory course for registered Chef Apprentices. The course includes preparation of stocks, soups, sauces, entrees, starches, vegetables, fruits and breakfast items. Also includes butchery, fish filleting and poultry deboning. Students will develop and cost recipes, plan menus, requisition food, and prepare menu items.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: HOSP 102, HOSP 122, and HOSP 107
Lab fee: $60.00

HOSP 107 Food Principles (A, W, SP) 5 credits
A course in basic food preparation including the terminology and definitions used and the scientific principles involved in preparing food products. The course includes a detailed study of the principles of preparation and selection criteria for all categories of foods served in foodservice operations.
Lecture: 5 hours
Lab fee: $5.00

HOSP 109 Food Production (W) 3 credits
A laboratory course in which students will produce and serve marketable food products according to standardized recipes using food production equipment in a commercial kitchen environment. The products will be served in a dining room setting, with emphasis on customer service. The principles of safety and sanitation will be applied.
Lecture: 1 hour – Lab: 7 hours
Prerequisite: HOSP 102, HOSP 122
Corequisite: HOSP 107
Lab fee: $60.00

HOSP 110 Baking Principles (A) 3 credits
A course in the fundamentals of baking terminology, principles of baking, the characteristics and functions of the main ingredients used in bakery production, and an introduction to the equipment used for baking.
Lecture: 3 hours

HOSP 111 Principles of Baking Operations (W) 3 credits
A course in the principles involved in operating a bakery department including recipe adjustment, recipe costing, purchasing of baking ingredients, storage procedures, and customer service.
Lecture: 3 hours
Lab Fee: $5.00
Prerequisite: HOSP 110, 122

HOSP 112 Basic Yeast and Quick Breads (A) 4 credits
A laboratory course in which the fundamentals of producing basic yeast-raised and quick breads are studied. White breads, rolls, variety grain breads, specialty breads, sweet yeast-raised products and quick breads are produced. Emphasis will be given to sanitation, safety, and equipment usage.
Lecture: 1 hour – Lab: 9 hours
Concurrent: HOSP 122
Lab fee: $60.00

HOSP 113 Pies and Pastries (A) 3 credits
A laboratory course in which the fundamentals of preparing a variety of pies and pastries are studied. A variety of pastry dough and fillings are produced and finishing techniques are practiced. Emphasis will be given to sanitation, safety, and equipment usage.
Lecture: 1 hour – Lab: 4 hours
Concurrent: HOSP 122
Lab fee: $60.00

HOSP 114 Advanced Breads (W) 4 credits
This course builds on the skills learned in HOSP 112 Basic Yeast and Quick Breads. Emphasis will focus on the principles and preparation of complex breads- e.g. artisan bread, Danish dough, puff dough, pâte à choux using safe and sanitary methods. Industry standard products for commercial production will be introduced.
Lecture: 1 hour – Lab: 9 hours
Prerequisite: HOSP 112
Lab fee: $60.00

HOSP 115 Cakes, Cookies & Other Desserts (W) 3 credits
A laboratory course in which the fundamentals of preparing a variety of cakes, cookies and other desserts are studied and produced utilizing both scratch and convenience techniques. Production of restaurant style desserts, along with specialty or celebration styles, will be emphasized.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: HOSP 122
Lab fee: $60.00

HOSP 116 Baked Goods and Dessert Presentation and Decoration (W) 3 credits
A laboratory course in which the styles of decorating and presenting baked goods is studied. Plate, buffet, and retail presentations are demonstrated and practiced.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: HOSP 122
Lab fee: $50.00

HOSP 122 Hospitality Sanitation and Safety (A, W, SP, SU) 3 credits
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. Examination of laws and regulations related to safety, fire, and sanitation. Students must pass the applied Foodservice Sanitation examination from the National Restaurant Association Educational Foundation. Students will receive certificates from National Restaurant Association Educational Foundation and from the Ohio Department of Health.
Lecture: 3 hours
Lab fee: $15.00

HOSP 123 Food Purchasing (A, SP) 3 credits
Provides a working knowledge of procurement methods and procedures and record keeping (manual methods and computer applications) when purchasing, receiving, and storing food, equipment and non-food supplies. Special emphasis is given to writing specifications, determining order quantities, evaluating product quality, and selecting suppliers. Field trips allow the student to see food processing operations and wholesale food markets.
Lecture: 3 hours
Prerequisite: HOSP 107 and DEV 031 or MATH 101 or MATH 102
Lab fee: $5.00

HOSP 143 Hospitality and Travel Law (A, SP) 3 credits
Provides a general knowledge of the law as it applies to the hospitality and tourism industry.
Lecture: 3 hours
Lab fee: $3.00

HOSP 145 Lodging Operations (W) 5 credits
This course provides students with a basic understanding of the lodging industry. It covers the activities of various hotel operating departments: front office, housekeeping, food and beverage, hotel purchasing, marketing, yield management, engineering, security, and hotel accounting. Emphasis will be placed on guest satisfaction.
Lecture: 4 hours – Lab: 2 hours
Lab fee: $25.00

HOSP 153 Nutrition for a Healthy Lifestyle (A, W, SP, SU - DL) 5 credits
A study of the role of nutrition in establishing, promoting and maintaining good health. The composition and functions of foods, nutrition

needs throughout the life cycle, and contemporary nutrition concerns are included in the course.
Lecture: 5 hours
Prerequisite: DEV 031 and placement into ENGL 101
Lab fee: $10.00

HOSP 154 Destination Geography (A, W) 5 credits
Geographical and cultural study of all major regions of the world with emphasis on the most popular travel destinations. Includes lodging, points of interest, customer profile and transportation types for each destination.
Lecture: 5 hours
Lab fee: $5.00

HOSP 157 Travel and Tourism Operations (W, SP) 5 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.
Lecture: 4 hours – Lab: 2 hours
Prerequisite: HOSP 154
Lab fee: $35.00

HOSP 203 Beverage Management (W, SU) 3 credits
Classification, history and control of beer, wines and spirits. Covers Ohio liquor and legal regulations, inventory control, liquor dispensing systems, cash control, drink merchandising and alcohol responsibility. The art of mixology and wine and food affinity.
Lecture: 3 hours
Lab fee: $20.00

HOSP 205 Records and Cost Control (A, SP) 4 credits
Covers the principles and procedures involved in an effective system of food, beverage, labor and sales control. Emphasizes development and use of standards and calculation of actual costs.
Prerequisite: MATH 101 OR MATH 102
Lecture: 4 hours

HOSP 206 Management Accounting for Hospitality (W) 4 credits
Covers accounting theory and use of the Uniform System of Accounting as applied to the hospitality industry. Emphasizes development and use of financial statements. Provides an overview and understanding of the need for budgets and budgeting.
Prerequisite: ACCT 106
Lecture: 4 hours
Lab Fee: $2.00

HOSP 214 International Cuisine (W, SU) 3 credits
This course focuses on the cuisines of the world. Students will research diverse countries and regions and cook from recipes that represent a variety of cultures, native foods, seasonings and flavors.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: ENGL 102, HOSP 216
Lab fee: $75.00

HOSP 216 Food Laboratory II (A, SP) 3 credits
A laboratory course to follow (HOSP 106) Food Laboratory I for registered Chef Apprentices. Proper roasting, grilling, poaching, sautéing and braising of meats, seafood and poultry with appropriate sauces. Classical preparation of consommé, bisque and cream soups. Starch and vegetable preparation. Plated desserts. Students will research and develop recipes and prepare and serve four course menus in the required amount of time.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: HOSP 106 and HOSP 107
Lab fee: $100.00

HOSP 217 Garde Manger (A, SP) 3 credits
A laboratory course including preparation and presentation of cold food items commonly produced in a garde manger station. Students will prepare garnishes, appetizers, salads, sandwiches, marinades, relishes, cold sauces and forcemeat items. An introduction to ice carving. Buffet presentation, including platters, bowls and plates, and culinary show guidelines and practices are covered.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: Permission of instructor/chair
Lab fee: $75.00

HOSP 218 Fundamentals of Baking (W, SU) 3 credits
Includes the fundamentals of baking and functions of ingredients with production of baked goods and dessert specialties. Proper use and care of equipment, as as well as principles of safety and sanitation are emphasized.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: Permission of instructor/chair
Lab fee: $50.00

HOSP 219 Food Production Management (SP) 4 credits
A capstone laboratory course in which application of foodservice management will occur in a simulated restaurant. 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: 1 hour – Lab: 8 hours
Prerequisite: Permission of instructor/chair
Lab fee: $60.00

HOSP 224 Hospitality Supervision and Quality Management (W, SU) 5 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: 5 hours
Prerequisite: BMGT 102
Lab fee: $5.00

HOSP 225 Menu Development (A, SP) 3 credits
Principles of menu planning for a variety of foodservice operations. Includes merchandising techniques, layout and design, and pricing strategies. Consideration is given to food selection; nutritional requirements; food, labor, and other costs; equipment utilization, and computer application.
Lecture: 3 hours
Prerequisite: HOSP 153 and HOSP 107
Lab fee: $5.00

HOSP 246 Hospitality Sales and Marketing (A, SP) 3 credits
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. Includes the basic knowledge and skills necessary to work within a hospitality or tourism organization's marketing plan.
Lecture: 3 hours
Lab fee: $5.00

HOSP 257 Computer Reservations Systems (W, SP – DL) 3 credits
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 (Release 15) will be used to develop student skills in the utilization of the American Airlines SABRE 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: 1 hour – Lab: 5 hours
Prerequisite: HOSP 157 and CIT 101
Lab fee: $40.00

HOSP 271 Meeting Planning & Catering Services (W, SU) 3 credits
Principles of and practice 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 satisfaction is measured.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: HOSP 122 and ENGL 101
Lab fee: $20.00

HOSP 273 Casino and Gaming Operations (on demand) 3 credits
Covers the history of the gaming industry from its beginning to today. Familiarize student with gaming trends. Emphasize the operation and management of the gaming and casino industry. Upon completion of this course, the student should see the intricate workings of all departments necessary in a casino organization to include marketing, accounting and finance, and customer relations.
Lecture: 3 hours
Lab fee: $5.00

HOSP 286 Apprenticeship Final Project (SU, W) 2 credits
A capstone course required for students registered in the three years American Culinary Federation National Apprenticeship Training Program. Preparation for and completion of national practical and written examinations. Evaluation of 6000 hours on-the-job training and documentation of completion of all required training objectives.
Lecture: 2 hours
Prerequisite: Permission of instructor/chair
Lab fee: $80.00

HOSP 291 Hospitality Cooperative Work Experience I
(A, W, SP, SU) 1-3 credits
Work experience in the hospitality/tourism industry. A minimum of 200 hours will be spent in cooperative work experience, with one classroom hour per week in an on-campus seminar. This course is designed for Travel/Tourism/Hotel Management and Foodservice/Restaurant Management majors.
Lecture: 1 hour – Lab: 20 hours
Lab fee: $10.00

HOSP 292 Hospitality Cooperative Work Experience II
(A, W, SP, SU) 3 credits
A continuation of HOSP 291. Work experience in the hospitality/tourism industry. A minimum of 200 hours will be spent in cooperative work experience, with one classroom hour per week in an on-campus seminar. This course is designed for Travel/Tourism/Hotel Management and Foodservice/Restaurant Management majors.
Lecture: 1 hour – Lab: 20 hours
Prerequisite: HOSP 291
Lab fee: $10.00

HOSP 293 Hospitality Cooperative Work Experience I
(A, SP) 3 credits
Work experience in the hospitality/tourism industry. A minimum of 200 hours will be spent in cooperative work experience, with one classroom hour per week in an on-campus seminar.
Lecture: 1 hour – Lab: 20 hours
Prerequisite: Chef Apprentice major
Lab fee: $80.00

HOSP 294 Hospitality Cooperative Work Experience II
(A, SP) 3 credits
A continuation of HOSP 293. Work experience in the hospitality/tourism industry. A minimum of 200 hours will be spent in cooperative work experience, with one classroom hour per week in an on-campus seminar.
Lecture: 1 hour – Lab: 20 hours
Prerequisite: HOSP 293 and Chef Apprentice major
Lab fee: $80.00

HOSP 295 Hospitality Cooperative Work Experience III
(A, SP) 3 credits
A continuation of HOSP 293 and HOSP 294 required for third year chef apprentices. On-the-job training in the foodservice industry following guidelines of the American Culinary Federation National Apprenticeship Training Program. One classroom hour per week will be spent in an on-campus seminar.
Lecture: 1 hour – Lab: 20 hours
Prerequisite: Permission of instructor/chair
Lab fee: $80.00

Human Resources Management Technology (HRM)

Note: Courses taught at a distance [Distance Learning (DL)] may have higher lab fees than traditionally taught courses

HRM 121 Human Resources Management
(A, W, SP, SU - DL) 4 credits
An introductory course in Human Resources Management, including the philosophy, principles, and legal aspects of human resources management; and the roles of the manager and the human resources professional/department in this management function. The course focuses on the laws governing policymaking, recruiting, selection, training, evaluation, wage and salary administration, benefit programs, representation, and safety; and the employer's obligations and the employee's rights under these laws. Students use the Internet to research human resources issues. ***Distance Learning Students:*** Course content is provided on rental audio lecture tapes obtained from the ERC with paid fee receipt. Other course materials are provided in a packet mailed prior to the beginning of the quarter, and graded assignments are returned via mail. The fees for the rental audio tapes and course mailings are included in the distance learning lab fee.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: BMGT 111 or LAWE 252 (Law Enforcement students only) or BMGT 218 (Logistics students only), and ENGL 102
Lab fee: $10.00
Distance Learning Lab fee: $40.00

HRM 122 Human Resource Policy and Procedure Writing
(W, SU) 4 credits
The course provides an in-depth study of employment law, the recruiting process, and the selection process; a review of business grammar through the use of a programmed learning text; a transition from "term paper writing" to formal policy writing; and the application of employment law, business grammar, and policy writing skills through the development of an employment policy, procedure, and an employee handbook summary of the policy. The course is offered at night Winter Quarters and during the day Summer Quarters.
Lecture: 2 hours – Lab: 5 hours
Prerequisite: HRM 121 with a minimum grade of "C", OADM 101 with a minimum grade of "C", CIT 102, and ENGL 102
Lab fee: $10.00

HRM 124 Personnel Interviewing (A, W, SP, SU) 4 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, counseling, disciplinary, exit, and performance appraisal interview simulations. Interviewing techniques and skills are evaluated

using videotape playback.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: HRM 121 (BMGT and HRM Technology students only) and COMM 105 or COMM 110
Lab fee: $10.00

HRM 220 Labor Relations (A, W, SP, SU - DL) 5 credits
The course provides a study of labor relations including: the history of the labor movement, the legislative history, and in-depth study of the four major pieces of private sector collective bargaining legislation; a discussion of the State of Ohio collective bargaining law; and the union organizing process and management responses, the collective bargaining process, the grievance process, the 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, third step grievance meeting, and grievance arbitration simulations. ***Distance Learning Students:*** Course content is provided on rental audio lecture tapes obtained from the ERC with paid fee receipt. Other course materials are provided in a packet mailed prior to the beginning of the quarter, and graded assignments are returned via mail. The fees for the rental audio tapes and course mailings are included in the distance learning lab fee.
Lecture: 3 hours – Lab 4 hours
Prerequisite: HRM 121 and MATH 101 or MATH 103
Lab fee: $10.00
Distance Learning Lab fee: $40.00

HRM 221 Staffing Under the Law (A, SP) 5 credits
The course provides an in-depth study of the laws governing discrimination in employment, affirmative action, sexual and other forms of harassment, discipline, termination, and safety, and the application of these laws through the development of policies, procedures, rules, regulations, and summary postings for the organization. The course is offered in the afternoon during Autumn Quarters and at night during Spring Quarters.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: HRM 121, HRM 122 with a minimum grade of "C", CIT 102, and MATH 135
Lab fee: $10.00

HRM 222 Monetary Compensation (A, SP) 4 credits
The course provides an in-depth study of the history, principles and theories of a compensation package; the laws governing monetary compensation, and the application of these principles, theories and laws through the development of internal and external equity in monetary compensation, and the development of monetary compensation policies and procedures. The course is offered in the afternoon during Autumn Quarters and at night during Spring Quarters.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: HRM 121, HRM 122 with a minimum grade of "C", CIT 102, MATH 135
Corequisite: HRM 223
Lab fee: $10.00

HRM 223 Benefits/Non-Monetary Compensation (A, SP) 4 credits
The course provides an in-depth study of the history, principles, and theories of benefits and non-monetary compensation; the development of external equity in benefit packages, the value of benefit programs to an organization; and the laws governing benefits. Students learn the application of these principles, theories, and laws through the development of plan descriptions for benefit programs such as health, life, disability, pension/retirement, pay for time not worked, and policies and procedures for the implementation of benefits required by law. The course is offered in the afternoon during Autumn Quarters and at night during Spring Quarters.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: HRM 121, HRM 122 with a minimum grade of "C", CIT 102, and MATH 135.
Corequisite: HRM 222
Lab fee: $10.00

HRM 224 Human Resources Information Systems (W, SU) 3 credits
The course provides an in-depth study of the records governing the employment relationship required by the federal and state laws and the legal aspects of those records; and 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. The course is offered at night Winter Quarters and during the day Summer Quarters.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: HRM 121, HRM 122 with a minimum grade of "C", and CIT 102
Lab fee: $10.00

HRM 225 Alcohol and Drugs in the Workplace (W, SU) 2 credits
The course provides the student in the Human Resources Management technology with an overview of alcohol and drug use as they relate to contemporary workplace issues. Students explore the impact of drugs of abuse on the individual, family and society**;** signs and symptoms indicative of alcohol and drug use and abuse; response models, and resources available to persons with chemical dependency and their families. There is emphasis on the Drug Free Workplace Act, Employee Assistance Programs, and drug testing. Students demonstrate their understanding by developing a Drug Free Workplace Policy. The course is offered at night Winter Quarters and during the day Summer Quarters.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: HRM 121 and HRM 122 with a minimum grade of "C"
Lab fee: $4.00

HRM 240 Administration of Human Resources Management (W, SU) 5 credits
As a part of the capstone sequence for the Human Resources Management Technology, the course provides a hands-on application environment wherein students serve as a "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 two to four individual projects, in the major topic areas (employment, compensation, benefits, performance appraisal, discipline, safety, and training), in the form of presentations, the development of policies and/or procedures as appropriate to the presentation, and the development/securing of documents as appropriate to the presentation. As a group students review, revise, and approve or reject policy, procedure, and program recommendations made by the presenter. The course is offered only at night both Winter and Summer Quarters.
Lecture: 0 hours – Lab: 10 hours
Prerequisite: HRM 124 with a minimum grade of "C", HRM 220-225 with a minimum grade of "C", and CIT 137
Lab fee: $5.00

HRM 242 Human Resources Management Practicum (A, W, SP, SU) 4 credits
As a part of the capstone sequence for the Human Resources Management Technology, the course provides a guided work experience 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.
Lecture: 0 hours – Lab: 28 hours
Prerequisite: HRM 124, HRM 220-225, CIT 137, and permission of the HRM Technology, Program Coordinator **requested 2 QUARTERS in advance**
Corequisite: HRM 243
Lab fee: $2.00

HRM 243 Human Resources Management Practicum Seminar (A, W, SP, SU) 2 credits
As a part of the capstone sequence for the Human Resources Management Technology, the course provides for a seminar discussion of the work

experience; and demonstration of the ability to transfer program skills to a real world work environment through the development of work related projects and assignments.
Lecture: 0 hours – Lab: 4 hours
Prerequisite: HRM 124, HRM 220-225, CIT 137, and permission of the HRM Technology, Program Coordinator **requested 2 QUARTERS in advance**
Corequisite: HRM 242
Lab fee: $1.00

Humanities (HUM)

Students who enroll in humanities courses must have placed in ENGL 101 and are encouraged to either have completed ENGL 101 or be enrolled in that course when scheduling a humanities course.

HUM 111 Civilization I (A, W, SP, SU – DL) 5 credits
A survey of the culture, ideas, and values of human civilization from their origins in the Ancient World through the 15th Century. Emphasis is on the intellectual and artistic achievements of the ancient Middle East, Classical Greece and Rome, the Christian and Arab/Islamic Middle Ages, and Renaissance Italy showing how culture reflects and influences economic, social and political development. Students are exposed to the creative process by reading from primary works of literature and philosophy and critically reviewing works of art, music, theater and dance, both in and out of class. Classes meet three hours per week in small groups for lecture and discussion and in combined sections for two hours per week for group cultural experiences.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $8.00

HUM 112 Civilization II (A, W, SP, SU – DL) 5 credits
A study of the development of the culture, ideas, and values of the early modern world. Emphasis is on the Protestant Reformation, initial contacts between Europe and other cultures, the rise of modern science, the Enlightenment, the American and French Revolutions, the Industrial Revolution, Baroque, Classical, and Romantic styles in art, music and literature and the revolutionary theories of Karl Marx. Students are exposed to the creative process by reading from primary works of literature and philosophy and critically reviewing works of art, music, theater and dance, both in and out of class. Classes meet three hours per week in small groups for lecture and discussion and in combined sections for two hours per week for group cultural experiences.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $8.00

HUM 113 Civilization III (A, W, SP, SU – DL) 5 credits
A survey of the triumphs and failures of modern culture, ideas, and values from 1850 to the present. Emphasis is on the conflicts and contradictions between the prevailing spirit of Liberalism, Capitalism, Nationalism and Imperialism from the perspective of the European and non-European worlds, the crises of Western capitalism and democracy and the Fascist and Communist responses, and the major issues confronting world civilization at the turn of the 21st Century. Students are exposed to the creative process by reading from primary works of literature and philosophy and critically reviewing works of art, music, theater and dance, both in and out of class. Classes meet three hours per week in small groups for lecture and discussion and in combined sections for two hours per week for group cultural experiences.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $8.00

HUM 151 American Civilization to 1877 (A, W, SP, SU) 5 credits
A survey of American History from settlement through the Civil War and Reconstruction. The course places major emphasis on the relationship between historical events and the literature, art, music, major ideas and popular culture, which made up the American intellectual tradition. Students are exposed to the creative process by reading from primary works of literature and philosophy and critically reviewing works of art, music, theater and dance, both in and out of class.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $8.00

HUM 152 American Civilization Since 1877
(A, W, SP, SU) 5 credits
A survey of the development of the United States from a frontier society to an industrial world power in the 20th century. The course places major emphasis on the relationship between historical events and the literature, art, music, major ideas and popular culture, which have made up the American intellectual tradition. Students are exposed to the creative process by reading from primary works of literature and philosophy and critically reviewing works of art, music, theater and dance, both in and out of class.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $8.00

HUM 222 Classical Mythology (A, W, SP, SU - DL) 5 credits
An introduction to the world of mythology, the human and the supernatural, the real and the fantastic through a 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 expressions of mythical themes in literature and art.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $3.00

HUM 224 African-American History from Emancipation
(on demand) 5 credits
A survey of African-American History from the Civil War to present. Emphasis will be placed on the struggle for political, social and economic freedom as well as the contributions of African-Americans to the music, art, and literature of the United States. Meets Humanities requirement for AAS students.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $3.00

HUM 245 Music and Art Since 1945 (on demand) 5 credits
A survey of the styles and subject matter of important contemporary works of music and visual art. Students will examine the wide spectrum of aural and visual expression that has developed since the Second World War such as aleatoric music, electronic music, abstract expressionism, performance art, pop and op art, minimalism, etc. Students will also examine the major intellectual and social issues of the day and the relationship between these issues and the styles and expressive content of contemporary music and art.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $3.00

HUM 251 Latin American Civilization (on demand) 5 credits
A general introduction to the history and cultures of Latin America through the study of literature, film and primary historical texts. The course will employ an interdisciplinary approach to explore the relationship between culture and the major historical, political, and socio-economic developments in Latin America from 1492 to the present.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $3.00

HUM 252 The Islamic World and the Middle East (on demand) 5 credits
A survey of Islamic civilization from the birth of Mohammad to the destruction of the Ottoman Empire in the 20th century. Emphasis is placed on developing an understanding of the nature and diversity of the Islamic religion, an appreciation of the great cultural achievements of medieval Islam, and an awareness of the complexities of the problems of the contemporary Middle East. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and distributive transfer requirements in history, social sciences, and non-western studies.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $3.00

HUM 253 History of China and Japan (on demand) 5 credits
A survey of the economic, social, political, and cultural development of China and Japan from earliest times to present. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and distributive transfer requirements in history, social sciences, and non-western studies.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $2.00

HUM 254 Introduction to African Literature (on demand) 5 credits
A general survey of sub-Saharan African literature including the oral traditions that formed its background. Students will examine traditional African artistic expressions such as dance, drama, poetry and short story as well as novels produced by European-educated writers. Students will read literary texts originally written in English or in English translation.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $3.00

HUM 270 Comparative Religions (A, W, SP, SU) 5 credits
Introduction to the study of religion through a historical overview and comparison of the major world religions of Judaism, Christianity, Islam, Buddhism, and Hinduism through readings in their sacred texts in translation. Attention will be focused on the concepts, categories, theories, and methods used by the various religious disciplines and how each of them addresses basic issues of the human condition. Also included will be an examination of Sectarianism and contemporary sects in America and the World. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and distributive transfer requirements in comparative studies, religion, and philosophy.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $3.00

HUM 290 Capstone Experience in the Humanities (on demand) 3 credits
A capstone course focusing on synthesis among the disciplines of the Humanities, including but not limited to, history, classics, art history, music history and philosophy. Students will work on developing research techniques and methodologies and will apply these techniques to a project of their own design.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: Open only to AA and AS students preparing to graduate within 2 academic quarters.
Lab fee: $2.00

HUM 299 Special Topics in Humanities (on demand) 1 to 5 credits
Special topics from the Humanities discipline designed to meet specific needs.
Lecture: variable hours – Lab: 0 hours
Lab fee: $2.00

Interactive Multimedia (IMMT)

IMMT 100 Digital Literacy (DL) 2 credits
This course provides students an interdisciplinary approach to understanding how to evaluate and create digital media. Major areas of emphasis include how digital information/media is created, organized and accessed; how to evaluate the reliability of websites and information sources; basics of how to create and manipulate digital media including digital photography, digital video, scanning and the fundamentals of Web site design. In step-by-step tutorials, students will learn how to download text, images, sounds, video, data and software from the Internet. NOTE: This course is an introduction to these topics; subsequent course offerings are available for those who want to learn more.
Lecture: 1 hour – Lab: 2 hours
Prerequisites: None
Lab Fee: $20.00

IMMT 101 The World of Multimedia (A, W, SP, SU – DL) 4 credits
This is the first of the two course series introducing students to the products, tools, and environment of the interactive multimedia profession. This first course covers elements of communication, marketing, the Internet, web development, digital media and graphic design. This course relies on industry web sites to bring state-of-the-art information directly to the student in a timely manner.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: None
Lab fee: $20

IMMT 111 The Digital Revolution (A, W, SP, SU) 4 credits
The second of a two course series that expands on the required disciplines needed to function in the interactive multimedia profession. The primary focus in this course centers on the design, software and scripting of the multimedia project. This course details how these disciplines are related to professional job responsibilities and the other team members.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: IMMT 101
Lab fee: $10

IMMT 121 Introduction to Multimedia (A – DL) 2 credits
This is the first of the two course series introducing students to the products, tools and environment of interactive multimedia. This first course covers elements of communication, marketing, digital media, the Internet, web development and the interactive design process. This course is not intended for Interactive Multimedia majors.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: None
Lab Fee: $30.00

IMMT 122 Digital Media Preparation (W – DL) 2 credits
This is the second of the two course series on 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 Multimedia majors.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: IMMT 121
Lab Fee: $33.00

IMMT 150 Introduction to Audio/Video Production (A, SP) 4 credits
This course deals with the use of audio and video production techniques to prepare output for various multimedia formats (e.g. DVDs, PDAs, interactive CDs, etc.) so as to achieve integrated marketing communications goals. Students are introduced to basic theories and practices of audio and video production. The audio component includes the use of microphones, mini disc recorders, mixing consoles, and digital audio workstations for a variety of sound collection and processing applications. The video component introduces basic concepts and skills in digital video productions

and non-linear video editing. Students will learn the theory and practice of digital non-linear editing, including edit list management, off-line and on-line editing techniques.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: IMMT 101, IMMT 111
Lab Fee: $36.00

IMMT 151 Intermediate Audio Production (W) 4 credits
This course 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: 4 hours
Prerequisite: IMMT 150
Lab Fee: $36.00

IMMT 152 Intermediate Video Production (W) 4 credits
This course is designed to help students develop an understanding of the relationship of video production to various related media including multimedia and broadcast. Image capture, digitizing, and editing at a digital workstation will be highlighted.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: IMMT 150, IMMT 153, GRPH113
Lab Fee: $36.00

IMMT 153 Formatting & Screenwriting for Digital Video and Audio (A, SP) 3 credits
This course deals with 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.
Lecture: 3 hours – Lab: 0 hours
Prerequisites: ENGL 101, ENGL 102, IMMT 101
Lab Fee: $22.00

IMMT 155 Advanced Audio Production (SP) 4 credits
This course 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: 4 hours
Prerequisite: IMMT 151
Lab Fee: $20.00

IMMT 156 Advanced Video Production (SU) 4 credits
This course is designed to expand student understanding of the relationship of video production to various related media including multimedia and broadcast. Advanced skills in image capture, digitizing, and editing at a digital workstation will be developed upon through the development of comprehensive video projects for internal and non-profit organizations.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: IMMT 152
Lab Fee: $20.00

IMMT 213 Designing an eCommerce Website (A, SP) 4 credits
E-Commerce, a frequently used word in the area of business. This course covers not just the why, but also the practical application of creating a shopping cart. Looking at multiple service providers and how they relate to a cart. Setting up, creating and implementing a working shopping cart will be the final goal of the course.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: IMMT 101, IMMT 111
Lab fee: $30.00

IMMT 214 Web Database Development (W) 4 credits
This course introduces students to the concepts of a relational database. Students learn how to open, access and add records to an ecommerce website. Querying databases is a focus of the course. Students are required to complete a website that includes a functional database within it.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: IMMT 101, IMMT 111
Lab fee: $30.00

IMMT 216 Dynamic Graphics (A, W, SP, SU) 4 credits
Image input, storage and retrieval using the industry standard Adobe Photoshop/Image Ready are the focus of this course. Each electronic photograph must be handled from digitization, through augmentation and final storage or utilization phases. Files will be transported over the internet utilizing industry-standard file compression and transmission technologies.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: IMMT 101. IMMT 111, GRPH 112, GRPH 251
Lab fee: $30.00

IMMT 217 Video Graphics Editing (W, SU) 4 credits
The basic principles of digital video are presented. Course covers the standards and methods for recording/editing and the interconnection of digital video. Concepts of digital conversation, video coding and processing, and digital audio with video are presented.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: IMMT 101, IMMT 111
Lab fee: $33.00

IMMT 231 Creating Vector Graphics (A, SP, SU) 4 credits
This course presents students with content and application for the vector graphic areas in multimedia. Specifically, instruction, demonstration and student projects will focus on such illustration software applications as Macromedia Freehand for creation of two dimensional vector illustrations.
Lecture: 2 hours – Lab: 4hours
Prerequisite, IMMT 101, IMMT 111, GRPH 112
Lab fee: $33.00

IMMT 236 Designing in 3rd Dimension (W, SP) 4 credits
This course provides students with an overview of how to model, render, light, and animate in 3D environments using industry standard software. Topics covered include environment navigation, primitive geometry construction, basic lofting, modifier based editing, parametric editing, texture creation, basic texture mapping, basic lighting, particle systems, and basic keyframe animation, Web design and 2D editing tools are also integrated in the course material. Maya software is used in this class.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: IMMT 101, IMMT 111
Lab fee: $36.00

IMMT 237 Beginning Flash [Design] (A, SP) 4 credits
This course provides the students with an overview of how to begin, storyboard, create and design a fully functional Flash Website. This course surveys the major sources of businesses that use the software Macromedia Flash. 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.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: IMMT 216, IMMT 231
Lab fee: $33.00

IMMT 238 Intermediate Flash [Development] (W) 4 credits
This course covers the gaming industry, careers, and the basic terminology. Topics include history of gaming; an industry overview; career paths, the state of the job market, and the skills needed for various jobs; (http://www.igda.org/breakingin) genres and platforms; societal issues; the study of

games and "play"; the future of gaming; development of design, teamwork, business, and production skills all using the Flash application.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: IMMT 237
Lab fee: $33.00

IMMT 239 Advanced Flash [Advanced Scripting] (A) 4 credits
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. The purpose of the course is to teach the core concepts of scripting as they apply to multimedia and web development. The course will use Javascript and HTML to illustrate these concepts. Using HTML and JavaScript, students will learn how to develop visually intriguing interactive sites, and how to create HTML forms and write CGI scripts.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: IMMT 238, GRPH 251
Lab fee: $33.00

IMMT 250 Document Transfer Using Acrobat (A, SP – DL) 2 credits
Adobe Acrobat facilitates the creation of PDF documents the industry-standard format for cross platform document delivery. This course will present an overview of Adobe Acrobat, its use and application in production, with emphasis on generating Acrobat PDF files for integration and delivery in a prepress environment and on the Web. Students must have access to Adobe Acrobat 6.0 software (not just the reader).
Lecture: 2 hours – Lab: 0 hours
Lab Fee: $ 22.00

IMMT 251 Multimedia Practicum (A, W, SP, SU – DL) 4 credits
Supervised on-the-job application of knowledge and skills acquired in the classroom. Internship applications must be filed with the Department at least 2 months prior to internship start date.
Lecture: 0 hours – Lab: 28 hours
Prerequisite: IMMT 101, IMMT 111, IMMT 216, and permission of instructor; contact the Marketing and Graphic Communication Department for details
Corequisite: IMMT 252
Lab fee: $3.00

IMMT 252 Seminar on Multimedia Production (A, W, SP, SU – DL) 2 credits
Application of business knowledge to specific areas of on-the-job practicum experience.
Internship applications must be filed with the Department at least 2 months prior to internship start date.
Lecture: 0 hours – Lab: 4 hours
Prerequisite: IMMT 101, IMMT 111, IMMT 216. Permission of Instructor; contact the Marketing and Graphic Communication Department for details.
Corequisite: IMMT 251
Lab fee: $3.00

IMMT 262 Building Hierarchical Websites (W, SP, SU) 4 credits
This course provides the student with an overview of how to begin, storyboard, create and design a fully functional website. The software Macromedia 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, using Dreamweaver as an authoring tool, understanding and applying Dreamweaver's expanded scripting capabilities.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: IMMT 101, IMMT 111, IMMT 211, IMMT 216, IMMT 231, IMMT 236, IMMT 237, IMMT 261
Lab fee: $30.00

IMMT 271 Interactive Portfolio Development (A, SP) 4 credits
Macromedia Director, the industry standard for multimedia, is used to create many of today's top-selling interactive titles. The information and exercises takes students from beginner status to authoring their own Interactive CD resume for external use in locating a professional job.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: IMMT 237
Lab fee: $33.00

IMMT 280 Basic Flash 3 credits
Flash is used to create beautiful, resizable, and extremely small and compact navigation interfaces, technical illustrations, long-form animations, and other effects for Web sites and other Web-enabled devices (such as Web TV). Flash graphics and animations are created using the drawings tools in Flash or by importing artwork from vector illustration tools, such as Macromedia FreeHand. In this hybrid (one 8-hour day plus web component) curriculum, students will learn how to create artwork with Flash, how to animate artwork, and how to make interactive movies. This course cannot be substituted for required technical courses in the Interactive Multimedia degree but may be used to fulfill a technical elective.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: Permission of Instructor; contact the Marketing and Graphic Communication Department for details. webtech@cscc.edu; (614) 287-5010.
Lab fee: $33.00

IMMT 281 Intermediate Flash 3 credits
This course is designed for the Flash developer who has already achieved an intermediate level of proficiency in Flash (recommended). The hybrid (one 8-hour day plus web component) curriculum contains 9 Units to help developers master the powerful programming elements of Flash. This course cannot be substituted for required technical courses in the Interactive Multimedia degree but may be used to fulfill a technical elective. It is strongly suggested that students be familiar with Basic Flash before taking this course.
Lecture: 1 hour - Lab: 4 hours
Prerequisite: Permission of Instructor; contact the Marketing and Graphic Communication Department for details. webtech@cscc.edu; (614) 287-5010.
Lab fee: $33.00

IMMT 283 Dreamweaver 3 credits
This course introduces students to Dreamweaver by guiding them step by step through the development of sample web projects. In this hybrid (one 8-hour day plus web component) curriculum, students will learn to create basic HTML pages by formatting text, inserting images, and setting links, and learn to use high-end features such as Dynamic HTML, Cascading Style Sheets, XML, etc. This course cannot be substituted for required technical courses in the Interactive Multimedia degree but may be used to fulfill a technical elective.
Lecture: 1 hour - Lab: 4 hours
Prerequisite: Permission of Instructor; contact the Marketing and Graphic Communication Department for details. webtech@cscc.edu; (614) 287-5010.
Lab fee: $30.00

IMMT 286 Illustrator 3 credits
Illustrator is an extremely powerful graphics program capable of creating complex illustrations and text effects. In this hybrid (one 8-hour day plus web component) curriculum, students are exposed to the basic skills that will allow them to take advantage of Illustrator's powerful tools, learn how to navigate in Illustrator, and explore the use of drawing tools and text. This course cannot be substituted for required technical courses in the Interactive Multimedia degree but may be used to fulfill a technical elective.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: Permission of Instructor; contact the Marketing and Graphic

Communication Department for details. webtech@cscc.edu; (614) 287-5010.
Lab fee: $33.00

IMMT 290 PhotoShop and ImageReady 3 credits
In this hybrid (one 8-hour day plus web component) curriculum, students will learn how to use several Photoshop tools for selecting parts of images, move, duplicate, and resize images. The course also covers how to use and apply layer effects and filters to create special effects, including lighting and texture effects. The use of painting tools and blending modes to create shading effects is covered as well as how to use color reduction algorithms to select colors from the Web palette.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: Permission of Instructor; contact the Marketing and Graphic Communication Department for details. webtech@cscc.edu; (614) 287-5010.
Lab fee: $30.00

IMMT 292 Acrobat Professional 3 credits
This course familiarizes students with the basics of After effects. Students will explore the After Effects environment and become familiar with the tools available. In this hybrid (one 8-hour day plus web component) curriculum, students will create basic shapes, draw paths with the pen tool, and work with text. Students will also work with colors and gradients and experiment with object layers. Finally, students will create a basic animation and experiment with motion paths, color changes, and rollovers.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: Permission of Instructor; contact the Marketing and Graphic Communication Department for details. webtech@cscc.edu; (614) 287-5010.
Lab fee: $30.00

IMMT 294 ColdFusion 3 credits
In this hybrid (one 8-hour day plus web component) curriculum, students are introduced to concepts related to the development of web pages using ColdFusion. Designed for future expert web developers, this course covers the following topics: application frameworks, databases, directories and files, e-mail, flow-control, functions, interacting with remote servers, output and formatting, re-using code, and variables. It is strongly suggested that students be familiar with Dreamweaver before taking this course.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: Permission of Instructor; contact the Marketing and Graphic Communication Department for details. webtech@cscc.edu; (614) 287-5010.
Lab fee: $33.00

IMMT 297 Special Topics in Interactive Multimedia (on demand) 1-6 credits
Detailed examination of selected topics in Interactive Multimedia.
Lab fee: $3.00

Interpreting /ASL Education (ITT)

ITT 110 Introduction to Interpreting/Transliterating (A) 3 credits
This course is designed to provide students with an overview of the field of interpreting. Topics of study include a historical overview, terminology, interpreter's role, ethics, and career options.
Lecture: 3 hours – Lab: 0 hours
Prerequisite Acceptance into the ITT program after attending one Mandatory Information Session with the program coordinator and completing application
Corequisite: ITT 143
Lab fee: $5.00

ITT 111 Introduction to the Deaf Community (A , SP) 5 credits
This course is designed to provide students with an overview of the D/deaf community. It focuses on the following areas: social, cultural and education experiences. This course also examines employment, local services available to the D/deaf community, and majority culture's myths and misconceptions of the deaf community. This class is an Entrance Requirement for admission into the Interpreting Associate's Degree program.
Lecture: 5 hours – Lab: 0 hours
Lab fee: $5.00

ITT 120 Lexical Analysis and Development for Interpreters (SU) 3 credits
This course focuses on analyzing English and ASL lexical items as they pertain to creating meaning. Topics of study will include vocabulary expansion, English grammar, and thinking beyond ASL gloss. Various aspects of language, such as idioms, slang, and euphemisms will also be developed.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ITT 145 and ITT 212, ITT 201 with a grade of "C" or better
Corequisite: ITT 149 and ITT 202
Lab fee: $10.00

ITT 121 Legal and Ethical Aspects of Interpreting/Transliterating (SP) 3 credits
This course looks at applying the RID Code of Ethics to the interpreting situation. Analysis of professional ethics, confidentiality vs. privilege, legal liability, and the role of the interpreter are all covered.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ITT 204 with a grade of "C" or better
Corequisite: ITT 123
Lab fee: $5.00

ITT 123 Specialized Interpreting/Transliterating (SP) 4 credits
This course introduces the student to special vocabulary, skills, and knowledge needed to interpret in special situations. It looks at ethical considerations of these settings as well. Some of these situations include artistic interpreting, interpreting for deaf/blind persons, interpreting in medical settings, and oral interpreting.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: ITT 204 and 212 with a grade of "C" or better
Corequisite: ITT 121
Lab fee: $5.00

ITT 129 Current Research & Theory of Interpreting (WI) 3 credits
As interpreting students begin to learn the skill of interpreting, their knowledge of current interpreting theory is critical. The most relevant and up-to-date research will be examined and discussed as it applies to the profession. Topics will include models of interpreting, processing, prosody, and discourse analysis.
Prerequisites: ITT 110 with a grade of "C" or better
Corequisite: ITT 211, ITT 144
Lab Fee: $10

ITT 130 Fingerspelling (W, SU) 2 credits
This course offers students the opportunity to work on expressive and receptive fingerspelling. The emphasis of this course is on using fingerspelling in context. Opportunities are provided for the students to work with videotaped materials as well as live models.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: ITT 141
Corequisite: ITT 142
Lab fee: $5.00

ITT 141 American Sign Language I (A, SP) 5 credits
This course begins with a series of visual readiness activities as a way of introducing the students to and preparing them for a language in a visual modality. The course utilizes a practical approach to teaching vocabulary,

grammar, and the cultural aspects through "real life" conversational experiences. The student is further acclimated to the new modality of this language via classroom experiences conducted without voice. 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 Interpreting Associate's Degree program.
Lecture: 4 hours – Lab: 2 hours
Lab fee: $10.00

ITT 142 American Sign Language II (W, SU) 5 credits
ASL II, as a continuation of ITT 141, further acclimates the students to the visual/gestural modality of this language. The course utilizes a practical approach to teaching vocabulary, grammar, and cultural aspects through "real life" conversational experiences. More attention is given to the student's production of the language than in ITT 141, while receptive /comprehension skills continue to be emphasized. Additional information about the Deaf Community is introduced via outside readings, class discussions and participation in cultural experiences. This class is an Entrance Requirement for admission into the Interpreting Associate's Degree program.
Lecture: 4 hours – Lab: 2 hours
Prerequisite: ITT 141 with a grade of "C" or better
Lab fee: $10.00

ITT 143 American Sign Language III (A, SP) 5 credits
ASL III provides the students with additional opportunities to expand their ability to produce and comprehend the language as used in everyday conversational settings. Students continue to recognize the fact that communication is governed by culturally bound rules as they continue to study the culture of the Deaf Community.
Lecture: 4 hours – Lab: 2 hours
Prerequisite: ITT 142 with a grade of "C" or better
Lab fee: $10.00

ITT 144 American Sign Language IV (W, SU) 5 credits
In ASL IV, students' production and comprehension skills continue to develop qualitatively and quantitatively as they are exposed to a greater variety of interaction activities. Whereas these activities are based on cultural values of the Deaf Community, the students' knowledge of this unique community is expanded.
Lecture: 4 hours – Lab: 2 hours
Prerequisite: ITT 143 with a grade of "C" or better
Lab fee: $10.00

ITT 145 American Sign Language V (A, SP) 5 credits
As the final course in this five (5) course series, ITT 145 provides students with opportunities to expand their production and comprehension skills with American Sign Language. Communication activities focus on advanced functions of language usage. Study of the cultural aspects of the Deaf Community is continued.
Lecture 4 hours – Lab: 2 hours
Prerequisite: ITT 144 with a grade of "C" or better
Lab fee: $10.00

ITT 149 Advanced ASL for Interpreters (SU) 2 credits
Students will expand their use of ASL as it is used specifically in interpreting settings. In-depth skill building of classifiers, use of space, prosody, establishing topics and the distributional and temporal aspects of verbs will be the focus of this course. This course is only open to interpreting majors.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: ITT 145, ITT 201, ITT 212 with a grade of "C" or better
Corequisite: ITT 120 and ITT 202
Lab Fee: $10

ITT 150 Linguistics of American Sign Language (A, SP) 3 credits
This course offers an introduction to general linguistics, as well as providing an in-depth analysis of the major grammatical features of American Sign Language. Comparisons are made between English and American Sign Language, noting how grammatical functions are performed differently in the two languages
Lecture: 2 hours – Lab: 2 hours
Corequisite: ITT 143
Lab fee: $5.00

ITT 170 Conversational ASL (on demand) 2 credits
This course continues to expand the ASL skills of students beyond ASL V. Students will focus on topics such as narratives, turn-taking, classifiers, and use of space as they apply to ASL conversations.
Lecture: 2 hours – Lab 0 hours
Prerequisite: ITT 145 or permission of instructor
Lab fee: $5.00

ITT 171 Gesturing and Visual Readiness (on demand) 1 credit
This course examines the role that gesturing plays in ASL. Students will develop their visual readiness and ability to think in pictures, instead of words. The focus is on using the body and face to give meaning.
Lecture: 1 hour – Lab: 0 hours
Lab fee: $5.00

ITT 172 History of the Deaf Community (on demand) 2 credits
This course provides an in-depth look at the history of the Deaf community and how it has impacted the linguistic and cultural development of that community. Students will see how Deaf history around the world influences ASL, literature, and education of the Deaf.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: ITT 143 or permission of instructor
Lab fee: $5.00

ITT 173 Script Analysis and Translation (on demand) 2 credits
Using a play script, students will learn the process required to translate the script from written English to signed ASL. Analyzing the script for meaning, examining sign choices, considering character development, and incorporating artistic presence will be developed. For the final project, students perform the translation that they have completed.
Lecture: 1 hour – Lab 1 hour
Prerequisite: ITT 143 or permission of instructor
Lab fee: $10.00

ITT 174 Religious Interpreting (on demand) 3 credits
This course examines the challenges that are unique to religious interpreting settings. Students will learn about the basic beliefs, terminology, sacred texts, and worship behaviors for a variety of denominations. Specialized vocabulary for these denominations is emphasized.
Lecture: 2 hours – Lab 1 hour
Prerequisite: ITT 144 or permission of instructor
Lab fee: $10.00

ITT 175 Text Preparation and Analysis (on demand) 3 credits
This course gives interpreting majors the opportunity to further develop their ability to prepare and analyze text for interpreting. Topics include comprehension of the source material, multiple meaning, discrimination, and inference as they pertain to determining appropriate message transfer.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ITT 202 or permission of instructor
Lab fee: $10.00

ITT 201 Interpreting I (SP) 3 credits
This course is a theoretical and practical "hands-on" approach to the process of sign language interpreting. The student will be actively learning how to render a signed message in ASL into spoken English, as well as render a spoken English message into ASL

Lecture: 2 hours – Lab: 2 hours
Prerequisite: ITT 129 & ITT 211 with a grade of "C" or better
Corequisite: ITT 145, ITT 212
Lab fee: $10.00

ITT 202 Interpreting II (SU) 3 credits
This course is a continuation of ITT 201. As such, the students continue the process of actively learning how to render a signed message in ASL into spoken English, as well as how to render a spoken message into ASL. This course places more emphasis on the practical "hands-on" dialogue setting; and increasing the speed, accuracy, and complexity of the interpreting process.
Lecture: 1 hour – Lab: 5 hours
Prerequisites: ITT 201 and ITT212 and ITT 145 with a grade of "C" or better
Corequisites: ITT 120 & ITT 149
Lab fee: $10.00

ITT 203 Interpreting III (A) 3 credits
This course continues to increase students' knowledge and skills in ASL/English interpretation process. Increased focus is placed on "real life" situational experiences involving complex interpreting settings.
Lecture: 1 hour – Lab: 5 hours
Prerequisite: ITT 202, ITT 149 and ITT 120 with a grade of "C" or better
Corequisite: ITT 220
Lab fee: $10.00

ITT 204 Interpreting IV (W) 3 credits
As the final course in the four course interpreting sequence, this course continues to increase students' knowledge and skills in ASL/English interpretation process. Increased focus is placed on "real life" situational experiences involving complex interpreting settings.
Lecture: 1 hour – Lab: 5 hours
Prerequisite: ITT 203 with a grade of "C" or better
Lab fee: $10.00

ITT 211 Transliterating I (W) 3 credits
This course is a theoretical and practical "hands-on" approach to the process of sign language transliterating. Students will be actively learning how to render contact varieties and signed English messages into spoken English, as well as render a spoken message in English into contact varieties and signed English.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: ITT 110 with a grade of "C" or better
Corequisites: ITT 144 and ITT 129
Lab fee: $10.00

ITT 212 Transliterating II (SP) 3 credits
This course is a continuation of ITT 211. As such, the students continue the process of actively learning how to render a signed message in a contact variety and signed English into spoken English, as well as how to render a spoken message into a contact variety and signed English. This course places more emphasis on practical "hands-on" dialogue settings; and increasing the speed, accuracy, and complexity of the transliteration.
Lecture: 1 hour – Lab: 5 hours
Prerequisite: ITT 129 & ITT 211 with a grade of "C" or better
Corequisite: ITT 145
Lab fee: $10.00

ITT 220 Sign to Voice Interpreting/Transliterating (A) 4 credits
This course provides students with additional experience with the process of sign to voice interpreting and transliterating. Students will practice with a variety of deaf and hard of hearing individuals to enhance team and solo voicing skills.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: ITT 120, ITT 212, ITT 149, ITT 202 with a grade of "C" or better
Corequisite: ITT 203
Lab fee: $10.00

ITT 265 Special Topics in Interpreting, ASL, Deaf Studies (on demand) 1 –5 credits
This course is offered for interpreters who are employed, or are pre-practice interpreters, who have an issue or skill they would like to explore or further develop. Topics may include any issue or skill that is germane to the field of interpreting, ASL, and/or Deaf studies, and appropriate for a diverse student population. This course is repeatable up to 10 hours of credit.

ITT 290 Interpreting/Transliterating Practicum Seminar II (A, W, SP, SU) 1 credit
This course supplements the practicum experience by providing opportunities for sharing experiences via recordings in journals and group discussions.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: Complete all first through fifth quarter courses as per the ITT Plan of Study and ITT 220 and ITT 203 with a grade of "C" or better
Corequisite: ITT 204 and ITT 293

ITT 291 Interpreting/Transliterating Practicum Seminar III (A, W, SP, SU) 1 credit
This course continues to supplement the practicum experience. Applying theory to the daily work setting, applying for jobs, and additional educational opportunities are also discussed.
Lecture: 1 hour– Lab: 0 hours
Prerequisite: ITT 290 and ITT 293 with a grade of "C" or better and completion of all sixth quarter courses
Corequisite: ITT 121, ITT 123 and ITT 294

ITT 292 Interpreting/Transliterating Practicum I (A, W, SP, SU) 2 credits
Students are provided opportunities to observe interpreting situations. These observations are then discussed and applied to the concepts learned in the classroom and applied to the actual setting. Students are required to observe interpreters in a variety of settings. Students also prepare a video portfolio and resume in preparation for Interpreting Practicum II.
Lecture: 1 hours – Lab: 10 hours
Prerequisite: ITT 202, completion of all 1st through 4th quarter courses per the full time plan of study, and 2.0 GPA Tech. Average
Corequisite: ITT 220 and ITT 203
Lab fee: $30.00

ITT 293 Interpreting/Transliterating Practicum II (A, W, SP, SU) 3 credits
Students are provided opportunities to work in different interpreting situations and apply the concepts learned in the classroom to the actual setting. Students are assigned to work in a variety of settings on a part-time basis and are supervised by staff interpreters.
Lecture: 0 hours – Lab: 20 hours
Prerequisite: ITT 292, ITT 203 with a grade of "C" or better, completion of all 1st through 5th quarter courses per the full time plan of study, and 2.0 GPA Tech. Average
Corequisite: ITT 290 and ITT 204
Lab fee: $30.00

ITT 294 Interpreting/Transliterating Practicum III (A, W, SP, SU) 3 credits
Students are provided opportunities to work in different interpreting situations and apply the concepts learned in the classroom to the actual setting. Students are assigned to work in a variety of settings on a part-time basis and are supervised by staff interpreters.
Lecture: 0 hours – Lab: 15 hours
Prerequisite: ITT 293 Completion of all 1st through 6th quarters per the

full time Plan of Study, and 2.0 GPA Tech. Average
Corequisite: ITT 291
Lab fee: $30.00

Italian (ITAL)

ITAL 101 Elementary Italian I (on demand) 5 credits
Italian 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: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

ITAL 102 Elementary Italian II (on demand) 5 credits
Continuation of ITAL 101, with further development of listening, reading, speaking, and writing skills and further study of Italian culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ITAL 101 with a grade of "C" or better
Lab fee: $6.00

ITAL 103 Intermediate Italian I (on demand) 5 credits
Continued study of the Italian language and development of listening, reading, speaking and writing skills. Readings from contemporary Italian culture and literature. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature. -
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ITAL 102 with a grade of "C" or better
Lab fee: $6.00

ITAL 104 Intermediate Italian II (on demand) 5 credits
Reading and discussion of Italian short stories, novels, plays, newspapers, and magazines, emphasizing literary appreciation and the development of Italian culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature programs.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ITAL 103 with a grade of "C" or better
Lab fee: $6.00

ITAL 299 Special Topics in Italian (on demand) 1-5 credits
Detailed examination of selected topics in Italian.
Prerequisite: vary
Lab fee: $2.00

Japanese (JAPN)

JAPN 101 Elementary Japanese I (A) 5 credits
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; learn about cultural factors that are reflected in the language.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

JAPN 102 Elementary Japanese II (W) 5 credits
Continuation of JAPN 101with further development of reading and writing skills and further study of culture. Meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: "C" or higher in JAPN 101
Lab fee: $6.00

JAPN 103 Elementary Japanese III (SP) 5 credits
Continuation of JAPN 102with further development of reading and writing skills and further study of culture. Meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature.
Prerequisite: "C" or higher in JAPN 102
Lecture: 5 hours – Lab: 0 hours
Lab fee: $6.00

JAPN 104 Elementary Japanese IV (SU) 5 credits
Continuation of JAPN 103 with further development of reading and writing skills and further study of culture. Meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: "C" or higher in JAPN 103
Lab fee: $6.00

JAPN 299 Special Topics in Japanese (on demand)) 1-5 credits
Detailed examination of selected topics in Japanese
Prerequisite: vary
Lecture: 5 hours – Lab: 0 hours
Lab fee: $2.00

Landscape Design/Build (LAND)

LAND 100 The American Landscape (on demand) 2 credits
This course is an overview of the American Landscape movement with historical, environmental, design, horticultural and professional applications.
Lecture: 2 hours
Lab fee: $10.00

LAND 101 Landscape Principles (A, W, SP, SU) 3 credits
Landscape principles will study the basic components of landscape design and those elements, that when combined together create such designs.
Lecture: 2 hours – Lab: 3 hours

LAND 102 Residential Landscape Design (A, W) 4 credits
This course will study the application of landscape design principles to construction situations, design vs. style, perform site inventory and analysis and draft basic projects.
Lecture: 2 hours – Lab: 6 hours
Prerequisite: ARCH 110, ARCH 112 and LAND 101
Lab fee: $20.00

LAND 104 Specialty Gardens (W) 3 credits
This course will study the history, development and basic design of gardens including Estate, Victorian, Colonial, Patio, Water, etc. The class will combine both in-class and field experience.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $ 15.00

LAND 105 Spring Landscape Plants (SP, SU) 4 credits
This course will study the identification parameters, landscape features and growing conditions of trees and shrubs of the midwest climate zone. This class will combine both in-class and field experience.
Lecture: 3 hours – Lab: 3 hours
Lab fee: $10.00

LAND 107 Landscape Maintenance (W, SP) 3 credits
Basic landscape maintenance principles will be discussed with an emphasis on procedures best suited to promote optimum growth and aesthetic qualities of landscape plants. Other areas include soil structure, amendments, pruning and fertilization.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $10.00

LAND 108 Herbaceous Plants (SP, SU) 3 credits
This course will study the identification parameters, landscape features and growing conditions of herbaceous flowering plants such as annuals, perennials, bulbs and herbs. Design of perennial gardens will also be covered.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $15.00

LAND 109 Landscape Arboriculture (A, W) 3 credits
This course introduces the basic principles of tree biology and care. Arboricultural practices will be discussed and performed
Lecture: 2 hours – Lab: 2 hours
Prerequisite: LAND 205
Lab fee: $15.00

LAND 110 Landscape Computer Applications (on demand) 3 credits
This course will explore current computer applications as they relate to the landscape industry
Lecture: 2 hours – Lab: 3 hours
Prerequisite: LAND 102, ARCH 112 and CIT 101
Lab fee: $10.00

LAND 111 Survey of the Landscape Industry (A,W) 2 credits
This course introduces the student to career possibilities in the green industry.
Lecture: 0 hours - Lab: 4 hours

LAND 117 Landscape Maintenance Laboratory (SP) (on demand) 2 credits
This course will expose the student to practical uses in the application of maintenance procedures in commercial and residential landscapes.
Lecture: 0 hours - Lab: 4 hours
Lab fee: $20.00

LAND 152 Site Planning (A, SP) 4 credits
This course identifies the elements of a site and influences, methods and examples of site planning for environmental design projects. Emphasis on interdisciplinary nature of site planning. Regulatory and technical requirements. Creation and evaluation of prototypical site planning projects.
Lecture: 2 hours – Lab: 6 hours
Prerequisite: LAND 102 or ARCH 111 or SURV 141 or permission of instructor
Lab fee: $20.00

LAND 201 Landscape Pest Control (A, SU) 3 credits
This course will study basic control methods as they apply to insects, fungi, bacteria, biotic and other pests in the landscape. Identification of pests as well as mechanical, cultural, biological and chemical controls will be discussed.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: LAND 105 or LAND 205 or permission of instructor
Lab fee: $5.00

LAND 202 Planting Design (W, SU) 4 credits
This course builds on skills learned in LAND 102 and emphasizes graphic representations of plant materials and landscape structures.
Lecture: 2 hours – Lab: 6 hours
Prerequisite: LAND 152, LAND 206 and LAND 105 and/or LAND 205
Lab fee: $20.00

LAND 203 Landscape Irrigation (A, W) 3 credits
This course will study the design principles of landscape irrigation systems. Cost/ estimation factors will also be discussed.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: LAND 102 and MATH 104 or permission of instructor.
Lab fee: $12.00

LAND 204 Turfgrass Management (W, SP) 3 credits
Students will learn the basic principles of turfgrass science and culture, specifically turfgrass identification, turf disease diagnosis, turf insect pest control, turf weed control and specific turfgrass cultural and management practices.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: LAND 101, LAND 201 and BIO 125 or LAND 107 or permission of instructor.
Lab fee: $10.00

LAND 205 Autumn Landscape Plants (A, SU) 4 credits
The plants in this course are not the same as those covered in LAND 105. This course will study the identification parameters, landscape features and growing conditions of trees and shrubs of the midwest climate zone. This class will combine both in-class and field experience.
Lecture: 3 hours – Lab: 3 hours
Lab fee: $10.00

LAND 206 Landscape Graphics (A, SP) 4 credits
This course will study the graphic symbols used to create landscape drawings. Included will be such information as color renderings, graphic representation of trees and shrubs, and shadowing.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: LAND 102
Lab fee: $15.00

LAND 207 Landscape Construction (A, SP) 3 credits
This course will study the design and construction principles of landscape decks, patios, site fixtures etc., and design projects of each will be created.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: LAND 152
Lab fee: $15.00

LAND 208 Interior Plants (W) 3 credits
This course will study the features and growing conditions of indoor plant materials and maintenance procedures for same.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $10.00

LAND 210 Evergreen Landscape Plants (W) 4 credits
This course will study the identification parameters, landscape features and growing conditions of evergreen trees and shrubs of the midwest climate zone.
Lecture: 3 hours – Lab: 3 hours
Lab fee: $10.00

LAND 217 Landscape Construction Laboratory (SU) (on demand) 2 credits
This course will expose the student to the practices and application of landscape construction practices
Lecture: 0 hours - Lab: 4 hours
Lab fee $20.00

LAND 222 Landscape Operations (W, SU) 4 credits
This is a capstone course in the Landscape Major; students will receive an overview of the technical operations of a landscape design/build firm. Students will work on group and individual class projects simulating the day to day business operations of a landscape firm.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: LAND 202, LAND 203, LAND 207 and BMGT 111
Lab fee: $15.00

LAND 291 Field Experience (SU) 4 credits
Off-campus field experience in the landscape industry. The field experience reinforces formal education received in the landscape program, with actual work conditions and job experience. "N" credit will not be allowed for this course.
Lecture: 0 hours – Lab: 48 hours
Lab fee: $10.00

LAND 295, 296, 297 Special Topics (on demand) 1-5 credits
These courses allow for landscape special topics to be offered in a timely and responsive way.
Lecture and/or Lab hours: Varies
Prerequisite: Permission of instructor.

Latin (LATN)

LATN 101 Elementary Latin I (on demand) 5 credits
Introduction to the fundamentals of Latin with practice in reading and writing. Includes selected studies in culture. Meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

LATN 102 Elementary Latin II (on demand) 5 credits
Continuation of LATN 101 with further development of reading and writing skills and further study of culture. Meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: LATN 101 with a grade of "C" or better
Lab fee: $6.00

LATN 103 Intermediate Latin I (on demand) 5 credits
Continuation of LATN 102. Meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: LATN 102 with a grade of "C" or better
Lab fee: $6.00

LATN 104 Intermediate Latin II (on demand) 5 credits
Continuation of LATN 103. Meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: LATN 103 with grade of "C" or better
Lab fee: $6.00

LATN 299 Special Topics in Latin (on demand) 1-5 credits
Individual Studies
Lab fee: $2.00

Law Enforcement (LAWE)

LAWE 101 Introduction to Criminal Justice (A, SP) 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 – Lab: 0 hours

LAWE 102 Patrol Procedures (A, SP) 3 credits
This course covers the basic concepts of police patrol. The purpose of patrol and various patrol strategies will be examined. Calls for service and response tactics as well as arrest techniques, vehicle stops, and prisoner booking and handling are covered.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $ 7.00

LAWE 103 Academy Orientation (W, SU) 2 credits
This course will serve as an orientation to the law enforcement profession and the Columbus State Police Academy.
Lecture: 2 hours – Lab: 0 hours

LAWE 104 Government and the Law (A, W, SP, SU) 3 credits
The role of local government in the community; its structure, organization, and responsibility. Local government politics and the community. Urban, suburban, rural and community structure will be discussed in relationship to delivery of services.
Lecture: 3 hours – Lab: 0 hours

LAWE 110 Criminal Investigation I (A, SP) 4 credits
Principles and techniques of criminal investigation, including those techniques and skills used in the investigation of major crimes such as: homicide, burglary, robbery, auto theft, arson and sex offenses.
Lecture: 3 hours – Lab: 2 hours
Lab fee: $5.00

LAWE 111 Criminalistics I (A, SP) 3 credits
An introduction to criminalistics laboratory techniques: includes the recognition, collection, and preservation of evidence and its preparation for court presentation. An introduction to fingerprint comparison.
Lecture: 1 hours – Lab: 4 hours
Lab fee: $10.00

LAWE 112 Criminal Investigation II (W, SU) 4 credits
A continuation of LAWE 110. Emphasis will be placed on the scientific analysis of evidence and proper methods for collection and preservation of trace evidence.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: LAWE 110
Lab fee: $5.00

LAWE 113 Criminalistics II (W, SU) 2 credits
Advanced study of criminalistics laboratory techniques: includes examination techniques for blood, hair and fiber, fire-arms identification, toolmark comparison, latent fingerprints, questioned document examination and trace evidence.
Lecture: 0 hours – Lab: 4 hours
Lab fee: $15.00

LAWE 115 Community and Personal Relations (W, SU) 3 credits
This course examines the complex relationship between the police and the public they serve. Areas of potential problems will be discussed and programs and procedures for enhancing the relationship will be presented.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $5.00

LAWE 120 Criminology (A, SP) 3 credits
An exploration of the crime problem in the United States. Theories of the causation of crime will be analyzed and critiqued.
Lecture: 3 hours – Lab: 0 hours

LAWE 121 Juvenile Delinquency (SP) 3 credits
A study of the nature and causes of delinquent activity by juveniles. Though the development of an understanding of causative factors, appropriate criminal justice responses to such activity can be planned.
Lecture: 3 hours – Lab: 0 hours

LAWE 122 Criminal Law (on demand) 3 credits
A study of the development of criminal law in the United States. The common law theories upon which law in this country is based will be explored. Specific topics will include: parties to crime, capacity to commit crimes; and defenses, and the laws defining specific crimes.
Lecture: 2 hours – Lab: 2 hours

LAWE 124 Penology (A, SP) 3 credits
An introduction to the field of corrections. The history and goals of corrections will be explored, as well as an overview of the processing of offenders from arrest through final release.
Lecture: 3 hours – Lab: 0 hours

LAWE 125 Traffic Accident Investigation (A, SP) 3 credits
An in-depth study of the procedure and objectives in accident investigations. Gathering facts from road, vehicle and witnesses, hit and run investigation, measurements and diagrams, utilization of skid mark evidence, proper methods of recording accident data, use of accident template and a practical application of the recommended method of submitting the Ohio state traffic crash report.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $3.00

LAWE 128 Special Category Offenders 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 – Lab: 0 hours

LAWE 136 Terrorism 3 credits
This course will examine the underlying issues of the terrorist threat, including the 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

LAWE 145 Self Defense for Women (TBA) 2 credits
Students will learn to recognize threatening behavior, situations, and appropriate responses. Simple to learn, basic physical defense techniques are taught. In addition, defensive devices will be discussed and demonstrated.
Lecture: 1 hours – Lab: 2 hours

LAWE 150 The Administration of Justice (A) 3 credits
The major institutions and processes in the administration of justice will be covered. The role and function of the courts, the progress of criminal and civil cases and methods for development of cooperative arrangements with other criminal justice professionals are discussed.
Lecture: 3 hours – Lab: 0 hours

LAWE 153 Civil Liability in Law Enforcement (SP) 4 credits
Coverage of potential areas of liability such as: tort law, vicarious liability, and civil rights legislation.
Lecture: 4 hours – Lab: 0 hours

LAWE 155 Managing Police Operations (W) 4 credits
Managing police operational units such as: investigations, patrol, internal investigations and traffic.
Lecture: 4 hours – Lab: 0 hours

LAWE 204 Juvenile Procedures (A, SP) 3 credits
Organization, functions, and jurisdiction of juvenile agencies. Processing and detention of juveniles. Statutes and court procedures relating to juveniles. Police services for juveniles and neglected children. Rights and liabilities of minors and their parents.
Lecture: 2 hours – Lab: 2 hours

LAWE 208 Community Based Corrections (W) 3 credits
This course will investigate alternative models of corrections in place of institutionalizing the offender. Various alternatives, and the benefits that will derive from the placing of the offender back in the community rather than in an institution will be discussed.
Lecture: 3 hours – Lab: 0 hours

LAWE 210 Crisis Intervention (A, SP) 3 credits
This course provides the student with intervention strategies for dealing with persons in crises. The areas of domestic disputes, suicide prevention, and the special problems of crime victims will be emphasized.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $10.00

LAWE 211 Institutional Corrections (A) 3 credits
An exploration of the development and the 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 – Lab: 0 hours

LAWE 212 Ohio Criminal Code (A, SP) 4 credits
The study of the statutes of Ohio that apply to crime and criminal procedures. With emphasis on the specific elements necessary to constitute individual crimes.
Lecture: 3 hours – Lab: 2 hours

LAWE 215 Introduction to Cyberlaw (W) 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 investingating such activities.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: CIT 101

LAWE 218 Supervision of Public Service Personnel (A, SP) 3 credits
Supervision techniques applied to public service personnel. The study of the need for job descriptions and job procedures, civil service requirements, reports, oral and written directions, work evaluation, and conference leadership. Methods of instruction effective in teaching and motivating personnel.
Lecture: 3 hours – Lab: 0 hours

LAWE 219 Correctional Law (W) 4 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, the right to have visitors, receive mail, attend religious functions, and the right to treatment. The course will also cover due process of law.
Lecture: 4 hours – Lab: 0 hours

LAWE 220 Constitutional Law (A, SP) 3 credits
A study of federal and state constitutional law and the Bill of Rights with emphasis on: due process of law, equal protection of the law, jury trial, and assistance of counsel. Interpretation of the constitution by the United

States Supreme Court as given in their decisions.
Lecture: 3 hours – Lab: 2 hours

LAWE 221 Counseling - Probation and Parole (SP) 4 credits
This course covers the responsibilities and duties of the correctional counselor and case worker. Emphasis is placed upon the application of professional standards of casework in the correctional setting. Emphasis is also placed on the functions of the parole and probation officers.
Lecture: 4 hours – Lab: 0 hours

LAWE 223 Correctional Administration (SP) 3 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 operation of probation and parole. The problems and possible solutions to them will be covered for each division of corrections.
Lecture: 3 hours – Lab: 0 hours

LAWE 231 Criminal Justice Planning and Analysis (W) 3 credits
Decision making and analysis, using research, police resource allocation, project management.
Lecture: 2 hours – Lab: 2 hours

LAWE 232 Task Force/Major Case Management (A) 3 credits
The management of groups of people in concentrated effort to effectively handle all facets of a major case or in dealing with emergencies.
Lecture: 2 hours – Lab: 2 hours

LAWE 241 Correctional Internship I (TBA) 1 credit
On-the-job training in the field of corrections. The student will work in a correctional agency. The course will include the interviewing of convicted felons, verification of the information received, and various other duties connected with probation and parole. Prerequisite:
Lecture: 0 hours – Lab: 10 hours
Prerequisite: LAWE 205
Corequisite: LAWE 249

LAWE 242 Community Policing (SP) 4 credits
Contemporary community policing issues such as crime prevention, community education, and police deployment strategies will be explored. Internal departmental changes and methods of obtaining cooperation and commitment by department personnel will also be examined.
Lecture: 4 hours – Lab: 0 hours

LAWE 243 Forensic Science for Law Enforcement Managers (TBA) 3 credits
Managing a forensic laboratory and/or crime scene search unit. Advanced forensic techniques will be explored.
Lecture: 2 hours – Lab: 2 hours

LAWE 244 Budgeting and Grant Writing for Criminal Justice Admin. (TBA) 3 credits
This course examines the various frameworks for budgeting and budget management in criminal justice agencies. Students will learn a process for obtaining and managing state, federal, or foundation grants. A sample grant application will be developed.
Lecture: 2 hours – Lab: 2 hours

LAWE 245 Media and the Police (TBA) 3 credits
This course will examine the difficult relationship of the media to the police. The development of a departmental media policy, and the utilization of the media for departmental advantage will be explored.
Lecture: 3 hours – Lab: 0 hours

LAWE 249 Corrections Seminar I (TBA) 1 credit
This seminar will cover the pre-sentence investigation report, the purpose and how they are compiled. Members of the internship program will be able to discuss the problems and events that they have encountered during their work at the probation office with each other and the instructor.
Lecture: 1 hours – Lab: 0 hours
Prerequisite: LAWE 205
Corequisite: LAWE 241

LAWE 252 Police Administration (A) 3 credits
The contemporary local law enforcement agency, its functions, structure, and operational techniques. Principles of organization, staffing, budgeting, controlling, coordination, planning and research. The development and maintenance of liaison between agencies.
Lecture: 3 hours – Lab: 0 hours

LAWE 253 Criminal Procedure (W, SU) 3 credits
A study of the rules of procedures as they apply to criminal cases and affect the ability of the officer to have the evidence he/she collects or prepares presented in court.
Lecture: 2 hours – Lab: 2 hours

LAWE 254 Correctional Internship II (TBA) 1 credit
On-the-job training in the corrections setting. The student will work in a correctional agency. The course will consist of making background investigations for parole board, checking of inmates at various halfway houses, and interviewing persons on parole.
Lecture: 0 hours – Lab: 10 hours
Prerequisite: LAWE 241
Corequisite: LAWE 255

LAWE 255 Corrections Seminar II (TBA) 1 credit
This course is a discussion of what has occurred during the student's internship and clarification of problems. Assignment of project and explanation of reason for the project.
Lecture: 1 hours – Lab: 0 hours
Prerequisite: LAWE 249
Corequisite: LAWE 254

LAWE 256 Law Enforcement Practicum I (A, W, SP, SU) 2 credits
A guided work experience in a law enforcement agency. Students will observe and participate in a variety of law enforcement functions. Exact duties will be decided on by agreement of the student and the law enforcement agency. Prerequisite: Permission of the chairperson.
Lecture: 0 hours – Lab: 14 hours
Corequisite: LAWE 257

LAWE 257 Law Enforcement Practicum Seminar I (A, W, SP, SU) 1 credit
Seminar discussions of work experience, and development strategies to improve work performance. Prerequisite: Permission of the chairperson.
Lecture: 1 hours – Lab: 0 hours
Corequisite: LAWE 256

LAWE 258 Law Enforcement Practicum II (on demand) 2 credits
A guided work experience in a law enforcement agency. Students will observe and participate in a variety of law enforcement functions. Exact duties will be decided upon by agreement of the student and the law enforcement agency. Prerequisite: Permission of the chairperson.
Lecture: 0 hours – Lab: 14 hours
Corequisite: LAWE 259

LAWE 259 Law Enforcement Practicum Seminar II (on demand) 1 credit
Seminar discussions of work experience, and development of strategies to improve work performance.
Prerequisite: Permission of the chairperson
Lecture: 1 hours – Lab: 0 hours
Corequisite: LAWE 258
Lab fee: $5.00

LAWE 260 Criminal Evidence and Trial (A, SP) 3 credits
In this course the student will study the rules of evidence as they relate to the introduction of evidence at trial. In addition to the study of rules, students will participate in a mock trial in which evidence they have collected, preserved and processed will be presented.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $5.00

LAWE 261 Defensive Driving and Emergency Response (SP) 2 credits
Defensive driving is driving to prevent accidents from occurring in spite of the actions of others or the presence of adverse conditions. Students will learn recommended driving principles and practices through vehicle operation. The student will also learn the skills necessary to administer emergency aid until assistance can be obtained.
Lecture: 0 hours – Lab: 4 hours
Lab fee: $35.00

LAWE 263 Arrest and Control (SU) 4 credits
The student will learn: the basic principles and tactics of unarmed self-defense, how to defend against physical attack, and control of aggressive behavior in effecting an arrest using minimum force.
Lecture: 1 hours – Lab: 6 hours
Prerequisite: LAWE 102

LAWE 264 Police Firearms (SU) 3 credits
Students will learn to safely use police firearms including pistol and shotgun. Shooting decisions and alternatives to firearm use are covered. Successful completion of the course requires compliance with current Ohio Peace Officers Training Council qualification standards.
Lecture: 0 hours – Lab: 6 hours
Lab fee: $50.00

LAWE 265 Police Physical Fitness (A) 3 credits
This course will utilize the proven methods developed by the Aerobic Institute in measuring and attaining fitness. A baseline of fitness will be established for each student and an individual exercise program will be decided upon. Class activities may include aerobics, jogging, and if needed, weight training.
Lecture: 1 hours – Lab: 4 hours

LAWE 266 High Rise Safety (A) 2 credits
Discussions of the particular problems related to the fire safety in high rise buildings. Students will research and establish life-safety plans for a building. Information gained from previous incidents in high rise buildings will be utilized.
Lecture: 1 hours – Lab: 2 hours
Lab fee: $5.00

LAWE 268 Hazardous Materials I (A) 3 credits
An introduction to the properties and behaviors of hazardous chemicals in our environment. A study of the physical and chemical characteristics of toxic, flammable, and reactive substances in the forms of solids, liquids, and gases combined with overview of methods for safely responding to emergencies involving such materials. Emphasis will be placed on safe approach to incident scenes, positive identification of materials, and accurate analysis of the hazards presented by hazardous materials.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $6.00

LAWE 271 Contemporary Issues in Law Enforcement (SP, A) 3 credits
A review of important facts in modern law enforcement along with an examination of current topics and trends.
Lecture: 3 hours – Lab: 0 hours

LAWE 273 Legal Computing 2 credits
Course is designed to focus on legal style microcomputing for law enforcement and legal assisting personnel. Emphasis is on the legal history, copyright, computer crimes, computer security and legal computer systems.
Lecture: 2 hours – Lab: 1 hours
Prerequisite: CIT 101/ Optional LEGL 251

LAWE 275 Police Management Assessment (SP) 4 credits
A capstone course in which students participate in typical assessment center evaluation techniques. These techniques include: in-basket/out-basket, written problem solving, structured oral exercise, leaderless group, and subordinate counseling.
Lecture: 3 hours – Lab: 2 hours

LAWE 276 Criminalistic III (SP) 3 credits
Advanced study of Forensic laboratory techniques: The student will perform or view examination techniques for blood, " DNA Profile Analysis", questioned document examination, autopsy, trace evidence, drug identification,, toxicology, and the forensic examination of arson, and explosion trace evidence.
Lecture: 1 hour – Lab: 4 hours
Lab fee: $25.00

LAWE 299 Special Topics in Law Enforcement 3 credits
Special Topics in Law Enforcement is a course that utilizes a variety of instructional techniques to meet the needs of the constantly changing law enforcement, corrections, and legal community. The course will be designed with the advice of the particular group requesting the course and/or the Law Enforcement faculty, and Department Chairperson.
Lecture: 3 hours – Lab: 0 hours

Legal Assisting - See Paralegal Studies (LEGL)

Marketing (MKTG)

Note: Courses taught at a distance [Distance Learning (DL)] may have a higher lab fee than traditionally taught courses.

MKTG 101 Introduction to Retailing (A, W, SP, SU – DL) 5 credits
This course 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 experience.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: None
Lab fee: $5.00

MKTG 111 Marketing Principles (A, W, SP, SU – DL) 5 credits
The fundamentals of product planning, pricing, promotion and distribution of goods and services with emphasis on the impact of a global economy and technology on marketing activities. Additional attention is given to consumer behavior, market research and market strategies. Students taking the video version of Marketing Principles may choose to rent the videos for the quarter from the ERC with pre-payment to the CSCC Bookstore.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: None
Lab fee: $5.00

MKTG 122 Business & the Internet (A, SP – DL) 3 credits
An overview of how to use the Internet to gather and evaluate primary and secondary sources of business information for product development, market research, sales, advertising and promotion, and customer service/retention.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: None
Lab fee: $13.00

MKTG 131 Market Research Principles (A, SU – DL) 3 credits
An introduction to the field of market research with particular emphasis on how to use research data to make better marketing decisions. Topics covered include the market research process, research design and data sources, data collection and the analysis of marketing research data.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: MKTG 111 and MATH 101 (or a higher math), or instructor approval.
Lab fee: $5.00

MKTG 140 Introduction to Advertising and Promotion (A, SP – DL) 4 credits
An introduction to the critical role that advertising and promotion play in marketing activities. Topics covered include promotional program development and analysis, the communications process and evaluating an integrated marketing communications program.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: MKTG 111 or instructor approval
Lab fee: $5.00

MKTG 141 Integrated Marketing Communications (W – DL) 3 credits
An introduction to the fundamentals of integrated marketing communications (IMC). Emphasis wil be on understanding how IMC plans are developed and executed as well as the various factors and considerations that influence this process. Students will elarn how to set goals, objectives and budgets. Special emphasis will be placed on direct marketing, internet and interactive marketing, sales promotion, publicity and public relations, and personal selling.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: MKTG 111 and MKTG 140, or instructor approval
Lab fee: $5.00

MKTG 142 Media Buying (SU – DL) 3 credits
Introduction to media buying and selling with particular emphasis on the role of the various participants in the process: clients, advertising and media agencies, media sales companies, media companies, etc. Current industry selling practices will be discussed for various print and electronic media. Components of the course include media plan development, target audience(s) selection, and integration of a media plan into an advertising plan. At the completion of the course, students will have developed portfolio-ready examples of work
Lecture: 3 hours – Lab: 0 hours
Lab fee: $5.00

MKTG 145 Services Marketing (SU – DL) 3 credits
A study of the characteristics of services, their contribution to an economy, service quality, service customer behavior and the relationship between organizational performance and customer retention. Emphasis will be placed on customer satisfaction measurement, coordination issues between marketing and operations in the design and implementation of service delivery, and the utilization of emerging technology.
Lecture: 3 hours - Lab: 0 hours
Prerequisites: MKTG 111
Lab Fee: $5.00

MKTG 146 Non Profit Marketing (SP – DL) 3 credits
This course will give students an understanding of the basic organizational structures, systems and practices of non-profit organizations. Emphasis will be placed on identifying the various types of non-profit organizations, non-profit marketing mixes, and non-profit marketing strategies. The role of technology in the delivery of effective service and administration for non-profit organizations will also be examined.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $5.00

MKTG 150 Introduction to e-Commerce (A, SP, SU – DL) 3 credits
Overview of the marketing and technical aspects of e-commerce. Students are introduced to basic network concepts and protocols; how various markets (consumer, business-to-business, and government) make use of e-commerce; the four fundamental marketing considerations of product, price, distribution/place and promotion as informed by interactive media; and, a brief overview of the design, financial and ethical aspects of e-commerce.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $5.00

MKTG 205 Quantitative Methods for Retailing (A - DL) 5 credits
This course provides the student with an overview of the impact of merchandising strategies on the fiscal management of store operations. Special emphasis is given to the mathematical tools that aid in merchandise planning, selection, and pricing. 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.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MKTG 101
Lab fee: $5.00

MKTG 213 Merchandise Buying and Management (SP - DL) 4 credits
An in-depth review of the many different duties of a buyer and the role the buyer plays in assuring profitability. Topics covered include the buyer's role in risk management, inventory shortage control, people management, promotion and the legal environment that impacts retailing.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: MKTG 101
Lab fee: $5.00

MKTG 221 Consumer Behavior (W, SU - DL) 3 credits
Consumer behavior is designed to assist the student in developing a fuller understanding of the influences, both internal and external, that determine consumer behavior.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: MKTG 111 or instructor approval.
Lab fee: $5.00

MKTG 223 Sales Principles & Practices (A, SP - DL) 4 credits
Practical application of selling theory in a variety of personal selling situations. All phases of the selling process (from initial contact to the close of the sale) are taught.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: MKTG 111 or instructor approval
Lab fee: $5.00

MKTG 224 Public Relations (A - DL) 3 credits
Public relations examines both the theoretical and practical factors that contribute to a firm's image among its many publics. The emphasis is on public relations as a function of management as well as an adjunct of promotion.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: MKTG 111 or instructor approval
Lab fee: $5.00

MKTG 226 Customer Service Principles & Practices (A, SP - DL) 4 credits
A study of customer service principles used in business. Concepts and key elements will be explored. Techniques will be developed for small

business applications. Topics include customer service overview, key elements of customer service, trends, industry examples, business impact and legal implications.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: MKTG 111 or instructor approval
Lab fee: $5.00

MKTG 229 Organizational Marketing (A, SP - DL) 3 credits
A comprehensive overview of the marketing principles and practices utilized in business-to-business marketing. An empirical approach is taken to analyzing marketing strategy in business to business environments. Additional emphasis is placed on organizational marketing, future trends and the impact of technology on business-to-business marketing.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: MKTG 111 or instructor approval
Lab fee: $5.00

MKTG 236 Direct Marketing (SP - DL) 3 credits
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. Special emphasis is placed on how to integrate direct marketing into the overall marketing mix.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: MKTG 111 or instructor approval
Lab fee: $5.00

MKTG 237 Database Marketing (W - DL) 3 credits
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.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: instructor approval
Lab fee: $5.00

MKTG 241 Marketing Practicum I (A, W, SP, SU - DL) 4 credits
Supervised on-the-job application of knowledge and skills acquired in the classroom. Internship applications must be filed with the Department at least 2 months prior to the internship start date. This course is graded on a Satisfactory / Unsatisfactory basis.
Lecture: 0 hours – Lab: 28 hours
Prerequisite: 12 hours in technology and permission of instructor
Corequisite: MKTG 242
Lab fee: $5.00

MKTG 242 Marketing Seminar I (A, W, SP, SU - DL) 2 credits
Application of marketing knowledge to specific areas of on-the-job internship. Internship applications must be filed with the Department at least 2 months prior to the internship start date. This course is graded on a Satisfactory / Unsatisfactory basis.
Lecture: 0 hours – Lab: 4 hours
Prerequisite: Open to Marketing Technology students only and permission of instructor
Corequisite: MKTG 241
Lab fee: $5.00

MKTG 251 Marketing Practicum II (on demand) (DL) 4 credits
Continuation of MKTG 241. Open to Marketing Technology students only. Internship applications must be filed with the Department at least 2 months prior to the internship start date. This course is graded on a Satisfactory / Unsatisfactory basis.
Lecture: 0 hours – Lab: 28 hours
Prerequisite: MKTG 241 and advisor approval required the quarter before the student actually begins the internship, open to Marketing Technology students only
Corequisite: MKTG 252
Lab fee: $5.00

MKTG 252 Marketing Seminar II (on demand - DL) 2 credits
Application of marketing knowledge to specific areas of on-the-job internship. Internship applications must be filed with the Department at least 2 months prior to the internship start date. This course is graded on a Satisfactory / Unsatisfactory basis.
Lecture: 0 hours – Lab: 4 hours
Prerequisite: MKTG 242, open to Marketing Technology students only
Corequisite: MKTG 251
Lab fee: $5.00

MKTG 263 Direct Marketing Creative & Financial Analysis (A - DL) 4 credits
Overview of how to create and evaluate effective direct response materials. Topics covered include: establishing a "unique selling proposition," copywriting guidelines, how to use graphic support, offer development, and the inclusion of token/stamps to increase audience interaction. Special attention is given to how to select appropriate formats including computerized letters, self-mailers, broadsides, and brochures.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: MKTG 236 or permission of instructor
Lab fee: $5.00

MKTG 265 Understanding Interactive Users (SP – DL) 3 credits
A comprehensive model for understanding consumer decision making in an interactive environment. Emphasis is placed on the differences and similarities between classic research techniques and traditional consumer behavior models and their interactive complements. Particular emphasis is placed on the techniques and trends used to conduct online research, including how to leverage existing sources, online chat-based sessions, email feedback, and online focus groups.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $5.00

MKTG 266 Marketing Communications on the Web (W - DL)3 credits
Introduction to the marketing communications opportunities and challenges facing web marketers. Topics covered include developing an online marketing strategy, online selling, Web-based promotion, customer service and publicity. Special emphasis is placed on emerging e-commerce strategies, such as auditing effective of online advertising, permission marketing, affiliate programs and e-mail strategies.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $5.00

MKTG 270 Global Marketing (A, SP - DL) 6 credits
A capstone course designed to develop a broader understanding of the marketing function and its relationship to business strategy in the context of a global marketing environment.
Lecture: 4 hours – Lab: 4 hours
Prerequisite: 12 hours of Marketing or Supply Chain Management courses, CIT 101, FMGT 201 or ACCT 106, and permission of instructor
Lab Fee: $5.00

MKTG 285 Advertising & Promotion on the Web (A, SP - DL) 1 credit
This course provides the student with an overview of how the Internet can be used as a part of an organization's advertising and promotion strategy. The focus is on the Internet as another means of communicating with an organization's various target markets.
Lecture: 1 hour – Lab: 0 hours
Lab fee: $5.00

MKTG 286 Customer Service on the Web (A, SP - DL) 1 credit
This course provides the student an opportunity to see how the Internet can be used to improve the basic delivery of customer service and improve customer relations for business organizations.
Lecture: 1 hour – Lab: 0 hours
Lab fee: $5.00

MKTG 287 Public Relations on the Web (A, SP - DL) 1 credit
The focus is 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: 0 hours
Lab fee: $5.00

MKTG 288 Marketing Research on the Web (A, SP - DL) 1 credit
Students will use the Internet to gather information on customers, business organizations, and non-profit 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: 0 hours
Lab fee: $5.00

MKTG 289 Direct Marketing on the Web (A, SP - DL) 1 credit
Students will use the Internet as a tool in the direct marketing process. The focus is on using the Internet as a vehicle to create databases and as a direct response mechanism for target markets.
Lecture: 1 hour – Lab: 0 hours
Lab fee: $5.00

MKTG 290 Government Marketing on the Web (SP - DL) 1 credit
A study of the characteristics of government and its utilization 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: 0 hours
Lab fee: $5.00

MKTG 292 Non Profit Marketing Using the Web (SU - DL) 1 credits
A study of the characteristics of non-profit organizations and the utilization of emerging technology to market services to, raise funds and communicate with people. The course will examine the relationships between non-profit 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: 0 hours
Lab fee: $5.00

MKTG 297-298 Special Topics in Marketing (on demand - DL) 1 - 3 credits
Detailed examination of various topics in marketing. Prerequisites vary. Lab fees vary.
Lecture: 1 to 3 hours – Lab: 0 hours

Massage Therapy (MASS)

MASS 235 Massage Law and Business Principles for Massage Therapy (AU, W, SP, SU) 3 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 provided. The course will also provide a study of basic business principles as they apply to the massage therapist.
Prerequisites: acceptance into the program
Lecture: 3 hours
Lab fee: $10.00

MASS 236 Medical Ethics for Massage Therapists (A, SP) 3 credits
An introduction to the professional practice of health care including the role of the practitioner, relationships with other health care providers, privacy and confidentiality, the concepts of liability, malpractice and negligence.
Prerequisites: MASS 262
Lecture: 3 hours – Lab: 0 hours
Lab fee: $5.00

MASS 261 Massage Technique I (A, SP) 6 credits
Introduction to the professional practice of massage therapy including hygiene, touch, stroking, friction, kneading, vibration, and percussion.
Lecture: 3 hours – Lab: 6 hours
Prerequisite: acceptance into the program
Corequisite: MASS 271
Lab fee: $50.00

MASS 262 Massage Technique II (W, SU) 6 credits
Introduction to the professional practice of massage therapy including the effects, indications, and contraindications of massage upon various body systems.
Lecture: 3 hours – Lab: 6 hours
Prerequisite: MASS 261
Corequisite: MASS 272
Lab fee: $50.00

MASS 271 Massage Anatomy & Physiology I (A, SP) 5 credits
Investigation of the various human body systems, their structure and function as required by the State Medical Board of Ohio for licensure as a Massage Therapist. Prerequisite: Acceptance into program.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: BIO 161 and acceptance into the program
Corequisite: MASS 261
Lab fee: $50.00

MASS 272 Massage Anatomy & Physiology II (W, SU) 5 credits
Investigation of the various human body systems, their structure and function as required by the State Medical Board of Ohio for licensure as a Massage Therapist.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: MASS 271
Lab fee: $50.00

MASS 273 Massage Anatomy & Physiology III (AU, SP) 5 credits
Investigation of the various human body systems, their structure and function as required by the State Medical Board of Ohio for licensure as a Massage Therapist.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: MASS 272
Lab fee: $50.00

MASS 274 Massage Anatomy & Physiology IV (W, SU) 5 credits
Investigation of the various human body systems, their structure and function as required by the State Medical Board of Ohio for licensure as a Massage Therapist.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: MASS 273
Lab fee: $50.00

MASS-292 Massage Practicum I (A, SP) 5 credits
This course is an introduction to the clinical practice of massage therapy. The student will learn new techniques with specific applications for clinical situations. The student will have the opportunity to hone their clinical skills with the experience gained in the student clinic.
Lecture: 3 hours – Lab 10 hours
Prerequisite: successful completion of MASS 262 and MASS 272 or permission of the instructor
Lab fee: $50.00

MASS 294 Massage Practicum II (W, SU) 5 credits
This course is a continuation of MASS 292. The topics to be covered include but are not limited to different therapeutic approaches to the treatment of conditions that may benefit from the application of massage. .

This course includes additional clinical experience affording the student the opportunity to refine their treatment skills and professional approach to the practice of massage therapy.
Lecture: 3 hours – Lab 10 hours
Prerequisite: successful completion of MASS 292 and MASS 273 or by permission of the instructor
Lab fee: $50.00

MASS 298 Special Topics in Massage (SU, W) 3 credits
This course serves to bring together concepts discussed in previous program courses. Topics of discussion will revolve around massage therapy techniques other than Swedish Massage. Topics may include but are not limited to Trigger Point Therapy, Post Isometric Muscle Release, Positional Release Techniques and other therapeutic techniques. Development and modification of institutional programming based on individual and group needs.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: MASS 262
Co-requisite MASS 272
Lab fee: $50.00

MASS XXX Massage Therapy Electives (A, W, SP, SU) 5 credits
These courses provide the massage therapy student with the ability to personalize their training program to better aid them once in the workforce. The approved technique elective courses are: SES 231, SES 241, MULT 103, MULT 175, MULT 176, MULT 177, MULT 275, and MASS 298
Lecture: 2-5 hours Lab: 0
Prerequisites: acceptance into the program

Mathematics (MATH)

MATH 100 Calculations and Dosages (A,W,SP,SU) 2 credits
A review of the fundamental operations of arithmetic with fractions and decimal fractions; ratio and proportion calculations; an introduction to the metric and apothecary systems of measures; metric-apothecary conversions; strengths of solutions; and calculating medication dosages; children's dosages; intravenous calculations. Meets degree requirement for the Veterinary and Medical Assisting Technologies and the Practical Nursing Program.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: DEV 030 with a grade of "C" or higher
Lab fee: $1.00

MATH 101 Business Mathematics (A, W, SP, SU - DL) 5 credits
Percents and the percent formula; gross earning; FICA and withholding; trade discounts; mark-up and mark-down; simple and compound interest and present value; simple discount notes; annuities and loan amortization; depreciation schedules. An introduction to descriptive statistics: mean, median, mode, and graphs. Applications labs using Excel. This course is offered in both a traditional format and as a WEB course. Meets degree requirement for the AAS degree in several technical programs.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: DEV 031 with a grade of "C" or higher, or by placement
Lab fee: $5.00

MATH 102 Beginning Algebra I (A, W, SP, SU) 4 credits
This course is a remedial preparatory course designed to improve the student's algebra and problem solving abilities. The course includes: the real number system; order of operations; simplifying expressions; solving linear equations and inequalities in one variable; applications and modeling; overview of graphing; linear equations in two variables; and relations and functions. These topics are taught using an approach that integrates algebraic, graphic and numeric methods whenever possible. Not open to students with credit for MATH 103 or above. A TI-83/84 graphing calculator is required. This course is offered in both a traditional format and in a computer-based format.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: DEV 031 with a grade of "C" or higher, or by placement
Lab fee: $3.00

MATH 103 Beginning Algebra II (A, W, SP, SU) 4 credits
This course is a continuation of MATH 102. This course is a remedial preparatory course designed to improve the student's algebra and problem solving abilities. The course includes: functions; systems of equations in two variables; applications and modeling; properties of exponents; scientific notation; polynomial arithmetic, factoring and equation solving; rational expression arithmetic and simplification; and complex fraction simplification. These topics are taught using an approach that integrates algebraic, graphic and numeric methods whenever possible. Not open to students with credit for MATH 104 or above. A TI-83/84 graphing calculator is required. This course is offered in both a traditional format and in a computer-based format.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: MATH 102 with a grade of "C" of higher, or by placement
Lab fee: $3.00

MATH 104 Intermediate Algebra (A, W, SP, SU - DL) 5 credits
This course is a remedial preparatory course designed to improve the student's algebra and problem solving abilities. The course includes: interval notation; absolute value, rational, radical and quadratic equations; absolute value and polynomial inequalities in one variable; linear inequalities in two variables; compound inequalities in one and two variables; operations on radical expressions and expressions containing rational exponents; complex number system introduction; and applications and modeling. These topics are taught using an approach that integrates algebraic, graphic and numeric methods whenever possible. Not open to students with credit for MATH 110, 111, 112, 113, 116, 125, 130, or 148 and above. A TI-83/84 graphing calculator is required. .
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 103 with a grade of "C" or higher, or by placement
Lab fee: $3.00

MATH 105 Fundamental Mathematics Concepts for Teachers I (A, W, SP, SU) 5 credits
This course is designed to introduce the basic concepts of arithmetic and problem solving as appropriate for primary and middle school teachers. Development of these concepts will focus on the Ohio Standards and the Grade Level indicators. Instruction will also focus on the development of these concepts through the use of hands on manipulatives, calculators, and other appropriate technology. The role of technology and the NCTM Standards for the teaching and learning mathematics will be demonstrated, explored and discussed.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 104 or MATH 110 with a grade of "C" or higher, or by placement
Lab fee: $2.00

MATH 106 Fundamental Mathematics Concepts for Teachers II (A, W, SP, SU) 5 credits
A continuation of MATH 105. Development of basic concepts of Inductive Geometry, Deductive Geometry, Measurement, and Informal Logic as appropriate for primary and middle school teachers. Development of these concepts will focus on the Ohio Standards and the Grade Level indicators. Instruction will also focus on the development of these concepts through the use of hands on manipulatives, calculators, and other appropriate technology. The role of technology and the NCTM Standards for the teaching and learning of mathematics will be demonstrated, explored and discussed.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 105 with a grade of "C" or higher
Lab fee: $2.00

MATH 107 Condensed Algebra I (A, W, SP, SU) 5 credits
This course is intended for those students who need a quicker review of

algebra than provided in MATH 102 and 103. This course is a remedial preparatory course designed to improve the student's algebra and problem solving abilities. This course includes: the real number system; order of operations; simplifying expressions; solving linear equations and inequalities in one variable; applications and modeling; overview of graphing; linear equations in two variables; relations and functions; compound inequalities in one and two variables; absolute value equations and inequalities in one variable; linear inequalities in two variables; systems of equations in two variables; properties of exponents; scientific notation; and polynomial arithmetic. These topics are taught using an approach that integrates algebraic, graphic and numeric methods whenever possible. Not open to students with credit for MATH 110, 111, 112, 113, 116, 125, 130 or 148 and above. A TI-83/84 graphing calculator is required.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: By COMPASS placement or department chairperson approval
Lab fee: $3.00

MATH 110 Condensed Algebra II (A, W, SP, SU) 5 credits
This course is intended for those students who need a quicker review of algebra than provided in MATH 103 and 104. This course is a continuation of MATH 107. This course is a remedial preparatory course designed to improve the student's algebra and problem solving abilities. This course includes: properties of exponents; scientific notation; polynomial arithmetic; factoring and equation solving; rational expression arithmetic and simplification; complex fraction simplification; rational, radical and quadratic equations; polynomial inequalities in one variable; operations on radical expressions and expressions containing rational exponents; complex number system introduction; and applications and modeling. These topics are taught using an approach that integrates algebraic, graphic and numeric methods whenever possible. Not open to students with credit for MATH 111, 112, 113, 116, 125, 130 or 148 or above. A TI-83/84 graphing calculator is required.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 107 with a grade of "C" or higher, or by placement
Lab fee: $3.00

MATH 111 Technical Mathematics I (A, SP) 4 credits
A brief review of scientific notation and other algebraic concepts; dimensional analysis; significant digits; introduction to complex numbers; solutions to quadratic equations and applications of the quadratic function; solving formulas; ratio-proportion; direct and inverse variation; algebraic functions and rectangular coordinates; solutions to 2 x 2 linear systems; right triangle trigonometry. Lab work with a TI-83/84 Plus graphing calculator will be included. Not open to students with credit for MATH 148. Meets degree requirement for Electronic Engineering, Mechanical Engineering, Computer Electronics, Quality Assurance, Electro-Mechanical, and Aviation Technologies.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: MATH 103 with a grade of "C" or higher, or by placement
Lab fee: $2.00

MATH 112 Technical Mathematics II (W, SU) 4 credits
Periodic functions with emphasis on graphing the Sine and Cosine curves; exponential and logarithmic functions; vectors and oblique triangles using the Law of Sines and the Law of Cosines; sequences, series, and summation notation; solving radical equations and equations in quadratic form; solving linear, polynomial, rational and absolute value inequalities; the equations of lines and circles. Lab work with a TI-83/84 Plus graphing calculator will be included. Not open to students with credit for MATH 150. Meets degree requirement for Mechanical Engineering, Quality Assurance, and Electro-Mechanical Technologies.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: MATH 111 with a grade of "C" or higher
Lab fee: $2.00

MATH 116 Mathematics for the Liberal Arts
(A, W, SP, SU - DL) 5 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. A TI-83/84 graphing calculator is required. This course is designed for the student who does not intend to take additional courses in mathematics. This course is offered in both a traditional format and as a WEB course. Meets the general education requirement for the AA Degree. Not open to students with credit for MATH 130 or 148 or above.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 104 with a grade of "C" or higher, or by placement
Lab fee: $3.00

MATH 121 Mathematics for Computer Technology (on demand)
5 credits
A study of fixed and floating-point real numbers, significant digits, scientific and normalized notations; a look at algorithm, flowchart, and pseudocode forms; a comparison of decimal, binary, octal, and hexadecimal numeration systems, conversions, and arithmetic in those systems; definitions, symbols, and operations in set theory; logical operators with truth tables and flowcharts and Boolean Algebra.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 103 with a grade of "C" or higher, or by placement
Lab fee: $2.00

MATH 130 Mathematical Analysis for Business
(A, W ,SP, SU) 5 credits
A review of applications of equations, inequalities, and function notation; an introduction to graphs of functions: translations and reflections of graphs of functions; An introduction to modeling of linear, quadratic, exponential, and logarithmic functions; an introduction to matrices: addition, subtraction, multiplication, row reduction, and solving linear systems using row reduction; the mathematics of finance: compound interest, annuities, amortization and sinking funds; Business applications throughout. A TI-83/84 graphing calculator is required. Not open to students with credit for MATH 116, 125, 148, or MATH 150. Meets general education requirement for the AA degree for a student planning to transfer to a business college at a four-year university.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 104 or MATH 110 with a grade of "C" or higher, or by placement
Lab fee: $2.00

MATH 131 Business Calculus I (A, W, SP, SU) 5 credits
An introduction to differential calculus: limits, continuity, derivatives, rules for differentiation, derivatives of logarithmic and exponential functions, extrema, concavity and applied maxima and minima problems. Business Applications throughout. A TI-83/84 graphing calculator is required. Not open to students with credit for MATH 151. Meets general education requirement for the AA degree for a student planning to transfer to a business college at a four-year university.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 130 or MATH 148 with a grade of "C" or higher, or department chairperson approval
Lab fee: $2.00

MATH 132 Business Calculus II (A, W, SP, SU) 5 credits
An introduction to integral calculus and multivariable calculus; anti-derivatives, definite integrals, area under a curve, Fundamental Theorem of Calculus, techniques of integration, differential equations, functions of several variables, partial derivatives, extrema of functions of two variables; Business applications throughout. A TI-83/84 graphing calculator is required. Not open to students with credit for MATH 152. Meets general education requirement for the AA degree for a student planning to transfer to a business college at a four-year university.

Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 131 with a grade of "C" or higher
Lab fee: $2.00

MATH 135 Elementary Statistics (A, W, SP, SU - DL) 5 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; testing hypothesis; linear correlation and regression. A TI-83/84 graphing calculator is required. Not open to students with credit for MATH 233. This course is offered in both a traditional format and as a WEB course. Meets basic related requirements for several AAS Degree technical programs. MATH 135 may be available as an honors class.
Lecture: 5 hours – Lab: 1 hour
Prerequisite: MATH 103 with a grade of "C" or higher, or by placement
Lab fee: $6.00

MATH 147 Trigonometry Module (on demand) 1.2 credits
Right triangle and unit circle trigonometry is studied along with related trigonometric applications. A TI-83 graphing calculator is required. Calculators that can do symbolic manipulations are not allowed. This module is intended to prepare students who have an adequate algebra background but lack the necessary trigonometry to succeed in Physics 117, Physics 181, or Physics 183.
Lecture: 1.2 hours – Lab: 0 hours
Prerequisite: Permission from the Mathematics Department Chairperson
Lab fee: $0

MATH 148 College Algebra (A, W, SP, SU - DL) 5 credits
The concept of function is used to analyze quadratic, higher degree polynomial, and rational functions. The function concept is applied to solving related equations and inequalities. Right triangle trigonometry is included, along with related applications. Conic sections are defined and analyzed. A TI-83/84 graphing calculator is required. Calculators that can do symbolic manipulations are not allowed. This course is offerd in both a traditional format and as a WEB course. Meets general education requirement for AA degree. Not open to students with credit for MATH 150 and above. Can be substituted for MATH 130.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 104, MATH 110, or MATH 111 with a grade of "C" or higher, or by placement
Lab fee: $2.00

MATH 150 PreCalculus (A, W, SP, SU) 5 credits
A continuation of the study of functions, including the exponential, logarithmic, and trigonometric functions; triangle trigonometry, analytic trigonometry; applications of trigonometry; polar coordinates; vectors; and parametric equations. A TI-83/84 graphing calculator is required. Calculators that can do symbolic manipulations are not allowed. Meets general education requirement for AA degree. Not open to students with credit for MATH 151 or above.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 148 with a grade of "C" or higher
Lab fee: $2.00

MATH 151 Calculus and Analytic Geometry I
(A, W, SP, SU) 5 credits
Introduction to differential calculus: functions, limits, continuity, derivatives, differentiation rules, derivatives of the trigonometric and transcendental functions, related rates, extrema, curve sketching, optimization., antiderivatives Applications to problems in science and engineering. Meets general education requirement for AS and AA degrees. MATH 151 may be available as an honors contract.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 150 with a grade of "C" or higher, or by placement
Lab fee: $1.00

MATH 152 Calculus and Analytic Geometry II
(A, W, SP, SU) 5 credits
Introduction to integral calculus: antiderivatives, definite integral, area under a curve, Fundamental Theorem of Calculus, integration of exponential, logarithmic, trigonometric, inverse trigonometric and hyperbolic functions, volume and surface area of solids of revolution, arc-length, and methods of integration. Also includes L'Hopital's Rule and improper integrals. Applications to problems in science and engineering. Meets general education requirement for AS and AA degrees.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 151 with a grade of "C" or higher
Lab fee: $1.00

MATH 153 Calculus and Analytic Geometry III
(A, W, SP, SU) 5 credits
Continuation of differential and integral calculus: Infinite sequences and series, conic sections, plane curves and polar coordinates, vectors in the plane and in space, and analytic geometry in space. Applications to problems in science and engineering. Meets general education requirement for AS and AA degrees.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 152 with a grade of "C" or higher
Lab fee: $1.00

MATH 233 Statistics for Business (A, W, SP, SU) 5 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, Poisson, normal, exponential, and other discrete and continuous probability distributions; the Central Limit Theorem; and an introduction to estimating population parameters. Applications in business, management and economics are emphasized. A TI-83/84 graphing calculator is required. Meets general education requirement for AS and AA degrees.
Lecture: 5 hours – Lab: 1 hour
Prerequisite: MATH 132 or MATH 152 with a grade of "C" or higher
Lab fee: $6.00

MATH 254 Multivariable Calculus (A, W, SP, SU) 5 credits
Introduction to multivariable calculus; vector valued functions and motion in the plane and in space, functions of several variables, partial derivatives, directional derivatives, gradients, extrema, multiple integrals, line integrals and Green's Theorem; applications to problems in science and engineering. Meets general education requirement for the AS and AA degrees.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 153 with a grade of "C" or higher
Lab fee: $1.00

MATH 255 Elementary Differential Equations (SU) 5 credits
A study of the basic concepts and methods of solving ordinary differential equations, first and second order, higher order linear equations, Laplace transform methods, series solutions, and numerical solutions of differential equations. Applications to the physical sciences and engineering. Meets general education requirements for the AS and AA degrees.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 254 with a grade of "C" or higher
Lab fee: $1.00

MATH 266 Discrete Mathematical Structures (W, SP, SU) 5 credits
Mathematical formalization and reasoning; logic; Boolean algebra; sets, relations, and functions; recursive definitions; mathematical induction; probability theory and counting principles. Meets general education requirements for the AS and AA degrees.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 152 with a grade of "C" or higher
Lab fee: $1.00

MATH 268 Elementary Linear Algebra (SU) 5 credits
Linear systems, matrices, and determinants; vector spaces, R N and its subspaces; Eigenvalues, Eigenvectors, and applications; orthogonal matrices; linear transformations; and complex scalars; with applications. Meets general education requirement for the AS and AA degrees.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 254 with a grade of "C" or higher, or department chairperson approval
Lab fee: $1.00

MATH 277 Probability and Statistics I (W) 5 credits
Introduction to probability, discrete and continuous random variables, probability distributions, expected value, sampling distributions, and point estimation. Applications to problems in science, engineering, computer science, and related areas. The MATH 277-278 sequence is intended primarily for students majoring in science, engineering, mathematics, or computer science, or for any student needing a calculus-based sequence in probability and statistics.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 254 with a grade of "C" or higher
Lab fee: $1.00

MATH 278 Probability and Statistics II (SP) 5 credits
Continuation of MATH 277; One and two sample estimation; one and two sample hypothesis tests for proportions, means, variances; goodness-of-fit; simple linear regression and correlation; non-parametric statistics; statistical quality control. Applications to problems in science, engineering, computer science, and related areas. The MATH 277-278 is intended primarily for students majoring in science, engineering, mathematics, or computer science, or for any student needing a calculus-based sequence in probability and statistics.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: MATH 277 with a grade of "C" or higher
Lab fee: $1.00

MATH 285 Ordinary and Partial Differential Equations (A, W, SP, SU) 6 credits
Ordinary and partial linear and nonlinear differential equations; Fourier series; boundary value problems. Applications to engineering and the physical sciences. Lab fee: $1.00. Prerequisite: MATH 254 with a grade of "C" or higher, or permission of the Mathematics Department. Not open to students with credit for MATH 255. Meets general education requirement for the AS and AA degrees.
Lecture: 6 hours – Lab: 0 hours
Prerequisite: MATH 254 with a grade of "C" or higher, or department chairperson approval
Lab fee: $1.00

MATH 290 Capstone in Mathematics (on demand) 3 credits
A capstone course focusing on mathematics. This course is intended to provide the student with an introduction to a baccalaureate major in the mathematical sciences. Topics include the historical and philosophical developments of mathematics and how they affect the advancements of mathematics; the interdependence of science, technology, and mathematics; mathematical methods and how they are used in modeling problems in science and engineering; majoring in mathematics and professional career opportunities. The laboratory utilizes a scholarly approach to reviewing research in mathematics or the history of mathematics, taking students through the process of identifying a research topic, conducting a literature review, writing a paper, and presenting the results. This course is required of all students in the AA or AS degree program preparing for a major in one of the mathematical sciences.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: MATH 152 with a grade of "C" or higher
Lab fee: $10.00

Mechanical Engineering Technology (MECH)

MECH 110 Introduction to Manufacturing Technology (A, W, SP, SU) 3 credits
This course is designed to introduce the beginning student to Engineering Technology and the Engineering Technology Department of Columbus State. Topics such as sketching and blueprint reading, engineering procedures and calculations, and engineering terminology and symbols are covered. A broad overview of manufacturing organizations, employment opportunities, and professional societies are presented. In addition team skills are discussed and Steven Covey's "Seven Habits of Highly Effective People" is examined.
Lecture: 2 hours – Lab: 3 hours

MECH 111 Manufacturing Processes (A, SU) 4 credits
This course is designed to be an introduction to primary processing and the six main secondary manufacturing processes-casting and molding, separating, hot and cold forming, conditioning, assembling, and finishing.
Lecture: 3 hours – Lab: 2 hours
Lab fee: $5.00

MECH 112 Computer Applications in Manufacturing (A, W, SP, SU) 3 credits
An introductory level computer course for Engineering Technology students. The course introduces computer technology critical to the subsequent success in studies of CAD, CAM, Numerical Control Machining and Computer Programming for Technicians. Students will complete assignments in Microsoft Office as well as cover DOS commands and applications, Windows, the web and the basic hardware of the computer.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $10.00

MECH 120 Mechanical Drafting I (W, SU) 3 credits
This course is an introductory drafting and blueprint reading course that teaches students how to draw and interpret orthographic and isomeric views of various objects and components. Dimensioning, fasteners, section views, assembly and sub-assembly drawings, and Bills of Material are examined in-depth. Emphasis is placed on interpretation of drawings as well as being able to do simple manual construction of views.
Lecture: 1 hour – Lab: 5 hours
Lab fee: $10.00

MECH 130 Statics (A, SP) 3 credits
This course deals with the principles of trusses, frames, machines and machine components. The course will offer the student experience in dealing with coplanar load systems that are concurrent, parallel and noncoplanar.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: PHYS 181
Lab fee: $15.00

MECH 131 Hydraulics (W, SP, SU) 3 credits
This is a course designed to instruct students in the basics of fluid flow and power transmission in hydraulically controlled machines. The principles of system design and practical uses of hydraulic systems for industrial, agricultural, and off-road applications are emphasized. Hands-on laboratory experiences are used to demonstrate basic operating principles including piping, pumps, cylinders, and motors.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $10.00

MECH 240 Machine Tools (A, W, SP, SU) 4 credits
This course features hands-on operation of mills, lathes, shapers, and grinders in addition to instruction on 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: 2 hours – Lab: 6 hours
Lab fee: $30.00

MECH 242 Strength of Materials (W, SU) 3 credits
This course is a study of the application of external loads to rigid bodies and the analysis of the resulting stresses produced within those bodies. Study will be devoted to thermal expansion, bolted and welded joints, thin walled pressure vessels, beam stresses and deflection, beam design, column stresses, and column design.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: MECH 130
Lab fee: $15.00

MECH 243 Robotics (A, SU) 3 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 S-6 robot.
Lecture: 2 hours – Lab: 3 hours
Prerequisites: MECH 112
Lab fee: $10.00

MECH 244 Statistical Process Control (W, SU) 3 credits
This course provides a broad overview of statistical process control practices commonly found in business and industry. This course includes presentation of the philosophy and practices of modern quality control principles, basic probability, control chart applications, acceptance sampling, frequency distributions, and process capability studies.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: Placement into MATH 103 or higher

MECH 250 Materials Science (A, SP) 3 credits
This is a course that will acquaint the engineering technician with the nature, properties, performance, characteristics and practical uses of various engineering materials. Materials such as ferrous and nonferrous metals as well as plastics, and selected organic materials will be covered. Nondestructive and destructive testing practices commonly found in industry today will be presented.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $15.00

MECH 251 Computer Aided Drafting I (A, SP) 3 credits
Introduces students to the basic terminology and fundamental concepts of computer aided drafting. Commands and functions presented are applicable to other CAD systems. Students apply this knowledge to generate orthographic and other two-dimensional mechanical drawings using AutoCAD software.
Lecture: 1 hour – Lab: 5 hours
Prerequisites: MECH 112 and MECH 120
Lab fee: $20.00

MECH 252 Computer Programming for Technicians (W, SU) 3 credits
A course designed to instruct students in the use of QBasic 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 to QBASIC.
Lecture: 1 hour – Lab: 5 hours
Prerequisites: MECH 112 and placement into MATH 103 or higher
Lab fee: $10.00

MECH 253 Numerical Control (W) 3 credits
This course is designed for the beginning student and 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: 5 hours
Prerequisites: MATH 112 and MECH 240
Lab fee: $25.00

MECH 260 Basic Mechanisms (SP, SU) 4 credits
A graphical and mathematical study of the displacement, velocity, and acceleration of typical industrial mechanisms such as linkages, cams, and gears. Additional topics such as bearings and lubrication are also discussed.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: MECH 120
Lab fee: $6.00

MECH 261 Machine Design (SP, SU) 4 credits
This course is designed as a capstone experience for Mechanical Engineering Technology students. Students are required to demonstrate their ability to solve engineering problems using skills and knowledge gained through their course work. The class, as a team, will participate in designing and prototyping a machine or mechanism related to the field.
Lecture: 2 hours – Lab: 6 hours
Prerequisites: MECH 131, MECH 242 and EET 102
Lab fee: $25.00

MECH 262 Computer Aided Drafting II (W, SU) 3 credits
This course is an extension of MECH 251. Course includes the study of practical applications of computer graphics with isometric and three dimensional drawings including wire-frame and solid modeling techniques to produce mechanical and production type drawings using AutoCAD software.
Lecture: 1 hour – Lab: 5 hours
Prerequisite: MECH 251
Lab fee: $20.00

MECH 263 Computer Aided Manufacturing (SP) 4 credits
This course provides the manual numerical control programmer with an understanding of computer aided manufacturing including instruction in Feature-Cam computer aided manufacturing language
Lecture: 2 hours – Lab: 6 hours
Prerequisites: MECH 251and MECH 253
Lab fee: $30.00

MECH 264 Computer Aided Drafting III (AU, SP) 3 credits
An advanced course in 3D design and production oriented information. Students will create production drawings and documentation required to take a product from concept to design, sales, prototyping, production, and final assembly. Students will be utilizing AutoCAD 2000™ and Mechanical Desktop and additional software operating in conjunction with AutoCAD.
Lecture: 1 hour– Lab: 5 hours
Prerequisite: MECH 262
Lab fee: $20.00

Medical Assisting (MAT)

MAT 100 Introduction to Medical Assisting (A) 3 credits
This course provides an overview of the medical assisting profession. Emphasis is placed on professionalism, communication, medical specialties, and medical law and ethics. The students will be evaluated through essay writings of the topics covered. Discussion of the Standard Precautions and compliance with federal regulatory agencies is included. The importance of the professional organizations at the national, state

and local levels is examined as well as the credentialing of the medical assistant.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Acceptance into the program

MAT 111 Clinical Procedures-Lecture (A) 3 credits
This course introduces the student to the entry-level skills typically performed by the medical assistant in the clinical area of the medical office. The competency based skills are instructed though theoretical presentations and will include: infection control, sanitization, and sterilization using the autoclave, hand-washing, measuring and recording vital signs, measuring height and weight, setting up the physical examination tray, positioning patients and assisting the physician in examinations. The guidelines for OSHA compliance are discussed.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Acceptance into the program

MAT 113 Clinical Procedures-Lab (A) 2 credits
This course will demonstrate the entry-level skills and allow the students to perform hands-on the clinical skills to a 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.
Lecture: 0 hours – Lab: 4 hours
Prerequisite: Acceptance into the program
Lab Fee: $40.00

MAT 121 Advanced Medical Assisting (W) 5 credits
This course will instruct the medical assisting student in the skills beyond the basic entry-level. The advanced skills will include: electrocardiography, minor surgery in the medical office, rehabilitation and physical therapy, radiology in the medical office, nutrition and diet therapy and the importance of accurate patient education. The student will explain and demonstrate the practical aspects of the advanced skills following a check off format outlined by the instructor. Diseases, medical conditions and illnesses treated in the medical office by the various medical specialties will be studied.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: MAT 111
Lab fee: $10.00

MAT 122 Advanced Office Procedures-Lecture (SP) 2 credits
This course will instruct the student to the administrative skills expected of the entry-level medical assistant through theoretical presentations. Topics to be covered and demonstrated to competency-level are: communications, computer concepts, medical records management, screening and processing mail, scheduling and monitoring appointments, office inventory and supplies, operating office equipment, telephone technique and managing practice finances. 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: 2 hours – Lab: 0 hours
Prerequisite: MAT 236, MAT 237

MAT 123 Advanced Office Procedures-Lab (SP) 1 credit
This course introduces the student to advanced aspects of the medical office through practical presentations. Topics include: communications, computer concepts, medical records management, screening and processing mail, scheduling and monitoring appointments, operating office equipment and managing practice finances.
Lecture: 0 hours – Lab: 3 hours
Prerequisite: MAT 236, MAT 237
Lab fee: $7.50

MAT 230 Pharmacology (SP) 4 credits
This course introduces the pharmacology of commonly prescribed drugs in the medical office. The lecture portion allows the student to learn drug laws, brand and generic drug names, prescription abbreviations, prescription format and drug uses and body reactions. The laboratory section will include the demonstration, technique and theory of administration of medications in the medical office setting: included will be intradermal, subcutaneous, and intramuscular routes as well as oral, topical, sublingual, vaginal and rectal administration. The theory and principal of IV medication therapy is discussed. The accuracy of recording medications in the medical record is emphasized. The student will be expected to perform to competency level the pharmacological skills in check off format outlined by the instructor.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: MATH 100, MAT 121

MAT 236 Computer Application for the Medical Office Lecture (SP) 1 credit
This course introduces the medical office computer package to the student. 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 as well as preparing daily, monthly and yearly billing cycles. A complete review of coding diagnosis and procedures and insurance claim submissions is included. Internet research of physician and medical practices websites is demonstrated.
Lecture: 1 hour – Lab: 0 hours
Prerequisites: MAT 122,
Corequisite: MAT 240, MAT 230

MAT 237 Computer Application for the Medical Office Laboratory (SP) 3 credits
This course allows the student to practice the principals of the medical office computer package through hands-on production of office simulations discussed in the lecture portion. The student will be expected to prepare a portfolio of the medical office package to competency level in check off format as directed by the instructor.
Lecture: 0 hour – Lab: 6 hours
Prerequisites: MAT 123
Corequisite MAT 240, MAT 230
Lab Fee: $10.00

MAT 240 Physician's Office Laboratory (SP) 5 credits
This course is designed to provide the student with an overview of the procedures utilized to collect and process specimens in a physician's office setting. Emphasis is placed on methods of collections, processing of specimens and quality control. Additionally, the student is introduced to the microscope, the techniques of capillary puncture and venipuncture (vacutainer method), urinalysis, blood typing, microbiology procedures and understanding the normal ranges and the various laboratory reports.
Lecture: 3 hours - Lab: 4 hours
Prerequisite: MAT 121
Lab fee: $75.00

MAT 260 Ethical and Professional Principles in the Medical Office (SU) 2 credits
An examination of the medical ethical, legal and bioethical issues in today's medical office is studied. The course will focus on legal/ethical aspects of medicine. Additional focus will be placed on current legislative statutes that affect the practicing medical assistant.
Lecture: 2 hours – Lab: 0 hours
Pre-requisite: MAT 122/123
Co-requisite: MAT 290/296

MAT 290 Practicum (SU) 3 credits
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 160 ***unpaid*** externship hours.
Lecture: 0 hours – Lab: 16 hours
Prerequisite: MAT122, MAT123, MAT230, MAT240
Co-requisite: MAT 296/260
Lab fee: $50.00

MAT 296 Seminar (SU) 1 credit
Group discussion of topics related to practicum experiences as well as current trends and topics in the medical assisting profession. Students will also be responsible for projects and simulations of daily medical office activities. *The student will also present a professional portfolio of their competency check off sheets and completed projects*
Lecture: 1 hours – Lab: 0 hours
Prerequisite: MAT122, MAT123, MAT236, MAT237, MAT230, MAT240
Corequisite: MAT 290/260

Medical Laboratory Technology (MLT)

MLT 100 Introduction to Health Care (A, W, SP, SU-DL) 3 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 – Lab: 2 hours
Prerequisite: Placement into ENGL 100
Lab fee: $15.00

MLT 120 Role and Responsibility of the MLT (W, SU-DL) 1 credit
This course provides an in-depth examination of the role and responsibilities of the MLT as an important professional in the delivery of quality health care. Discussions will include such topics as professionalism, the general organization and operational activities of a clinical laboratory, and career opportunities for MLT graduates. Students will be exposed to actual clinical settings and meet with practicing laboratory personnel. In addition, students will be introduced to specimen collection and processing techniques, quality assurance, and the application of laboratory math and statistics.
Lecture: 1 hour
Prerequisite: MLT 141, MLT 142
Corequisite: MLT 121

MLT 121 Role and Responsibility of the MLT Lab (W, SU) 1 credit
This course provides a lab component to complement MLT 120. Students will be introduced to basic laboratory equipment, specimen collection and transport procedures, and the principles and practices of phlebotomy.
Lab: 2 hours
Prerequisite: MLT 141, MLT 142
Corequisite: MLT 120

MLT 130 Immunology (W, SU-DL) 3 credits
This course covers the immune system, the nature of immune responses, and the application of immunological reactions to a variety of laboratory procedures. Also included are discussions of the etiology and diagnosis of immunologically mediated diseases.
Lecture: 3 hours
Corequisite: MLT 131

MLT 131 Immunology Lab (W, SU) 2 credits
This course provides a lab component to complement MLT 130. Emphasis is placed on commonly performed serological tests. Upon completion, students should be able to demonstrate theoretical comprehension and application in performing and interpreting routine immunologic and serodiagnostic procedures.
Lab: 4 hours
Corequisite: MLT 130
Lab fee: $80.00

MLT 141 Hematology I (A, SP-DL) 3 credits
This course focuses on the origins, morphology, and function of blood cells. The theory and technology used in analyzing blood cells as well as the laboratory evaluation of hematologic disorders will be discussed. Upon completion, students should be able to demonstrate theoretical comprehension of hematology.
Lecture: 3 hours
Prerequisite: Acceptance into the program
Corequisite: MLT 142

MLT 142 Hematology Lab (A, SP) 3 credits
This course provides a lab component to complement MLT 141. Emphasis is placed on laboratory experiences that enhance materials presented in MLT 141. Upon completion, students should be able to perform routine hematology procedures and correlate laboratory findings with disorders.
Lab: 9 hours
Prerequisite: Admission to program
Corequisite: MLT 141
Lab fee: $80.00

MLT 180 Special Topics in Medical Laboratory (on demand) 1 credit
Students work independently on a research project related to the field of clinical laboratory science and present their findings.
Lecture: 1 hour
Prerequisite: Permission of coordinator

MLT 181 Special Topics in Medical Laboratory (on demand) 2 credits
Students work independently on a research project related to the field of clinical laboratory science and present their findings.
Lecture: 2 hours
Prerequisite: Permission of coordinator

MLT 182 Special Topics in Medical Laboratory (on demand) 3 credits
Students work independently on a research project related to the field of clinical laboratory science and present their findings.
Lecture: 3 hours
Prerequisite: Permission of coordinator

MLT 220 Immunohematology (A,SP-DL) 4 credits
This course is designed to prepare students to perform, according to American Association of Blood Banks (AABB) standards, the routine serological procedures used in any transfusion service or blood bank. Stress is placed on the performance of pretransfusion testing and the recognition of the presence of serological incompatibilities in a patient's specimen. Students will be introduced to the techniques used in the resolution of the most commonly encountered serological difficulties. Class discussions will also include donor blood collection and processing for component therapy, blood transfusion practices, adverse affects of blood transfusion, investigation of transfusion reactions, and fetal-maternal blood incompatibilities.
Lecture: 4 hours
Prerequisite: MLT 130 & MLT 131.
Corequisite: MLT 223

MLT 223 Immunohematology Lab (A, SP) 3 credits
This course provides a lab component to complement MLT 220. Emphasis is placed on laboratory experiences that enhance materials presented in MLT 220. Upon completion, students should be able to perform and interpret routine pretransfusion procedures and recognize common problems.
Lab: 9 hours
Prerequisites: MLT 130, MLT 131
Corequisite: MLT 220
Lab fee: $80.00

MLT 240 Hematology II (W, SU-DL) 2 credits
This course builds on the routine Hematology procedures covered in Hematology I. Blood smears are prepared and studied for the identification of blood cells that aid in the diagnosis of anemias, leukemias, hemoglobinopathies, and other disease states. Also included is the study of coagulation and the routine procedures used to evaluate hemostasis. Upon completion of this course the student will be able to perform routine hematology procedures during clinical experience.
Lecture: 3 hours
Prerequisite: MLT 141, MLT 142
Corequisite: MLT 245

MLT 242 Body Fluids (W, SU-DL) 2 credits
The course introduces the physical, chemical, and microscopic examination and interpretation of urine and other body fluids in normal and abnormal states, examination and interpretation.
Lecture: 2 hours
Corequisite: MLT 243

MLT 243 Body Fluids Lab (W, SU) 2 credits
This course provides a laboratory component to complement MLT 242. Emphasis is placed on laboratory experiences that enhance materials presented in MLT 242. Upon completion, students should be able to demonstrate theoretical comprehension in performing and interpreting urinalysis and other body fluid tests.
Lab: 4 hours
Corequisite; MLT 242

MLT 244 Medical Laboratory Case Studies (W, SU-DL) 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: 1 hour – Lab: 3 hours
Prerequisite: All technical courses.

MLT 245 Hematology II Lab (W, SU) 2 credits
This course provides a lab component to complement MLT 240. Emphasis is placed on laboratory experiences that enhance materials presented in MLT 240. Upon completion, students should be able to perform and interpret routine hematology procedures and recognize common problems and abnormal results.
Lab: 6 hours
Prerequisites: MLT 141, MLT 142
Corequisite: MLT 240
Lab fee: $80.00

MLT 250 Clinical Microbiology (W, SU-DL) 4 credits
This course provides a comprehensive survey of clinical microbiology, including mycology and parasitology. Emphasis is placed on the identification of pathogenic organisms covering both routine and special areas of clinical microbiology.
Lecture: 4 hours
Prerequisite: BIO 115
Corequisite: MLT 251

MLT 251 Clinical Microbiology Lab (W, SU) 4 credits
This course provides a laboratory component to complement MLT 250. Emphasis is placed on methods used to isolate and identify commonly encountered pathogens from clinical specimens. Upon completion, students should be able to demonstrate theoretical comprehension in performing and interpreting routine clinical microbiology procedures.
Lab: 12 hours
Prerequisite: BIO 115
Corequisite: MLT 250
Lab fee: $80.00

MLT 260 Clinical Chemistry (A, SP-DL) 3 credits
This course introduces 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.
Lecture: 3 hours
Prerequisite: CHEM 113 or CHEM 111

MLT 261 Clinical Chemistry Lab (A, SP) 3 credits
This course provides a laboratory component to complement MLT 260. Emphasis is placed on laboratory experiences that enhance materials presented in MLT 260. Upon completion, students should be able to demonstrate theoretical comprehension of clinical chemistry, perform diagnostic techniques, evaluate quality control, and correlate laboratory findings with disorders.
Lab: 9 hours
Prerequisite: CHEM 113 or CHEM 111
Corequisite: MLT 260
Lab fee; $80.00

MLT 270 Clinical Practicum (A, W, SP, SU) 5 credits
This course provides students with entry-level clinical laboratory experience in a supervised laboratory setting. Students 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.
Lecture: 0 hours – Lab: 35 hours
Prerequisite: All technical courses
Corequisite: MLT 271
Lab fee: $45.00

MLT 271 Clinical Seminar (A, SP-DL) 2 credits
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.
Lecture: 2 hours – Lab: 0 hours
Corequisite: MLT 270

Mental Health / Chemical Dependency /Mental Retardation (MHCR)

MHCR 111 Introduction to Mental Health (A, W, SP, SU) 4 credits
This entry level course provides the student with a comprehensive overview of the mental health field as it relates to historical and contemporary issues impacting the mental health field, as well as service delivery components and barriers. The student acquires knowledge of clinically

based mental health skills needed to formulate assessments.
This course must be completed with a C or better.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101 or 111, placement out of DEV 044 and 031
Lab fee: $ 12.00

MHCR 112 Introduction Mental Retardation/Developmental Disabilities (A, W, SP, SU) 3 credits
This entry level course provides the student with a comprehensive overview of the mental retardation field as it relates to sociocultural, psychosocial, political and economic variables that impact the field of mental retardation and its overall service delivery to individuals who are mentally retarded or individuals with disabilities and their families.
This course must be completed with a C or better.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101 or 111, placement out of DEV 044 and 031
Lab fee: $ 12.00

MHCR 114 Introduction to Chemical Dependency (A, W, SP, SU) 4 credits
This entry level course provides the student with an overview of chemical dependency. Historical and cultural influences and models utilized to understand substance abuse are discussed. The ASAM/NCADD definition and the DSM-IV criteria of substance dependence are explored. Common drugs of abuse and their impact on the individual, family and society are presented. Students explore community resources available to persons with chemical dependency and their families. This course must be completed with a C or better.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101 or 111, placement out of DEV 044 and 031
Lab fee: $12.00

MHCR 115 Introduction to Counseling (A, W, SP, SU) 4 credits
This introductory course focuses on the development of basic interviewing, rapport building and active listening skills for the beginning student. The student gains a beginning understanding of the process and principles in establishing effective helping relationships using attending behaviors, effective questioning, empathy and self-awareness. This course must be completed with a C or better.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101 or 111, placement out of DEV 044 and 031
Lab fee: $12.00

MHCR 117 Introduction to Documentation Skills (A, W, SP, SU) 2 credits
The emphasis in this introductory course is on the use of behavioral writing to document services delivered to clients. Students learn beginning skills needed to maintain records,including writing progress notes. This course must be completed with a C or better.
Lecture: 2 hours – Lab: 0 hours
Prerequisite Placement into ENGL 101 or 111, placement out of DEV 044 and 031
Lab fee: $ 15.00

MHCR 135 Intervention Strategies (A, W, SP, SU) 3 credits
The emphasis in this core course is on understanding client behavior, assessing readiness and stage of change, and developing positive intervention strategies. Behavioral principles are utilized. Crisis intervention, anger management and therapeutic assault prevention are explored. Application of skills is utilized with clients with mental health, chemical dependency and/or mental retardation problems. This course must be completed with a C or better.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Admission to the program
Corequisite: MHCR 191
Lab fee: $16.00

MHCR 150 Pharmacology in Human Services (A, W, SP, SU) 2 credits
This is a required course in all three tracks in the MH/CD/MR Program. This course examines the composition, uses and effects of various psychoactive and psychotropic drugs. Commonly used psychotropic medications, the psychiatric conditions for which they are prescribed and frequently experienced side effects are discussed. An overview of the central nervous system and drug/neurotransmitter interactions is also covered. This course must be completed with a C or better.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: Admission to the program
Lab fee: $12.00

MHCR 191A Fundamentals in Human Service Practice – Helping Process (A, W, SP, SU) 4 credits
Emphasis in this core course is on understanding and applying the helping process. Students learn to apply data collection, data assessment, action planning, action/implementation and evaluation skills. This course must be completed with a C or better.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: Admission to the program, MHCR 111, 112, 114, 115, 117, PSY 100, ENGL 101
Lab fee: $12.00

MHCR 191B Fundamentals in Human Service Practice – Practicum (A, W, SP, SU) 4 credits
Emphasis in this core course is on observing and participating in the delivery of services to clients served by an agency. The student practices beginning helping skills under the supervision of an agency professional. The student processes practicum experiences in a weekly seminar. This course must be completed with a C or better.
Lecture: 2 hours – Lab: 14 hours
Prerequisites: Admission to the program, MHCR 111, 112, 114, 115, 117, PSY 100, ENGL 101
Lab fee: $38.00

MHCR 230 Supervision & Ethics In Chemical Dependency (on demand) 2 credits
This course familiarizes the student with clinical supervision in the field of chemical dependency and looks at ethical standards and issues in substance abuse counseling and prevention. This course must be completed with a C or better.
Lecture: 2 hours – Lab: 0 hours
Lab fee: $5.00

MCHR 230A Supervision in Chemical Dependency Counseling (on demand) 1 credit
This course is a modularized component of 230 which will familiarize the student with clinical supervision in the field of chemical dependency and issues in substance abuse counseling and prevention. This course must be completed with a C or better.
Lecture: 1 hour – Lab: 0 hours
Lab fee: $5.00

MCHR 230B Ethics in Chemical Dependency Counseling (on demand) 1 credit
This course is a modularized component of 230 which will familiarize the student with ethical standards and issues in substance abuse counseling and prevention. This course must be completed with a C or better.
Lecture: 1 hour – Lab: 0 hours
Lab fee: $2.00

MCHR 231 Ethics in Substance Abuse Prevention (on demand) 1 credit
This course familiarizes the student with ethical issues in the field of substance abuse prevention. This course must be completed with a C or better.
Lecture: 1 hour – Lab: 0 hours
Lab fee: $2.00

MCHR 234 Therapeutic Laughter (on demand) 3 credits
This course familiarizes the student with the therapeutic aspects of humor and the skills and knowledge necessary to become a Certified Laughter Leader. Leaders are able to facilitate social and therapeutic Laughter Clubs. This course must be completed with a C or better.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $8.00

MCHR 235 Diagnosis & Treatment for Chemical Dependency Counselors (on demand) 4 credits
This course familiarizes the student with DSM-IV with the emphasis on substance related disorders. Other common mental disorders are explored. Treatment for substance related and mental disorders are discussed. This course must be completed with a C or better.
Lecture: 4 hours – Lab: 0 hours
Lab fee: $8.00

MHCR 236 Foundations in Prevention (on demand) 4 credits
This course familiarizes the student with the historical perspectives, theoretical approaches, current program models and research in ATOD. This course must be completed with a C or better.
Lecture: 4 hours – Lab: 0 hours
Lab fee: $8.00
Prerequisites: MHCR 114
Co-requisites: MCHR 191

MHCR 237 Program Planning and Evaluation (on demand) 3 credits
This course focuses on the role of the community and leaders in the community in the development and Implementation of prevention services. Methods for evaluating program effectiveness, impact and outcomes of prevention services are explored. This course must be completed with a C or better.
Lecture: 3 hours – Lab: 0 hours
Prerequisites: MHCR 236
Lab fees: $8.00

MHCR 239 Advanced Prevention Practices 3 credits
This practicum course allows students to become involved in the community to access develop implement and evaluate prevention services. This course must be completed with a C or better.
Lecture: 2 hours – Lab: 0 hours
Practicum: 10 hours
Prerequisites: MCHR 237
Lab fee: $35.00

MHCR 241 Counseling Skills (A, W) 4 credits
This core course focuses on theoretical and practical aspects of effective helping through the counseling relationship with clients who have MH/CD and/or .MR issues. Skills which form the foundation of effective communication, using a microtraining model, are emphasized. Critical thought and creativity is stressed. Course emphasizes practicing skills in small groups, and in role play/simulations. This course must be completed with a C or better.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: MHCR 191
Lab fee: $18.00

MHCR 245 Chemical Dependency I (A, W) 4 credits
This course is offered as part of the CD track only. Course content includes exploration of various approaches and philosophies to the treatment of addictions, recognition of signs and symptoms of substance dependence and assessing the appropriate level of care for treatment. Issues and treatment for families and significant others are reviewed. Students complete a bio-psycho-social assessment, diagnostic summary and didactic presentation. The 12 Core Functions of a substance abuse counselor are interwoven throughout the quarter. Legal and ethical issues in the field of chemical dependency counseling are explored. This course must be completed with a C or better.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: MHCR 191
Corequisite: MHCR 241 and MHCR 293
Lab fee: $18.00

MHCR 247 Teaching and Supporting Strategies (A, W) 4 credits
This course provides a comprehensive overview of the principles and techniques for teaching and supporting people with diverse needs. Topics covered include job coaching, habilitation programming, person centered planning, teaching and learning styles and community inclusion. This course must be completed with a C or better.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: MHCR 191
Corequisite: MHCR 241 and 291
Lab fee: $18.00

MHCR 251 Social Policy (W, SP) 4 credits
This course examines social welfare policies/programs at national, state, and local levels in fields of MH/CD/MR. The student uses an ecological model for social change to collect, synthesize and evaluate data on a variety of social problems. Throughout the course the student documents analysis of visits to agencies and organizations. This course must be completed with a C or better.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: MHCR 245/293 or MHCR 247/291
Lab fee: $18.00

MHCR 253 Therapeutic Group Work Skills (W, SP) 4 credits
This course, offered as a part of all three tracks in the program, is focused on knowledge and experiential learning using group as the unit of attention. Course content includes process, stages of development, leadership skills, therapeutic factors and problematic issues for groups of clients who are mentally ill, mentally retarded, chemically dependent or who have co-occurring disorders. The student participates as a member in a peer group to compliment classroom theoretical constructs. This course must be completed with a C or better.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: MHCR 241 and MHCR 247/291 or MHCR 245/293
Corequisite: MHCR 295
Lab fee: $20.00

MHCR 258 Service Coordination/Case Management (SP, SU) 4 credits
This course provides the human service student with a comprehensive overview of the service coordination/ case management system as well as an in-depth exposure to newly defined skills, treatment approaches and contemporary issues impacting the service coordination/case management delivery field. This course must be completed with a C or better.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: MHCR 253 and 295
Corequisite: MHCR 298
Lab fee: $18.00

MHCR 265 Chemical Dependency II (SP, SU) 4 credits
This is an advanced course offered as part of the Chemical Dependency track only. This course focuses on working with clients with co-occurring disorders and relapse prevention. Students assess client resistance, iden-

tify stages of change and practice appropriate motivational interviewing techniques. Students develop a relapse prevention plan/ treatment plan and develop a discharge plan utilizing a variety of community support groups. Legal and ethical issues, including duty to warn and working with impaired professionals, are explored. This course must be completed with a C or better.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: MHCR 253 and 295
Corequisite: MHCR 296
Lab fee: $18.00

MHCR 266 Treatment in the Criminal Justice System (on demand) 4 credits
This course explores substance abuse and mental health treatment in the criminal justice system. Various treatment modalities will be discussed with particular focus on therapeutic communities. Students gain awareness of social, political and institutional issues that influence design, policy and implementation of institutional treatment programming.
Lecture: 4 hours – Lab: 0 hours
Lab fee: $10.00

MHCR 270 Special Topics in Chemical Dependency Counseling (on demand) 2 credits
This course familiarizes the student with the cultural perspectives of specific client populations as it relates to substance abuse/dependency assessment and treatment of individuals and families. The topics include: Native Americans, Domestic Violence Survivors, Sexual Abuse Perpetrators, Pregnant Women, Siblings of Substance Abusing Adolescents, Latinos, Gangs, Older Adults and Parents and Families. This course must be completed with a C or better.
Lecture: 2 hours – Lab: 0 hours
Lab fee: $20.00

MCHR 275 Principles of Team Process (on demand) 3 credits
This is an advanced course which provides the student with a theoretical and practical foundation for functioning as a team member in a human service agency. This course must be completed with a C or better.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $10.00

MHCR 280 Special Topics in Chemical Dependency (on demand) 2 credits
This course familiarizes the student with the cultural perspectives of specific client populations as it relates to substance abuse/dependency assessment and treatment of individuals and families. The topics include: African-American Persons; The Appalachian Community; People Living with HIV-AIDS; Adolescents; Criminal Offender Population; Gay, Lesbian, Bisexual and Transgendered Persons; Homeless Individuals; Persons with co-occurring disorders. This course must be completed with a C or better.
Lecture 2 hours – Lab 0 hours
Lab fee: $20.00

MHCR 274 and MHCR 284 Special Studies in MH/CD/MR (on demand) 4 credits
These courses are designed to meet specific needs of students who wish to pursue in-depth training in the MH/CD/MR field. Typical subject areas include theory and skills in helping individuals who are chemically dependent, severely mentally disabled, dually-multi diagnosed , or persons with mental retardation/developmental disabilities. Instructional methods may include clinical experience, seminar format, field placement, lecture, research, videotape and role play. Students enroll in this course with permission of faculty or clinical coordinator. This course must be completed with a C or better.
Lecture 4 hours – Lab: 0 hours
Lab fee: $20.00

MHCR 290 Special Topics in Prevention 2 credits
This course familiarizes the student with various aspects of prevention. Evidence Based Practice standards will be utilized including risk and protection measures. The topics will rotate and include the prevention of various health related issues, violence, crime, delinquency, teen pregnancy, mental health issues, sexually transmitted diseases and other emerging issues.
Lecture: 2 hours – Lab: 0 hours
Lab fee: $4.00

MHCR 291 Practicum in Teaching and Supporting Strategies (A, W) 4 credits
This is a clinical experience for the student specializing in the Mental Health and Mental Retardation tracks which takes place in a community agency. The student practices the skills needed to teach and support people in vocational, or community settings with an emphasis on job coaching, habilitation programming, person centered planning and community inclusion. The student is expected to assume the role of service provider and is responsible for professional conduct and appropriate work habits. The student processes practicum experiences in a weekly seminar. This course must be completed with a C or better.
Lecture: 2 hours – Lab: 14 hours
Prerequisite: MHCR 191
Corequisite: MHCR 247
Lab fee: $45.00

MHCR 293 Practicum in Chemical Dependency I (A, W) 4 credits
This is a required clinical experience for students in the Chemical Dependency track. The student is placed in an agency that provides chemical dependency treatment services. Students begin to participate in services that relate to the 12 core functions of a substance abuse counselor. Focus in on assessment, symptom identification and engaging clients in the treatment process. The student assumes the role of service provider demonstrating professional conduct and appropriate work habits. The student processes practicum experiences in a weekly seminar. This course must be completed with a C or better.
Lecture: 2 hours – Lab: 14 hours
Prerequisite: MHCR 191
Corequisite: MHCR 245
Lab fee: $45.00

MHCR 295 Practicum in Therapeutic Group Work (W, SP) 4 credits
This is a clinical experience for the student in all three tracks in the MH/CD/MR program. In a community agency the student leads or co-leads a group using skills learned in the classroom, in addition to maintaining one-on-one contact with an identified agency client. The student assumes the role of service provider, demonstrating professional conduct and appropriate work habits. This course must be completed with a C or better.
Lecture: 2 hours – Lab: 14 hours
Prerequisite: MHCR 241 and 247/291 or 245/293
Corequisite: MHCR 253
Lab fee: $50.00

MHCR 296 Practicum in Chemical Dependency II (SP, SU) 4 credits
This advanced clinical experience is required for the student in the Chemical Dependency track and continues to engage students in the 12 Core Functions of a substance abuse counselor. Emphasis is on co-occurring disorders and relapse prevention utilizing motivational enhancement and stage wise treatment throughout the practicum experience. The student assumes the role of service provider, demonstrating professional conduct and appropriate work habits. The student processes practicum experiences in a weekly seminar. This course must be completed with a C or better.
Lecture: 2 hours – Lab: 14 hours
Prerequisite: MHCR 253 and 295
Corequisite: MHCR 265
Lab fee: $50.00

MHCR 298 Practicum in Service Coordination/Case Management (SP, SU) 4 credits
This is a clinical experience for the Mental Health and Mental Retardation track student. The student practices service coordination and case management skills with emphasis on interdisciplinary treatment planning, assessment writing and the implementation of appropriate referrals. The student assumes the role of service provider and is responsible for professional conduct and acceptable work habits. This course must be completed with a C or better
Prerequisite: MHCR 253 and 295
Corequisite: MHCR 258
Lab fee: $35.00

MHCR 299 Portfolio Completion Capstone Course in MH/CD/MR (SP, SU) 1 credit
This course will provide the student with the opportunity to assemble, edit, and ready for presentation in portfolio format the collected assignments from each course in the major. Feedback regarding each course is solicited from the student. In addition, the content areas of ethical concerns in human services, effective team participation and avoiding "burnout" are addressed. This course must be completed with a C or better.
Lecture: 1 hour – Lab: 0 hours
Corequisite: Fourth and last technical course paired with practicum.
Lab fee: $40.00

Multi-Competency Health (MULT)

MULT 101 Medical Terminology (A, W, SP, SU-DL) 2 credits
This introductory online 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 – Lab: 0 hours
Lab fee: $5.00

MULT 102 Cardiopulmonary Resuscitation (CPR) (A, W, SP, SU) 1 credit
Cardiopulmonary resuscitation for adults, pediatrics and infants including early warning signs of heart attacks, airway blockage, and stroke are taught. Students completing the course will be eligible for American Heart Association Basic Life Support Certification. Offered as a flexibly scheduled course in one weekend. This course is available on main, Dublin and Westerville campuses. This course meets the required CPR Certification for healthcare providers and includes the new 2000 guidelines from the American Heart Association. This course is professional level CPR; only students in a pre health or health program may take the course. Certification is good for 2 years. This may only be repeated with an instructor/coordinator signature.
Lecture: 1 hour – Lab: 0 hours
Lab fee: $5.00

MULT 103 Responding to Emergencies (A, W, SP, SU) 2 credits
Requirements for Red Cross Certification including artificial respiration, bleeding control, treatment of shock, and care of fractures are presented This course includes MULT 102, American Heart Association CPR-Basic Life Support.
Lecture: 1 hour – Lab: 2 hours
Lab fee: $23.00

MULT 104 Adult and Pediatric CPR (for Non-Healthcare Providers) (A, W, SP, SU) 1 credit
This course is based on the combined guidelines and standards set forth by the American Heart Association (AHA) in Basic Life Support-Heartsaver and Pediatric Cardiopulmonary Resuscitation and First Aid for Choking. Guidelines 2000 for CPR and Emergency Cardiovascular Care are presented and practiced by the student who is *not* a health care provider. *This course does not fulfill the required CPR certification for healthcare providers.* This is a flexibly scheduled course offered in one weekend. Available on main, Dublin and Westerville campuses. Not open to students with credit for MULT 102. This may only be repeated with an instructor/coordinator signature.
Lecture: 1 hour – Lab: 0 hours
Lab fee: $5.00

MULT 110 Basic Electrocardiography (EKG) (A, SP) 6 credits
This course is designed to provide basic entry-level skills in cardiovascular technology. The course covers an introduction to health care, anatomy and physiology of the heart, operation of the electrocardiograph and recording of EKG's, cardiac pathology and basic cardiac rhythm recognition skills. Completion of the course qualifies the student to function as an EKG technician, a skill ordinarily utilized in an acute health care setting or physician's office. This course includes 24 hours of clinical experience.
Lecture: 5 hours – Lab: 2 hours
Prerequisite: Placement into ENGL 101. Completion of a health record.
Lab fee: $38.00

MULT 114 Phlebotomy Practicum II (A, SP) 1.5 credits
This course is designed to be a continuation of MULT 115 by providing an additional 60 hours clinical phlebotomy experience and requiring an additional 60 successful blood collections. Phlebotomy Practicum II is designed for students who intend to be a professional phlebotomist and will be arranged individually. MULT 114 and MULT 115 completes the NAACLS approved program.
Lecture: 0 hours – Clinical: 60 hours total
Prerequisite: Completed health record. Completion of MULT 115 with a C or better
Lab fee: $10.00

MULT 115 Phlebotomy (W, SU) 4.75 credits
Blood collection by both venipuncture and capillary puncture techniques, using various equipment are performed in class and in the hospital. Professional ethics and liability, composition and appearance of blood, safety, anticoagulants and clinical relevance of laboratory tests are studied. Problems encountered in phlebotomy, in addition to special specimen collection for transfusion services, blood cultures, coagulation tests, timed tests and the nursery are also reviewed. This course includes a 40 hour clinical experience and at least 40 successful blood collections in a Central Ohio health care facility. You must be available for an 8 daytime hour shift one time per week during the last half of the quarter for the clinical experience. Fingerprinting for a background check is a requirement for the clinical experience.
Lecture: 3 hours – Lab: 3 hours Clinical: 40 hours total
Prerequisite: Completed health record., MULT 101; Placement above or credit for ENGL 100
Lab fee: $55.00

MULT 116 Venipuncture for Health Care Providers 2 credits
Basic blood collection techniques using vacuum tubes and syringes will be covered and practiced in a laboratory and clinical setting. Emphasis is on basic skills, safety and infection control. Not open to students who have credit for MULT 114 and MULT 115 This course includes a 30 hour clinical experience and at least 50 successful blood collections in a central Ohio health care facility.
Lecture: 1 hour – Lab: 4 hours
Prerequisite: Completed health record and be enrolled in Medical Laboratory Technology
Lab fee: $28.00

MULT 120 Nurse Aide Training Program (A, W, SP, SU) 5 credits
The Nurse Aide Training Program (NATP) is designed to instruct students and prospective long-term care nurse aides in the skills needed to provide basic care for clients in long term care settings. The 76 hour NATP course includes 60 hours of classroom/lab instruction and 16 hours of clinical

preparation, which meet the requirements for nurse aide training in Ohio. Since the course follows state and federal guidelines, class and clinical attendance is mandatory.
Lecture: 2 hours – Lab: 6 hours
Prerequisite: Completed health record, Placement into ENGL 101, Placement into DEV031, and Placement into "no reading required", or Permission of Instructor
Lab fee: $38.00

MULT121 Nurse Aide to Home Health Aide (A, W, SP, SU) 2 credits
This course will prepare students who have taken the nurse aide training program to transition into home care.
Lecture: 2 – Lab: 0 hours
Prerequisite: State tested nurse aide or eligible
Lab fee: $30.00

MULT 126 Patient Care Skills I (A, W, SP, SU) 4 credits
This course presents the rationale for and practice of skills commonly used 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: 2 hours – Lab: 6 hours
Prerequisite: MULT 120 with a grade of 'C' or better, Placement into ENGL 101, Placement into DEV 031, and Placement into "no reading required"
Lab fee: $35.00

MULT 127 Patient Care Assistant for the Workforce (A, W, SP, SU) 5 credits
This is a workforce training course for employees of health care systems who have entered into a partnership with CSCC. Students gain knowledge and skills to function as a patient care assistants.
Lecture: 3 hours – Lab: 4 hours
Prerequisite: Employee of health care system who has partnership with CSCC
Lab fee: $30.00

MULT 128 Introduction to Patient Care Assistant for the Workforce (A, W, SP, SU) 5 credits
This is a workforce training course for employees of health care systems who have entered into a partnership with CSCC. The student learns nurse aide training skills (basic patient care skills such as bathing, feeding, etc.) in order to work with patients prior to taking the Basic PCA/MSP training.
Lecture: 2 hours – Lab: 6 hours
Prerequisite: Employee of health care system who has a partnership with CSCC

MULT 129 Patient Care Skill: Restorative Technique for the Workforce (A, SP) 4 credits
This course provides information and skills using safe, effective techniques in the care of mobility-impaired patients. Discusses the role of the physical therapy and nursing staff use of therapeutic modalities, patient positioning, patient transfer techniques, exercise, ambulation, and utilization of assistive and adaptive equipment for patients with impaired mobility.
Lecture: 3 hours – Lab: 4 hours
Prerequisite: MULT 120 or permission of instructor
Lab fee: $11.00

MULT 135 Basic PCA/MSP Training for the Workforce (A, W, SP, SU) 4 credits
This is a workforce training course for employees of health care facilities who have entered into a partnership with CSCC. In classroom, laboratory and clinical settings, students learn sterile techniques and patient care skills.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: NATP or MULT 128 and employee of health care facility who has a partnership with CSCC

MULT 136 Advanced Patient Care Assistant for the Workforce (A, W, SP, SU) 2 credits
This is a workforce training program for employees of health care facilities who have entered into a partnership with CSCC. In classroom, laboratory, and clinical settings, students learn advanced patient care skills such as tracheostomy care.
Lecture: 1 hour – Lab: 2 hour
Prerequisite: MULT 135 and employee of health care facility who has a partnership with CSCC

MULT 137 Phlebotomy Training for the Workforce (A, W, SP, SU) 4 credits
This is a workforce training program for employees of health care facilities who have entered into a partnership with CSCC. In classroom, laboratory and clinical settings, students learn the skills of drawing blood.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: MULT 135 or permission of instructor and employee of health care facility who has a partnership with CSCC

MULT 138 EKG Training for the Workforce (A, W, SP, SU) 2 credits
This is a workforce training program for employees of health care facilities who have entered into a partnership with CSCC. In classroom, laboratory and clinical settings, students learn the skill of performing electrocardiograms.
Lecture: 1 hours – Lab: 2 hours
Prerequisite: MULT 135 or permission of instructor and employee of facility who has a partnership with CSCC

MULT 139 Basic PCA Training for the Workforce (A, W, SP, SU) 4 credits
This is a workforce training program for employees of health care facilities who have entered into a partnership with CSCC. In classroom and laboratory settings, students learn basic patient care skills.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: Employee of facility who has a partnership with CSCC

MULT 140 Patient Care Technician Training for the Workforce (A, W, SP, SU) 3 credits
This is a workforce training program for employees of health care facilities who have entered into a partnership with CSCC. In classroom and laboratory settings, students learn sterile technique and advanced patient care skills.
Lecture: 2 hour – Lab: 2 hours
Prerequisite: MULT 139 or permission of instructor and employee of health care facility who has partnership with CSCC

MULT 149: Tissue Identification Clinical (A) 1 credit
In this course, the student will apply the concepts of tissue identification in an authentic clinical setting, working with tissue specimens.
Practicum: 5 hours
Prerequisites: MATH 100, MULT 101, BIO 161, CHEM 113, Placement into ENGL 101
Corequisite: MULT 150, 151, 152

MULT 150: Histologic Techniques (A) 3 credits
This course provides an examination of all of the procedures that take place at the beginning of preparing a tissue sample for examination by the pathologist. These procedures include embedding techniques, tissue fixation, principles of microtomy and tissue processing.
Lecture: 3 hours – Lab: 0 hours
Prerequisites: MATH 100, MULT 101, BIO 161, CHEM 113, Placement into ENGL 101
Corequisite: MULT 149, 151, 152

MULT 151: Histologic Techniques Clinical (A) 2 credits
In this course, the student will apply the theory of the basic histologic techniques examined in MULT 150 in an authentic clinical setting.
Practicum: 15 hours
Prerequisites: MATH 100, MULT 101, BIO 161, CHEM 113, Placement into ENGL 101
Corequisite: MULT 149, 150, 152

MULT 152 Tissue Identification (A) 2 credits
The structure and identification of tissue systems is emphasized at a cellular level. The student will develop skills that will assist them in identification of different tissue sources. Subsequently, the tissue source will be correlated with tissue function.
Lecture: 2 hours – Lab: 0 hours
Prerequisites: MULT 100, MULT 101, BIO 161, CHEM 113
Corequisite: MULT 149, 150, 151

MULT 154 Chemistry of Stains I (W) 3 credits
This course addresses the fundamentals and clinical significance of routine and special histological staining.
Lecture: 3 hours – Lab: 0 hours
Prerequisites: MULT 149, MULT 150, MULT 151, MULT 152
Corequisite: MULT 155

MULT 155 Chemistry of Stains I Clinical (W) 2 credits
In this course, students will apply the concepts from MULT 154 in an authentic clinical setting.
Practicum: 15 hours
Prerequisites: MULT 149, MULT 150, MULT 151, MULT 152
Corequisite: MULT 154

MULT 156 Chemistry of Stains II (SP) 2 credits
This course is a continuation of MULT 154 and will include special histology staining procedures including imunohistochemistry, and basic and advanced troubleshooting techniques.
Lecture: 2 hours – Lab: 0 hours
Prerequisites: MULT 154, MULT 155
Corequisite: MULT 157

MULT 157 Chemistry of Stains II Clinical (SP) 2 credits
In this course, students will apply the concepts from MULT 156 in an authentic clinical setting.
Practicum: 15 hours
Prerequisites: MULT 154, MULT 155
Corequisite: MULT 156

MULT 171 Current Issues: HIV Infection (A, W, SP, SU) 1 credit
Introductory course covering the psycho, social, legal, epidemiologic issues surrounding HIV infection. Offered as a term course.
Lecture: 1hour – Lab: 0 hours
Lab fee: $9.00

MULT 175 Principles of Homeopathy (W) 4 credits
This course is designed to introduce students to the principles and theories behind the use of homeopathic preparations to treat most disease and disorders.
Lecture: 4 hours – Lab: 0 hours
Lab fee: $5.00

MULT 176 Fundamentals of Herbology (A) 4 credits
This course outlines the uses of herbs in the healing process from ancient history to present day. Herbs will be discussed in relation to both flowers and in cooking. Emphasis will be on therapeutic self-care first aide.
Lecture: 4 hours – Lab: 0 hours
Lab fee: $5.00

MULT 177 Holistic Healing Methods (SP) 4 credits
This course offers an introduction to the fundamentals of holistic healing, which includes philosophical and theoretical foundations, alternative methods and their uses for health maintenance and development of personal healing capacities.
Lecture: 4 hours – Lab: 0 hours
Lab fee: $5.00

MULT 178 Animals and Nature - Therapeutic Programs (SP) 3 credits
The Animal-Assisted Therapy and Education Certificate Program is designed to meet the Delta Society's standards for accreditation. The Delta Society is an international organization devoted to research and service in the area of human-animal relationships and is the leading resource center on the interactions of people, animals and the environment. The program will include the Delta Society's Pet Partners home-study course and its two-day course on temperament testing.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: MULT 179. Admission to a Health and Human Services Technology

MULT 179 Companion Animals and Health (W) 2 credits
This course will review the recent scientific evidence which confirms the ancient wisdom that our living environment - our pets, gardens, parks, rural landscapes and wild and domestic animals - have important, positive effects on health and well-being of humans. Topics to be covered include the cognitive, emotional, behavioral, and physiological effects of contact with animals and nature; Biophilia, our natural affinity for life that binds us to all living species; the psychobiology of nurturing; the ecology of pets, gardens and natural places.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: MULT 181

MULT 181 Introduction to the Human-Animal Interaction (A) 2 credits
This course will investigate the origins, nature and application of the human-animal bond. The course content is designed to promote understanding of the mutually nurturing relationship between people and animals and to explore services by animals to aid people with health difficulties and physical and emotional challenges
Lecture: 2 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $8.00

MULT 190 Radiation Protection for General Machine Operator (A, W, SP, SU) 2 credits
This course is designed to prepare non-radiographers with a specific background in radiation protection and radiation biology necessary to be eligible to apply for the State of Ohio, Radiologic Technology Division, General Machine Operator examination. Areas of instruction include radiation physics, radiographic technique, darkroom processing and film handling, radiation health, safety and protection, and radiation biology. Basic radiographic positioning skills and terminology are also presented.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: Admission to College
Lab fee: $3.00

MULT 191 Radiographic Positioning for General Machine Operators (A, W, SP, SU) 2 credits
This course is a continuation of MULT 190. It provides an environment to apply the concepts of technique selection, radiographic accessories, exposure and processing, and radiation protection in an energized laboratory setting. Radiographic anatomy, patient care skills, body mechanics, and radiographic positioning skills will be emphasized. This competency based course will include positioning of the chest, abdomen, extremities and spine.
Lecture: 1hour – Lab: 3 hours
Prerequisite: MULT 190 or permission of the instructor
Lab fee: $30.00

MULT 245 RN First Assistant Program (A, SP) 5 credits
This is an intensive training 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 official statement of the RNFA role.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Current RN Licensure; two years current perioperative experience; CNOR certified or eligible; current ACLS or CPR; liability insurance; two letters of recommendation
Lab fee: $8.00

MULT 246 RNFA Experiences in the Operating Room (W, SU) 4 credits
This course provides the student with continued practicum for completion of the RN First Assistant Program.
Lecture: 2 hours – Lab: 14 hours
Prerequisite: MULT 245
Lab fee: $8.00

MULT 250 NATP Train the Trainer (A, W, SP, SU) 3 credits
This course prepares qualified nurses to teach, coordinate, and supervise a Nurse Aid Training Program, meeting Federal and State of Ohio requirements.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Current RN/LPN licensed in Ohio; minimum of two years experience in caring for elderly or chronically ill.
Lab fee: $39.00

MULT 270 Human Resource Management for Health Services (online) 4 credits
The focus of this course is the application, analysis, synthesis, and evaluation of human resource management principles and practices for health care managers. Practical application to past and current life/work experience is provided and emphasized. Case studies are used as simulations to provide future application in the real work setting.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: ENGL 101, and BMGT 218 or permission of the coordinator
Lab fee: $5.00

MULT 272 Health Care Resource Management (online) 4 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: 4 hours – Lab: 0 hours
Prerequisite: ENGL 101, and BMGT 218 or permission of the coordinator
Lab fee: $5.00

MULT 274 TQM/UM/Accreditation (online) 4 credits
This course prepares health care professionals to apply, analyze, synthesize, and evaluate principles and practices of Total Quality Management (TQM), Utilization Management (UM), and Accreditation. TQM focuses on methods and systems to identify and resolve problems that interfere with optimal care and explore continuous quality improvement processes. UM enlightens the health care manager to their essential involvement in the review process and examines the meaning of utilization review to institutional performance. Accreditation process is presented in a practical manner to approach a very complex concern of health care managers. Health care managers will be more knowledgeable of and compliant with external accreditation processes.
Lecture: 4 hours – Lab: 0 hours
Prerequisite. ENGL 101, and BMGT 218 or permission of the coordinator
Lab fee: $5.00

MULT 275 Advanced Homeopathic Theories (A, W, SP, SU) 4 credits
This course will discuss homotoxicology and details of homeopathic care in acute and chronic conditions as they relate to self-care. Referral protocols will also be addressed.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: MULT 175 or permission of instructor
Lab fee: $5.00

MULT 276 Legal Aspects and Risk Management (online) 3 credits
This course is designed to provide the student with an overview of the legal aspects and risk management of the health care system. It is intended for health care practitioners preparing to enter supervisory positions.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 101, and BMGT 218 or permission of the coordinator
Lab fee: $5.00

MULT 290 Special Topics in Health Care (A, W, SP, SU) 1–5 credits
This is a workforce training course for employees of health care facilities who have entered into a partnership with CSCC. Various current and timely topics will be offered to give students an opportunity to expand their knowledge and/or skill level in a special area of interest.
Lecture: 1-5 hours (maximum of 10)) – Lab: 0 hours
Prerequisite: Permission of instructor and employee of facility who has partnership with CSCC

MULT 291 Special Topics in Health Care for the Workforce (A, W, SP, SU) 1 -5 credits
This is a workforce training program for employees of health care facilities who have entered into a partnership with CSCC. Students will discuss various current and timely topics related to patient care.
Lecture: 1-5hours maximum of 10)) – Lab: 0 hours
Prerequisite: Permission of instructor and employee of facility who has partnership with CSCC

Music (MUS)

MUS 101 History of Western Music (A, W, SP, SU) 5 credits
A survey of Western music from earliest times to the present including the development of notation in music, the development and limitations of standard instruments, the role of patronage in musical developments, the relationship of changes in music to changes in society, and a consideration of the attributes of "great" music in any time or age. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and distributive transfer requirements in History, Humanities and the Arts.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $3.00

MUS 102 Introduction to Vocal Technique (A, W, SP, SU) 1 credit
An introduction to vocal technique intended for non-music majors. This class will develop basic skills for both solo and group singing through the use of traditional song materials. Repeatable for 2 total credits.
Lecture: hours – Lab: 2 hours
Lab fee: $2.00

MUS 103 Vocal Technique II (A, W, SP, SU) 1 credit
Continuation of MUS 102: continued development of skills for solo and group singing through traditional song material. Repeatable for 2 total credits.
Lecture: hours – Lab: 2 hours
Prerequisite: Admission by Audition
Lab fee: $2.00

MUS 110 Basic Keyboard and Music Fundamentals I 2 credits
Basic applied keyboard combined with the development of music reading and basic aural skills. This course is for those without prior musical experience.
Lecture: 1 hours – Lab: 2 hours
Lab fee: $2.00

MUS 111 Basic Keyboard and Music Fundamentals II 2 credits
Continued development of keyboard technique and basic musical theory.
Lecture: 1 hours – Lab: 2 hours
Prerequisite: MUS 110 or permission of instructor
Lab fee: $2.00

MUS 120 Introduction to Electronic Music (on demand) 3 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. Prototypical synthesizing, MIDI sequencing, and digital sampling will be discussed, demonstrated, and used in class. Instruction is through a combination of lecture and hands-on experience.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: MUS 110 or permission of instructor
Lab fee: $3.00

MUS 121 Fundamentals of Music Theory (on demand) 5 credits
An introduction to the elements of music for non-music majors, including notation, composition, and the basic skills necessary for listening and performance. The class is designed to introduce the students to the elements and procedures necessary for the composition and performance of music.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $2.00

MUS 130 Electronic Music Lab (on demand) 2 credits
A continuation of MUS 120. The emphasis in this course is more on hands-on studio experience. Repeatable up to a total of 6 credits
Lecture: 1 hour – Lab: 2 hours
Lab fee: $3.00

MUS 135 Electronic Music Ensemble (on demand) 1 credit
Admission by audition/instructor permission. A select group of musicians rehearsing, arranging, and performing music on electronic instruments. Repeatable for a total of 6 credits.
Lab: 2 hours
Lab fee: $3.00

MUS 140 World Music (on demand) 5 credits
A survey of nonwestern musical traditions, including forms of music, instrumental development and function, and the role of music and the musician in society. Meets elective requirements in the Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in History, Humanities and the Arts.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $2.00

MUS 160 Concert Band (A, W, SP) 1 credit
Admission by audition. Preparation of a variety of wind literature for performance. Prior experience in instrumental music expected. Elective credit for Associate of Arts and Associate of Science degrees. Repeatable for a total of 6 credits.
Lecture: 0 hours – Lab: 2 hours
Lab fee: $5.00

MUS 165 Small Instrumental Ensemble (A, W, SP) 1 credit
Placement by audition. Specialized ensemble to concentrate on specific instrumental techniques or to explore specialized musical literature. Prior experience in instrumental music expected. Elective credit for Associate of Arts and Associate of Science degree. Repeatable for a total of 6 credits.
Lecture: 0 hours – Lab: 2 hours
Lab fee: $5.00

MUS 170 Gospel Vocal Ensemble (A, W, SP) 1 credit
Admission by audition. Preparation for concert performance of music primarily from the gospel and African-American vocal/choral traditions. Music reading ability not required. Repeatable for a total of 6 credits.
Lab: 2 hours
Lab fee: $3.00

MUS 180 Vocal Ensemble (A, W, SP) 1 credit
Admission by audition. Preparation for performance in concert of a variety of music. Music reading ability helpful but not required. It is suggested that a new Ensemble member take MUS 102 concurrently. Repeatable for a total of 6 credits.
Lecture: 0 hours – Lab: 2 hours
Lab fee: $5.00

MUS 217 Electronic Sound (on demand) 4 credits
This course is part of the Time Arts curriculum and will explore the history of electronic music as well as introducing to the student the techniques and methods for structuring sound digitally.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: Hum 245 and Art 215
Lab fee: $4.00

MUS 221 Musicianship I (A) 5 credits
Elements of music and musical notation; analytical concepts and terminology; major and minor scales; fundamentals of harmony and melody as well as development of basic aural skills: sight singing and dictation. For students intending to major in music or those with strong interest in music.
Lecture: 3 hours – Lab: 4 hours
Prerequisite: MUS 121 or permission of instructor
Lab fee: $3.00

MUS 222 Musicianship II (W) 5 credits
Principles of diatonic harmony and non-chordal melodic technique; introduction to chord structures; continued development of aural skills.
Lecture: 3 hours – Lab: 4 hours
Prerequisite: MUS 221 or permission of instructor
Lab fee: $3.00

MUS 223 Musicianship III (SP) 5 credits
Continued study of diatonic modulation and secondary dominants, modal and pentatonic harmonic patterns and pentatonic and blues scales. Continued development of aural skills.
Lecture: 3 hours – Lab: 4 hours
Prerequisite: MUS 222 or permission of instructor
Lab fee: $3.00

MUS 224 Contemporary and Jazz Theory (on demand) 5 credits
Chord structures, form, and chord-scale relationships of the jazz idiom will be studied, as will jazz (musical) vocabulary, lead sheets, chord symbols, and the practice of improvisation. For those intending to major in music or having strong personal interest. Music reading ability assumed.
Lecture: 3 hours – Lab: 4 hours
Prerequisite: Entry into ENGL 101 and either MUS 221 or permission of instructor
Lab fee: $6.00

MUS 241 Music History I (A) 3 credits
A survey of the development of music from earliest times to the 18th Century. Student ability to read music is assumed.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $2.00

MUS 242 Music History II (W) 3 credits
A survey of music from the rococo through the early romantic (1850) periods. Student ability to read music is assumed.
Lecture: 3 hours – Lab: hours
Prerequisite: Placement into ENGL 101
Lab fee: $2.00

MUS 243 Music History III (SP) 3 credits
A survey of music from the late romantic period to the present. Student ability to read music is assumed.
Lecture: 3 hours – Lab: hours
Prerequisite: Placement into ENGL 101
Lab fee: $2.00

MUS 244 History of Jazz and Popular Music 3 credits
A survey of the origins and development of jazz, the uniquely American musical idiom. 19th century origins of jazz, Dixieland, Chicago sound and evolution of the 1920s and 1930s big bands, cool jazz and the influence of jazz on other popular music of the 20th century will be explored through listening to recordings by major innovators and studying the written forms. Music reading ability assumed.
Lecture: 3 hours
Prerequisite: Entry into ENGL 101
Lab fee: $2.00

MUS 251 Audio Production I 4 credits
Examination of recording techniques in the studio and for live performance. Analog and digital formats will be explored, as will elements of post-production.
Lecture: 3 hours – Lab: 2 hours
Lab fees: $3.00

MUS 252 Audio Production II 4 credits
Continuation of MUS 251. Further exploration of recording and sound reinforcement techniques and principles, in addition to post-production issues.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: Successful completion of MUS 251 (Audio Production I)
Lab fees: $3.00

MUS 253 Audio Production III 4 credits
Continuation of MUS 252. Further exploration of recording and editing techniques and principles, in addition to maintenance and repair.
Lecture: 3 hours - Lab: 2 hours
Prerequisite: Successful completion of MUS 252 (Audio Production II)
Lab fees: $3.00

MUS 290 Capstone Experience in Music (on demand) 3 credits
A capstone course focusing on Music. Students will work on developing techniques and methodologies in the field of music. Students will apply these techniques to a project of their own design, and participate in summative testing of their academic skills.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: Open only to Associate of Arts and Associate of Science students preparing to graduate within 2 academic quarters.
Lab fee: $2.00

MUS 299 Special Topics in Music (on demand) 1 to 5 credits
Detailed examination of selected topics in music.
Lecture: variable hours – Lab: hours
Prerequisite: Permission of instructor
Lab fee: $2.00

Natural Science (NSCI)

Note: Courses taught at a distance [Distance Learning (DL)] may have a higher lab fee than traditionally taught courses.

A mandatory safety lesson (normally given in the laboratory) must be completed before the student is admitted to certain natural science laboratory sessions. Approved safety goggles are required for some laboratory sessions and may be purchased through the Bookstore. Attendance during the first week of class is mandatory and may affect a student's continued enrollment in these classes. Students must complete 60% of the laboratories in the course to receive credit.

NSCI 101 Natural Science I (A, W, SP, SU - DL) 5 credits
This course covers the evolution of the physical and biological sciences from antiquity to the modern era. Topics include early ideas of the physical world, the principles of mechanics and optics, microscopy and its role in the development of cell and germ theory, germ theory, the atomic nature of matter, and the classification and bonding of the elements. Related laboratory and demonstrations. Safety training and goggles are required for the laboratory. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting, completion of certain exams and laboratories. Laboratories are generally done on an every other week basis on campus.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: Placement into ENGL 101 and placement into MATH 102 or higher.
Lab fee: $19.00

NSCI 102 Natural Science II (A, W, SP, SU -DL) 5 credits
A continuation of NSCI 101. Topics include the laws of chemical combination, chemical reactions, evolution and natural selection, the diversity of life and ecology, the concept of energy, heat and thermodynamics, kinetic theory, electricity and magnetism, the nature of light, and quantum mechanics. Related laboratory and demonstrations. Safety training and goggles are required for the laboratory. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting, completion of certain exams and laboratories. Laboratories are generally done on an every other week basis on campus.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: NSCI 101 or equivalent
Lab fee: $ 19.00

NSCI 103 Natural Science III (A, W, SP, SU -DL) 5 credits
This course integrates the study of chemistry and biology with an emphasis on topics which have had an impact on the development of science in the twentieth century. Topics include the ways scientists communicate information, the modern advances of organic chemistry and biochemistry, protein synthesis, the processes of mitosis and meiosis, and genetics. Discussions cover scientific information as well as any ethical and moral implications of scientific advances. Related laboratory and demonstrations. Safety training and goggles are required for the laboratory. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting, completion of certain exams and laboratories. Laboratories are generally done on an every other week basis on campus.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: NSCI 102, equivalent, or permission of instructor
Lab fee: $19.00

Nuclear Medicine Technology (NUC)

NUC 149 Introduction to Clinical Nuclear Medicine Technology (W) 3 credits
This course is a basic introduction to nuclear medicine principles and clinical procedures. Areas of emphasis include fundamentals of nuclear medicine imaging, radiation safety, patient care and venipuncture.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: Completed health record, acceptance into the Nuclear Medicine Technology Program and NUC 200.

NUC 200 Introduction to Nuclear Medicine Technology (AU) 3 credits
This course is a prerequisite for all other Nuclear Medicine Technology Courses. Areas of emphasis include: fundamentals of nuclear medicine imaging, medical ethics, quality control testing, and radiopharmaceuticals.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Admission to Program

NUC 213 Physics and Nuclear Imaging I - LEC (W) 3 credits
This course will introduce the basic concepts of the atom, nuclear physics, interactions between radiation and matter, and nuclear imaging and counting devices. Lectures will emphasize the fundamentals of radioactivity and radioactive decay, radionuclides, basic statistics and quantitative measurements used in nuclear medicine, and computers and computer programming.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: NUC 200

NUC 214 Physics and Nuclear Imaging I - LAB (W) 1 credit
This course will introduce the basic concepts of the atom, nuclear physics, interactions between radiation and matter, and nuclear imaging and counting devices. Lab exercises will emphasize the fundamentals of radioactivity and radioactive decay, radionuclides, basic statistics and quantitative measurements used in nuclear medicine, and computers and computer programming.
Lecture: 0 hours – Lab: 2 hours
Prerequisite: NUC 200
Lab fee: $50.00

NUC 215 Physics and Nuclear Imaging II - LEC (SP) 3 credits
This course serves as a continuation of NUC 210 (Physics and Nuclear Imaging I). This course will consist of a lecture series that will provide an in-depth study of the electronics of imaging and counting devices, fundamentals of collimation, operational characteristics of radiation detector systems and imaging devices including Anger type single and multicrystal cameras, single photon emission computerized tomography (SPECT), positron emission tomography (PET) detectors, and scintillation probe, survey meter, and dose calibrator type counting devices.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: NUC 213, NUC 214

NUC 216 Physics and Nuclear Imaging II - LAB (SP) 3 credits
This course serves as a continuation of NUC 210 (Physics and Nuclear Imaging I). This course will consist of a lab series that will provide an in-depth study of the electronics of imaging and counting devices, fundamentals of collimation, operational characteristics of radiation detector systems and imaging devices including Anger type single and multicrystal cameras, single photon emission computerized tomography (SPECT), positron emission tomography (PET) detectors, and scintillation probe, survey meter, and dose calibrator type counting devices.
Lecture: 0 hours – Lab: 2 hours
Prerequisite: NUC 213, NUC 214
Lab fee $50.00

NUC 217 Physics and Nuclear Imaging III (SU) 3 credits
This course is a continuation of NUC 211 (Phys & Nuclear Imaging III). Through lecture , it will emphasize record keeping, nuclear regulations and licensure, and an advanced study of the operational characteristics of single photon emission computerized tomography (SPECT), Positron Emission Tomography (PET), and single and multicrystal camera operations and performance. This course will also provide an in-depth knowledge of nuclear imaging and counting device quality control, quality assurance, and acceptance testing programs.
Lecture: 3 hours
Prerequisite: NUC 215, NUC 216

NUC 218 Physics and Nuclear Imaging III (SU) 3 credits
This course is a continuation of NUC 211 (Phys & Nuclear Imaging III). Through lab exercises, it will emphasize record keeping, nuclear regulations and licensure, and an advanced study of the operational characteristics of single photon emission computerized tomography (SPECT), Positron Emission Tomography (PET), and single and multicrystal camera operations and performance. This course will also provide an in-depth knowledge of nuclear imaging and counting device quality control, quality assurance, and acceptance testing programs.
Lecture: 0 hours – Lab: 2 hours
Prerequisite NUC 215, NUC 216
Lab fee: $50.00

NUC 232 Radiation Safety & Protection (A) 2 credits
This course enables students to understand the duties of a Radiation Safety Officer (RSO) and a radiation safety program. The radiation safety program outlines the radiation protection of technologists and the public by teaching the basis of radiation measurement, the practical methods of radiation protection (time, distance, and shielding), use of personnel monitoring devices, compliance with federal, state, and local regulations including ALARA, maintenance of required records, compliance with receipt and disposal regulations of all radionuclides, supervision of a quality management program for therapeutic dosages and follow-up procedures, performance of appropriate radiation surveys and decontamination procedures, disposal of radioactive waste, and conduction of in-service education programs.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: Accepted into Program

NUC 234 Radiochemistry and Radiopharmacy I (W) 3 credits
This course will emphasize the basics of operating a hospital or commercial based nuclear pharmacy by emphasizing radiopharmaceutical receipt and storage, physical and biological characteristics of radiopharmaceutical generators, preparation, quality control, activity unit calculations, administration of diagnostic and therapeutic radiopharmaceuticals, and FDA, NRC, and State Regulations. All commonly used radiopharmaceuticals will be discussed along with their associated methods of localization.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: NUC 232, CHEM 113

NUC 235 Radiochemistry and Radiopharmacy II (SP) 4 credits
This course is a continuation of NUC 234 Radiochemistry and Radopharmacy I and will review and practice during lecture and lab exercises the basics of operating a hospital or commercial nuclear pharmacy by emphasizing radiopharmaceuticals, generators, radiopharamceutical preparation, radiopharmaceutical quality control, radiopharmaceutical activity and unit calculations, administration of diagnostic and therapeutical radioparmaceuticals and FDA, NRC, and State regulations. All commonly used radiopharmaceuticals will be discussed along with their associated methods and localization.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: NUC 234, CHEM 113
Lab Fee: $100.00

NUC 240 Seminar I (A) 1 credit
This class will devote class sections for the discussion of new technology including techniques, imaging modalities, and equipment. In addition the students will prepare a literature search project that will review the

nuclear medicine literature for pertinent changes in the nuclear medicine core areas.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: NUC 252

NUC 241 Seminar I I (W) 1 credit
This class will continue to devote class sections for the discussion of new technology including techniques, imaging modalities, and equipment. This class will also discuss responsibilities including the preparation of a nuclear medicine budget, the purchase/lease of new equipment, and administrative duties including a review of the insurance and governmental reimbursement process.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: NUC 240

NUC 242 Seminar III (SP) 1 credit
This class is a continuation of Seminar II and in addition will include a comprehensive review of the content areas covered by the American Registry of Radiological Technologists (ARRT {N}), and the Nuclear Medicine Technology Certification Board (NMTCB) examinations.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: NUC 241

NUC 251 Clinical Theory and Procedures I (SP) 5 credits
This course sequence introduces to the student how a diagnostic study is completed from start to finish. Pre-study preparations will be emphasized including scheduling of patients, choosing the proper radiopharmaceutical, basic patient preparations, and providing patient care and maintaining communication. General study procedures will then be introduced by reviewing the applicable anatomy/physiology and methods of pharmaceutical localization, and then discussing the performance of imaging procedures including selecting the proper camera or instrument, introducing proper patient and camera positioning, utilizing imaging techniques and methodologies, and performing data manipulation, image processing, and image critique. Adult/pediatric considerations and procedures will be discussed.
Lecture: 4 hours – Lab: 2 hours
Prerequisite: NUC 200, NUC 234
Lab fee: $50.00

NUC 252 Clinical Theory and Procedures II (SU) 5 credits
This course will continue to emphasize the fundamentals previously introduced in Section I while covering procedures that study the cardiovascular, central nervous, endocrine, gastrointestinal, genitourinary, pulmonary, and musculoskeletal systems. Adult/Pediatric considerations and procedures will be discussed. Cross sectional or SPECT images will be emphasized.
Lecture: 4 hours – Lab: 2 hours
Prerequisite: NUC 251
Lab fee: $50.00

NUC 254 Clinical Theory and Procedures III (SU) 5 credits
This course will continue to emphasize the fundamentals previously introduced in sections I & II while covering additional procedures that study the hematological system, infection imaging, and tumor imaging. Special emphasis will be placed on Positron Emission Tomography (PET) methodologies including fusion technologies that allow the superimposition of PET with CT or MRI Images. Adult/pediatric considerations and procedures will be discussed. Therapeutic procedures will also be studied including therapies of the endocrine, hematological, intracavitary, and skeletal systems. An in-depth study of federal (NRC and FDA) and state regulations regarding therapy procedures will be reviewed.
Lecture: 4 hours – Lab: 2 hours
Prerequisite: NUC 252
Lab fee: $50.00

NUC 260 Clinical Practicum I (SP) 3 credits
In this first clinical 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. Proficiency requirements are completed using a competency-based format. Students are required to complete a portion of the "Required and Elective Procedures" list that will be reviewed at the completion of each practicum course. This "Required and Elective Procedures" list will need to be 100% completed by the end of Clinical Practicum V. A special form will be utilized to allow the student to list how the study was conducted. This same form will be utilized in the "Projects in Nuclear Medicine" class. Technologist film critique and physician interpretation are incorporated into the form to provide a correlation of all factors that comprise a finished nuclear medicine image(s) to include an analysis of the structure or organ that was imaged/counted, patient positioning, radiation protection, and date processing.
Lecture: 0 hours – Lab: 0 hours – Clinical: 16 hours
Prerequisite: NUC 234
Lab fee: $100.00

NUC 261 Clinical Practicum II (SU) 2 credits
As a continuation of Clinical I, Clinical II provides the practical experience for the student to work more independently as a technologist and is designed to enhance and compliment didactic/lab studies. Nuclear medicine imaging/counting procedures, instrumentation, radiopharmaceutical injection/patient preparation, data and image processing, and assisting with quality assurance procedures will be emphasized.
Lecture: 0 hour – Lab: 0 hours – Clinical: 16 hours
Prerequisite: NUC 260
Lab fee: $100.00

NUC 262 Clinical Practicum III (A) 3 credits
As a continuation of Clinical II, Clinical III provides the practical experience for the student to work more independently as a technologist, and is designed to enhance and compliment didactic/lab studies. Nuclear medicine imaging/counting procedures, instrumentation, radiopharmaceutical preparation under supervision, radiopharmaceutical injection/patient preparation, data and image processing, and performing/critiquing quality assurance procedures are emphasized. Film critique and physician review are continued.
Lecture: 0 hour – Lab: 0 hours – Clinical: 24 hours
Prerequisite: NUC 261
Lab fee: $100.00

NUC 263 Clinical Practicum IV (W) 3 credits
As a continuation of Clinical III, Clinical IV provides the practical experience for the student to work more independently as a technologist, and is designed to enhance and compliment didactic/lab studies. In addition to the hospital rotations, students are to begin rotational shifts in the commercial/hospital based radiopharmacies, radiation safety offices, Radiologist/Nuclear Medicine physician reading rooms, and human resource departments. They are to prepare radiopharmaceuticals, communicate to patients, conduct imaging/counting/therapeutic studies, perform data and SPECT analysis, conduct image processing, and perform quality assurance procedures with little supervision. Film critique and physician review are continued.
Lecture: 0 hour – Lab: 0 hours – Clinical: 24 hours
Prerequisite: NUC 262
Lab fee: $100.00

NUC 264 Clinical Practicum V (SP) 3 credits
As a continuation of Clinical IV, Clinical V provides the practical experience for the student to work more independently as technologist, and is designed to enhance and compliment didactic/lab studies. Students in addition to the hospital rotations are to continue to rotate through commercial/hospital based radiopharmacies, radiation safety offices, Radiologist/Nuclear Medicine physician reading rooms, and human resource departments. Students will be required to present their completed

"Required and Elective Procedures" list in which they will prove their competency to perform the preparation of radiopharmaceuticals, communicate to patients, conduct imaging/counting/therapeutic studies, perform data and SPECT analysis, conduct image processing, and perform quality assurance procedures with little supervision. Film critique and physician review are continued.
Lecture: 0 hour – Lab: 0 hours – Clinical: 24 hours
Prerequisite: NUC 263
Lab fee: $100.00

NUC 270 Case Studies I (A) 1 credit
This course will allow students to critique how a nuclear medicine study was conducted and to understand differential diagnosis based on that study. Cases presented will come from the archives of the clinical sites or the Society of Nuclear Medicine either in the form of films to be shown on a view box, computer display, or from a CD-ROM that can be viewed off site if necessary. The students will also present interesting cases. Students will be responsible for filling out a critique and diagnosis form for each case reviewed.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: NUC 261

NUC 271 Case Studies II (W) 1 credit
This class will be a continuum of NUC 270 Case Studies I. The students will conduct the case studies in this course by completing a predetermined number of mandatory and elective case studies. The students will be responsible for conducting the patient exam from start to finish, and to complete a form for each case study. Conduction of the exam is to include: taking the patient history, determining the pre-test diagnosis, preparing and administrating the radiopharmaceutical, preparing, positioning, computing, and completing the exam on a camera/computer/counting device, critiquing the exam, displaying/presenting the exam to a Radiologist or Nuclear Medicine Physician, and explaining the post-test diagnosis and problems encountered while conducting the examination. Presentations to the class will be an integral part of the course.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: NUC 270

NUC 273 Projects in Nuclear Medicine Technology (SP) 1 credit
This course will enable the student to conduct a project that will contribute to what the student will utilize in their future career. In most cases, a procedure manual will be required to be completed that will be 75% prepared from the completion of the "Required and Elective Procedures" list that was utilized in Clinical Practicum classes I-V. A special form will be utilized that will standardize the manual. This form will be given to the student beginning in Clinical Practicum I, which will enable the student to accumulate these procedures as they progress through their Clinical Practicum courses.
Lecture: 1 hours – Lab: 0 hours
Prerequisite: NUC 271

Nursing (NURS)

NURS 100 Health Assessment in Nursing (A, SP) 3 credits
The student will be involved in holistic assessments of patients across the life span with consideration to ethnic variations. Developmental considerations in the geriatric and pediatric client will be discussed.Legal ramifications of nursing assessment will be presented. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 2 hour – Lab: 3 hours
Prerequisite: Admission to Nursing or permission of instructor
Corequisite: BIO 161, ENGL 101 or 111
Lab fee: $45.00

NURS 109 Student Transition (A, W, SP, SU) 1 credit
This course is designed to assist the student who has life experience credit for one or more designated nursing courses with transition into the nursing sequence. The components of the course include socialization into the Associate Degree Nursing student role at Columbus State, nursing process, communications skills, and selected psychomotor skills.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: acceptance into Nursing via LPN route or transfer student route.
Lab fee: $39.00

NURS 110 Introduction to Nursing (A, SP) 3 credits
The student will examine the historic and current role of the nurse in the health care delivery system. The nursing process is introduced as a method for planning care and self-care activities that promote, maintain, and restore health in adult and geriatric clients. Communication techniques, teaching/learning principles, and computer skills used by the nurse in delivery of care will be discussed. The student will examine the economics and services available within the health care delivery system. Ethical and legal issues as they relate to the practice of nursing are introduced. Safe implementation of technical skills with a holistic approach and attention to cultural consideration is stressed. Beginning principles of critical thinking are discussed. Clinical experiences are provided in a variety of community settings 4 hours each week. Lab hours include the total number of hours for clinical and seminar. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 1 hour – Lab: 6 hours
Prerequisite: Admission to nursing
Corequisite: BIO 161, ENGL 101 or ENGL 111, and NURS 100
Lab fee: $44.00

NURS 111 Health Promotion of Women and Families (W, SU) 6 credits
The student will focus on the role of the nurse as a provider of care in the promotion of health for women and families. The influence of cultural diversity and health care economics on women and families will be included. The student will use the nursing 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 women and families will be examined. Clinical experiences will be provided in a variety of community settings 7 hours each week. The student will begin application of critical thinking principles. Lab hours include the total number of hours for clinical and seminar. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 2 hour – Lab: 9 hours
Prerequisite: NURS 110, NURS 100, BIO 161,
Corequisite: BIO 169, PSY 240, NURS 123, and NURS 132
Lab fee: $34.00

NURS 112 Introduction to Nursing Concepts of Health Maintenance and Restoration (A, SP) 6 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, pain management, infectious processes, cancer, fluid and electrolyte imbalances, and altered nutrition. A variety of community settings for adults and children will be utilized for the clinical experience scheduled 10 hours each week. Lab hours include the total number of hours for clinical and seminar. Students must receive a C or better in this course as

a prerequisite for subsequent courses.
Lecture: 2 hours – Lab: 12 hours
Prerequisite: NURS 111, NURS 123, NURS 132, BIO 169, and PSY 240
Lab fee: $55.00

NURS 113 Nursing Skills (A) 2 credits
Principles and concepts underlying the performance of select nursing skills as well as the technical aspects necessary in performing those skills will be discussed. Critical thinking and communication techniques, which are integral components of the application of these skills in nursing practice, are included. As a provider of care the nurse implements nursing skills with consideration to the developmental level of the person and to the venue in which they practice. In each unit of instruction the legal, ethical and economic issues related to the skills will be presented. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: NURS 110, NURS 130, or permission of instructor
Lab fee: $60.00

NURS 121 Health Assessment in Nursing II (SU) 2 credits
This is the second of two nursing assessment courses. The focus will be on holistic assessments of the childbearing, newborn, and pediatric client. Assessment of mental health status and family relations will also be included. Consideration will be given to ethnic and developmental variations. The assessment of community resources available to promote, maintain, and restore health will be explored. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: NURS 120
Corequisite: BIO 169 and PSY 240
Lab fee: $45.00

NURS 123 Nursing Skills I (W, SU) 2 credits
This is the first of two nursing skills courses. In this course the student is introduced to the principles and concepts underlying the performance of select nursing skills as the technical aspects necessary in performing those skills will be discussed. Critical thinking and communication techniques, which are integral components of the application of these skills in nursing practice are included. In each unit of instruction the legal, ethical, and economic issues related to the skills will be presented. This is part of the nursing skills course.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: NURS 110, NURS 100
Corequisite: NURS 111, NURS 132
Lab fee: $45.00

NURS 124 Nursing Skills II (A, SP, – DL) 2 credits
Principles and concepts underlying the performance of select nursing skills as well as the technical aspects necessary in performing those skills will be discussed. Critical thinking and communication techniques, which are integral components of the application of these skills in nursing practice, are included. As a provider of care the nurse implements nursing skills with consideration to the developmental level of the person and to the venue in which they practice. In each unit of instruction the legal, ethical and economic issues related to the skills will be presented. This is part one of the nursing skills course.
Students must receive a C or better in this course as a prerequisite for subsequent courses
Lecture: 1 hour – Lab: 3 hours
Prerequisite: NURS 123, 132,
Lab fee: $50.00

NURS 130 Concepts of Pharmacology I (SU) 3 credits
The student is introduced to the general principles of pharmacology. This is the first of two courses where the focus will be on the nurse's role in drug administration to person's of all ages. Drug classifications and their relationship to promotion, maintenance and restoration of health will be presented. Safe administration and documentation of oral, topical, and injected medication is presented in the laboratory component. Calculations of medications for each administration form will be taught. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: NURS 120 or permission of instructor
Lab fee: $15.00

NURS 131 Concepts of Pharmacology II (A) 3 credits
This is the second of two courses where the focus will be on the nurse's role in drug administration to persons of all ages. Drug classifications and their relationship in promotion, maintenance and restoration of health will be presented. Safe administration of enteric, intravenous and inhalation mediations is presented in the laboratory component. Calculations of medications for each administration form will be taught. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: NURS 130
Corequisite: NURS 113
Lab fee: $41.00

NURS 132 Concepts of Pharmacology I (W, SU) 2 credits
The student is introduced to the general principles of pharmacology. This is the first of two courses where the focus will be on the nurse's role in drug administration to person's of all ages and the effects of medications on patients. Drug classifications and their relationship to promotion, maintenance and restoration of health will be presented Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: NURS 110, NURS 100
Lab fee: $39.00

NURS 133 Concepts of Pharmacology II (A, SP) 2 credits
This is the second of two courses where the focus will be on the nurse's role in drug administration to persons of all ages and the effects of medications on patients. Drug classifications and their relationship in promotion, maintenance and restoration of health will be presented. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: NURS 132,
Lab fee: $41.00

NURS 188 Neonatal Nursing (W, SU) 2.5 credits
The student will focus on the role of the nurse as the provider of care for the high risk neonate and their families. This course will focus on neonatal development and potential complications ante partum and post partum periods. The student will gain a specialized knowledge and skills to provide care ranging from pre-hospitalization through post-discharge and follow-up.
Lecture: (online) 2 hours – Lab: 1 hr [on campus, (5 two hour labs)]
Prerequisite: NURS 210
Lab Fee: $15.00

NURS 189 Principles of Basic Trauma Nursing (SU, W) 3 credits
This course is designed to introduce the student to the basic concepts of trauma nursing. The focus of the course will be the exploration of major concepts and issues underlying the specialty of trauma nursing. Through an organized and standardized approach, students will review the mechanisms of injury, problems arising from these injuries, and related nursing care. The course will include content about adult trauma nursing, triage, airway management, shock/cardiac arrest, trauma to specific anatomic and physiologic systems, psychosocial impact of trauma, and organ donation. Learning opportunities will include use of the Human Patient Simulator. Students must receive a C or better in this course as a prerequisite for

subsequent courses.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Nursing 211 or permission of the instructor
Lab fee: $25.00

NURS 190 Holistic Interventions for Health Care Practitioners (A, SP,) 2 credits
The student will be introduced to various healing modalities and complementary therapies that are used by health care practitioners to provide holistic care to a patient. Included will be an overview of the body/mind paradigm and a survey of commonly used techniques such as guided imagery, meditation and therapeutic touch. This course may be used to fulfill the elective requirement for nursing. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: Admission to a health technology or permission of instructor
Lab fee $5.00

NURS 191 Basics of Gerontological Nursing (A, W, SP, SU – DL) 3 credits
The student is introduced to the basic concepts of gerontological nursing. The focus is on meeting the needs of the elderly. Assessment, maintenance and restoration of health is presented for those over the age of 65. The nursing process is used as the framework for the development of thinking skills. Content will reflect on the influence of the legal, ethical, cultural and economic issues related to the health care needs of the elderly. This course may be used to fulfill the elective requirement for nursing. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: Admission to a health technology or permission of instructor
Lab fee: $5.00

NURS 192 Introduction to Community Nursing (W, SU) 3 credits
The course is designed to introduce students to the basic concepts of Community Health Nursing. The focus of this course is exploration of the major concepts and conceptual issues underlying the specialty of Community Health Nursing. The course is intended to assist students in clarifying conceptual issues in the specialty and to begin to develop positions on critical issues related to access to care and analysis of existing delivery systems. The course will also provide the tools of practice necessary for the Registered Nurse already working in a community setting. Assessment, promotion, maintenance and restoration of health are presented for families, communities and common community health problems. The nursing process is used as the framework for critical thinking skills. This course may be used to fulfill the elective requirement for nursing. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: NURS 112 or permission of instructor
Lab fee: $5.00

NURS 193 End of Life Care (A, SP – DL) 2 credits
The student will be introduced to various nursing interventions appropriate at the end of life. Included will be an overview of commonly experienced problems. Nine critical areas including palliative care, quality of life, pain symptom management, communication needs of caregivers, the dying process, ethics and bereavement will be explored. This course may be used to fulfill the elective requirement for nursing. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 2 hours—Lab: 0 hours
Prerequisite: Admission to a Health Technology or permission of the instructor.
Lab fee: $5.00

NURS 194 Using Advanced Nursing Skills to Manage the Care of Critically Ill Adult Patients (A, SP) 3 credits
The student will be exposed to the advanced theory and skills needed to manage the care of individuals in a variety of critical care areas. The focus will be on identifying critical situations and potential problems and selecting and implementing the appropriate interventions. Students will apply theory and skills to case studies and clinical situations. Students will be exposed to such advanced skills as cardiac monitoring, hemodynamic monitoring, ventilator support, critical care drugs, emergent and code situations using case studies and simulated patient care situations. This course may be used to fulfill the elective requirement for nursing. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture3 hours – Lab: 0 hours
Prerequisite: NURS 113, or permission of instructor
Lab fee: $25.00

NURS 195 Nursing Concepts Enhancement I (W, SU) 1 credit
The course is designed to assist the student to meet the outcomes of the nursing curriculum through enhanced test-taking skills. Students will apply nursing concepts to formulating responses in testing situations. This course may NOT be used to fulfill the elective requirement for nursing
Lecture: 1 hour – Lab: 0 hours
Prerequisite: NURS 112 and Nursing Outcome Exam I completed
Lab fee: $34.00

NURS 196 Nursing Concepts Enhancement II (A, SP) 1 credit
The course is designed to assist the student to meet the outcomes of the nursing curriculum through enhanced test-taking skills. Students will apply nursing concepts to formulating responses in testing situations. This course may NOT be used to fulfill the elective requirement for nursing. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 0 – Lab: 3hours
Prerequisite: NURS 212 and exit Nursing Outcome exam completed
Lab fee: $28.00

NURS 197 Current Trends in Pediatric Nursing (W,) 3 credits
The course is designed to build on the foundation of nursing from previous nursing courses. The focus of the course is to explore the health care needs of pediatric patients and their families. The nursing process will be the framework to study the physical, psychological and social aspects of pediatric nursing care. The course will provide students with the opportunity to apply knowledge and skills by using simulated pediatric care situations. This course may be used to fulfill the elective requirement for nursing. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: NURS 111
Lab fee: $20.00

NURS 198 Information Technology in Healthcare (W, SU – DL) 3 credits
This introductory course in computer applications will help to stimulate 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. The impact of information technology on society will be considered. Legal, ethical and social issues as they relate to technology will be covered. Learning activities will include using standard software applications such as: word processing, graphics and presentation software. This course may be used to fulfill the elective requirement for nursing. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: None
Lab fee: $5.00

NURS 199 Healthcare Mission (W, SU) 1 credit
This course will provide students with an opportunity to travel to Mexico and gain exposure to Mexican culture. Students will work with primary health care providers in an ambulatory care clinic. Students will use nursing skills to deliver outpatient health care to Mexican clients of all ages. Travel expenses will be paid by the student and will be approximately $450.00. Students will be in Texas and Mexico for 3 nights and 4 days. This course may be used to fulfill the elective requirement for nursing. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 0 hours – Lab: 32 hours
Prerequisite: Nursing 112 and permission of the instructor following an interview, review of applicant's essay and recommendations from prior clinical instructors
Lab fee: $5.00

NURS 210 Nursing Concepts of Health Maintenance and Restoration (W, SU) 6 credits
The student is introduced to the concepts of care management while continuing to function as a provider of care and promoter of health for pediatric and adult clients. The focus is on meeting the holistic needs of the client. Maintenance and restoration of health are presented in relation to the integumentary, gastrointestinal, urinary, sensory, and endocrine systems. The nursing process is the framework for continued development of critical thinking skills. Each unit of instruction will contain content on the influence of legal, ethical, cultural, and economic issues related to health care. In the clinical component of the course, which meets 10 hours each week and is conducted in a variety of community settings, the student is accountable for his/her nursing practice. The nursing outcome exam covering the first three quarters of nursing will be given during the initial weeks of the quarter. Lab hours include the total number of hours for clinical and seminar. Students must receive a C or better in this course as a prerequisite for subsequent courses.

Lecture: 2 hours – Lab: 12 hours
Prerequisite: NURS 112, NURS 113, NURS 131, and BIO 170
Corequisite: BIO 115 and ENGL 102 or ENGL 111
Lab fee: $40.00

NURS 211 Nursing Concepts of Health Maintenance and Restoration II (A, SP) 6 credits
The student continues to develop the role of manager of care while providing care and promoting health of pediatric and adult clients. The focus is on meeting the holistic needs of clients. Maintenance and restoration of health are presented in relation to the respiratory, cardiovascular, hematological, and reproductive systems. The nursing process is the framework for continued development of critical thinking skills. Each unit of instruction will contain content on the influence of legal, ethical, cultural, and economic issues related to health care. In the clinical component of the course, which meets 10 hours each week and is conducted in a variety of community settings, the student is accountable for his nursing practice. Lab hours include the total number of hours for clinical and seminar. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 2 hours – Lab: 12 hours
Prerequisite: NURS 210, a passing score on Nursing Outcome Exam I, and BIO 115
Lab fee: $34.00

NURS 212 Nursing Concepts of Health Maintenance and Restoration III (W, SU) 6 credits
The student continues to develop the role of manager of care while providing care and promoting health of pediatric and adult clients. The focus is on meeting the holistic needs of clients. Maintenance and restoration of health are presented in relation to mental health, and the neurological, musculoskeletal, and immune systems. The nursing process is the framework for continued development of critical thinking skills. Each unit of instruction will contain content on the influence of legal, ethical, cultural, and economic issues related to health care. In the clinical component of the course, which meets 7 hours each week and is conducted in a variety of community settings, the student is accountable for his/her nursing practice. Lab hours include the total number of hours for clinical and seminar. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 2 hours – Lab: 9 hours
Prerequisite: NURS 211
Lab fee: $40.00

NURS 213 Concepts of Nursing Management (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 16 hours each week. The nursing outcome exam covering the previous six quarters in nursing will be given the beginning of the quarter. Students must achieve a minimum percentile score on this outcome exam in order to graduate. Lab hours include the total number of hours for clinical and seminar. Students must receive a C or better in this course as a prerequisite for subsequent courses.
Lecture: 2 hours – Lab: 18 hours
Prerequisite: NURS 212 and MATH 135
Lab fee: $34.00

Office Administration (OADM)

OADM 101 Business Grammar (A, W, SP, SU - DL) 4 credits
This course is a structured program reviewing all eight parts of speech in detail. In addition, it is designed to assist the student to become skillful in sentence analysis, word choice, punctuation, vocabulary, capitalization, number expression, and spelling. Office Administration majors must earn a C grade or better in OADM 101 as one of the two prerequisites for OADM 102 Editing Business Documents.
Lecture: 3 hours – Lab: 2 hours

OADM 102 Editing Business Documents (W, SP) 3 credits
Editing Business Documents is a course that has application for anyone who writes, edits, or prepares final copy for distribution or publication. Includes basic rules regarding grammar usage and aspects of style, as well as techniques and procedures for producing many different kinds of written communications. In addition to editing and proofreading at the computer, letters, memos, and reports will be formatted.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: OADM 101 with "C" grade or higher and OADM 132, or permission of instructor
Lab fee: $3.00

OADM 111 Accounting Basics (A,W, SP, SU) 4 credits
This course is designed to provide students with a basic understanding of accounting principles and procedures including analysis of business transactions, journalizing, posting, adjusting and closing entries, and financial statement preparation. Also included are transactions involving payroll accounting, bank accounts, and cash funds.
Lecture: 3 hours – Lab: 2 hours

OADM 113 Quickbooks (A, SP – DL) 1 credit
Students learn to keep a set of computerized books for a small company in this introductory course to the Quickbooks computerized accounting software. This is a self-paced course completed at home using the student's

own copy of Quickbooks software.
Lecture: 0 hours - Lab: 2 hours
Lab fee: $5.00

OADM 114 Quickbooks II (A, SP – DL) 1 credit
Students will gain additional knowledge in the use of Quickbooks software. Students will learn how to adjust company inventory, process payroll, and use software to reflect banking transactions. This is a self-paced course; students should have this software on their home/business computer.
Lecture: 0 hours – Lab: 2 hours
Lab fee: $5.00

OADM 115 Desktop Management (Microsoft Outlook) (A, W) 3 credits
This course is a desktop information management application using the Microsoft Outlook software. The student will learn problem-solving techniques to organize and manage a variety of tasks, such as file management, calendar, e-mail, contacts, tasks, and journals. The goal of this course is to promote independent problem-solving proficiency while working simultaneously as a member of an office team.
Prerequisite: none
Lecture: 2 hours – Lab: 3 hours
Lab fee: $5.00

OADM 121 Records Management (A, W, SP) 3 credits
This course is designed to provide knowledge of efficient handling of business records, ARMA filing methods and systems, and principles for the selection of records systems and supplies.
Lecture: 2 hours – Lab: 3 hours

OADM 131A Keyboarding Module 1 (Alphabetic Keyboarding) (A, W, SP, SU – DL) 1 credit
This beginning keyboarding module contains approximately one third of the lessons covered in OADM 131 Keyboarding I. The student will learn only the alphabetic keys and essential punctuation marks. Touch typing at the rate of 20 words a minute (B grade) or better will grant the student one-third credit toward OADM 131 Keyboarding I.
Prerequisite: none
Lecture: 0 hours – Lab: 2 hours
Lab fee: $3.00

OADM 131B Keyboarding Module 2 (Symbols) (A, W, SP, SU – DL) 1 credit
The student will learn the top row numbers and symbol keys in this second keyboarding module. Successful completion of the timing in Lesson 25 at 20 words a minute (B grade) or better will grant the student one-third credit toward OADM 131 Keyboarding I.
Prerequisite: OADM 131A
Lecture: 0 hours – Lab: 2 hours
Lab fee: $3.00

OADM 131C Keyboarding Module 3 (Numeric Keypad) (A, W, SP, SU – DL) 1 credit
In this third module, the student will learn the number keypad located at the right of every keyboard. Employees with a high rate of speed with this one-handed skill can demand much higher compensation from employers. Passing a one-minute timing at a rate of 175 strokes per minute (B grade) or better with no more than a 5 percent error rate will grant the student one-third credit toward OADM 131 Keyboarding I.
Prerequisite: none
Lecture: 0 hours – Lab: 2 hours
Lab fee: $3.00

OADM 131 Keyboarding I (A, W, SP, SU - DL) 3 credits
An introductory interactive system of keyboarding teaching the "touch" system of typing. Development of basic keyboarding skills is measured in words per minute and accuracy of one error per minute. To receive credit for this course, students must complete all keyboarding lessons in assigned text, and be able to type at least two different two-minute timings, each demonstrating a minimum speed of 25 words a minute (D grade) with accuracy of two errors or less. Students must earn a C grade or better as a prerequisite for OADM 132 Keyboarding II.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $3.00

OADM 132 Keyboarding II (A, W, SP, SU - DL) 3 credits
An intermediate interactive system reinforcing keyboarding skills by touch. Applications using Microsoft Word are designed to teach formats for business correspondence, tabulations, and manuscripts with emphasis on correct techniques, proofreading, decision-making skills, and accuracy; further development of keyboarding speed measured in words per minute and accuracy of one error per minute on three-minute timings. To receive credit for this course, students must demonstrate assigned formatting skills and be able to type at least two different three-minute timings, each demonstrating a minimum speed of 35 words a minute (D grade) with accuracy of three errors or less. Lab fee:. Students must earn a C grade or better as a prerequisite for OADM 133 Keyboarding III.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: C grade or better in OADM 131 or proficiency test.
Lab fee: $3.00

OADM 133 Keyboarding III (W, SU - DL) 3 credits
An advanced interactive system reinforcing keyboarding skills by touch. Applications using Microsoft Word software are designed to teach business correspondence, tabulations, manuscripts, reports, and various business forms with emphasis on correct techniques, proofreading, decision-making skills, and accuracy; further development of keyboarding speed measured in words per minute and accuracy of one error per minute on five-minute timings. To receive credit for this course, students must demonstrate assigned formatting skills and be able to type at least two different five-minute timings, each demonstrating a minimum speed of 40 words per minute (D grade) with accuracy of five errors or less. Students must earn a C grade or better as a prerequisite for OADM 134 Keyboarding IV.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: C grade or better in OADM 132 or proficiency test.
Lab fee: $5.00

OADM 134 Keyboarding IV (A) 3 credits
The focus in this course is in three areas of learning: developing keyboarding speed and accuracy, building production-level mastery on a wide variety of business documents, and using word processing functions and features to streamline the creation of professional-looking documents. To receive credit for this course, students must demonstrate assigned formatting skills and be able to type at least two different five-minute timings, each demonstrating a minimum speed of 50 words per minute (C grade; no D grade for timings) with accuracy of five errors or less A grade of C or better is required in OADM 134 in order to graduate.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: C grade or better in OADM 133
Lab fee: $5.00

OADM 139 Keyboarding Improvement (W - DL) 3 credits
This elective course is designed to provide students with increased skills in the operation of the keyboard. Greater speed and accuracy are the goals. The emphasis is on speed and accuracy using straight-copy material.
Lecture: 1 hour – Lab: 4 hours
Lab fee: $5.00

OADM 151 Computer Transcription (SP) 3 credits
This course is designed to develop skill in the use of machine transcription equipment. Mailable copy is the goal in transcribing machine dictation of business correspondence, technical reports, drafts, and other business communications in a broad range of business formats. Emphasis on the fundamentals of English in grammar, spelling, and vocabulary will re-

inforce transcription skills. Recommended: Students should complete OADM 101 and OADM 102 before taking this course.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: OADM 132
Corequisite: OADM 133
Lab fee: $5.00

OADM 164 WordPerfect (A, W, SP, SU) 3 credits
Provides a solid foundation for this word processing software. Covers basic to advanced features including the use of icons, the ruler bar, line and page formatting, tabs, headers, footers, footnotes, endnotes, merging, tools, and file management. A keyboarding skill of 35 words per minute is recommended.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $5.00

OADM 167 Desktop Publishing Using PageMaker (A, W, SP) 3 credits
Principles of design and hands-on experience using PageMaker software. Requirements: 35 words per minute typing skill and knowledge of a personal computer in general, Windows, and word processing.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $5.00

OADM 172 Excel (A, W, SP, SU) 3 credits
This is a foundation course in spreadsheets for office workers. Covers major spreadsheet features of the program including spreadsheet design, formulas, functions, and charts. Applications investigate Excel's powerful features in business situations.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $5.00

OADM 186 Introduction to Word (A, SP - DL) 1 credit
This is an introductory course to Microsoft Word word-processing software. Students will learn to create and edit a document, format a document, arrange text, and use simple graphics. This is a self-paced course to be completed at home.
Lecture: 0 hours – Lab: 2 hours
Lab fee: $5.00

OADM 187 Introduction to Excel (A, SP - DL) 1 credit
This is an introductory course to Microsoft Excel spreadsheet software. Students will learn to create a worksheet, modify a worksheet, and work with charts. This is a self-paced course to be completed at home.
Lecture: 0 hours - Lab: 2 hours
Lab fee: $5.00

OADM 188 Introduction to PowerPoint (A, SP - DL) 1 credit
This is an introductory course to Microsoft PowerPoint presentation software. Students will learn the fundamentals of creating and enhancing a presentation using clip art, charts, photographs, videos, and sound. This is a self-paced course to be completed at home.
Lecture: 0 hours - Lab: 2 hours
Lab fee: $5.00

OADM 189 Introduction to Access (A, SP, - DL) 1 credit
This is an introductory course to Microsoft Access database software. Students will learn to create, modify, and enhance a database using screen and report generators. This is a self-paced course to be completed at home.
Lecture: 0 hours - Lab: 2 hours
Lab fee: $5.00

OADM 191 Word I (A, W, SP, SU - DL) 3 credits
Covers basic and intermediate features including formatting documents; creating bullets and numbered lists; customizing auto correct; using find/replace for words and codes; working with folders; copying, moving, and renaming files; working with blocks of text; working with windows; applying styles; customizing headers/footers; and formatting with templates. Also covered are document passwords; document properties; margins; favorites folder; shortcuts; print options; envelopes/labels; speller/grammar options; tabs/leaders; newspaper-style columns; page numbers; footnotes/endnotes; page and section breaks; and other selected topics. A keyboarding skill of at least 35 words per minute is recommended. Students must earn a C grade or better in OADM 191 as a prerequisite for OADM 192 Word II.
Lecture: 2 hours – Lab: 3 hours
Lab fee: $5.00

OADM 192 Word II (A, W, SP, SU) 3 credits
Provides additional skills and refines techniques presented in OADM 191. Covers intermediate to advanced features including mail merge; tables; borders and images; special formatting features such as hyphenation, auto text, bookmarks, and customizing toolbars and menus. Also covers drawing objects and WordArt; charts; macros; styles; sorting and selecting; outlines, master documents, and subdocuments; fill-in forms; working with shared documents; and other selected topics. A keyboarding skill of at least 35 words per minute is recommended. Students must earn a C grade or better in OADM 192 as a prerequisite for OADM 261 Electronic Office Procedures.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: C grade or better in OADM 191 or CIT 102
Lab fee: $5.00

OADM 261 Electronic Office Procedures (A) 4 credits
This upper-level course is designed for second-year students who are preparing to enter an Office Administration position or who are currently working in an office. The student will prepare for a job search, consider topics such as incoming and outgoing communications, reprographics, travel arrangements, meetings and conferences, preparing presentations and meeting minutes, as well as other advanced topics. Students must earn a C grade or better in OADM 261 in order to graduate.
Lecture: 3 hours – Lab: 2 hours
Prerequisites: C grades or better in OADM 134, OADM 188, and OADM 192 or permission of instructor.
Lab fee: $5.00

OADM 297 Special Topics in Office Administration (on demand) 3 credits
Detailed examination of selected topics of interest in office administration.
Lecture: 0 hours – Lab: 1 hour
Prerequisite: vary
Lab fee: $20.00

Paralegal Studies (LEGL)

LEGL 101 Introduction to Paralegal Studies (A, W, SP, SU) 4 credits
The role of the legal assistant, ethical responsibilities, and legal restrictions are the main focus of this course. Students will also be introduced to the function of statutes, case law, administrative regulations and constitutions within the legal system.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: ENGL 101 or placement into ENGL 101
Lab fee: $5.00

LEGL 102 The Legal System (A, W, SP, SU) 2 credits
This course explores the federal and state civil law systems, federal and state criminal law systems, appellate process and such concepts as jurisdiction and venue.
Lecture: 2 hours – Lab: 0 hours
Lab fee: $5.00

LEGL 103 Law Office Procedures and Management
(A, W, SP, SU) 3 credits
This course is an introduction to the day to day operation of a law office. Emphasis will be placed on the development of accurate records keeping skills and developing an understanding of office management procedures unique to law offices, including computerized time keeping and billing programs.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $5.00

LEGL 111 Legal Research and Writing I (A, W, SP, SU) 4 credits
An introduction to conducting legal research and the proper methods of preparing briefs, pleadings and memorandum of law. Locating, analyzing and checking of case law is emphasized. Students will learn proper citation methods, and legal writing style, as well as becoming familiar with the Ohio and Federal Rules of appellate procedure.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: LEGL 101
Lab fee: $5.00

LEGL 112 Legal Research and Writing II (A, W, SP, SU) 4 credits
A continuation of LEGL 111, developing advanced research skills with an emphasis on preparing legal documents. Students will be familiar with primary and secondary sources, computer assisted research and a variety of legal documents. The student will also participate in a brief writing competition.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: LEGL 111

LEGL 113 Legal Research and Writing III (on demand) 5 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 incorporate both printed and computer-based research strategies.
Lecture: 4 hours – Lab: 2 hours
Prerequisite: LEGL 112 and LEGL 251
Lab fee: $5.00

LEGL 114 Family Law (W, SU) 3 credits
Domestic relations matters including: marriage, divorce, dissolution, child custody and support, visitation and adoptions. The law regulating such matters and the drafting of appropriate documents will be emphasized.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LEGL 101
Lab fee: $5.00

LEGL 119 Real Estate Transactions (A , SP) 3 credits
A study of the law governing real property, its ownership, sale, lease or other conveyance. The instruments utilized in conveyance or lease of such property will be examined and drafted. Title searching and abstracts of title are included.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LEGL 101
Lab fee: $5.00

LEGL 201 General Practice (A, SP) 4 credits
This course will acquaint the student with a variety of matters that may be encountered in a law practice. The basic elements of torts and contracts will be covered as well as judgments and civil collection actions.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: LEGL 101
Lab fee: $5.00

LEGL 205 Litigation Practice and Procedure I (A, SP) 3 credits
A study of the Ohio Rules of Civil Procedure, the Federal Rules of Civil Procedure, and Federal and State Rules of Evidence. The basic elements of a tort claim will be discussed and the initial phases of an action, the complaint pleadings and discovery and pre-trial phases will be examined.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: LEGL 101
Lab fee: $5.00

LEGL 210 Criminal Law and Procedure (A, SP) 3 credits
The Ohio Criminal Code and Rules of Criminal Procedure will be the foundation of this examination of the pre-trial and post-trial procedures in a criminal case. Students will be exposed to the criminal justice system from the elements of offenses through post-conviction remedies. The drafting of motions and other documents associated with criminal matters will be included.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LEGL 101
Lab fee: $5.00

LEGL 215 Paralegal Studies Practicum I (A, W, SP, SU) 2 credits
A guided work experience in an office or agency providing legal services. Exact duties are decided upon by agreement of the student and administrators of the placement site.
Lecture: 0 hours – Lab: 14 hours
Prerequisite: Permission of instructor

LEGL 216 Paralegal Practicum Seminar I (A, W, SP, SU) 1 credit
Seminar discussion of work experiences and the development of strategies to improve work performance.
Lecture: 1 hours – Lab: 0 hours
Prerequisite: Permission of instructor

LEGL 220 Business Organizations (A, SP) 3 credits
The fundamentals of the formation of business entities including sole proprietorships, partnerships, and corporations. Students will prepare documents regarding the formation of such organizations.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LEGL 101
Lab fee: $5.00

LEGL 222 Immigration Law (on demand) 3 credits
An overview of Immigration Law and practices for assisting immigrants and illegal aliens.
Lecture: 3 hours – Lab: 0 hours

LEGL 224 Probate Law and Practice I (A, SP) 3 credits
The law of wills, estates and estate administration including estate taxation. Testate and intestate estates, law of descent and distribution, estate planning and other probate processes will be discussed.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LEGL 101
Lab fee: $5.00

LEGL 226 Administrative Law (A, SP) 3 credits
Statutory law, case law, and administrative rules will be utilized to develop an understanding of the role and authority of administrative agencies. Particular attention will be paid to social security and workers compensation claims.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LEGL 101
Lab fee: $5.00

LEGL 227 Paralegal Practicum II (A, W, SP, SU) 2 credits
Further work experience in an office or agency providing legal services. Exact duties will be decided upon by the student and administrators of the placement site.
Lecture: 0 hours – Lab: 14 hours
Prerequisite: Permission of instructor

LEGL 228 Paralegal. Practicum Seminar II (A, W, SP, SU) 1 credit
Seminar discussion of current work experiences and the development of further strategies for improvement.
Lecture: 1 hours – Lab: 0 hours
Prerequisite: Permission of instructor

LEGL 229 Certified Legal Assistants Exam Review (on demand) 2 credits
This course is designed as a review course for the student/graduate wishing to take the Certified Legal Assistant Exam. It will examine all areas of procedural and substantive law included on the CLA exam as well as the ethics section of the test. Students taking the course must successfully pass a mock CLA exam to complete the course.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: LEGL 228
Lab fee: $10.00

LEGL 230 Special Problems in Legal Assisting (on demand) 2 credits
This course is a special topics course designed to allow the student to research and develop an understanding of legal assisting issues unique to the interests of the student and for which there is no other course available, the content of which will address such issues. This course is offered on an independent study basis only.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: Permission of chairperson

LEGL 232 Taxation (W, SP) 3 credits
Fundamentals of state, local and federal tax laws. The agencies and tribunals involved in tax matters will be examined. Specific research strategies and document preparation relative to tax issues are explored.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LEGL 101
Lab fee: $5.00

LEGL 234 Litigation II (W) 3 credits
Building on the knowledge gained in Litigation I, students will examine the role of the attorney in the trial process, case preparation and organization of materials for trial. Students will prepare a hypothetical case for trial.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: LEGL 205
Lab fee: $5.00

LEGL 236 Probate Law II (on demand) 3 credits
The law of guardianship and trusts with emphasis on guardianship administration, land sales and trust accounting.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LEGL 224
Lab fee: $5.00

LEGL 238 Insurance Law (W, SU) 3 credits
An introduction to insurance law. The course will include principles of indemnity, interests protected, the transfer of risk and claims processes.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LEGL 101
Lab fee: $5.00

LEGL 240 Professional Malpractice (W) 3 credits
An examination of the law of malpractice with an emphasis on malpractice in health professions and an examination of risk management methods in health care. The course will focus on informed consent, vicarious liability of health professionals and health care facilities, negligence, the doctrine of res ipsa loquitur, mandatory arbitration, defenses, and medicolegal ethics.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LEGL 201
Lab fee: $5.00

LEGL 243 Alternative Dispute Resolution Issues Seminar (A, SP, SU) 3 credits
This course is designed to examine legal, ethical, and policy issues that arise in the use of mediation, arbitration, minitrials, summary jury trial and conciliation and to help develop mediation skills.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LEGL 205
Lab fee: $5.00

LEGL 244 Creditor Debtor Relations (W, SU) 3 credits
This course will ensure the student is aware of the respective rights of creditors and debtors. An introduction to the pre-legal and legal procedures of debt collection.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LEGL 220
Lab fee: $5.00

LEGL 248 Searching and Closing the Real Estate Title (on demand) 4 credits
This course is designed to examine the process of real estate title searches, and to prepare the student, in detail, to perform commercial and residential real estate title closings.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: LEGL 228 or by permission of chairperson
Lab fee: $5.00

LEGL 250 Intellectual Property (on demand) 4 credits
Because businesses spend millions of dollars to build consumer confidence in their product names and logos, this course explores the world of patents, trademarks, copyrights, trade secrets, registration and protection of these business assets. The course includes a review of federal laws and case law that cover these areas. It also includes issues relating to cyber law and the internet. The student will consider the future implications for the business owner and the consumer regarding these very contemporary topics.
Lecture: 4 hours – Lab: 0 hours

LEGL 251 Computer Assisted Legal Research (A, W, SP, SU) 3 credits
A course designed to give the Legal Assisting student exposure to the ever expanding and utilized area of computer assisted research, an alternative to traditional, manual legal research. The student will be required to complete a series of projects within the different libraries of LEXIS in which the student will become proficient with the various uses and functions of electronic legal information retrieval.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: LEGL 111
Lab fee: $25.00

LEGL 252 Survey of Advanced Legal Technology (W, SU) 2 credits
The course will introduce and provide the student with computer training in document management, litigation support, billing, the Internet and Advanced computer assisted legal research. The student will be acquainted with Internet user groups where questions are asked and answered via e-mail and list servs. Legal software that supports legal administration, case management and internal network applications will be emphasized. The course will use CD-ROM, extensive computer lab sessions and each student will manage a complete case on an automated platform. The goals of the course will be to provide the student with certain computer competencies that go beyond the basics and allow them to be proactive in the use of technology while at the same time utilizing creative thinking skills.
Lecture: 2 hours – Lab: 1 hours
Prerequisite: LEGL 112, LEGL 251 or by permission of Chairperson
Lab fee: $25.00

LEGL 253 Intellectual Property (W) 4 credits
The course is a comprehensive examination of the law related to the field of intellectual property, federal and state statues and regulations, and the

registration and protection process for intellectual property.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: ENGL 101, CIT 101

LEGL 255 Introduction to Workers' Compensation Law (A, SP) 4 credits
This course is an introduction to the Bureau of Workers' Compensation. The focus of the course is the structure of the bureau, with an emphasis on the purpose of the agency, the hierarchy, the authority under which it operates, and basic concepts of workers' compensation benefits.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: LEGL 228 or by permission of instructor
Lab fee: $5.00

LEGL 256 Introduction to BWC Claims Processing (A, SP) 4 credits
This course is designed to acquaint the student with how the Bureau of Workers' Compensation process claims made including self-insured of state fund (BWC) claims, the calculation of wages and compensation, payment of medical bills, authorization of medical treatment, as well as how the bureau addresses motions made, application to reactivate, and permanent partial disability settlements, from injury to resolution.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: LEGL 228 or by permission of instructor
Lab fee: $5.00

LEGL 257 Workers' Compensation Adjudication (A, SP) 4 credits
This course is designed to acquaint the student with how to deal with state agencies, in particular the Bureau of Workers' Compensation from the claimant position. The emphasis of this course is how to acquire information available through state files and computer systems. Violations of specific safety requirements, applications for permanent total disability and the hearing process will be examined.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: LEGL 228 or by permission of instructor
Lab fee: $5.00

LEGL 258 Workers' Compensation Rating System (W, SU) 4 credits
This course is designed to acquaint the student with the different rating plans available through the Bureau of Workers' Compensation to establish appropriate premiums. The emphasis is on the underwriting process of the bureau.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: LEGL 228 or by permission of instructor
Lab fee: $5.00

LEGL 259 Workers' Compensation Practice and Procedure (W, SU) 4 credits
This course is designed to acquaint the student with the procedures to complete the hearing process in a claim against the Bureau of Workers' Compensation from both the bureau and claimant perspective.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: LEGL 228 or by permission of instructor
Lab fee: $5.00

LEGL 261 Business Law I (A, W, SP, SU - DL) 3 credits
Survey of the legal framework of business, the nature of legal systems and the law, including contracts, criminal, and the law of torts.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $1.00

LEGL 262 Business Law II (A, W, SP, SU - DL) 3 credits
A continuation of LEGL 261. Exploring the law of agency, corporation, partnerships, and property.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LEGL 261
Lab fee: $1.00

LEGL 263 Business Law III (on demand) 3 credits
An advanced examination of law as it pertains to business with emphasis on specialty areas of the law designed for the protection of business assets including the law of sales, commercial paper and secured transactions under the Uniform Commercial Code; debtor/creditor rights under the laws of bankruptcy; and the use of wills, trusts and estate planning techniques for the protection and transfer of business interest.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LEGL 262
Lab fee: $1.00

LEGL 264 Legal Environment of Business (A, W, SP, SU - DL) 4 credits
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: 4 hours – Lab: 0 hours
Lab fee: $2.00

LEGL 265 Business Law for Accountants (A, W, SP, SU) 5 credits
An in-depth examination of business law as it applies to the accounting discipline with an emphasis on those topics directly relating to the Business Law section of the Certified Public Accountants Examination, including professional responsibility of the C.P.A.
Lecture: 4 hours – Lab: 2 hours
Lab fee: $5.00

LEGL 266 Liability Issues in Health Occupations (on demand) 3 credits
An examination of liability concerns in health occupations; examination of risk management methods in health care. The course will focus on informed consent, medical malpractice and vicarious liability issues.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 101
Lab fee: $5.00

LEGL 269 Consumer Law (on demand) 4 credits
This course is an examination of the various state and federal statutes and regulations that govern the relationship of debtor and creditor. Statutes discussed include, but are not limited to the Fair Debt Collection Act, Uniform Consumer Credit Code (UCCC) and Article 9 of the Uniform Commercial Code (UCC).
Lecture: 4 hours – Lab: 0 hours
Corequisite: LEGL 228 or by permission of Chairperson
Lab fee: $5.00

LEGL 272 Mediation (W, SU) 4 credits
This course is an intensive overview of the mediation process. Students will study, in-depth, 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 participants. The fundamentals of researching arbitration decisions and legal resources in arbitration will be examined with special emphasis on Internet resources. Each student will conduct a mediation in class and prepare a mediation notebook as a final project.
Lecture: 4 hours – Lab: 4 hours
Prerequisite: LEGL 228 or by permission of chairperson
Lab fee: $5.00

LEGL 275 Overview of Bankruptcy Law and Practice (on demand) 4 credits
This course is designed to acquaint the student with the statutory and regulatory structure, location and jurisdiction of bankruptcy law and bankruptcy courts and their non-judicial officers. Parties and proceedings will be discussed as well as an overview of the bankruptcy chapters.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: LEGL 228 or by permission of chairperson
Lab fee: $5.00

LEGL 281 Social Security Practice and Procedure (on demand) 4 credits
This course is designed to introduce the student to the origination of Social Security, its jurisdiction and regulation, and the practice and procedure within the Social Security Administration.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: LEGL 228 or by permission of chairperson
Lab fee: $5.00

LEGL 285 Estate Administration (on demand) 4 credits
This course is designed to familiarize the student with the various methods of estate administration including full administration of testate and intestate estates and the process of completing the same, including introduction to tax forms, and relief from administration.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: LEGL 228 or by permission of chairperson
Lab fee: $5.00

LEGL 287 Wills, Trusts and Powers of Attorney (on demand) 5 credits
This course is an in-depth examination of the law relating to wills, trusts, and powers of attorney, the development and execution of the same, and the application of these probate tools to development and protection of estates.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: LEGL 228 or by permission of chairperson
Lab fee: $5.00

LEGL 291 Arbitration (on demand) 4 credits
The course is an intensive overview of the arbitration process. Students will study in-depth both court annexed arbitration and private arbitration processes. The fundamentals of researching arbitration decisions and legal resources in arbitration will be examined with special emphasis on Internet resources. Each student will conduct an arbitration in class and prepare an arbitration notebook as a final project.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: LEGL 228 or by permission of chairperson
Lab fee: $5.00

Philosophy (PHIL)

PHIL 101 Introduction to Philosophy (A,W,SP,SU - DL) 5 credits
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. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and distributive transfer requirements in philosophy and humanities.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $3.00

PHIL 130 Ethics (A, W, SP, SU) 5 credits
An introduction 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. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and distributive transfer requirements in philosophy and humanities.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $3.00

PHIL 150 Introduction to Logic (A, W, SP, SU - DL) 5 credits
An introduction to critical thinking and the methods of inductive, deductive and symbolic logic. 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 your academic advisor.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $3.00

PHIL 250 Symbolic Logic (on demand) 5 credits
A presentation of deductive logic focused on propositional logic, natural deduction and predicate logic. This course develops in greater detail principles of deductive logic covered in PHIL 150. 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 your academic advisor.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $2.00

PHIL 270 Philosophy of Religion (on demand) 5 credits
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. Meets elective requirements in the Associate of Arts and Associate of Science programs.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $2.00

PHIL 290 Capstone Experience in Philosophy (on demand) 3 credits
A capstone course focusing on philosophy. Paradigms and their underlying assumptions will be explored. Students will work on developing research techniques and methodologies. Students will apply these techniques to a project of their own design, and participate in summative testing of their academic skills.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: Open only to Associate of Arts and Associate of Science students preparing to graduate within 2 academic quarters.
Lab fee: $2.00

PHIL 299 Special Topics in Philosophy 1 to 5 credits
Detailed examination of selected topics in philosophy.
Lecture: variable hours – Lab: 0 hours
Prerequisite: Permission of instructor
Lab fee: $2.00

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.

PHYS 100 Introduction to Physics (A, W, SP, SU – DL) 4 credits
This course is a survey of the basic concepts of physics with emphasis on energy and its various forms. Topics include mechanics, heat, electricity,

and waves, with related laboratory and demonstrations. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting, completion of certain exams and laboratories. Laboratories are generally done on an every other week basis on campus.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: MATH 102 or equivalent, and placement into ENGL 100. Not open to students with credit for PHYS 117, PHYS 118, PHYS 177, PHYS 178, PHYS 181, PHYS 182, PHYS 183, or PHYS 185.
Lab fee: $10.00

PHYS 117 College Physics (Mechanics and Heat) (A, W, SP, SU) 5 credits
A study of classical mechanics, including statics and kinematics, Newton's laws of motion, linear and angular momentum, work and energy, and properties of solids and fluids. Elementary concepts of heat are introduced, including temperature and thermal expansion, the ideal gas law, calorimetry, and heat transfer. Related laboratory and demonstrations. This course and PHYS 118 provide a two-quarter sequence in physical science that will fulfill the elective requirement for the Associate of Science Degree.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: MATH 148 or MATH 111 or equivalent, placement into ENGL 101. Not open to students with credit for PHYS 177 or PHYS 178.
Lab fee: $11.00

PHYS 118 College Physics (Electricity, Magnetism, and Light) (A, W, SP, SU) 5 credits
A continuation of PHYS 117. Topics in classical electricity and magnetism include electric potential, current and resistance, dc circuits, magnetic forces and fields, and electromagnetic induction. The nature of light is introduced and the principles of geometrical and physical optics, including optical instruments, are treated. Related laboratory and demonstrations.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: PHYS 117, and MATH 150 or MATH 112 or equivalent. Not open to students with credit for PHYS 177, PHYS 178 or PHYS 179
Lab fee: $10.00

PHYS 119 College Physics (Modern Physics) (A, W, SP) 5 credits
A continuation of PHYS 118. Topics include alternating current, electromagnetic waves, kinetic theory of gases, thermodynamics, and modern physics. The major emphasis of the course is on topics in modern physics, including special relativity, quantum mechanics, atomic and nuclear physics, nuclear radiation, and nuclear energy. Related laboratory and demonstrations.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: PHYS 118. Not open to students with credit for PHYS 177, PHYS 178 or PHYS 179
Lab fee: $10.00

PHYS 177 General Physics I (A, W, SP, SU – DL) 5 credits
A course in the fundamental principles of mechanics for physics majors and engineers. Topics treated include vectors, equilibrium, kinematics and dynamics of a particle, energy, momentum, rotation, elasticity, simple harmonic motion, and the behavior of fluids. Related laboratory and demonstrations. This course and PHYS 178 provide a two-quarter sequence in physical science that will fulfill the elective requirement for the Associate of Science Degree. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting, completion of certain exams and laboratories. Laboratories are generally done on an every other week basis on campus.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: MATH 151, high school physics or PHYS 100 recommended and placement into ENGL 101
Lab fee: $ 11.00

PHYS 178 General Physics II (A, W, SP, SU – DL) 5 credits
A continuation of PHYS 177, topics covered include Coulomb's law, electric fields and potentials, capacitors and dielectrics, current and resistance, dc circuits. Magnetic fields and forces, electromagnetic properties of matter, ac circuits. Related laboratory and demonstrations. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting, completion of certain exams and laboratories. Laboratories are generally done on an every other week basis on campus.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: PHYS 177 and MATH 152
Lab fee: $10.00

PHYS 179 General Physics III (A, W, SP, SU – DL) 5 credits
A continuation of PHYS 178. Topics include mechanical waves, sound, electromagnetic waves, light, mirrors, lenses, interference, diffraction, polarization, relativity, photons, structure of atoms, nuclei, and solids. Related laboratory and demonstrations. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting, completion of certain exams and laboratories. Laboratories are generally done on an every other week basis on campus.
Lecture: 4 hours – Lab: 3 hours
Prerequisite: PHYS 178 and MATH 153
Lab fee: $10.00.

PHYS 181 Technical Physics (Mechanics) (A, W, SP, SU) 4 credits
A course in the basic principles of mechanics. Major topics include equilibrium or rigid bodies, particle motion, Newton's laws of motion, work and energy, conservation principles, and rotational motion. Related laboratory and demonstrations.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: MATH 111 or MATH 148 or equivalent, and placement into ENGL 100. Not open to students with credit for PHYS 117 or PHYS 177
Lab fee: $10.00

PHYS 183 Technical Physics (Properties of Matter) (W, SU) 4 credits
A course in the basic principles associated with the mechanical and thermal properties of matter. Major topics include elasticity, fluid mechanics, heat and temperature, energy transformations, heat transfer, ideal and real gases, thermodynamics, vibrations and wave motion. Related laboratory and demonstrations.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: MATH 111 or MATH 148 or equivalent, and placement into ENGL 100. Not open to students with credit for PHYS 117 or PHYS 177
Lab fee: $ 10.00

PHYS 185 Technical Physics (Heat, Light, Sound) (A, W, SP, SU) 4 credits
A course in the basic principles associated with heat, light, and acoustic phenomena. Major topics include temperature and heat, heat transfer, wave and particle nature of light, atomic theory, solid-state theory, electronics, and acoustics. Related laboratory and demonstrations.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: MATH 112 or equivalent, and placement into ENGL 100. Not open to students with credit for PHYS 117 or PHYS 177
Lab fee: $12.00

PHYS 290 Capstone Experience in Physics (on demand) 3 credits
An integrated science course blending elements of chemistry, physics and biology. Topics include the historical development of the sciences, ethical issues in science and how they affect the advancement of scientific thought, and the scientific method as it relates to experimental design and interpretation of scientific results. The laboratory utilizes an investigative approach taking students through the process of identifying a research problem, conducting a literature review, writing a research proposal,

collecting and analyzing data, writing a scientific paper and presenting results. This course is required for all physics majors seeking either the Associate of Arts or Associate of Science degree.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: 75 hours or more of course work completed with a minimum of 20 credit hours within the sciences.
Lab fee: $18.00

PHYS 293 Independent Study in Physics (on demand) 1 to 5 credits
Detailed examination of selected topics of interest in physics.
Lecture: 1 to 5 hours – Lab: 0 to 6 hours
Prerequisite: Permission of instructor
Lab fee: varies

PHYS 299 Special Topics in Physics (on demand) 1 to 5 credits
Detailed examination of selected topics of interest in physics.
Lecture: 1 to 5 hours – Lab: 0 to 6 hours
Prerequisite: Permission of the instructor
Lab fee: varies

Political Science (POLS)

Students who enroll in political science courses must have placed in ENGL 101 and are encouraged to either have completed ENGL 101 or be enrolled in that course when scheduling a political science course.

POLS 101 Introduction to American Government
(A, W, SP, SU – DL) 5 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. A distance-learning version of Introduction to American Government is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

POLS 165 Introduction to Politics (A, W, SP, SU) 5 credits
This course introduces students to the basic concepts and issues in the study of politics. The course compares various political institutions, ideologies, and economic systems; examines political socialization and culture; explores methods of resolving international conflict; and explains the impact of modern bureaucracies on policy-making.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

POLS 290 Capstone Experience in Political Science (on demand) 3 credits
This course is for students completing the two-year Associate of Arts or Associate of Science degree who have special interest in continuing a baccalaureate degree program in political science. The course presents a basic introduction to political science research methodologies that students apply in researching a social science topic of interest. Course requirements include the assembly of a portfolio that covers their academic career at Columbus State Community College; and participation in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: Completion of Associate of Arts and Associate of Science core requirements and at least 75 hours toward the degree and five credit hours in political science
Lab fee: $6.00

POLS 293 Independent Study in Political Science (on demand) 1 - 5 credits
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 interest within the context of a faculty-guided program.
Lecture: 1 to 5 hours – Lab: 0 hours
Prerequisite: Permission of the Instructor and the chairperson and one course in Political Science
Lab fee: $6.00

POLS 299 Special Topics in Political Science (on demand) 1 - 5 credits
A detailed examination of selected topics of interest in political science.
Lecture: 1 to 5 hours – Lab: 0 hours
Prerequisite: Vary
Lab fee: $6.00

Practical Nursing (PNUR)

PNUR 100 Introduction to Practical Nursing (W, SU) 1 credit
The student is introduced to the role, responsibilities and the scope of practice for the practical nurse. The framework for the practical nursing curriculum is introduced, including the major concepts and threads.
Lecture: 1 hour
Prerequisite: Admission into the Practical Nursing Program

PNUR 101 Foundations of Practical Nursing (A, SP) 2 credits
This course expands on knowledge and application of the major concepts and threads of the curriculum. The student is introduced to the nursing process as it relates to practical nursing, critical thinking, culturally sensitive care, client safety, and communication skills. The use of the computer in health care and documentation will be introduced. Laboratory practice will assist the student to develop safe practice of basic nursing skills.
Lecture: 1 hour – Lab: 3 hours
Prerequisites: PNUR 100, ENG 101, BIO 161
Corequisite: PNUR 121
Lab fee: $113

PNUR 102 Introduction to Practical Nursing Concepts (W, SU) 6 credits
The practical nurse role in assessment/observation is presented with emphasis on observing the physical, psychosocial, and developmental components of adult and geriatric clients. Observation of the client's ability to adapt to stress is also explored. Practical nursing concepts related to nutritional health, fluid, electrolyte and acid/base balance, peri-operative care, the infectious process, pain management, mental health, and end of life care will also be presented. Emphasis will be placed on the practical nurse's use of the nursing process to promote, maintain, and/or restore health. Students will practice assessment/observational skills and basic nursing skills in the laboratory. Clinical experience will be in adult and/or geriatric settings. Lab hours include the total number of hours for lab and clinical.
Lecture: 3 hours – Lab: 3 hours; Clinical 6 hours.
Prerequisites: PNUR 101, BIO 169
Corequisites: PNUR 122
Lab fee: $97

PNUR 103 Practical Nursing Concepts Related to Health Promotion, Maintenance, and Restoration (W, SU) 6 credits
The student will be introduced to commonly occurring alterations of the body systems. The course focuses on application of the nursing process by the practical nurse to promote, maintain, and restore health of clients experiencing alterations in functioning of the 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 skills laboratory will consist of nursing interventions that assist clients in achieving optimal health of the body systems. Clinical experiences will be conducted in a variety of adult acute health care facilities. Lab hours include the total number of hours for lab and clinical.
Lecture: 3 hours – Lab: 3 hours; Clinical: 6 hours.
Prerequisites: PNUR 102, PNUR 122
Lab fee: $96

PNUR 104 Practical Nursing Concepts Related to Maternal and Child Health (A, SP) 6 credits
The student will continue to apply the practical nursing concepts from previous courses to the care of women and children. Health promotion through the antepartal, intrapartal, and postpartal stages of pregnancy will be a focus. Complications occurring during pregnancy will be presented. Issues related to promotion of health of women and normal growth and development of the child will be discussed. Information on common health alterations of the child from the newborn through adolescence will be included. Students will perform those nursing skills in the laboratory that relate to care of maternal and pediatric clients. Clinical experiences will be provided in a variety of obstetrical and pediatric settings. Lab hours include the total number of hours for lab and clinical.
Lecture: 3 hours – Lab: 3 hours; Clinical: 6 hours
Prerequisites: PNUR 103, SSCI 101
Lab fee: $65

PNUR 105 Concepts Related to Practical Nursing Practice (A, SP) 5 credits
The student is introduced to the concepts of leadership and management that enable the practical nurse to care for groups of clients. The clinical experience provides for practicum in which the student can apply these concepts while caring for a typical assignment of clients for a practical nurse while under the supervision of a registered nurse. In addition, content will be presented on caring for clients in emergency situations and in community based health care facilities. To enhance knowledge of continuity of care and the role of the practical nurse in the community, students will have an observation experience in a community healthcare setting. The final content in the course focuses on the transition of the student into the practice of practical nursing with information about the NCLEX-PN and application for licensure. Lab hours include the total number of hours for seminar and practicum.
Lecture: 2 hours – Seminar: 1 hour; Practicum: 16 hours
Prerequisites: PNUR 104, COMM 110
Lab fee: $128

PNUR 121 Pharmacology I for the Practical Nurse (A, SP) 2 credits
This is the first of two courses where the focus will be on the practical nurse's role in medication administration to persons of all ages. Basic concepts, dosage calculations, drug classifications, and nursing implications will be presented for analgesic medications, integumentary system mediations, gastrointestinal medications, and self-care preparations. Safe administration and documentation of oral, topical, and injectable medications will be presented in the laboratory setting.
Lecture: 1 hour – Lab: 3 hours
Prerequisites: Admission into Practical Nurse Program, MATH 100, BIO 161
Corequisites: PNUR 101
Lab fee: $41

PNUR 122 Pharmacology II for the Practical Nurse (W, SU) 3 credits
This is the second of two courses where the focus will be on the practical nurse's role in medication administration to persons of all ages. Dosage calculations, drug classifications, and nursing implications will be presented for the reproductive system medications, respiratory system mediations, cardiovascular system medications, endocrine system medications, nervous system medications, immune system medications, sensory system medications, and hematological system medications. Safe administration and documentation of oral, topical, and injectable medications will be presented in the laboratory setting.
Lecture: 2 hours – Lab: 3 hours
Prerequisites: PNUR 121, BIO 169
Corequisite: PNUR 102
Lab fee: $41

PNUR 190 Special Topics in Practical Nursing 1 credit
The student will examine current topics and issues as they relate to practical nursing practice and roles.
Lecture: 1 hour
Prerequisites: PNUR 101

Psychology (PSY)

Students who enroll in psychology courses must have placed in ENGL 101 and are encouraged to either have completed ENGL 101 or be enrolled in that course when scheduling a psychology course.

Note: Courses taught at a distance [Distance Learning (DL)] may have a higher lab fee than traditionally taught courses.

PSY 100 Introduction to Psychology (A, W, SP, SU – DL) 5 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. In addition to traditional classes, students have the option of taking a web-based version or a video-based version (telecourse) of the course. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Students who take the video-based version (telecourse) may view the one-half hour video segments of the course on the Educable channel, at the College library, or rent copies of the videotapes. Course content in distance learning courses is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00
Telecourse lab fee: $25.00

PSY 135 Psychology of Adjustment (A, W, SP, SU) 3 credits
This course examines psychological factors that influence individual growth, development, and behavior. Current theoretical approaches to understanding and achieving self-awareness, application of conditioning and motivation techniques to behavior modification, group dynamics, methods of self-help, and methods of improving interpersonal communications and relationships are investigated.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: placement into ENGL 101
Lab fee: $6.00

PSY 200 Educational Psychology (A, W, SP, SU – DL) 5 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. A distance-learning version of Educational Psychology is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Grade of C or better in PSY 100 and placement into ENGL 101
Lab fee: $6.00

PSY 201 Field Based Experience in Educational Psychology (on demand) 1 to 3 credits
An independent study course that offers teaching aides and other employed, screened, and insured individuals who work in the schools an opportunity to reflect in writing and in discussion on the learning and teaching theories and practices studied in Educational Psychology 200. Twelve hours of observation/work in the schools are required each week for 10 weeks for each hour of credit earned. Only students who have successfully completed Educational Psychology 200 or who are currently enrolled in PSY200 may take PSY201. Each student meets face to face a minimum of four times per quarter with his or her course instructor.
Lecture: 0 hours – Lab: 0 hours - Field experience: 12 hours per credit hour
Prerequisite: Grade of C or better in PSY 100 and placement into ENGL 101
Corequisite: PSY 200
Lab fee: $6.00

PSY 230 Abnormal Psychology (A, W, SP, SU – DL) 5 credits
Abnormal Psychology presents the basic concepts of abnormalities as defined by the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). 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. A distance-learning version of Abnormal Psychology is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Grade of C or better in PSY 100 and placement into ENGL 101
Lab fee: $6.00

PSY 240 Human Growth and Development Through the Life Span (A, W, SP, SU– DL) 4 credits
This course surveys developmental change from conception to death. The following stages of human growth and development are covered: conception and prenatal growth, infancy, childhood, adolescence, young adulthood, middle age, old age, and death. This course focuses on physical, social, emotional and cognitive development. A distance-learning version of Human Growth and Development Through the Life Span is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail account, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: Grade of C or better in PSY 100 and placement into ENGL 101
Lab fee: $6.00

PSY 245 Children With Exceptional Personalities (A, SP) 5 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 life-long learning.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Grade of C or better in PSY 100 and placement into ENGL 101
Lab fee: $6.00

PSY 251 Adolescent Psychology (A, W, SP, SU – DL) 5 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. A distance-learning version of Adolescent Psychology is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail account, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Grade of C or better in PSY 100 and placement into ENGL 101
Lab fee: $6.00

PSY 261 Introduction to Child Development (A, W, SP, SU – DL) 5 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. Observation of children is an integral part of the course.
A distance-learning version of Introduction to Child Development is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite**:** Grade of C or better in PSY 100 and placement into ENGL 101
Lab fee: $6.00

PSY 267 Social Psychology (A,W,SP,SU) 5 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, non-verbal communication, obedience to authority, conformity, aggression, prosocial behavior, interpersonal attraction, and behavior in groups.
Lecture: 5 hours – Lab: 0 hours
Prerequisite**:** Grade of C or better in PSY 100 and placement into ENGL 101
Lab fee: $6.00

PSY 290 Capstone Experience in Psychology (on demand) 3 credits
This course is for students completing the two-year Associate of Arts or Associate of Science degree who have a special interest in continuing a baccalaureate degree program in psychology. The course presents a basic introduction to psychology research that students apply in researching a social science topic of interest. Course requirements include the assembly of a portfolio that covers their academic career at Columbus State Community College; and participation in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: Completion of Associate of Arts or Associate of Science core requirements and at least 75 hours toward the degree and five credit hours in psychology
Lab fee: $6.00

PSY 293 Independent Study in Psychology (on demand) 1 - 5 credits
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 to 5 hours – Lab: 0 hours
Prerequisite: Permission of the Instructor and the Chairperson and one course in Psychology
Lab fee: $6.00

PSY 299 Special Topics in Psychology (on demand) 1 - 5 credits
A detailed examination of selected topics of interest in psychology.
Lecture: 1 to 5 hours – Lab: 0 hours
Prerequisite: Vary
Lab fee: $6.00

Quality Assurance Technology (QUAL)

For Statistical Process Control, see MECH 244 in the Mechanical Engineering Technology course descriptions. For other related course descriptions, see Electronic Engineering Technology and Mechanical Engineering Technology.

QUAL 150 Quality Transformation (A,SU) 4 credits
This course focuses on teamwork and the applications of Total Quality Transformation ® tools. Teams of students and employees from business and industry solve existing quality problems in their organization with careful direction.
Lecture: 3 hours – Lab: 2 hours

QUAL 240 Total Quality Management (A,W) 3 credits
This course is a study and practice of the major elements and concepts of total quality management, including principles and styles of quality management, systems thinking, continuous improvement, management by data, and historic influences of leaders in quality management.
Lecture: 2 hours – Lab: 2 hours

QUAL 250 Metrology (SP) 3 credits
Making precise measurements is an important part of producing quality products for the customer. This introductory course covers the correct procedures for the linear and angular measures of features or attributes on machine components. Traceability to standards is also presented and instrument capability discussed. Students use a variety of instruments and systems to make precision measurements.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $10.00

QUAL 251 Value Engineering (W) 3 credits
Value engineering is the systematic application of recognized techniques which identify the function of a product or service, establish a monetary value for that function, and provide the necessary function reliably at the lower overall cost. Students will be introduced to value engineering concepts and applications for the practitioner.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: MECH 244

QUAL 260 Reliability and Systems Maintainability (SP) 3 credits
This course is an examination of the basic methods that companies use to ensure the reliability of their products. Students learn statistical methods used to determine reliability, the effectiveness of data analysis, use of simulations, and ways to improve system performance.
Prerequisites: MECH 244.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: MECH 244

QUAL 261 Technical Project Management (SP) 3 credits
Course provides an integration of the elements involved in planning, developing, and managing a successful and efficient technical project. Several methods are used including current software and Gantt charts.
Lecture: 2 hours – Lab: 2 hours

Radiography (RAD)

RAD 100 Health & Safety Guidelines for Allied Health Students (W, SU) 1 credit
This course introduces students to the Federal Regulation Guidelines and Health/Safety Instructions for students entering any program in the Allied Health Department
Lecture: 1 hour – Lab: 0 hours

RAD 111 Introduction to Radiologic Technology (SU) 3 credits
Basic introduction to radiologic principles and clinical radiography. Areas of emphasis include fundamentals of radiobiologic concepts, medical ethics, body mechanics, patient care skills, and clinical observation. This course is a prerequisite for all other radiologic technology courses.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Completed health record, acceptance into program.
Lab fee: $30.00

RAD 113 Radiologic Science (W) 5 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. Applications of equipment are discussed to include special x-ray equipment such as tomography, stereoradiography, mammography, and fluoroscopy.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: RAD 111

RAD 118 Radiographic Exposure and Processing (SP) 5 credits
This course consists of a study of film processing through analysis of radiographic film characteristics, film processing, film storage and han-

dling, and silver recovery methods. Photographic and geometric properties necessary to the production of a quality radiograph are discussed, as well as technical conversions necessary to maintain film density.
Lecture: 4 hours – Lab: 2 hours
Prerequisite: RAD 113
Lab fee: $44.00

RAD 123 Advanced Exposure and Processing (W) 4 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: 3 hours – Lab: 2 hours
Prerequisite: RAD 118
Lab fee: $49.00

RAD 126 Radiation Biology and Protection (A) 3 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: 3 hours – Lab: 0 hours
Prerequisite: RAD 113
Lab fee: $30.00

RAD 141 Radiographic Procedures I (SU) 4 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, upper and lower extremities, chest, abdomen, and basic urography. Lab provides the opportunity for practice and demonstration of proficiency.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: Acceptance into the program
Lab fee: $61.00

RAD 142 Radiographic Procedures II (A) 4 credits
This course serves as a continuation of RAD 141, with progression through the positioning categories and radiographic anatomy. Course topics include basic fluoroscopic procedures, the vertebral column, bony thorax, specialized biliary and urographic studies, and tomography.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: RAD 141
Lab fee: $61.00

RAD 143 Radiographic Procedures III (W) 4 credits
This course serves as the final of a series of three, with progression through the remaining categories of positioning and radiographic anatomy. Course topics include specialized fluoroscopic and radiographic studies, skull and facial bones, operative radiography, and trauma radiography.
Lecture: 3 hours – Lab: 3 hours
Prerequisite: RAD 142
Lab fee: $61.00

RAD 148 Special Radiographic Procedures (SP) 4 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: 3 hours – Lab: 2 hours
Prerequisite: RAD 143
Lab fee: $5.00

RAD 203 Anatomy and Physiology (A, DL) 2 credits
This is a web-based distance learning course. This one-hour course discusses in detail the human breast anatomy, physiology and pathology, in preparation for identifying anatomical landmarks, physiological processes and pathological processes in mammogram films.
Lecture: 2 hour – Lab: 0 hours
Prerequisite: Graduate of a JRCRTE-approved Radiography program or current student in the Radiography program.

RAD 204 Mammographic Positioning(A, DL) 2.5 credits
This is a web-based distance learning course. This course discusses in detail the elements required in a patient medical history, the various positioning views required for both a routine screening mammogram and a diagnostic mammogram, and the introductory elements of positioning.
Lecture: 2 hour – Lab: 1 hours
Prerequisite: Graduate of a JRCRTE-approved Radiography program or current student in the Radiography program.

RAD 205 Mammographic Physics and Quality Assessment (W – DL) 2 credits
This is a web-based distance learning course. This course discusses in detail the various elements of quality assurance in the mammography laboratory, including daily, weekly, monthly, quarterly, semi-annual, and yearly procedures.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: Graduate of a JRCRTE-approved Radiography program or current student in the Radiography program.

RAD 206 Mammography Special Procedures and Pathology (A, DL) 2.5 credits
This is a web-based distance learning course. This two-hour course discusses in detail the various diagnostic positioning views required for a diagnostic mammogram.
Lecture: 2 hour – Lab: 1 hours
Prerequisite: Graduate of a JRCRTE-approved Radiography program or current student in the Radiography program.

RAD 207 Clinical Experience in Mammography (W, SP – DL) 1.5 credits
This is a web-based distance learning course. This one-credit hour course provides the capstone experience of the mammography program and is the clinical unit. The student will complete screening and diagnostic mammograms on patients in the clinical setting, under the supervision of a certified mammographer. This course is repeatable to a total of 4 CR.
Lecture: 0 hours – Lab: 3 hours
Prerequisite: RAD 203, RAD 204, RAD 205, RAD 206 and RAD 208

RAD 208 Mammographic Physics and Quality Assessment Laboratory (W – DL) 1 credit
This is a web-based distance learning course. This one credit-hour course is the laboratory practice section of mammography quality assurance.
Lecture: 0 hours – Lab: 2 hours
Prerequisite: RAD 205 (or co-requisitely enrolled in RAD 205)
Lab fee: $31.00

RAD 212 Sectional Anatomy (A) 3 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: 3 hours – Lab: 0 hours
Prerequisite: RAD 143
Lab fee: $3.00

RAD 222 Computerized Imaging (A) 1 credit
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: 1 hour – Lab: 0 hours
Prerequisite: RAD 113
Lab fee: $3.00

RAD 231 Radiographic Pathology (W) 3 credits
The 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: 3 hours – Lab: 0 hours
Prerequisite: RAD 148
Lab fee: $3.00

RAD 254 Seminar I (SU) 1 credit
Evaluation and review of radiography cases and discussion of current issues in the radiologic sciences.
Lecture: 1 hour – Lab: 0 hours
Corequisite: RAD 264

RAD 255 Seminar II (A) 1 credit
Evaluation and review of radiography cases and discussion of current issues in the radiologic sciences.
Lecture: 1 hour – Lab: 0 hours
Corequisite: RAD 265

RAD 256 Seminar III (W) 3 credits
Evaluation and review of radiography cases and discussion of current issues in the radiologic sciences.
Lecture: 3 hour – Lab: 0 hours
Prerequisite: RAD 255
Corequisite: RAD 266

RAD 257 Seminar IV (SP) 1 credit
Evaluation and review of radiography cases and discussion of current issues in the radiologic sciences. This summative course also reviews all program requirements. This is an elective course.
Lecture: 1 hour – Lab: 0 hours

RAD 261 Clinical I (A) 2 credits
This directed practice in the clinical area provides the 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.
Lecture: 0 - Lab: 16 hours
Prerequisite: RAD 111
Lab fee: $31.00

RAD 262 Clinical II (W) 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 compliment 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.
Lecture: 1 hour – Lab: 16 hours
Prerequisite: RAD 261
Lab fee: $31.00

RAD 263 Clinical III (SP) 2 credits
This directed practice in the clinical area is a continuation of Clinical II. Clinical III provides the practical experience necessary to function as a radiographer and is designed to complement and enhance the didactic studies. Experience is gained in the general diagnostic and fluoroscopic areas, the emergency department, the operating room, tomography, portable radiography, and digital imaging. Film critique and case presentations are continued.
Lab: 16 hours
Prerequisite: RAD 262
Lab fee: $31.00

RAD 264 Clinical IV (SU) 3 credits
This directed practice in the clinical area is a continuation of Clinical III. Clinical IV provides the practical experience necessary to function as a radiographer and is designed to enhance and compliment the didactic studies. Experience is gained in the general diagnostic and fluoroscopic areas, the emergency department, the operating room, tomography, portable radiography, the computed tomographic area, to include an evening rotation. In addition, each student is required to observe a radiologist during film reading and dictation. Film critique and case presentations are continued.
Lab: 24 hours
Prerequisite: RAD 263
Corequisite: RAD 254
Lab fee: $18.00

RAD 265 Clinical V (A) 3 credits
This directed practice in the clinical area is a continuation of Clinical IV. Clinical V provides the practical experience necessary to function as a radiographer and is designed to enhance and compliment didactic studies. Experience is gained in the general radiographic and fluoroscopic areas, emergency department, operating room, portable radiography, tomography, computed tomography, cardiovascular and interventional radiology, digital imaging and special area (one day) rotations in nuclear medicine, radiation oncology, diagnostic medical sonography, cardiac catheterization laboratory, and extra-corporeal shock wave lithotripsy. Film critique and case presentations are continued.
Lab: 24 hours
Prerequisite: RAD 264
Corequisite: RAD 255
Lab fee: $31.00

RAD 266 Clinical VI (W) 3 credits
This directed practice in the clinical area is a continuation of Clinical V. Clinical VI provides the practical experience necessary to function as a radiographer. Experience is obtained in general radiographic and fluoroscopic areas, the emergency room, the operating room, tomography, mammography, portable radiography, digital imaging, computed tomography, and magnetic resonance imaging. Film critique and case presentations are continued.
Lab: 24 hours
Prerequisite: RAD 265
Corequisite: RAD 256
Lab fee: $31.00

RAD 267 Clinical VII (SP) 3 credits
This directed practice in the clinical area is a continuation of Clinical VI. Students are required to complete the Final Competency Examination during this quarter. Clinical rotations are scheduled in the general radiographic and fluoroscopic areas, the operating room, the emergency room, mammography, and computed tomography. Once the Final Competency Examination has been satisfactorily completed, the student may custom design their own specific clinical rotations. Critique and case presentations are continued.
Lab: 24 hours
Prerequisite: RAD 266
Corequisite: RAD 257
Lab fee: $31.00

Real Estate (REAL)

REAL 101 Real Estate Principles and Practices (A, W, SP, SU) 4 credits
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. Provides a basic knowledge of the real estate business. Course covers 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. Meets all state requirements for licensing.
Lecture: 4 hours – Lab: 0 hours
Lab fee: $3.00

REAL 102 Real Estate Law (A, W, SP, SU) 4 credits
Real estate law includes all of the areas of law of common concern to the typical real estate practitioner and investor-consumer. Among topics covered are the law of agency as applied to real estate brokers and salespersons, law of fixtures, freehold and leasehold, estates, conveyance of real estate, real estate managers, licensure laws of Ohio, zoning, cooperatives and condominiums. Meets state requirements for licensing.
Lecture: 4 hours – Lab: 0 hours
Lab fee: $3.00

REAL 111 Real Estate Finance (A ,W, SP, SU) 2 credits
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. Meets requirements for licensing.
Lecture: 2hours – Lab: 0 hours
Lab fee: $3.00

REAL 112 Real Estate Appraisal (A, W, SP, SU) 2 credits
Stresses the methodology of appraising the single-family residential property and the theory underlying appraisal techniques. The three basic techniques of appraising: market comparison; penalized cost of replacement; and income approach (GMRM) are covered. A term appraisal project is assigned to give the student practical experience in applying these techniques. Meets state requirements for licensing.
Lecture: 2 hours – Lab: 0 hours
Lab fee: $3.00

REAL 121 Residential Sales Practices (SP) 3 credits
A "how to" course providing a step-by-step approach for success as a real estate professional based on sound principles and acceptable techniques. Course sets forth basic fundamentals which must be mastered by real estate practitioners regardless of their specialization or type of property involved. Underlying theme is communication. See advisor to find out if course may meet continuing education requirement.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: REAL 101 and REAL 102 or Real Estate License.
Lab fee: $3.00

REAL 221 Professional Property Management (SP) 3 credits
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 Ohio Tenant Landlord Act, forcible entry and detainer, typical leases, office management, hiring, merchandising, advertising, collection problems, taxes, insurance and maintenance. See advisor to find out if course may meet continuing education requirement.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: REAL 101
Lab fee: $3.00

REAL 240 Introduction to Entrepreneurship (A, W, SP, SU – DL) 3 credits
This course represents the state-of-the-art in next-generation education using national business experts and timely documentary footage to create a course rich in content and compelling presentation. Its documentary case studies range from international franchising operations and high-technology companies to smaller, niche-oriented ventures and fledgling businesses still trying to raise start-up capital.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $3.00

REAL 270 Real Estate Investing (A, W, SP) 3 credits
This course offers a practical approach to understanding the steps necessary to purchase real property as part of an investment portfolio. Student 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: 3.0 hours – Lab: 0 hours
Lab fee: $ 3.00

REAL 275 Repair, Restore, Remodel (A, W, SP) 3 credits
This course is based on proven techniques used to repair, restore or remodel property that is functionally obsolete. Course is structured to teach basic hand tool and power tool use and safety. Several labs will be conducted with hands-on activities. Part of the course will help students understand the basic techniques in restoration of circa properties. These techniques will involve a beginning study of architectural style and design based upon property's age. The final part of the course will analyze what type of remodeling is economically feasible verses those remodeling projects that are not feasible.
Lecture: 3.0 hours – Lab 0 hours
Lab fee: $3.00

REAL 290 Post Licensure Sales Course (A ,W, SP, SU) 1 credit
Mandatory 10-hour Post Licensure course for real estate salespersons. Course covers the housing market today; future trends impacting real estate markets; license law matters; legal matters; environmental concerns; real estate specialties; the image of real estate licensees; and finance, taxes, and legislation.
Lecture: 1 hour – Lab: 0 hours
Lab fee: $3.00

REAL 291 Post Licensure Brokers Course (on demand) 1 credit
Mandatory 10-hour post licensure course for real estate brokers. Course covers the housing market today; future trends impacting real estate markets; license law matters; legal matters; environmental concerns; real estate specialties; the image of real estate licensees; and finance, taxes, and legislation.
Lecture: 1 hour – Lab: 0 hours
Lab fee: $3.00

Respiratory Care (RESP)

RESP 100 Introduction to Respiratory Care (A) 5 credits
This course presents an integrated introduction to the care of pulmonary patients. Course content will focus on the skills required and the methods used to manage cardiopulmonary problems.
Lecture: 3 hours – Lab: 4 hours
Prerequisite: Acceptance into the program
Lab fee: $35.00

RESP 114 Introduction to Pulmonary Disease (W) 4 credits
This course provides an integrated approach to the anatomy, physiology and pathology of the cardiopulmonary system. Normal and abnormal

function will be compared.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: RESP 100 or permission of instructor
Co-requisite: RESP 150

RESP 130 Patient Assessment I (SP) 2 credits
This course presents a holistic approach to assessment of adult and pediatric patient in the sub-acute/homecare setting. Special emphasis will be placed on assessment of the cardiopulmonary function.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: RESP 114, RESP 150, or permission of instructor
Co requisite: RESP 152 and RESP 196

RESP 132 Patient Assessment II (SU) 2 credits
This course presents a holistic approach to assessment of adult and pediatric patients in the acute care setting. Special emphasis will be placed on assessment of the cardiopulmonary system.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: RESP 130
Co requisite: RESP 154 and RESP 198

RESP 150 Introduction to Pharmacology (W) 2 credits
This course provides an introduction to the basic principles of therapeutic drug administration. Classification of drugs will be included. Special emphasis will be directed to safety issues, sources of drug information, and application to respiratory care practice.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: RESP 100 or permission of instructor
Co requisite: RESP 114

RESP 152 Case Management I (SP) 2 credits
This course presents a holistic approach to the management of adult and pediatric patients in the sub-acute settings. Special emphasis will be placed on the management of the cardiopulmonary problems.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: RESP 114, RESP 150 or permission of instructor
Co requisite: RESP 130 and RESP 196

RESP 154 Case Management II (SU) 2 credits
This course presents a holistic approach to the management of adult and pediatric patients in the acute care setting. Special emphasis will be placed on the management of the cardiopulmonary problems.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: RESP 152 or permission of instructor
Co requisite: RESP 132 and RESP 198

RESP 160 Introduction to Respiratory Equipment (A) 1 credit
This course is an introduction to basic respiratory care equipment.
Lecture: 0 hours – Lab: 2 hours

RESP 170 Mechanical Ventilators (W) 1 credit
Students will learn operational characteristics of critical care, home care, transport, and neonatal ventilators.
Lecture: 0 hours – Lab: 2 hours
Prerequisite: Permission of instructor

RESP 196 Clinical Practice/Therapeutic Procedures I (SP) 8 credits
This course is focused on conducting respiratory care procedures in the sub-acute setting.
Lecture: 2 hours – Lab: 12 hours
Prerequisite: RESP 150 or permission of instructor
Co requisite: RESP 150 and RESP 152
Lab fee: $35.00

RESP 198 Clinical Practice/Therapeutic Procedures II (SU) 8 credits
This course is focused on conducting respiratory care procedures in the acute care setting.
Lecture: 2 hours – Lab: 12 hours
Prerequisite: RESP 196 or permission of instructor
Co requisite: RESP 132 and 154
Lab fee: $35.00

RESP 230 Patient Assessment III (A) 2 credits
This course presents a holistic approach to the assessment of adult and pediatric patient in the critical care setting. Special emphasis will be placed on assessment of the cardiopulmonary system.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: RESP 132 or permission of instructor
Co requisite: RESP 256 and RESP 290

RESP 232 Neonatal and Pediatric Respiratory Care (W) 3 credits
A study of the management and treatment of neonatal and respiratory diseases. Special emphasis is placed on the therapeutic procedures of respiratory care which are associated with pediatric and neonatal patients.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Permission of instructor
Lab fee: $20.00

RESP 238 Pulmonary Function (on demand) 3 credits
A study of the equipment and the techniques utilized in pulmonary function testing and blood gas analysis. This course examines the types of analyzers used in performing lung volume tests, lung flow tests, and gas analysis test with a discussion of the advantages and disadvantages of such systems. Procedures used in each test are discussed including patient instruction and calculation of the data.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Permission of instructor

RESP 251 Respiratory Rehabilitation Home Care Techniques (on demand) 3 credits
This course provides the student with the appropriate adaptations of skills and concepts traditionally used in the hospital to alternate care settings in order to educate the patient and caregiver to maintain the highest possible functional capacity. Included are: medication regimens, smoking cessation, breathing retraining, bronchial hygiene, and other self -care techniques. Other topics include monitoring the patient's disease and servicing the equipment needs of the patient.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Permission of instructor
Lab fee: $15.00

RESP 252 Patient Management in Respiratory Rehabilitation (on demand) 3 credits
The study of the patient's adaptation to chronic pulmonary disease. Emphasis will be placed on problem identification, appropriate interventions, and referral to community resources using a multidisciplinary approach in coordinating the various systems of care.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: RN, LPN, RRT, CRTT, or permission of instructor

RESP 253 Respiratory Rehabilitation Home Care Administration (on demand) 4 credits
This course concentrates on the management of a respiratory rehabilitation or home care organization. Topics include the development of policies and procedures for respiratory rehab home care services, the preparation of the certificate of medical necessity, and the documentation necessary for reimbursement, accreditation, regulatory requirements, and quality assurance. Other topics include marketing strategies and community health promotion.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: RN, LPN, RRT, CRTT, or permission of instructor

RESP 256 Case Management III (A) 2 credits
This course presents a holistic approach to the management of adult and pediatric patients in the critical care setting. Special emphasis will be placed on the management of the cardiopulmonary problems.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: RESP 154 or permission of instructor
Co requisite: RESP 230 and RESP 290

RESP 260 Respiratory Care Seminar 2 (SP) 2 credits
This course deals with special topics in respiratory care.
Lecture: 2 hours – Lab: 0 hours
Lab fee: $60.00

RESP 270 Current Issues in Respiratory Care (A, W, SP, SU) 2 credits
This course is intended to be focused on current trends in the care of patient's with cardiopulmonary problems. Course content will change as current issues change.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: RESP 256
Co requisite: RESP 292

RESP 290 Clinical Practice/Therapeutic Procedures III (A) 8 credits
This course focuses on conducting respiratory care procedures in the critical care setting.
Lecture: 2 hours – Lab: 12 hours
Prerequisite: RESP 198 or permission of instructor
Co requisite: RESP 232 or RESP 256
Lab fee: $35.00

RESP 292 Clinical Practice/Therapeutic Procedures IV (W) 8 credits
This course allows students to select a specialty area for additional clinical practice.
Lecture: 2 hours – Lab: 12 hours
Prerequisite: RESP 290 or permission of instructor
Co requisite: RESP 270
Lab fee: $55.00

RESP 295 Clinical Experience (SP) 4 credits
In the clinical practicum students apply skills that they have learned in the previous four quarters. Students spend 24 hours per week practicing respiratory care with a clinical affiliate.
Lecture: 1 hour – Lab: 24 hours
Prerequisite: RESP 292 or permission of instructor
Lab fee: $30.00

RESP 221 Introduction to Sleep Problems (A) 2 credits
This introductory course will provide an overview of the physiology and architecture of sleep, common sleep disorders, their prevalence in the population, causes and treatment, the factors related to risk and risk management for shift workers, and the role of the polysomnography laboratory in monitoring and recording physiologic data during sleep.
Prerequisite: This course is open to any interested student
Lecture: 2 hours – Lab: 0 hours
Lab fee: $3.00

RESP 223 Level I Polysomnography Technician (W) 2 credits
This course will prepare the student for performing Level I polysomnographic technician responsibilities in the clinical area, and will provide an introduction to polysomnography.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: RESP 221 or permission of RESP program coordinator
Lab fee: $3.00

RESP 224 Level I Polysomnography Technician Clinical (W) 2 credits
This course will prepare the student for performing Level I polysomnographic technician responsibilities in the clinical area. The student will complete a supervised clinical experience in a sleep lab under the guidance of a clinical preceptor. The course focuses on preparing the equipment and instrumentation used in the sleep lab, as well as patient preparation.
Lecture: 0 hours – Lab: 4 hours
Prerequisite: RESP 221 or permission of RESP program coordinator
Lab fee: $3.00

RESP 225 Level II Polysomnography Technician (SP) 2 credits
The Level II Technician course is designed for nurses, respiratory therapists, paramedics and other health care practitioners who are interested in polysomnography. This course focuses on scoring of polysomnography tracings, applying and titrating CPAP/Bi-Level therapy, and patient education.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: RESP 223, RESP 224 or permission of RESP program coordinator
Lab fee: $3.00

RESP 226 Level II Polysomnography Technician-Clinical (SP) 2 credits
The Level II Technician clinical course is designed to provide clinical practice for skills covered in the RESP 225.
Lecture: 0 hours – Lab: 4 hours
Prerequisite: RESP 223, RESP 224 or permission of RESP program coordinator.
Lab fee: $3.00

RESP 228 Polysomnography Current topics (on demand) 2 credits
This course will examine current changes in the field of polysomnography. Changes may include new techniques in instrumentation or diagnosis, and new approaches to sleep disorders or assessment.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: RESP 225, RESP 226 or permission of RESP program coordinator
Lab fee: $3.00

Retail Management (See Marketing)

Social Sciences (SSCI)

Students who enroll in interdisciplinary social science courses must have placed in ENGL 101 and are encouraged to either have completed ENGL 101 or be enrolled in that course when scheduling an interdisciplinary social science course.

SSCI 101 Cultural Diversity (A, W, SP, SU - DL) 5 credits
An interdisciplinary course that focuses on the cultural, psychological, sociological, political, geographic, and economic diversity among various groups. Topics include the ways individual beliefs, social values, and political and economic systems affect our perspectives and life-styles. Through the use of team projects, students participate in interactive group work to explore the effects of social inequity on groups within society. The course emphasizes the development of critical thinking skills as applied to social science research and diversity issues that students may encounter in their lives. A general education core course. A distance-learning version of Cultural Diversity is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Group projects are maintained via virtual meetings and distance-learning students are required to take a proctored final examination at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

SSCI 102 Popular Culture (A, W, SP, SU – DL) 5 credits
An interdisciplinary general education core course that examines the relationship between society and popular culture in the United States through topics including advertising, television, music, movies, art, sports and the Internet. The course analyzes these components of American popular culture and their connections to social, political, economic, and cultural influences from the latter half of the twentieth century to the present. Students will explore these changes in U.S. society through selected readings, written assignments, and group projects. A distance-learning version of Popular Culture is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101

SSCI 104 Human Economic Geography (A, W, SP, SU – DL) 5 credits
An interdisciplinary course that provides a geographical examination of the world economy. Students research the factors affecting a country's socioeconomic development and present findings from a policy maker's perspective. Factors to be covered include: location; demographic trends; resource availability and use patterns; industrialization; political and cultural forces; and global interdependence. A general education core course. A distance-learning version of World Economic Geography is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

SSCI 105 Law and Society (A, W, SP, SU) 5 credits
An interdisciplinary course that examines the interrelationships between law and other social structures and processes. The structure of the 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. A general education core course.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

SSCI 287 Research Methods for the Social Sciences (A, W, SP, SU) 5 credits
This course is designed to provide students with an introduction to the major research techniques that are employed by social science researchers. The first half of the course focuses on the logic of research and research design and the procedures used for research design. The second half of the course deals more specifically with a variety of particular techniques used for gathering data. Students will be expected to apply each of the techniques covered in the course though a series of small exercises throughout the quarter. Students will write a research paper based on some of their findings.
Lecture: 3 hours – Lab 2 hours
Prerequisite: ENG 102 or ENG 111; MATH 104 or MATH 135; 10 hours of credit in the social sciences.
Lab fee: $6.00

SSCI 290 Capstone Experience in Social Sciences (on demand) 3 credits
This course is for students completing the two-year Associate of Arts or Associate of Science degree who have a special interest in continuing in a baccalaureate degree program in the social sciences. The course presents a basic introduction to social science research methodologies that students apply in researching a social science topic of interest. Course requirements include the assembly of a portfolio that covers their academic career at Columbus State Community College; and participation in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: Completion of Associate of Arts or Associate of Science core requirements and at least 75 hours toward the degree
Lab fee: $6.00

SSCI 293 Independent Study in the Social Sciences (on demand) 1 - 5 credits
An individual, student-structured course that examines a selected topic in the social sciences 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 to 5 hours – Lab: 0 hours
Prerequisite: Permission of the instructor and the chairperson and one course in the Social Sciences
Lab fee: $6.00

SSCI 299 Special Topics in the Social Sciences (on demand) 1 - 5 credits
A detailed examination of selected topics of interest in the social sciences.
Lecture: 1 to 5 hours – Lab: 0 hours
Prerequisite: Vary
Lab fee: $6.00

Sociology (SOC)

Students who enroll in sociology courses must have placed in ENGL 101 and are encouraged to either have completed ENGL 101 or be enrolled in that course when scheduling a sociology course.

SOC 101 Introduction to Sociology (A, W, SP, SU - DL) 5 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. A distance-learning version of Introduction to Sociology is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

SOC 202 Social Problems (A, W, SP, SU – DL) 5 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 (i.e., studies in the fields of anthropology, economics, geography, political science, psychology, and sociology). 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. A general education core course. A distance-learning version of Social Problems is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail

address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

SOC 210 Sociology of Deviance (A, W, SP, SU – DL) 5 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. A distance-learning version of Sociology of Deviance is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Completion of SOC 101 is recommended, but not required
Lab fee: $6.00

SOC 230 Marriage and Family Relations (A, W, SP, SU - DL) 5 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: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Completion of SOC 101 is recommended, but not required
Lab fee: $6.00

SOC 280 American Race and Ethnic Relations (A, W, SP, SU – DL) 5 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. A distance-learning version of American Race and Ethnic Relations is available. Students taking the web-based version of the course must be familiar with computers, have an e-mail address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for distance-learning courses are administered at the Testing Center.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Completion of SOC 101 is recommended, but not required
Lab fee: $6.00

SOC 290 Capstone Experience in Sociology (on demand) 3 credits
This course is for students completing the two-year Associate of Arts or Associate of Science degree who have a special interest in continuing in a baccalaureate degree program in sociology. The course presents a basic introduction to sociology research methodologies that students apply in researching a social science topic of interest. Course requirements include the assembly of a portfolio that covers their academic career at Columbus State Community College; and participation in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: Completion of Associate of Arts or Associate of Science core requirements and at least 75 hours toward the degree and five credit hours in sociology
Lab fee: $6.00

SOC 293 Independent Study in Sociology (on demand) 1 - 5 credits
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 to 5 hours – Lab: 0 hours
Prerequisite: Permission of the Instructor and the Chairperson and one course in Sociology
Lab fee: $6.00

SOC 299 Special Topics in Sociology (on demand) 1 - 5 credits
A detailed examination of selected topics of interest in sociology.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Vary
Lab fee: $6.00

Spanish (SPAN)

SPAN 100 Spanish for the Professions (A, W, SP, SU) 3 credits
In this course, students learn basic Spanish phrases and questions necessary to carry out specific protocols in a specific 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 a specific profession that has frequent contact with the Hispanic population.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $3.00

SPAN 101 Elementary Spanish I (A, W, SP, SU - DL) 5 credits
Introduction to the fundamentals of the Spanish language with practice in listening, reading, speaking, and writing. Includes selected studies in Hispanic culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: Placement into ENGL 101
Lab fee: $6.00

SPAN 102 Elementary Spanish II (A, W, SP, SU - DL) 5 credits
Continuation of SPAN 101 with further development of listening, reading, speaking, and writing skills and further study of Hispanic culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: SPAN 101 with a grade of C or better or by placement exam
Lab fee: $6.00

SPAN 103 Intermediate Spanish I (A, W, SP, SU - DL) 5 credits
Continued study of the Spanish language and development of listening, reading, speaking, and writing skills. Readings from contemporary Hispanic culture and literature. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: SPAN 102 or SPN2 102 with a grade of "C" or better or by placement exam
Lab fee: $6.00

SPAN 104 Intermediate Spanish II (A, W, SP, SU - DL) 5 credits
Reading and discussion of Spanish and Latin American short stories, novels, plays, newspapers, and magazines, emphasizing literary appreciation

and the development of Hispanic culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: SPAN 103 with a grade of C or better or by placement exam
Lab fee: $6.00.

SPAN 105 Spanish Conversation and Composition (on demand) 1 credit
Conversation/composition course designed to provide students completing the 104-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. The course is repeatable for a total of 5 hours of credit.
Lecture: 1 hours – Lab: 0 hours
Prerequisite: Completion of SPAN 104 or permission of instructor
Lab fee: $4.00.

SPAN 290 Capstone Experience in Spanish (on demand) 3 credits
A capstone course focusing on Spanish. Paradigms and their underlying assumptions will be explored. Students will work on developing research techniques and methodologies. Students will apply these techniques to a project of their own design, complete a personal portfolio covering their studies at Columbus State, and participate in summative testing of their academic skills.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters
Lab fee: $5.00

SPAN 299 Special Topics in Spanish (on demand) 1-5 credits
Detailed examination of special topics in Spanish.
Prerequisite: vary
Lab fee: $2.00

Sport & Exercise Studies (SES)

SES 100 Personal Fitness Concepts (A, W, SP, SU, DL) 3 credits
This course of study focuses on fitness issues which affect Americans today and in the future. Emphasis is placed on establishing a basis for positive fitness through 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: 0 hours
Lab fee: $10.00

SES 101 Introduction to Sport & Fitness Management (W, SU) 3 credits
A survey of the health and fitness arena both private and public, to include the study of facilities, recreational options for the client, client profiles, daily operations, legal aspects, personnel issues, and program administration.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Acceptance into the program
Lab fee: $2.00

SES 102 Women's Total Body Conditioning (A, SP, SU) 1 credit
Participation in a resistance/aerobic fitness program to include cardio-respiratory fitness, strength training, and flexibility activities.
Lecture: 0 hours – Lab: 2 hours
Lab fee: $10:00

SES 104 Beginning Yoga (A,W,SP,SU) 1credit
Instruction in the fundamentals of yoga such as sun salutations, bandha (core) strength and flexibility.
Lecture: 0 hours – Lab: 2 hours
Lab fee: $20.00

SES 105 Introduction to Resistance Training (A, SP) 2 credits
An introduction to weight room use for the individual exerciser. Investigation of various types of resistance exercise devices, proper techniques and programs, and weight room safety. An introduction to basic anatomical and exercise concepts and their application in the use of resistance exercise modalities as a part of a total conditioning and exercise program.
Lecture: 1 hour – Lab: 2 hours
Lab fee: $10.00

SES 106 Beginning Golf (A, SP, SU) 1 credit
An introductory exposure to playing the game of golf. Laboratory experiences to include: introduction to the golf swing, club selection, driving range experience and game/course experience.
Lecture: 0 hours – Lab: 2 hours
Lab fee: $ 100.00

SES 113 Aquatics Management (SP, SU, AU) 2 credits
A survey of the recreational aquatics environment. Hands on training in the filtration systems and their general operation, an understanding of federal and state guidelines for licensure for pool operation and maintenance. Legal aspects of the aquatics area. Staffing requirements and training of aquatics personnel for indoor and outdoor facilities. Students also will complete the American Red Cross Life-guarding Certification as a part of this course.
Lecture: 1 hour – Lab: 2 hours
Lab fee: $15.00

SES 114 Aerobic & Group Fitness (A, SP) 2 credits
Introduction into the methods of teaching participation in a fitness program, to include a thorough understanding of the fundamental techniques of the sport. The history and the value of dance for the client, the basic movements of dance, and the interpretation of music and language for dance and aerobic conditioning. Students will demonstrate fundamental techniques of a fitness program including safety, motivation, goal setting, and variations of aerobic and group fitness.
Lecture: 1 hour – Lab: 2 hours
Lab fee: $10.00

SES 115 Intermediate Resistance Training (A, SP) 2 credits
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, assessment of clients. 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.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: SES 105 or permission of instructor
Lab fee: $20.00

SES 116 Golf Management (A, SP, SU) 2 credits
An in-depth analysis of the game of golf. To include the historical study of the game, the rules which apply to the playing of the game, and a perspective of the growth and increasing significance of the game inside and out of the industry. 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: $100.00

SES 117 Introduction to Tae Kwon Do (A, W, SP, SU) 2 credits
Introduction to coaching and participating in the activity, to include a thorough understanding of the rules and sport strategy. History of the art form, self defense strategies, and concepts of tournament sparring and tournament implementation.
Lecture: 1 hours – Lab: 2 hours
Lab fee: $20.00

SES 190 SES Freshman Seminar 1 credit
A survey of the sport & exercise studies profession and academic discipline. This class prepares students for the navigation of the SES curriculum and applicable academic technology and learning tools. The course will introduce students to the campus resources available for their research and writing assignments, update them on the technology skills required for graduation, familiarize themselves with industry trends, and introduce them to personal development skills that they can use upon graduation. This course must be taken in either the first or second quarter of enrollment in the Sport and Exercise Studies program.
Lecture: 1 hour
Prerequisite: Admission to the SES program
Lab fee: $10.00

SES 205 Activities Programming for the Elderly in Long Term Care (on demand) 9 credits
This course demonstrates how management of an activity department promotes the psychosocial, physical, emotional, creative and intellectual well being of residents. This course provides a student with practical and theoretical framework from which to develop and manage a comprehensive program of activities within long term settings. This course uses the NAAP/NCCAP curriculum known as the mepacourse. Students are awarded a certificate of completion when the course is completed with a grade of C or higher. The Ohio Department of Health accepts this certificate. This certificate will also qualify the student to apply for National Certification.
Lecture: 9 hours
Lab fee: $10.00

SES 213 Aquatic Programming for Individuals with Disabilities (on demand) 3 credits
The adaptive aquatic course content will provide utilization of specialized instructional technology to maximize learning and participation of individuals with disabilities in aquatic activities. The inclusive or community setting will be emphasized since acquisition of skills and water safety knowledge should occur in as normalized a manner as possible. Practicum opportunities with diverse populations will highlight the learning experiences.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $20.00

SES 214 Advanced Dance Exercise (on demand) 2 credits
Instruction in the methods of teaching and participation in group fitness activities to include a thorough understanding of the skills and the fundamental techniques of fitness instruction. The value of dance exercise and variations for the client, the movements and techniques of dance exercise, and the principles and legalities that guide fitness instructors.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: SES 114
Lab fee: $10.00

SES 215 Advanced Resistance Training (A, SP) 3 credits
This class will be a continued study of systems of physical conditioning. Including discussion of progressive resistance exercise through super sets, pyramiding, split routines, plyometrics and isokinetics. Program development including interval, continuous, and circuit training. Non-traditional training including partner resistance training. Other topics will include discussion of advantages and disadvantages of commercial exercise equipment in developing cardiorespiratory fitness and muscular strength. Musculoskeletal risk factor identification and programming for post injury rehabilitate fitness will also be included.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: SES 115
Lab fee: $20.00

SES 222 Court Sports I (Tennis) (SU) 2 credits
Instruction in the coaching and participation in the activity, to include a thorough understanding of the rules and sport strategy. History of the sport and coaching techniques for the client, tournament set up and implementation for the facility.
Lecture: 1 hour – Lab: 2 hours
Lab fee: $20.00

SES 224 Sport Management Foundations (W, SU) 5 credits
An advanced study of the facilities required for the recreational environment. An analysis of indoor and outdoor designs and utilization. An overview of the personnel process, staffing requirements, and staff development procedures. A study of activity programming for the club environment, to include class structure, tournament procedures, proper selection of activities, and equipment needed as well as proper care and storage.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: SES 101
Lab fee: $10.00

SES 225 Athlete Intervention (on demand, DL) 3 credits
This course is designed to train sport managers to help athletes avoid or deal with the challenges of alcohol, drugs, and illegal drug use. The program allows sport managers to develop rules and expectations about drug and alcohol use, communication with parents and guardians, and behavior monitoring skills. Lessons on development of policies related to athlete usage and consequence and/or infraction guidelines.
Lecture: 3 hour – Lab: 0 hours
Lab fee: $5.00

SES 226 Care and Prevention of Athletic Injuries (W, SU) 3 credits
Recognition, treatment, management, and prevention of basic injuries sustained while participating in athletic activities. Basic taping and treatment procedures to be introduced and applied in the athletic environment.
Lecture: 2 hours – Lab: 2 hours
Prerequisite: SES 100 or permission of instructor
Lab fee: $10.00

SES 230 Fitness Concepts for Special Populations (A, SP) 3 credits
A survey of the response of children, seniors, and physically challenged persons to exercise. Emphasis to be placed on choosing appropriate and challenging activities that will result in a positive physiological response while accommodating the social, developmental and physical needs of the potential clients.
Lecture: 3 hour – Lab: 0 hours
Lab fee: $3.00

SES 231 Exercise Physiology (A, W, SP, SU – DL) 5 credits
Instruction in the testing processes used for the individual evaluation to include proper techniques used for body fat, analysis, aerobic and anaerobic capabilities, muscle mass, flexibility, and program development for the athlete.
Lecture: 3 hours – Lab: 4 hours
Prerequisite: BIO 121 or 161 C or better
Lab fee: $15.00

SES 232 Court Sports II (Racquetball) (W) 2 credits
Instruction in the coaching and participation in the three activities, to include a thorough understanding of the rules and sport strategy, history of the sport and coaching techniques for the clients, tournament set up and implementation for the facility.
Lecture: 1 hour – Lab: 2 hours
Lab fee: $20.00

SES 233 Outdoor Community Recreation (A, W, SP, SU) 3 credits
A survey of the outdoor recreational market and it's application through corporate America. Review outdoor recreational opportunities, basic activities, skills, and necessary equipment. Present safety, liability, and associated programming issues. Examine the business, career, and recreational applications.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $50.00

SES 234 Sport Marketing (A, SP) 5 credits
An advanced study of sports marketing strategies for the club both internal and external. Promotional guidelines and discussion of concepts of promotional activity. Study of the budgetary process, differentiation of budget styles, and implementation of the budgetary process in both the private or public sector. Lab fee: $3.00. Prerequisite: SFMT 224.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: SES-101
Lab fee: $3.00

SES 235 Sport Law (A, W, SP, SU – DL) 3 credits
Survey of the legal framework of the athletic environment. The nature of the legal system and the law pertaining to sports, to include tort law, contractual agreements, and civil law.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $2.00

SES 237 Corporate Health (on demand – DL) 3 credits
An assessment and analysis of current health and wellness issues related to the worksite environment. Course work will emphasize the major wellness components of fitness, nutrition, safety, and behavior modification and how these components can be introduced into the worksite. This course will also focus on the financial and administrative issues associated with worksite health promotion.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: SES 101 or permission of instructor
Lab fee: $3.00

SES 238 Aging Fitness and Exercise (on demand – DL) 3 credits
Physical activity can significantly improve the quality of ones life at all ages, although the type and intensity of activity may change. This course will present the essential information needed to provide older adults with safe and effective fitness programming. The physiology of aging, and the techniques and tools for motivating older adults, personal fitness, pre-exercise screening, and fitness assessment are presented.
Lecture: 2 hours – Lab: 2 hours
Lab fee: $10:00

SES 241 Kinesiology (A, W, SP, SU – DL) 5 credits
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: 4 hours
Prerequisite: BIO 121 or 161 with grade of "C" or higher and SFMT 231, or permission of instructor
Lab fee: $15.00

SES 280 History of Sport in the United States: 1840-Present (on demand, DL) 3 credits
An in-depth analysis of the history of sport, athletics, and recreation in the United States of America. Lecture and related activities will explore the role of sport in the lives of Americans since 1840 and assess the economic, political, social, and psychological impact sport has played as a part of the larger historical framework of the nation.
Lecture: 3 hours – Lab: 0 hours
Lab fee: $3:00

SES 292 Practicum I (A, SP) 3 credits
Practical training in the sport profession to include activity preparation, personnel evaluation, and budget analysis. This course also includes an on campus seminar to discuss issues relating to the profession. Summative assessment will include a combination of objective tests, performance checklists, and evaluation by the on-site supervisor.
Lecture: 1 hour – Lab: 14 hours
Prerequisite: SFMT 224 or permission of instructor.
Lab fee: $3.00

SES 294 Practicum II (W, SU) 3 credits
Continuation of SES 292. Working in conjunction with a current sport manager to gain insight on program and facility operation, budgetary implementation, and assist in the daily operation of a fitness facility. This course also includes an on campus seminar to discuss issues relating to the profession. Summative assessment will include a combination of objective tests, performance checklists, and evaluations by the on-site supervisor.
Lecture: 1 hour – Lab: 14 hours
Prerequisite: SES 292 or permission of instructor
Lab fee: $3.00

SES 298 Special Topics in Sport (on demand) 3 credits
This course serves to bring together concepts discussed in previous program courses. Topics of discussion will revolve around exercise prescription for special populations, some disease states, or social aspects of sport such as homophobia in sport. Development and modification of institutional programming based on individual and group needs. Resources, content and delivery of health promotion programs will also be discussed.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: Permission of instructor
Lab fee: $3.00

SES 299A Active Living I (A, W, SP, SU – DL) 1 credit
Active Living Every Day is the first course of a two-quarter sequence that focuses on helping sedentary people become and stay physically active-for a lifetime. This evidence-based course uses established behavior change models such as the stages of readiness to change to empower people to overcome their barriers to physical activity. Participants find ways to fit physical activity into their daily lives and maintain active lifestyles even when difficult life situations arise.
Lecture/Discussion: 1 hour – Lab: 0 hours
Prerequisite: Permission of instructor

SES 299B Active Living II (A, W, SP, SU – DL) 1 credit
Continuation of Active Living I
Lecture/Discussion: 1 hour – Lab: 0 hours
Prerequisite: Permission of instructor

SES 299C Healthy Eating I (A, W, SP, SU – DL) 1 credit
Healthy Eating Every Day is the first course of a two-quarter sequence that helps people establish a balanced and healthy approach to eating. This course presents a sensible and realistic way of eating that is in line with and complements the new USDA Nutrition Guidelines. Healthy Eating Every Day uses an evidence-based, cognitive behavioral approach to helping people change their diets. Participants learn how to identify the reasons for their poor eating choices and acquire the lifestyle-management skills they need to improve their eating permanently.
Lecture/Discussion: 1 hour – Lab: 0 hours
Prerequisite: Permission of instructor

SES 299D Healthy Eating II (A, W, SP, SU – DL) 1 credit
Continuation of Active Living I
Lecture/Discussion: 1 hour – Lab: 0 hours
Prerequisite: Permission of instructor

Supply Chain Management (LOGI)

LOGI 100 Principles of Supply Chain Management (A, W, SP, SU - DL) 5 credits
A study of the basic concepts included in the field of supply chain management with particular emphasis on the economic significance of distribution to business and the U.S. economy. The interrelationship between logistics and other areas of business will be covered with particular emphasis on how logistics can significantly impact customer loyalty by adding value. Knowledge of basic algebraic concepts is strongly recommended.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: None
Lab fee: $5.00

LOGI 110 Transportation & Traffic Management (W - DL) 4 credits
Introduction to traffic management function including mode and carrier selection.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: LOGI 100
Lab fee: $5.00

LOGI 151 Purchasing Principles I (A, SP – DL) 3 credits
This course is designed to teach the basics of purchasing management to the newly appointed buyer or non-purchasing personnel looking to broaden their business knowledge. Topics covered include: the challenge of purchasing and materials management, objectives and organization, function, specification, quality control and inspection, computerization, and quality considerations.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: None
Lab fee: $5.00

LOGI 152 Purchasing Principles II (W - DL) 3 credits
This course is a continuation of Purchasing Principles I and focuses on how the basics of good buying can be used effectively to meet the challenges and responsibilities of the constantly changing business climate. Topics include: forward buying, international purchasing, buying capital assets and purchasing transportation services.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LOGI 151
Lab fee: $5.00

LOGI 205 Freight Claims (W - DL) 3 credits
This course provides a study of freight loss, damage claims, and adjustment of claims in various modes of transportation including carrier and shipper liability, transportation documentation, and claim filing procedures.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LOGI 100
Lab fee: $5.00

LOGI 210 Warehouse Management (A, SP - DL) 4 credits
This course is an analysis of warehousing functions and management. Topics covered include facility location and operation, labor relations, financial analysis and productivity improvement and measurement.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: LOGI 100
Lab fee: $5.00

LOGI 211 Inventory Management (W) 4 credits
A study of inventory control problems and methods is the focus of this course. Topics covered include demand forecasting, independent demand inventory systems, inventory models and aggregate planning.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: LOGI 151 and LOGI 210, or permission of instructor
Lab fee: $5.00

LOGI 225 International Shipping (SP – DL) 5 credits
This course is a study of global supply chain management with emphasis on the requirements for importing and exporting. Laws, regulations, paperwork and international billing terms will be discussed.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: LOGI 100
Lab fee: $5.00

LOGI 226 Introduction to Export Administration Regulations (A – DL) 4 credits
A detailed examination of the Export Administration Regulations (EAR) covering the information exporters need to know to understand and comply with the U. S. export control requirements on commercial goods. The course focuses on what items and activities are subject to the EAR; steps to take to determine the export licensing for an item; how to determine an export control classification number (ECCN); when an item can be exported or re-exported without applying for a license; export clearance procedures; recordkeeping requirements; Export Management System (EMS) concepts; and "real life" examples in applying this information.
Lecture: 2 hours – Lab: 4 hours
Prerequisites: LOGI 100
Lab fee: $5.00

LOGI 227 Electronic Import/Export Documentation (W – DL) 2 credits
Provides students with the tools to electronically prepare export/import documentation; manage e-business and marketing functions related to global commerce; and evaluate and control e-commerce systems. Acceptance of electronic export/import documentation by non-government organizations, e.g., banks, forwarders, carriers, etc., continues to increase and is rapidly replacing paper-based systems. Additionally, regulatory agencies' requirements for electronic document submission have significantly increased post 9/11; course content subject to change in response to new or changing user requirements.
Lecture: 1 hour – Lab: 2 hours
Prerequisites: LOGI 100
Lab fee: $47.00

LOGI 228 Importing (W – DL) 4 credits
An introduction to procedural compliance with import regulations of the U. S. Customs & Border Protection (CBP) emphasizing the Trade Act of 2002, Advanced Electronic Information, published in the Federal Register on December 5, 2003. Additional topics discussed include antidumping and countervailing duties; informed compliance; commercial enforcement; the regulatory audit program; quotas; and customs broker management. Note that procedures and regulations are in a current state of flux and course content may be revised in response to changes.
Lecture: 4 hours – Lab: 0 hours
Prerequisites: LOGI 100
Lab fee: $5.00

LOGI 229 International Transportation Regulatory Compliance (W – DL) 4 credits
This course is an examination of the laws that apply to domestic motor carrier and rail and international air, ocean, and multi-modal transportation. Covers the evolution of various transportation laws, e.g., the Carriage of Goods by Sea Act (COGSA); the Warsaw Convention; the Montreal Protocol; the International Multi-modal Convention; cabotage law, freight claims, and cross-border trucking under the North American Free trade Agreement (NAFTA); course content subject to vary as laws are revised and created.
Lecture: 4 hours – Lab: 0 hours
Prerequisites: LOGI 100
Lab fee: $5.00

LOGI 241 Supply Chain Logistics Practicum I (A, W, SP - DL) 4 credits
Supervised on-the-job application of knowledge and skills acquired in the classroom is the purpose of this course. Open to Supply Chain Management Technology students only. Internship applications must be filed with

the Department at least 2 months prior to the internship start date.
Lecture: 0 hours – Lab: 28 hours
Prerequisite: Advisor approval required
Corequisite: LOGI 242
Lab fee: $5.00

LOGI 242 Supply Chain Logistics Seminar I (A, W, SP - DL) 2 credits
Application of logistics knowledge to specific areas of on-the-job experience is the focus of this seminar. Open to Supply Chain Management Technology students only. Internship applications must be filed with the Department at least 2 months prior to the internship start date
Lecture: 0 hours – Lab: 4 hours
Prerequisite: Advisor approval required
Corequisite: LOGI 241
Lab fee: $5.00

LOGI 246 Purchasing Negotiation (SP - DL) 3 credits
This course focuses on the skills required to prepare for and conduct purchasing negotiations.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LOGI 151 or permission of instructor
Lab fee: $5.00

LOGI 250 Transportation of Hazardous Materials (SP – DL) 3 credits
A study of the transportation of hazardous materials within the United States and the regulations and compliance issues resulting from these regulations. The course delves into the usage of the Code of Federal Regulations Part 49 100-185, the manual used to regulate all materials deemed hazardous. The segregation of the 9 classes of HAZMAT, the limitations of each shipment and the usage of this manual will encompass the course. The student will develop a better understanding of HAZMAT and the rules and regulations concerning the shipments.
Lecture:3 hours – Lab: 0 hours
Prerequisite: LOGI 100
Lab fee: $5.00

LOGI 256 Advanced Purchasing Seminar (SP - DL) 3 credits
A capstone course designed for the purchasing major. A comprehensive case study approach will be used to understand purchasing as the primary materials procurement activity while integrating purchasing with other materials management activities. Topics covered include: legal considerations, public purchasing, the planning process, and control functions such as inventory control, budgeting, and production.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: LOGI 152
Lab fee: $5.00

LOGI 260 Performance Management for Logistics Managers (SP) 4 credits
A capstone course designed around the steps in the performance/communication process as it relates to recognizing, understanding, planning, implementing and evaluating performance competencies. The course will look at performance challenges in the logistics arena and how to proactively approach and resolve them. It will also focus on creating positive relationships and ensuring effective workplace communication.
Lecture: 4 hours – Lab: 0 hours
Prerequisite: LOGI 100, LOGI 151, LOGI 211, ACCT 106
Lab fee: $5.00

LOGI 297 Special Topics in Logistics (on demand) 1-3 credits
Detailed examination of special topics of interest in supply chain management (logistics). Topics vary.
Lecture: 1 hour – Lab: 3 hours
Lab fee: $5.00

Surgical Technology (SURG)

SURG 102 Surgical Technology I (A) 7 credits
This course will provide an in-depth introduction of the role and responsibilities of the surgical technologist as an important professional in the delivery of surgical services. Introduction to the surgical environment will include professional responsibilities, legal and ethical considerations, interpersonal relationships, communication skills, and basic surgical workplace safety. Introduction to the principles of aseptic technique to include surgical asepsis, scrubbing, gowning, gloving, sterilization, disinfection, and operating room sanitation are explored. Direct patient care interventions to include positioning, prepping, draping techniques, and related operative procedures. Introduction to diagnostic procedures and anesthesia and pharmacological considerations for patient surgical care are investigated. The surgical use of instrumentation, sutures, needles, sponges, syringes, and hypodermic needles are investigated. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based surgery units.
Lecture: 3 hours – Lab: 12 hours
Prerequisite: Completion of all admission criteria for the Surgical Technology Program.
Lab fee: $50.00

SURG 104 Surgical Technology II (W) 7 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 non-sterile 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: 3 hours – Lab: 12 hours
Prerequisite: SURG 102
Lab fee: $50.00

SURG 202 Surgical Technology III (SP) 9 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 non-sterile 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: 4 hours – Lab: 15 hours
Prerequisite: SURG 104
Lab fee: $50.00

SURG 204 Surgical Technology IV (SU) 9 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: 4 hours – Lab: 15 hours
Prerequisite: SURG 202
Lab fee: $50.00

SURG 250 Surgical Technology V (A) 7 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: 3 hours – Lab: 12 hours
Prerequisite: Completion of the certificate tract Surgical Technology Program or equivalent training
Lab fee: $50.00

SURG 251 Surgical Technology VI (W) 7 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: 3 hours – Lab: 12 hours
Prerequisite: Completion of the certificate tract Surgical Technology Program or equivalent training
Lab fee: $50.00

Surveying (SURV)

Also see Civil Engineering Technology (CIVL)

SURV 100 Introduction to Geomatics (A) 2 Credits
An introductory course into the field of surveying and mapping technology. Integrated topics include drafting, surveying, cartography and geographic information systems.
Lecture: 1 hour – Lab: 3 hours
Prerequisite: Placement into ENGL101

SURV 140 Surveying and GPS (A, SP – on demand) 4 Credits
A comprehensive study in the acquisition of spatial data through the use of conventional surveying equipment and global position system (GPS). The course elements include measurement theory, precision and accuracy determinations, traditional and present day measurement systems, GPS theory, acquisition of spatial data through the use of total station and electronic data collectors, self-leveling and digital levels and hand-held code phase GPS receivers. Specific tasks include traversing for purpose of property boundary location, establishing horizontal and vertical control for aerial photography and topographic mapping. Data quality comparisons from all three sources (conventional and GPS) are performed. Data manipulation includes downloading data from the various means of acquisition into a common electronic format. Data generated in the course will be used in GIS110 Scanning, Digitizing and CAD and GIS203 Photogrammetry and Remote Sensing. Not open to students in Architecture, Civil Engineering Technology, Construction Management or Landscape Design/Build programs.
Lecture: 2 hours – Lab: 6 hours
Prerequisite: MATH 104 or MATH 112
Lab fee: $15.00

SURV 141 Basic Surveying (A,SP,SU) 4 Credits
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 measurements by traditional methods and by total station for the purpose of traversing and location of property corners, topographic mapping and construction staking. 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, level circuit reductions, radial building staking notes and boundary line determination by inverse coordinates.
Lecture: 2 hours – Lab: 6 hours
Prerequisite: MATH 104 or MATH 112
Lab fee: $15.00

SURV 241 Route Surveying (A,SP,SU) 4 Credits
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.
Lecture: 2 hours – Lab: 6 hours
Prerequisite: MATH 104, CIVL 123, SURV 141
Lab fee: $15.00

SURV 242 Computer Applications in Surveying (AU) 3 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 Autodesk Land desktop. The course elements include data entry, data analysis, measurement theory, precision and accuracy determinations and data presentation.
Lecture: 2 hours – Lab: 3 hours
Prerequisites: ARCH112 and SURV140 or SURV141
Lab fee: $7.00

SURV 243 Heavy Construction Standards (SP) 4 Credits
Elements of route location, construction materials, methods and procedures. Relation of design standards to topography and prospective traffic, earthwork measurement, physical design standards, and financing.
Lecture: 3 hours – Lab: 2 hours
Prerequisite: SURV 241, CMGT 121, and CMGT 105
Lab fee: $15.00

SURV 245 Survey Law (W) 3 Credits
A study of statute and common law as pertains to land surveying and real property rights and the methods to describe real property. Students

enrolled in the distance version of this course will be required to come to campus for exams.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: SURV 141
Lab fee: $15.00

SURV 247 Townsite/Urban Development (SP) 3 Credits
Analysis of data and related inventory methods needed to logically plan development of all land use types. Study the forces and actions by public agencies and private interests that create the urban form. Review methods of resolving conflicts and understanding the applicable land use regulations or standards that govern area development.
Lecture: 1 hours – Lab: 5 hours
Prerequisite: ARCH 112 and SURV 241
Lab fee: $15.00

SURV 248 Advanced Surveying Systems (SP) 4 Credits
Planning and execution of control surveying, cadastral surveying, network adjustment and topographic surveying using total stations and data collections, satellite positioning (Global Position Systems) and photogrammetric (aerial mapping) systems.
Lecture: 2 hours – Lab: 6 hours
Prerequisite: ARCH 112 or ARCH 115, MATH 148, SURV 141, SURV 245 and SURV 249 or corequisite.
Lab fee: $15.00

SURV 249 Land Subdivision Systems (SP) 3 Credits
Advanced surveying including section and subdivision lines and residential property lines. Reestablishment of property boundaries and legal considerations for boundary descriptions, including local municipal records searching. Lecture: 2 hours – Lab: 3 hours
Prerequisite: ARCH 112, SURV 241 and SURV 245
Lab fee: $15.00

SURV 299 Special Topics in Civil Engineering Technology (on demand) 1-5 credits
Special topics in civil engineering technology industry designed to meet specific needs.
Lecture: 1 hour – Lab: 1-15 hours
Prerequisite: Permission of Instructor
Lab fee: $10.00

Technical Communication (TCO)

TCO 101 Careers in Technical Communication (A, SP) 2 credits
In this course, students are required to interview with Technical Communication professionals, research the field of Technical Communication, and deliver an oral presentation of the findings. Discussions of career goals, including the preparation of an initial resume and employment data file will also be required. The requirements of this course must be met within the first two quarters of entering the Technical Communication degree program.
Lecture: 1 hours – Lab: 2 hours
Lab fee: $20.00

TCO 102 Tools and Techniques for Technical Communicators (W, SU) 3 credits
This course will introduce students to the software tools and basic techniques required of entry-level technical communicators. Students will learn about the various hardware and software tools technical communicators use on a daily basis. Lectures on general principles will be followed by exercises selected to simulate employer expectations. Mastery of techniques needed to complete daily technical communication tasks will be emphasized.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 101, TCO 101 or corequisite enrollment
Lab fee: $8.00

TCO 203 Introduction to Technical Communication (W, SU) 3 credits
In this course, students learn the project documentation cycle used by technical communicators in business, industry, and government by selecting an authentic problem-solving project from their technical cognate fields, and writing and formatting a series of reports in support of that project. Students learn the principles of modern technical communication and time/project management and practice them individually and in small groups throughout the documentation cycle.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: CIT 101and ENGL 102 with a grade of "C" or higher.
Lab fee: $5.00

TCO 204 Introduction to Technical Editing (A,SP) 3 credits
In this course, students will practice editorial skills needed for revising scientific/technical writing by checking grammar, sentence structure, clarity and style in personal, peer, and professional writings. Students will practice hard copy and online editing and proofreading and analyze editorial style books and other technical resource materials. Various editorial approaches and the editor/author relationship will be covered.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: ENGL 102 with a grade of "C" or higher and OADM 101.
Lab fee: $5.00

TCO 214 Document Design & Delivery Methods (W,SU) 3 credits
This course will introduce students to learning theory as applied to the design and delivery of technical documents. It will integrate current technical communication theory in document design and delivery with the capabilities of various software packages and delivery methods. Students will develop skills in applying design theory to technical documents and in selecting appropriate delivery methods for technical documents
Lecture: 2 hours – Lab: 3 hours
Prerequisite: TCO 203
Lab fee: $8.00

TCO 215 Online Documentation (A,SP) 3 credits
This course will introduce students to all aspects of creating online documentation. Students will learn about the five phases involved in creating online documentation: planning online documentation, designing and modifying information for online presentation, testing and redesigning online documentation. Students will develop actual online documentation for a software package during the course.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: TCO 203 and TCO 214
Lab fee: $8.00

TCO 221 Proposal Development (A) 3 credits
Students will learn how to develop proposals which offer to solve problems for a reader or groups of readers by providing specified services at a specified cost. The units involved in the learning process will include understanding the bidding process, defining the request for a proposal, planning and developing a proposal document and practicing the methods of formatting, writing, editing and presenting a formal business proposal.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: TCO 203
Lab fee: $5.00

TCO 222 Developing Software Documentation (W) 3 credits
In this course students are prepared as software documentation specialists to work with software users and developers. Students will prepare software

documentation, conduct document usability testing, and perform documentation development tasks, such as preparing user specifications, task lists, style guides, project schedules, instruction sets, and problem reports, as well as conducting interviews, reviews, and walk throughs.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: TCO 203
Lab fee: $5.00

TCO 223 Advanced Technical Communication (W, SU) 3 credits
In this course, students focus on current research and theory in scientific and technical writing and apply that research to practical situations. Students produce a proposal for funding, a full-length, portfolio quality manual or report, and various other writing assignments. They also lead class discussions on such topics as readability theory, writing style, documentation methods, text processing, manual formatting, and integrating graphics and text.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: TCO 203
Lab fee: $5.00

TCO 224 Advanced Technical Editing (A, SP) 3 credits
In this course, students are prepared as editors to work with other publications specialists. Students will edit manuscripts, prepare style books or manuals, and perform special editorial tasks such as preparing abstracts, indexes, and bibliographies with line-by-line precision and accuracy.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: TCO 203 and TCO 204
Lab fee: $5.00

TCO 230 Technical Presentations (W, SP) 3 credits
In this course, students learn to prepare and present various types of information ranging from press releases, annual reports, and statistical analyses to proposals for projects, systematic evaluations, and revisions of existing documents. Various types of audiences will be targeted, and students will be required to use computer graphics, hypermedia, desktop publishing, and multimedia approaches to supplement oral presentations.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: TCO 223
Lab fee: $5.00

TCO 235 Instructional Design (A, SP) 2 credits
Students will study the phases of an Instructional Design Project. They will conduct a needs assessment and define the skill and knowledge requirement of a job assignment. They will learn the typical training development cycle.
Lecture: 1 hours – Lab: 3 hours
Prerequisite: TCO 230 or current enrollment
Lab fee: $5.00

TCO 236 Computer-Based Training (W, SU) 3 credits
Students will study instructional design as it applies to developing Computer-based Training (CBT) modules. They will learn the typical CBT development cycle and design CBT screens, incorporating multimedia effects and maximum interactivity.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: TCO 235
Lab fee: $8.00

TCO 237 Digital Video Production for the Workplace (A) 3 credits
Digital Video Production for the Workplace is an introduction to basic and advanced techniques for creating and using digital video in the workplace. During the course, students will storyboard and write scripts, shoot and acquire clips, edit electronically, work collaboratively, and present video segments appropriate for a workplace environment. Students will critique examples and work on individual and group projects to produce a final product. This course is intended for Technical Communication students.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: TCO 235
Lab fee: $20.00

TCO 245 HTML-Based Online Documentation (W, SU) 5 credits
This course introduces students to all aspects of creating HTML-based online documentation without the use of an HTML authoring tool. Students will learn about the various phases of creating HTML-based online documentation: planning, designing, organizing, developing, publishing, testing and redesigning.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: TCO 214
Lab fee: $5.00

TCO 250 Capstone in Technical Communication (A, W, SP, SU) 3 credits
In this course, students will be required to demonstrate both the overall competency and quality workmanship expected of professionals in the technical communication field. Students will work individually and in collaboration to solve problems of technical writing, editing, and presentations, and on the study and implementation of projects normally assigned to entry-level technical communicators. The course can only be taken during the final quarter, prior to graduation.
Lecture: 2 hours – Lab: 3 hours
Prerequisite: Permission of instructor
Lab fee: $5.00

TCO 260 Career Development (A, SP) 1 credit
In this course, students prepare a professional portfolio, including a resume developed from the student's previous academic work experience. Students are required to review their portfolios informally and through formal oral presentations. Students will learn how to carry out company research and apply that research to targeted resumes, letters of application, and interview situations. This course must be completed within the final four quarters of the student's program.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: Permission of instructor
Lab fee: $5.00

TCO 290 Industry Internship (A, W, SP, SU) 1-4 credits
In this course, students are engaged in work specifically related to the Technical Communication field as employees in business or industry. Students are responsible for arranging the internship and must submit a written proposal to the Technical Communication Program Coordinator for approval no later than two quarters prior to becoming an intern. During the internship, the student must keep a written record of job responsibilities and projects. A formal written report must be accompanied by a written evaluation of the student's performance by his/her supervisor. One credit hour is equal to one hundred (100) clock hours on the job. The four credits may be spread over more than one quarter.
Prerequisite: TCO 101, TCO 203, TCO 204, and permission from the Program Coordinator of the Technical Communication Program. A GPA of "B" or higher in TCO courses
Lab fee: $5.00

TCO 297, 298, 299 Special Topics in Technical Communication (on demand) 1-5 credits
Special topics in technical communication designed to meet specific needs.
Lecture: 5 hours – Lab: 0 hours
Lab fee: $5.00

Theater (THEA)

Note: Courses taught at a distance [Distance Learning (DL)] may have a higher lab fee than traditionally taught courses.

THEA 100 Introduction to the Theater (A, W, SP, SU -DL) 5 credits
The course is designed to help students bring critical thinking skills into their experience as theatergoers. Students will be introduced to the theater arts - acting, directing, and design. Students will survey the history of Western theater, focusing on the art as a reflection of society's changing social and cultural values. Plays representing several genres and historical periods will be read and discussed. Writing assignments include critical reviews of plays attended.
Lecture: 5 hours – Lab: 0 hours
Prerequisite: ENGL 101 or ENGL 111
Lab fee: $5.00; $25.00 for DL

THEA 180 Theater Practicum (A, W, SP, SU) 3 credits
Supervised practical experience in two or more of the following areas - acting, lighting, set, sound, costuming, house management, stage managing, or directing. Enrollment is limited to students who have been cast in a theater production on campus or who have been selected to work on technical areas of the production. With the advanced approval of the instructor, credit can be earned by working on off-campus theater productions. Repeatable to nine credits.
Lecture: 0 hours – Lab: 9 hours
Prerequisite: THEA 100 (COMM 130) and permission of instructor
Lab fee: $5.00

THEA 205 Technical Production Practicum (A, W, SP, SU) 3 credits
Experience in technical production activities for a theater production. Students fulfill their role as a crew member by exploring a play script and participating in one or more technical areas: lighting design choices, hanging, focusing, and light board operation; sound design decisions and implementation; stage managing, costume design, building and pulling costumes for production, basic stagecraft; prop management; and publicity. Entails an understanding of budget and time constraints, time management, and an appreciation for theater as a collaborative art.
Lecture: 1hour Lab: 4 hours
Prerequisite: THEA 100
Lab fee: $5.00

THEA 210 Technical Production Fundamentals: Stage Lighting (SP) 3 credits
An introduction to the basic principles and functions of stage lighting. Experience in creating a lighting design, hanging and focusing sighting instruments, and executing the design with a computer control board. Brief overview of the work of other members of the production staff with whom a lighting designer collaborates.
Lecture: 1 hours – Lab: 4 hours
Prerequisite: THEA 100 (COMM130) or permission of instructor
Lab fee: $ 3.00

THEA 215 Fundamentals of Script Analysis (W) 3 credits
An intensive study of the play script as a basis for production. Students learn the basic principles and challenges of script analysis; techniques for assessing a script from the diverse perspectives of designers, directors, and performers; various modes of interpretation, including traditional and contemporary forms; and ways to effectively communicate critical positions, both written and orally.
Lecture: 3 hours Lab: 0 hours
Prerequisite: THEA 100
Lab fee: $5.00

THEA 231 Literature for the Theater I (W) 3 credits
A survey of selected world drama from the classical Greek period through the 17th century. The focus is on the plays as potential theater.
Lecture: 3 hours – Lab: 0 hours
Prerequisite : ENGL 101 or 111, THEA 100
Lab fee: $3.00

THEA 232 Literature for the Theater II (SP) 3 credits
A survey of selected western drama from the eighteenth century through the mid-nineteenth century. The focus is on the plays as potential theater.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: ENGL 101 or 111, THEA 100
Lab fee: $ 3.00

THEA 233 Literature for the Theater III (SU) 3 credits
A survey of selected western drama from the mid-nineteenth century to the present. The focus is on the plays as potential theater.
Lecture: 3 hours – Lab: 0 hours
Prerequisite or co-requisite: ENGL 101 or ENGL 111, THEA 100 or COMM 130
Lab fee: $3.00

THEA 280 Fundamentals of Acting (W) 3 credits
Introduction to the basic principles of stage acting with a focus on practical experience. Areas of emphasis include stage movement, vocal delivery, body language, concentration techniques and basic script analysis and scoring.
Lecture: 1 hours – Lab: 4 hours
Prerequisite: THEA 100 (COMM 130) or permission of instructor.
Lab fee: $3.00

THEA Writing Plays (SP) 5 credits
(See ENGL 283)

THEA 290 Capstone Experience in Theater (SU) 3 credits
Fulfills the capstone requirement for Associate of Arts and Associate of Science degree students at Columbus State. Students will carry out and present a major project in theater - in performance, technical theater, or research. Students will complete a personal portfolio covering their studies in theater and related areas.
Lecture: 0 hours – Lab: 6 hours
Prerequisite: Prerequisite: 75 credits toward the Associate of Arts or Associate of Science degree, including at least 12 credits in THEA beyond THEA 100 (COMM 130)
Lab fee: $10.00

THEA 297- 298-299 Special Topics in Theater (on demand) 1–5 credits
Special Topics in Theater is designed to meet specific needs.
Prerequisites:
Lecture: 1 hours – Lab: 0 hours
Prerequisite: vary, see instructor

Veterinary Technology (VET)

VET 101 Animal Nutrition (A) 3 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: 3 hours – Lab: 0 hours
Prerequisite: Admission to the program
Corequisite: VET 102, VET 114
Lab fee: $15.00

VET 102 Laboratory Animal Medicine (A) 2 credits
An introduction to laboratory animal medicine and management, including basic husbandry, common diseases, and treatment protocols for various laboratory animal species and pocket pets. The student will learn the scientific names and primary use of common laboratory animals, and practice restraint, sexing, appropriate methods of venipuncture, administration of medications, and anesthetic techniques.
Lecture: 1 hour – Lab: 2 hours
Prerequisite: Admission to the program
Corequisite: VET 101, VET 114
Lab Fee: $90.00

VET 114 Client Relations (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. Veterinary practice management, methods for improved client communication, and dealing with difficult clients are explored. The student will learn basic animal training methods and how to assist clients with the resolution of common animal behavior problems.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: Admission to program
Corequisite: VET 111
Lab fee: $15.00

VET 122 Veterinary Parasitology (W) 3 credits
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: 2 hours – Lab: 2 hours
Prerequisite: VET 111
Lab fee: $90.00

VET 124 Principles of Veterinary Radiology (W, SP) 2 credits
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: 2 hours– Lab: 0 hours
Prerequisite: BIO 161

VET 126 Principles of Veterinary Anesthesia (W) 3 credits
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 preanesthetic and general anesthetic agents, pain recognition and management, principles of fluid therapy, and dosage calculations. Patient monitoring, safe anesthetic equipment utilization, and handling anesthetic emergencies will also be emphasized.
Lecture: 3 hours – Lab: 0 hours
Corequisite: BIO 169
Lab fee: $15.00

VET 131 Veterinary Anatomy and Physiology (SP) 3 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: 3 hours – Lab: 0 hours
Prerequisite: BIO 161, BIO 169
Lab fee: $15.00

VET 133 Clinical Application I (SP, SU) 3 credits
Laboratory exercises for VET 138, VET 124 and VET 126. In this course, 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.
Lecture: 0 hours – Lab: 6 hours
Prerequisite: VET 124, VET 126 and MATH 100
Corequisite: VET 138
Lab fee: $90.00

VET 135 Veterinary Hematology (SP, SU) 5 credits
This course is designed to acquaint students with the equipment and techniques required to utilize blood as a diagnostic tool. Students will perform complete blood counts on a variety of domestic animal species. Blood smears are prepared and studied for the identification of blood cells that aid in the diagnosis of anemias and various other disease states. Recognition of normal versus abnormal cell morphology will be stressed. Students who successfully complete this course should be able to perform complete blood counts in a veterinary clinical setting.
Lecture: 2 hours – Lab: 6 hours
Prerequisite: BIO 169
Lab fee: $90.00

VET 136 Animal Health and Disease I (SP, SU) 3 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: 3 hours – Lab: 0 hours
Prerequisite: VET 111, VET 114 and BIO 169
Lab fee: $15.00

VET 138 Veterinary Surgical Techniques (SP, SU) 3 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. Preanesthetic laboratory testing, postoperative patient care, and client follow-up instructions are discussed.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: VET 111 and BIO 161
Lab fee: $10.00

VET 254 Clinical Seminar I (A, SU) 2 credits
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.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: All 100 level VET courses
Corequisite: VET 291

VET 262 Veterinary Pharmacology (A, W) 3 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: 3 hours – Lab: 0 hours
Prerequisite: MATH 100 and VET 136
Lab fee: $20.00

VET 263 Clinical Application II (A, W, SU) 3 credits
This is a capstone course designed for students to perform technical skills

commonly used in small animal veterinary practices, including medical record maintenance, physical examination, administration of fluids and medications, preanesthetic evaluation, general anesthetic administration and recovery, surgical preparation, splint application, dental prophylaxis, radiographic procedures, and laboratory techniques.
Lecture: 0 hours – Lab: 6 hours
Prerequisite: All 100 level VET courses
Lab fee: $90.00

VET 266 Animal Health and Disease II (A, W, SP, SU-DL) 3 credits
This course familiarizes the student with the most common disease of horses, food animals, and camelid species. Husbandry, vaccination protocols, nutrition, breeding, and management for preventive health care are also covered.
Lecture: 3 hours – Lab: 0 hours
Prerequisite: VET 136
Lab fee: $45.00

VET 267 Veterinary Urinalysis and Clinical Chemistry (A, W) 4 credits
An introduction to the physical, chemical, and microscopic evaluation of urine and blood serum. Students will perform routine veterinary urinalysis and clinical chemistry procedures on a variety of animal species, and determine normal versus abnormal constituents. Students will become familiar with the general indications for performing various blood chemistries and understand the significance of elevated values in pathological specimens.
Lecture: 2 hours – Lab: 4 hours
Prerequisite: VET 135
Lab fee: $90.00

VET 269 Veterinary Microbiology (A, W) 5 credits
This course is 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 135 and VET 136
Lab fee: $90.00

VET 274 Clinical Seminar II (W, SP) 2 credits
A continuation of VET 254, that addresses issues emanating from the students' clinical experiences. Students are prepared for employment as a veterinary technician 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.
Lecture: 2 hours – Lab: 0 hours
Prerequisite: VET 291
Corequisite: VET 293

VET 275 Seminar A (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.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: VET 133; evening program registration
Corequisite: VET 294

VET 276 Seminar B (W) 1 credit
A continuation of VET 275.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: VET 275; evening program registration
Corequisite: VET 295

VET 277 Seminar C (SP) 1 credit
This course addresses issues emanating from the students' clinical experiences. Students are prepared for employment as a veterinary technician 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.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: VET 276; evening program registration
Corequisite: VET 296

VET 278 Seminar D (SU) 1 credit
A continuation of VET 277.
Lecture: 1 hour – Lab: 0 hours
Prerequisite: VET 277; evening program registration
Corequisite: VET 297

VET 291 Clinical Experience I (A, SU) 6 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.
Lecture: 0 hours – Lab: 30 hours
Prerequisite: All 100 level VET courses
Lab fee: $90.00

VET 293 Clinical Experience II (W, SP) 6 credits
A continuation of VET 291.
Lecture: 0 hours – Lab: 30 hours
Prerequisite: All VET courses except VET 266 and VET 274
Lab fee: $90.00

VET 294 Clinical Experience A (A) 3 credits
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.
Lecture: 0 hours – Lab: 15 hours
Prerequisite: All 100 level VET courses; evening program registration
Lab fee: $45.00

VET 295 Clinical Experience B (W) 3 credits
A continuation of VET 294, designed for the evening program student.
Lecture: 0 hours – Lab: 15 hours
Prerequisite: VET 294; evening program registration
Lab fee: $45.00

VET 296 Clinical Experience C (SP) 3 credits
A continuation of VET 295, designed for the evening program student.
Lecture: 0 hours – Lab: 15 hours
Prerequisite: VET 295; evening program registration
Lab fee: $45.00

VET 297 Clinical Experience D (SU) 3 credits
A continuation of VET 296, designed for the evening program student.
Lecture: 0 hours – Lab: 15 hours
Prerequisite: VET 296; evening program registration
Lab fee: $45.00

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Directories and Index

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Accreditation/Certification/Approval

Columbus State Community College is accredited by The Higher Learning Commission; Member-North Central Association (NCA), 30 N. LaSalle St., Suite 2400, Chicago, Illinois 60602-2504, (312) 263-0456 or (800) 621-7440. Many of Columbus State's degree programs are accredited by professional associations and agencies as listed below.

Accounting and Finance

Association of Collegiate Business Schools and Programs (ACBSP)
7007 College Boulevard, Suit 420
Oakland Park, Kansas 66211
(913) 339-9356

Allied Health

Dental Hygiene
American Dental Association Commission on Dental Accreditation
211 East Chicago Avenue
Chicago, Illinois 60611-2678
(312) 440-2915

Medical Assisting
Commission on Accreditation of Allied Health Education Programs
35 East Wacker Drive, Suite 1970
Chicago, Illinois 60601
(312) 253-9355

Radiography
Joint Review Committee on Accreditation for Radiologic Technology Programs
20 North Wacker Drive, Suite 900
Chicago, Illinois 60606-2901
(312) 704-5300

Respiratory Care
Committee on Accreditation for Respiratory Care (CoARC)
1710 West Euless Boulevard, Suite 300
Euless, Texas 76040-6823
(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, Virginia 20175
(703) 669-6650

Business Management/Office Administration

Business Management
Human Resources Management Technology
Office Administration
Association of Collegiate Business Schools and Programs (ACBSP)
7007 College Boulevard, Suite 420
Overland Park, Kansas 66211
(913) 339-9356

Computer Science

Computer Information Technology
Associate of Collegiate Business Schools and Programs (ACBSP)
7007 College Boulevard, Suite 420
Overland Park, Kansas 66211
(913) 339-9356

Construction Science

Construction Management
American Council of Construction Education (ACCE)
1300 Hudson Lane, Suite 3
Monroe, Louisiana 71201-6054
(318) 323-2816

Landscape Design/Build
Professional Landscape Network (PLANET)
150 Elden Street, Suite 270
Herndon, Virginia 20170
(703) 736-9666

Engineering Technologies

Aviation Maintenance Technology
Federal Aviation Administration
2780 Airport Drive, Suite 300
Columbus, Ohio 43219
(614) 255-3120

Electronic Engineering Technology
Accreditation Board of Engineering and Technology, Inc (ABET)
111 Market Place, Suite 1050
Baltimore, Maryland 21202
(410) 347-7700

Hospitality Management

Commission on Accreditation of Hospitality Management Programs (CAHM)
P.O. Box 400
Oxford, MD 21654
(410) 226-5527

Chef Apprenticeship Major
Food Service/Restaurant Management Major
American Culinary Federation Accrediting Commission
10 San Bartola Drive
St. Augustine, Florida 32086
(800) 624-9458

Dietetic Technician Major
Commission for Accreditation and Approval of Dietetics Education
The American Dietetic Association
216 W. Jackson Boulevard
Chicago, Illinois 606006-6995
(800) 877-1600 ext. 4874

Dietary Manager Certificate
Dietary Managers Association
406 Surrey Woods Drive
St. Charles, Illinois 60174
(800) 323-1908

Human Services

Mental Health/Chemical Dependency/Mental Retardation
Council for Standards in Human Services Education (CSHSE)
Margaret J. Barbee
Vice President, Program Approval
1612 Greenville Boulevard S. E.
Greenville, North Carolina 27858
(252) 752-5320

Justice and Safety Programs

Emergency Medical Technician-Paramedic Program
Committee on Accreditation of Allied Health Education Programs (CAAHEP)
Joint Review Committee on Educational Programs for EMT/Paramedic
7108-C South Alton Way, Suite 150
Englewood, California 80112-2106
(303) 694-6191

Emergency Medical
Technician-Paramedic Program State of Ohio
EMS Agency
P.O. Box 182073
Columbus, Ohio 43219
(614) 466-9447

Paralegal Studies
American Bar Association
Standing Committee on Legal Assistants
750 North Lake Shore Drive
Chicago, Illinois 60611
(312) 988-5618

Marketing & Graphic Communications

Logistics
Marketing
Retail Management
Association of Collegiate Business Schools and Programs (ACBSP)
7007 College Boulevard, Suite 420
Overland Park, Kansas 66211
(913) 339-9356

Medical and Sports Services

Health Information Management Technology
Committee on Allied Health Education Programs (CAAHEP)
35 East Wacker Drive, Suite 1970
Chicago, Illinois 60606-2208
(312) 253-9355

Medical Laboratory Technology
National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
8410 West Bryn Mawr Avenue, Suite 670
Chicago, Illinois 60631-3415
(713) 714-8880

Massage Therapy
The State Medical Board of Ohio
77 S. High Street, 17th Floor
Columbus, Ohio 43266-0315
(614) 466-3934

Veterinary Technology
American Veterinary Medical Association
Committee on Veterinary Technician Education and Activities
1931 North Meacham Road, Suite 100
Schaumburg, Illinois 60173-4360
(847) 925-8070

Nursing and Related Services

Multi-Competency Health (Histotechnology)
Multi-Competency Health (Phlebotomy)
National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
8410 West Bryn Mawr Avenue, Suite 670
Chicago, Illinois 60631-3415
(713) 714-8880

Nursing
National League for Nursing Accrediting Commission (NLNAC)
61 Broadway, 33rd Floor
New York, New York 10006
(216) 363-5555 ext. 153

Ohio Board of Nursing
17 S. High Street, Suite 400
Columbus, Ohio 43215-3413
(614) 466-3947

Nurse Aide Training Program (NATP)
Ohio Department of Health NATCEP Unit
246 North High Street
P. O. Box 118
Columbus, Ohio 43216-118
(614) 752-8285

Surgical Technology
Commission on Accreditation of Allied Health Education Programs (CAAHEP)
Accreditation Review Committee on Education in Surgical Technology (ARC-ST)
7108 C. South Alton Way
Englewood, Colorado 80112-2106
(303) 694-9262

Index

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

Y

Glossary of Terms

Ability to Benefit - Ability to Benefit states that students who do not have a GED or high school diploma can take a federally authorized test and pass all sections to determine their eligibility for federal aid.

ACT/SAT - College Entrance Exams recommended or required for admission to some colleges

ADA - Americans with Disabilities Act

Alumni - Graduates of a college or school.

American Sign Language (ASL) - Language for communicating with the deaf, with its own grammatical structure different from English.

Apply to Columbus State Community College - Submit a completed admission application form and pay $10.00 application fee.

Articulation - A specific agreement between two schools that guarantees the transfer of a degree from one school to another, for example, Columbus State A.A. or A.S. degree to Ohio State B.A. and B.S. degree.

Associate Degree - the degree awarded if you successfully complete an associate degree program at Columbus State; also known as a two-year degree.

ASSET (Ford) - Two year cooperative training program (automotive related) sponsored by Ford Motor Company.

ASSIST Restriction (for students in Academic Difficulty) - Restriction placed on students file who has been dismissed from the college due to unsatisfactory academic progress.

ATS Degree (Associate of Technical Studies) - ATS degree enables a student to design an individualized program of study to fulfill a unique career goal. Student can select courses from up to four different technical programs.

Audit a Class - Process by which a student may take and pay for a class for information instruction only, no grade or credit received for the course.

Book Buybacks - The Bookstore buys back used books during finals week of each quarter.

Bursar's Office - Another term used for the cashier's office.

Business & Industry - Division at CSCC that assists local businesses with on site or on-campus consulting services and training programs.

C.A.D. - Computer Aided Drafting produces computer assisted drawings for architecture or engineering related projects.

Cashier - Location where students can pay fees, parking fines, purchase discount tickets and other cash related functions. The Cashiers Office is located on first floor in Rhodes Hall.

C.A.T.S. - **C**omputer **A**utomated **T**ouch/Tone **S**ystem allows students to register for classes using the touch-tone option.

CET (Computer Enrichment Training) - Computer training program offered through Business & Industry Division.

Certificate - Document testifying that one has fulfilled requirements of either a course or series of courses.

CLEP - The College Level Exam Program that allows students to earn college credit for what they already know.

College Work Study - Provides part-time employment on campus to assist with college expenses for students with financial need.

Commencement - the graduation ceremony held four times a year at the close of each academic quarter.

COMPASS (Placement Tests) - Computerized placement testing for new students to identify the appropriate starting level for reading, writing and math courses.

Contact hour - an hour of in-class time.

Continuing Education - Educational options available through non-credit courses and seminars designed to meet the licensing and certification needs of professionals in the community.

Contract Training - Providing training and consulting services to companies.

Cooperative Education (Co-Op) - Work-related opportunity for students to bridge the student's program of study with career-related work experience.

Cougar Mail/Cougar Net - The free e-mail program for enrolled students/ The Internet Service Provider available to students for a quarterly fee.

Course description - a written statement that explains what will be taught in a class.

CPE - Continuing Professional Education courses offered at Columbus State Community College through non-credit coursework designed to meet licensing or certification needs.

Credit - recognition by the college that you have successfully completed a course requirement leading to a degree or certificate.

Credit Bank Hours - This is an agreement between an employer and the college that allows for an exchange of the use of credit hours and internship hours.

Credit hour - the unit of measurement for college work that applies to a degree or certificate.

Curriculum - a series of courses that leads to a degree or certificate. The same as a program of study.

dBase - Data Base courses offered through the Computer Programming Technology at Columbus State Community College.

Distance Learning - classes delivered by video, on cable tv, PBS, or via the Internet or by teleconference.

Deferment (Student Loans) - Authorized period of time granted by the lender that a student does not need to make regular monthly payments toward their student loan.

Degree Audit - Advising tool that provides a written report of courses in progress, courses completed and courses remaining for completion of program or degree requirements.

Developmental Education Courses - Courses provided to improve or refresh a student's skills in reading, writing and mathematics.

Diploma (Replacement Diploma) - Official record of graduation from or of a degree conferred by a school or college. Replacement Diploma can be obtained by submitting a written request attesting that the original diploma has been lost or destroyed.

DISCOVER - Computer based assessment tool that surveys abilities, values, experiences and interests.

Drop a class - Process by which you withdraw from a class.

Duplicate Fee receipt - A second copy of a students original paid fee receipt.

Duplicate Schedule/Fee Statement - A second copy of a student's original schedule and fee statement.

EDP Auditing - Courses offered at Columbus State Community College that include accounting training with an emphasis toward systems analysis and programming.

Educable (Cable courses) - Cable channel that allows students to view televised classes.

Elective - A course that is not required in a degree or certificate program but that is counted in total hours required.

ERC - Educational Resources Center, also known as the Library or Columbus Hall.

Evening Classes - Defined as classes that are offered during the week and begin at 5:00 p.m. or later.

Exam Credit (Proficiency Credit) - Students who believe they possess the knowledge contained in a course, may request of the academic department to take a proficiency exam.

Faculty - the college's instructors.

Fee Payment - Students fees may include one or all of the following: quarterly academic fees, lab fees and or matriculation fees. Fees can be paid in the cashier office, over the telephone or by mail. All fees need to be paid by posted deadlines.

Fee Refund Appeal - If a student feels that the refund they received is not accurate, the student may fill out a tuition refund appeal from which is available in Records and Registration Dept. in Madison Hall.

Fee Refund - Refund of fees sent for student –initiated withdrawals in accordance to the refund schedule for full quarter classes. The dates for refund guidelines can be found on the student class schedule and in the front of the quarter schedule

Financial Aid - Available in four forms: grants, scholarships, loans, part time employment and Supplemental Educational Opportunity Grant (SEOG).

Fresh Start Rule - This is a rule that is intended to help students who were unsuccessful in their previous academic attempts.

Full-time student - a student who is taking 12 credit hours or more during the quarter

General Education - courses that give the student an introduction to the liberal arts and can be tailored to meet the student's interests and requirement of specific degree programs.

General Education Diploma Test (GED) - The GED is equivalent to a high school diploma and is accepted by most colleges and universities, and military recruiters.

Going the Distance - Complete degrees in Associate of Arts and Associate of Applied Science in Business Management are offered through distance learning by combining video-based and on-line courses.

Good As Gold Program - This is a free tuition program that is offered to senior citizens who are 60 years old or older and fully retired.

Grade-point average - a mathematical way of computing academic performance by giving a value to each grade, multiplying the credit hours by the points, and dividing that total by the number of credit hours attempted.

Graduation Requirements - the courses and competentcies in the program of study that you have to complete successfully in order to qualify for a degree or certificate.

Grades/Grade Letters - At the close of the term and upon the completion of a course the instructor reports a letter grade indicating the quality of a student's work.

Grants - This is a type of financial assistance that is available to students who meet the eligibility criteria based on a federal formula.

Harassment - This can be defines as general misconduct, which may result in penalties up to, and including dismissal from the college.

Health Insurance (Student) - All full-time students registered for credit and attending classes at Columbus State Community College are eligible for low cost group accident and sickness health care coverage.

Health Record (Health Care Students) - Students in certain health care technologies will be required to have a physician's examination and might be required to have immunizations and laboratory blood studies completed prior to being accepted into health related technology coursework.

HECC - The Higher Education Council of Columbus is an association of colleges and universities in Central Ohio.

Honors - formal recognition of academic achievement**.**

Housing for Students - Columbus State Community College does not provide on campus housing options for its students. Information regarding off campus housing options may be found in the Student Activities office in Nestor Hall.

Identification Cards - ID cards are required in order to use many campus related services or activities. These ID cards may be purchased at the Cashier's office for a one time fee of $4.00. - issued by the Public Safety Office.**Immigrant students** - Students who have immigrated to the United States

International students - a student from another country who is enrolled at CSCC.

Internship - approved on-the-job training in a work setting in which you earn credit hours towards graduation.

Intramural sports - on-campus, non-varsity or intercollegiate, sports.

Job Hot Line - a phone number to call for full or part-time employment while in college.

K-12 programs - CSCC programs that work with students in Kindergarten through 12 grade.

Laboratory; Lab hours - the time in the instructional plan that you spend applying the theories presented in the lecture portion of your class.

Late Payment of fees - paying your fees after the designated date; incurs a late fee.

Library - located in Columbus Hall, is sometimes referred to as the Educational Resources Center, or ERC.

Life Experience Credit - college credit that can be earned for life or career experience; determined by testing.

Loan - financial aid that must be repaid with predetermined terms.

Loan Deferment - when the loan repayment is "put off" a certain amount of time.

M.L.T. program - Medical Laboratory Technology.

Miami 2+2 program - A degree program offered by Columbus State and Miami University, which pairs an associate degree with two more years of study to earn a bachelor's degree.

MindLeaders - Non-credit web based continuing education courses in professional and technical areas that may enhance employment skills.

Modular courses - courses that are offered in shorter, self-contained units.

Multi-Competency Health - a degree program that offers courses in a variety of health-related areas.

Non-credit courses - courses that do not offer college credit.

Non-traditional credit - college credit earned through means other than traditional classroom or distance learning.

Nurses Office - the College Health Office, located in Union Hall.

Orientation - a formal or informal meeting for new students to become acquainted with the campus and student services at Columbus State.

O.N.O.W. - Ohio Non-Traditional Occupations for Women program, offered by the Transitional Workforce Office at Columbus State.

Out-of-State status - A student whose permanent residence is outside the state of Ohio, or who has not maintained residency in Ohio for 12 months.

Parking Ticket - given for parking violations at Columbus State. Must be paid prior to registration each quarter, and prior to graduation.

Part-time student - a student who is taking less than 12 credit hours of classes during a quarter.

Payment of Fees - Can be accomplished in a variety of ways such as in person, my mail, or by phone. There is a deadline each quarter for payment without a late penalty.

Peer Tutoring - a free service offered by the Developmental Education department, where students can be tutored by other students.

Phi Theta Kappa - a national student honorary society for two year college students.

Placement Tests - A test given to students to determine the level of courses they are required to take in subjects such as writing, math and reading.

Prerequisite - a course that is required prior to scheduling another class. Students must pass prerequisite classes with a "C" or better prior to scheduling the next course in the series.

Program of study - a series of courses that leads to a degree or certificate through a specified curriculum.

Proficiency credit - college credit that is earned by testing for proficiency in a certain subject.

Proficiency test - a test for proficiency in a subject - can lead to proficiency credit being earned.

PSEO - post secondary enrollment option - a program for current high school students to attend college while still in high school, earning credit that satisfy both requirements.

Public Safety - the college's Police Department.

Quarter - A part of the academic year. There are four, 11-week quarters at Columbus State during Autumn, Winter, Spring and Summer, with breaks in between each quarter .

Records, student - The records kept by Columbus State for the period of your enrollment, including grades, fees paid, classes taken, major declared, etc.
Refugee students -

Refund check - the money returned to you if you have dropped or been canceled from a class.

Registration - The process of selecting courses, choosing sections by day and hour, enrolling in classes and paying tuition and fees.

Remedial Course - a course taken to learn pre-college skills in various areas such as mathematics or communication skills.

Residency requirement - the requirements to be considered a resident of the state of Ohio.

Schedule/scheduling - the list of classes you have registered for/ the process of registering for classes.

Scholarship - a sum of money awarded to a student in recognition of academic achievement for use in paying fees or other college expenses. Does not require repayment.

Section - The individual class meeting at a particular day and time with a specific instructor.

Selective Service Registration - registration for the draft; required of all males, age 18 and over.
Senior Citizen - anyone age 60 or older.

S.O.A.R. - adult re-entry into college program.
Spring Street- the title of the college's literary magazine, published annually by the Communcation Skills department.

Student Athlete - a student who is participating in varsity athletics at Columbus State, and who must maintain certain grade standards to participate.

Student Ambassador - students who have been selected for a scholarship program which requires serving as "ambassadors" to groups and other students.

Student for a Day - a program for high school students; allows them to experience the college environment.

Teaching Learning Resource Center(TLRC) - the lab housed in Academic Center B in which students and faculty can experiment and be trained in methods of distance learning, teleconferencing, and more.

Tech-Prep program - a program for high school students in which they enroll in certain high school courses in preparation for a college degree program and career in the same area.

Teleconference - a meeting or class held simultaneously in more than one location, via fiber optic connection of video cameras.

Telecourse - a college course offered on videotape, on cable tv, or on public television .

TOEFL Exam - The Test of English as a Foreign Language required of foreign students at Columbus State.

Transfer credit - the college credits earned at Columbus State or another college, that transfer as the same credits to another college or university.

Transfer Fair: Representatives from 50+ colleges visit our campus and bring information about their transfer programs to CSCC students

Transfer program - A program offered by Columbus State which has been designed to transfer credits to other colleges or universities in preparation for continuing with a higher degree such as a bachelor's or master's degree.

Transcript - A record of courses taken, grades earned, honors received and degrees awarded at a previous educational institution, including high school or other colleges attended.

Transliterating - a program of sign language and interpretation offered at Columbus State.

Tuition - the money a student pays for instruction at any college. Fees and book costs are usually additional.

Tuition Reimbursement - The money a student can receive back from a company or employer that pays for college courses taken by their employees. Usually paid back after the course has been satisfactorily completed.

Tuition Refund - The money refunded to a student after he/she withdraws from a class.

Veteran - a person who has served in the United States military and earned benefits as a result of completion of their service.

Veteran's Benefits - The benefits earned by veterans of the U.S. Military, which include the cost of a college education.

Video-based course - college courses that are offered by Columbus State on videotape, on cable television or on public television.

Voucher - a statement of the funds available to pays fees from a grant.

Weather closing - a formal cancellation of classes forced by inclement weather; always announced via the broadcast media listed in the college's *Schedule of Classes*.

Withdraw form -the form required by a student who wishes to withdraw from a class he/she has scheduled, paid for and attended for a specified period of time.

World Wide Web -the Intenet on line.

Web-based course - courses offered via Internet or WWW via an Internet service provider, or on campus using a on-line computer lab.

Work Study - a student in the federal work study program, working no more than 20 hours a week while enrolled at the college.

Writing Center - the Developmental Education lab in Franklin Hall in which students can receive tutoring and academic assistance.