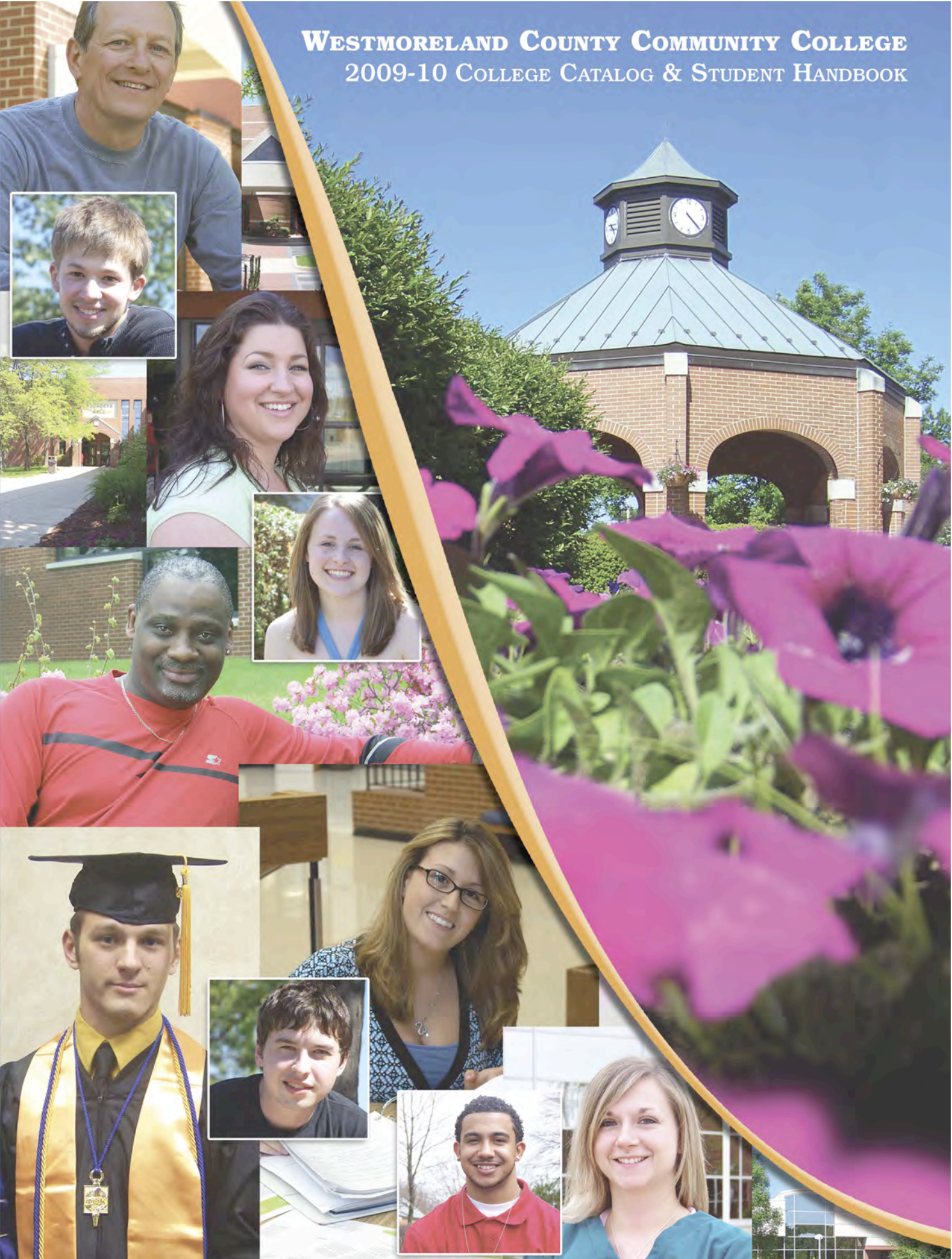
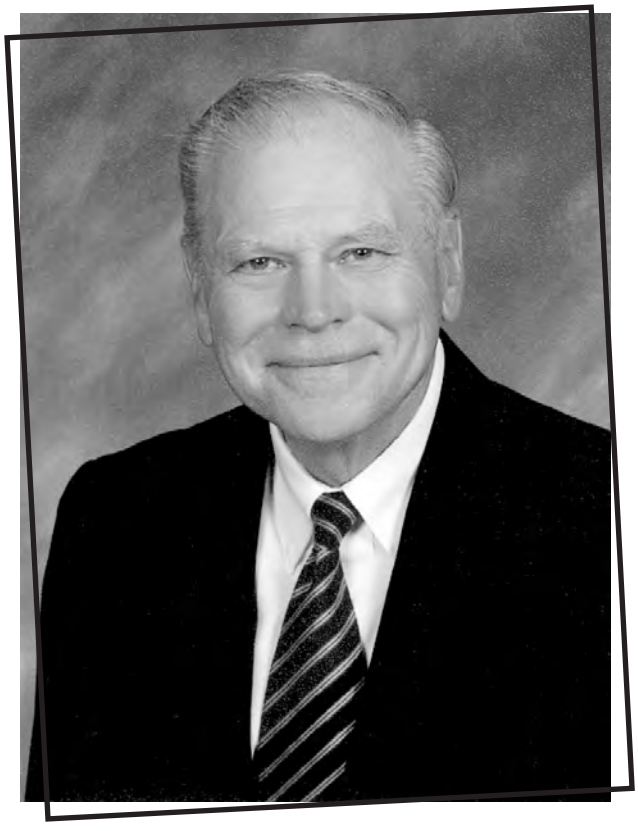
Westmoreland County Community College

2009-10 College Catalog & Student Handbook



A Message from the President



Congratulations! The fact that you are exploring Westmoreland County Community College, our academic programs and services tells me a lot about you. For instance, I know that you have made a decision to make postsecondary education a part of your life which in turn will better your future, and grow your intellectual and employability skills. We are honored that you are considering or have chosen WCCC as your postsecondary educational provider.

We are committed to you and your educational pursuits. Our faculty and staff stand ready to assist you to become all that you can be. We pledge to challenge and support you and to provide an outstanding educational curriculum to help you reach your dreams. You may be considering an associate degree, diploma, certificate, or just choosing to get your feet wet by taking a course or two. Whatever your goal at this stage in your life, we are ready to walk the path of success with you.

As a WCCC student, you can select from a variety of degree, diploma and certificate programs. We offer 56 associate degree programs, 13 diploma programs and 47 certificate programs that can provide you with the education and skills needed to enter the workforce immediately upon graduation. Or, you can enroll in our associate in arts degree program which parallels the first two years of a bachelor's degree and then transfer your credits to a four-year university. Articulation agreements with numerous colleges and universities will help to ease the transfer process.

Postsecondary education is not easy, nor should it be. As citizens of this great county and region, you are the leaders of tomorrow. Some of you are leaders of today. Leadership and citizenship are the cornerstones of our great country and we are all faced with living in an increasingly complex and complicated technological world. The challenges to our globe are significant and call for our very best thinking and problem-solving capabilities.

At WCCC we are committed to providing a curriculum, be it a course, program, or degree, that will challenge you intellectually and cultivate your problem-solving skills. We want you to learn how to learn, how to investigate problems and reach viable solutions. This process calls for hard work and commitment. We are committed to modeling these attributes as we work with you. We are confident that you will challenge yourself, grow in significant ways and become all that you can be.

Thank you for trusting us to be a part of your significant life journey.

Sincerely,
Daniel J. Obara, Ph.D.

Table of Contents

Academic Calendar 3

Accreditation/Affirmative Action 4

WCCC Profile 5

Education Centers 6

Admissions and Registration 8

Expenses and Financial Aid 12

Scholarships 15

Academic Information 21

Programs of Study 27, 28

Academic Programs 29

Associate in Arts Degree Requirements 29

Associate in Fine Arts Degree Requirements 29

Associate in Applied Science Degree Requirements 29

Course Descriptions 170

Student Handbook 215

Personnel Directory 236

Locations and Facilities 239

Index 244

Telephone Directory

Admissions Office	724-925-4077
Bookstore	724-925-4174
Campus Children's Center	724-925-4156
College Learning Center	724-925-4135
Continuing Education	724-925-4107
Counseling	724-925-4051
Disabled Student Services	724-925-4051
Division Offices	
Computer Technology/Business	724-925-4004
Public Service/Humanities/ Social Sciences	724-925-4046
Health Professions	724-925-4029
Wordforce Development/Technologies/ Culinary Arts	724-925-4086
Mathematics/Sciences	724-925-4176
Education Centers	
Armstrong County	724-763-7116
Bushy Run	724-327-8090
Fayette County	724-437-3512
Greene County	724-627-3464
Indiana County	724-357-1404
Laurel	724-539-3390
Mon Valley	724-379-4119
New Kensington	724-335-8110
Public Safety Training Center	724-872-2447
Financial Aid	724-925-4063
Health/Fitness Center	724-925-4244
Library	724-925-4101
Placement Testing	724-925-4121
Registration	724-925-4204
Student Activities	724-925-4055
Student Placement	724-925-4121
Student Records	724-925-4069
TDD	724-925-4297
Transfer Services	724-925-4059
Tutoring	724-925-4135
Veteran's Services	724-925-4056

For other WCCC offices call 724-925-4000.

2009-2010 ACADEMIC CALENDAR

Fall 2009

Classes begin	Aug. 20
Labor Day (college closed)	Sept. 7
No classes	Oct. 6, 22
Thanksgiving recess	Nov. 25-28
Last day for student-initiated withdrawal	Dec. 5
Last day of classes/final exams	Dec. 16

Spring 2010

Classes begin	Jan. 7
No classes	Jan. 18, March 23 & 31 April 1-3
Last day for student-initiated withdrawal	April 17
Last day of classes/final exams	May 5
Commencement	May 6

Summer 2010

1st session classes begin	May 17
Memorial Day (college closed)	May 31
8-week classes begin	June 7
1st session classes end	June 22
2nd session classes begin	June 23
Independence Day (college closed)	July 5
2nd session classes end	July 29
8-week classes end	July 29

Philosophy

Westmoreland County Community College, a publicly supported institution, offers a broad range of programs and services to meet the educational needs of the community. The college offers academic programs which parallel the first two years of a baccalaureate degree program, comprehensive occupational programs which prepare students for employment in a broad array of technical fields, a strong core of general education which prepares students to live and work in an increasingly complex and diverse society, and developmental education, which enables students to overcome academic deficiencies in order to be successful in college-level courses.

As a responsible and responsive member of the Westmoreland County community, the college invites business, industry, and community leaders to participate in the development and review of programs and courses to ensure that WCCC provides an up-to-date curriculum that will address the region's needs for well-educated workers.

The college provides a strong dedicated faculty who are committed to student success. In turn, WCCC expects students to commit time and energy to their course work in order to be successful.

The college also offers a variety of noncredit, continuing education courses to meet short-term educational goals as well as to provide leisure and recreational activities for people of all ages.

Mission/Vision/Values

MISSION

WCCC improves the quality of life of everyone we touch through education, training and cultural enrichment.

VISION

WCCC is a learning-centered college focused on student success, a catalyst for economic growth, a leader in workforce development, and a hub for cultural and artistic experiences.

VALUES

WCCC has a framework of cultures and values that embraces:

1. **Commitment to Teaching and Learning** (personal attention, individual choices, academic excellence, adaptive, promotes curiosity)
2. **Accountability** (responsibility, stewardship of resources, empowerment, results-oriented)
3. **Diversity** (respect for self and others, inclusion, value uniqueness)
4. **Collaboration and Cooperation** (teamwork, community partnerships)
5. **Social Responsibility** (promote active interest, awareness of world, being a good steward)
6. **Integrity** (honesty, ethical standards, dedication)
7. **Innovation** (creativity, commitment to growth, forward thinking)

Goals

Westmoreland County Community College is committed to these goals:

Providing quality curricula and educational opportunities and continual upgrading of its instructional capabilities,

Providing a curriculum that meets the needs of its students and provides them with the skills necessary to participate fully in a 21st century world,

Providing excellent physical facilities for the educational programs and the services that the college provides,

Supporting student development and helping students succeed in their educational programs and in reaching their educational goals,

Expanding its linkages within its entire service area, including businesses, industries, other educational entities, and community organizations,

Providing the technology and the systems necessary to manage and support informational requirements of staff and students,

Enhancing its image and becoming more visible to the public it serves,

Employing effective and efficient resource development and allocation based on sound planning, and

Providing a sense of community throughout the organization.

ACCREDITATION/AFFIRMATIVE ACTION

Westmoreland County Community College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3642 Market Street, Philadelphia, PA 19104, 267-284-5000. The Commission on Higher Education is an accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

Programs at the college are approved by the Pennsylvania State Department of Education for veteran's educational benefits. In addition, the following programs carry specific accreditation/approval by certifying/accreditation organizations:

- The associate in applied science degree Baking and Pastry program, Culinary Arts programs and Restaurant/Culinary Management program are accredited by the ACF (American Culinary Federation) Foundation Accrediting Commission, a specialized accrediting agency recognized by the Council for Higher Education Accreditation.

- The Dental Assisting and Dental Hygiene programs are accredited by the Commission on Dental Accreditation of the American Dental Association, a specialized accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

- The Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), on recommendation of the Curriculum Review Board of the American Association of Medical Assistants Endowment (AAMAE). Commission on Accreditation of Allied Health Education Programs, 35 East Wacker Drive, Suite 1970, Chicago, IL 60601-2208, 312-533-9355

- The Practical Nursing Diploma Program and Associate Degree Nursing Program are fully approved by the Pennsylvania State Board of Nursing. The Associate Degree Nursing program is accredited by the National League for Nursing Accrediting Commission, 61 Broadway, 33rd Floor, New York, NY 1006, 800-669-1656, www.nlnac.org - for achievement of quality and excellence in nursing education.

This catalog reflects the most current information about Westmoreland County Community College and does not constitute a contract between the student(s) and WCCC. The college reserves the right to amend any provisions or requirements at any time. Admission to WCCC acknowledges notice and acceptance of the college's reservation of this right.

Notice of Nondiscrimination

Westmoreland County Community College will not discriminate in its educational programs, activities or employment practices based on race, color, national origin, sex, sexual orientation, disability, age, religion, ancestry, union membership or any other legally protected classification. Announcement of this policy is in accordance with state law including the Pennsylvania Human Relations Act and with federal law, including Titles VI and VII of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, Section 503 and 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, and the Americans with Disabilities Act of 1990. Inquiries should be directed to the Affirmative Action Officer (presently Sylvia Detar) at 724-925-4190 or in Room 4100D, WCCC Business & Industry Center, Youngwood, PA 15697.

WCCC Profile

Founded: 1970

Location: Youngwood, Pa., approximately 6 miles south of Greensburg, off Route 119

Phone: 724-925-4000

Internet: www.wccc.edu

Enrollment: approximately 6,400 full- and part-time students who range in age from 17 to 75

Programs: 56 associate degree, 13 diploma, and 47 certificate programs with options that prepare students for careers or transfer to baccalaureate degree programs at four-year institutions.

Degrees Granted: associate in arts degree, associate in fine arts degree, associate in applied science degree, diploma and certificate

Campus: The main campus is located in a rural setting a short distance from the New Stanton Interchange of the Pennsylvania Turnpike off Route 119. The 80-acre campus comprises four buildings. Founders Hall, Commissioners Hall and Science Hall house general classrooms, science laboratories, computer and desktop publishing laboratories, multimedia technology laboratory, culinary arts laboratory with dining facility, dental hygiene clinic, radiology technology laboratory, greenhouse, theater, art gallery, library, Student Services, College Learning Center, Campus Children's Center, bookstore, student lounges, cafeteria, gymnasium, racquetball courts, fitness center, and indoor running track. The Business & Industry Center contains classrooms, laboratories, offices and training facilities for area employers. In addition, there are athletic fields for baseball, softball and other sporting activities. All buildings are easily accessible to the physically disabled. There are also designated parking spaces for the physically disabled. The WCCC smoking policy designates all buildings at the Youngwood campus and the education centers as smoke-free.

Off-Campus Centers: To provide access to quality educational opportunities to all area residents, the college operates eight off-campus education centers - Armstrong County Center at Lenape Tech, Ford City; Bushy Run Center, Export; Fayette County Center, Uniontown; Greene County Center, Waynesburg; Indiana County Center, Indiana; Laurel Center, Latrobe; Mon Valley Center, Belle Vernon; and New Kensington Center, New Kensington - that serve all of Westmoreland, Armstrong, Fayette, Greene and Indiana counties.

The WCCC Public Safety Training Center, located near Smithton, provides public safety training for fire, police and emergency services responders.

Faculty: 90 full-time teaching faculty and approximately 369 part-time faculty

Academic Calendar: two 15-week semesters (fall, spring); two 12-week Late-Start sessions (fall, spring); and 5-1/2-, 8- and 11-week summer sessions. Classes are conducted weekdays, evenings Saturdays and online.

Directions - Youngwood Campus:
From Greensburg and Route 30: Take Route 119 South into Youngwood. At the second traffic light, Depot Street, turn left and proceed one mile to the college, located on the right.

From the New Stanton interchange of the Pennsylvania Turnpike (Exit 8/75): Take Route 119 North into Youngwood. At the fourth traffic light, Depot Street, turn right and proceed one mile to the college, located on the right.

WCCC Education Centers

WCCC maintains education centers that serve all of Westmoreland, Armstrong, Fayette, Greene and Indiana counties. Day and evening classes are conducted at the Armstrong County Center, Ford City; Bushy Run Center, Export; Fayette County Center, Uniontown; Greene County Center, Waynesburg; Indiana County Community College Center, Indiana; the Laurel Center, Latrobe; the Mon Valley Center, Belle Vernon; and the New Kensington Center, New Kensington. In addition, online courses are offered to students at these sites. Student services such as counseling, advising and financial aid are also available at scheduled times. Students can also pay tuition and fees and purchase textbooks at the centers.

Bushy Run Education Center

Located off Route 22 in Penn Township, the Bushy Run Education Center houses traditional classrooms, a distance learning classroom, a computer laboratory, a science laboratory, a student lounge and offices. 724-327-8090

DIRECTIONS: From Greensburg: Take Route 66 North to Route 22 heading west toward Pittsburgh. At the third traffic light, turn left onto Mellon Road and proceed approximately 1.5 miles to the Bushy Run Center on the left.

From Murrysville: Take Route 22 East toward Delmont. Turn right at the intersection onto Mellon Road and proceed 1.5 miles to the Bushy Run Center.

Laurel Education Center

The Laurel Education Center is housed in the former Kennametal facility at Seventeen Lloyd Avenue, Latrobe. The center contains three computer classrooms/labs, an electronic classroom, a natural science classroom/lab and student lounges. 724-539-3390

DIRECTIONS: From Route 30: Take Route 981 North toward Latrobe. (Route 981 becomes Lloyd Avenue.) The center is located on the right just before crossing the Loyalhanna Creek Bridge.

From Route 22 - New Alexandria: Take Route 981 South and turn right onto Latrobe Derry Road at the traffic light. Cross the Loyalhanna Creek Bridge. (Route 981 becomes Lloyd Avenue.) The center is the second building on the left.

Mon Valley Education Center

The Mon Valley Education Center, located off Route 51 on Fells Church Road, Belle Vernon, houses traditional classrooms, a distance learning classroom, a computer laboratory, offices and a student lounge. 724-379-4119

DIRECTIONS: From Route 51 North: Make the first left turn at the traffic light past Bill's Golfland. Proceed on Fellsburg Road approximately 1/2 mile to the traffic light and turn right at the light; the Mon Valley Center is on the right.

From Route 51 South: Make the right turn at the United Mine Workers Headquarters. Proceed 1 mile and turn left into the college parking lot before the traffic light.

New Kensington Education Center

Opened in January 2009, the New Kensington Center is located at 1150 Fifth Avenue in downtown New Kensington. The center contains traditional classrooms, a distance learning classroom, computer classrooms/labs, a science lab, administrative offices and a student lounge. The center is also home to PA CareerLink - Alle-Kiski, which provides services to the unemployed. 724-335-8110

DIRECTIONS: From 9th Street Bridge: At the second traffic signal, turn left onto 4th Avenue. Follow 4th Avenue up to Heilman Drive. Turn right onto Heilman Drive. Turn right onto 5th Avenue. WCCC is located on the left.

From Greensburg Road: At the Parnassus Intersection, (CVS), proceed straight through the traffic signal onto Industrial Boulevard. Stay on Industrial Boulevard through town and past the 9th Street Bridge. At the stop sign, go straight and proceed to 5th Avenue. Turn right on to 5th Avenue. WCCC is located on the left.

Public Safety Training Center

Designed for firefighter, police and emergency services personnel, the first phase of this center, located in South Huntingdon Township, was completed in October 2003. The facility features a six-story tower with an attached 2 1/2 story residential building that simulates industrial, commercial and residential structures. Also on site are a classroom/administration building, class A live burn building, outdoor lethal weapons range, rubble pile, outdoor training props and pond. 724-872-2447

DIRECTIONS: From I-70 W (New Stanton and PA Turnpike, exit 75) - Take I-70 West 8 miles from New Stanton to the Smithton exit (no. 49). Exit, and turn left at the stop sign. At the next stop sign turn right onto Fitz Henry Road. Proceed 1 mile and turn right onto Reduction Road. Proceed 1 mile to the PSTC entrance on the left.

From I-70 E (Belle Vernon and I-79) - Proceed on I-70 to the Smithton exit (no. 49). Exit and turn left at the stop sign. Continue straight onto Fitz Henry Road. Proceed 1 mile and turn right onto Reduction Road. Proceed 1 mile to the PSTC entrance on the left.

WCCC Education Centers

Armstrong County Education Center

The WCCC Armstrong County Education Center classes are conducted at Lenape Tech, which is located at 2215 Chaplin Avenue in Ford City. 724-763-7116

DIRECTIONS: From Youngwood: Take PA-66-Toll N ramp toward Delmont. Stay straight to go onto PA-66. Turn left onto North Plz/PA-56/PA-66. Continue to follow PA-56/PA-66.

Turn right onto PA-66 Alternate/1st Street. Continue to follow PA-66 ALT.

Turn right onto PA-66/Leechburg to Kittanning Road. Continue to follow PA-66. Turn right onto Chaplin Ave.

From Ford City: Go northwest on Gutherie Road toward Fairway Street. Turn right onto Leechburg to Kittanning Road/PA-66. Continue to follow PA-66. Turn right onto Chaplin Ave..

From Kittanning: Go southeast on North Jefferson Street toward St. John's Way. Turn right onto St. John's Way. Turn left onto North Water Street. Stay straight to go onto Main Street.
Turn left onto Chaplin Ave.

Fayette County Education Center

Located at the Fayette County Community Action Agency Inc. Campus in Uniontown, the WCCC Fayette County Education Center houses two traditional classrooms, a computer classroom, a videoconferencing classroom and administrative offices. 724-437-3512

DIRECTIONS: From U.S. 119 South: Take the PA Route 51 ramp to Pittsburgh Street. Turn left on Route 51 South/Pittsburgh Road and continue to follow Route 51 South. Turn left onto W. Penn Street and then turn left onto North Beeson Boulevard.

From PA 21 Roy E. Furman Highway: Turn right onto US 40 East. Turn left onto Beeson Boulevard.

Greene County Education Center

The Greene County Education Center is located in the EverGreene Technology Park in Waynesburg. Easily accessible from I-79, the center contains two computer labs, a nursing lab, seven classrooms and a student lounge. 724-627-3464

DIRECTIONS: From I-79 South: Take Exit 14 (Waynesburg). At the bottom of the exit ramp, turn left onto Roy E. Furman Highway. Proceed to the second traffic light and make a left onto Progress Drive. Go straight on Progress Drive until the road splits. Bear to the right and follow the road to EverGreene Technology Park. WCCC is located in the first building on the right.

From I-79 North: Take Exit 14 (Waynesburg). At the bottom of the exit ramp, turn left onto Roy E. Furman Highway. Proceed to the first traffic light and make a left onto Progress Drive and follow the directions listed above.

From Route 21 West: Make a right onto Progress Drive at the light just after the Greene County Airport and follow the directions listed above.

From Roue 21 East: Proceed under I-79 and follow the directions from I-79 South listed above.

Indiana County Community College Center of WCCC

The Indiana County Community College Center is located at 45 Airport Road, Indiana, near the Jimmy Stewart Airport. Easily accessible from routes 286 and 119, the center contains a computer lab, a nursing lab, six classrooms, an office and a student lounge. 724-357-1404

DIRECTIONS: From Punxsutawney: Take Route 119 South to the Clymer/Indiana Exit and exit at Clymer Route 286. At the end of the exit ramp, turn right onto Airport Road. Continue approximately 100 yards and turn left into the parking lot.

From Blairsville: Take Route 119 North to the Clymer/Indiana Exit and exit at Clymer Route 286. At the end of the exit ramp, turn right onto Airport Road. Continue approximately 100 yards and turn left into the parking lot.

ADMISSIONS

High school graduates or those who hold a GED high school equivalency are granted admission to the college. Individuals 18 years of age and older who have not earned a high school diploma or a GED may be admitted to the college if they can demonstrate their ability to benefit from the college experience. After successfully completing 30 credits at WCCC, they may be eligible to petition for a Commonwealth Secondary School Diploma. Forms for Commonwealth Secondary School Diplomas are available at the Department of Education, GED, Harrisburg.

Requirements for Admission

1. Submit the Application for Admission with a $10 nonrefundable processing fee. Students returning to WCCC after stopping out for two (2) consecutive non-summer terms must reapply to the college but no fee is required.
2. Upon receipt of the Application for Admission, the Admissions Office will send information on placement testing and registration.
3. Take the placement test and register for classes.
4. In order to complete the admission process, students must request that their high school send an official copy of their transcript to the WCCC Admissions Office. GED holders must submit their GED certificate with the Application for Admission. Financial aid processing cannot be completed without these transcripts.
5. International students must complete this form and submit official copies of secondary school transcripts (translated in English), TOEFL scores of 500 or above, a statement of financial support for the entire period of enrollment, and provide documentation of immigration status.

Admission to Specific Programs

In addition to the general requirements, some programs have specific admission requirements. The requirements for the dental assisting, dental hygiene, nursing, medical assistant, and radiology technology programs are listed on the pages describing these programs. (See program index pages 27-28.)

Students who do not meet the requirements for a specific program may become eligible after completing appropriate course work.

Full- and Part-time Students

Full-time students register for 12 or more credits a semester; part-time students register for fewer than 12 credits a semester.

Since many programs and courses fill to capacity well before the beginning of each semester, early inquiry is advised.

Students interested in attending WCCC are encouraged to contact the Admissions Office at 724-925-4077 or 1-800-262-2103 for more information, an application, an interview, or a campus tour.

Early Enrollment for High School Students

High school students who are 16 years or older and in their junior or senior years may earn college credit at WCCC by demonstrating potential for college-level work and securing a recommendation from their high school guidance counselors or principals.

Tech Prep Programs of Study

Westmoreland County Community College is the fiscal agent for the Southwest PA Tech Prep Consortium. The consortium includes the counties of Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Washington and Westmoreland counties. Tech Prep supports all high schools and career and technology centers that operate Pennsylvania Department of Education, Career and Technical Education programs.

Tech Prep programs of study offered at WCCC are identified by the Tech Prep logo located in the top right hand corner of the catalog page. To receive a list of associate degrees which articulate to Career and Technical Education programs at the school the student attends, please contact the Tech Prep office at WCCC.

What is a Tech Prep Program of Study?

- All programs must include coherent and rigorous content aligned with PA Academic Standards and relevant career and technical content.
- Alignment of secondary and postsecondary curriculum to adequately prepare students to succeed in postsecondary education, which awards postsecondary articulated credit or opportunity for dual enrollment
- A competency list which includes all tasks to be completed at the secondary level by the student which results in an industry-recognized credential or certificate. All programs of study will be aligned with the PA Department of Labor and Industry's High Priority Occupational List.
- Each program of study offered at a Career and Technology Center would be reviewed and validated by postsecondary faculty to result in a statewide articulation agreement.

Many career and technology centers in the consortium currently have articulation agreements with WCCC. The curriculum at the secondary level has been aligned to coursework at the postsecondary level to award articulated credit. Seniors who are completers of a Tech Prep program may apply for advanced placement (articulated) credit when enrolling at WCCC. Students must complete a Tech Prep Request for Advanced Placement Form and submit it to the Tech Prep Office at WCCC to be reviewed by the appropriate division for approval.

Additionally information is available at the career and technology center the student attends or the WCCC Tech Prep office at 724-925-4268.

Credit for Prior Learning

Students may receive academic credit for prior learning enabling them to begin college work at advanced levels and shorten the time required to obtain degrees, diplomas or certificates. Credit for prior learning may be granted by any of the following methods: transfer credit, courses taken at area career and technology centers, College Level Examination Program, credit by examination, and credit for experiential learning.

Credit can be granted only for those courses which are listed in the WCCC catalog. The courses must meet the requirements of the program in which the student is enrolled. Credits obtained for prior learning are recorded with a grade of CR and are not used in the computation of grade point average. These credits are not applied to VA benefits, Selective Service deferment, Social Security benefits or scholastic honors. A maximum of 30 credits may be awarded to students for all credits earned for prior learning.

The award of credit for prior learning is subject to the approval of the appropriate faculty member and dean. Students who are interested in obtaining credit for prior learning should contact the Admissions Office for specific details.

Transfer of Credit

Credits earned at other regionally accredited colleges may apply to programs at WCCC. Students must complete an Application for Admission and a Request for Transfer of Credits to WCCC form, and must have official transcripts sent directly to the WCCC Admissions Office with descriptions of courses to be considered for transfer.

Evaluation and acceptance of credits completed 10 years prior to the transfer request date shall be made at the discretion of the college.

CLEP — College Level Examination Program

Credit may be awarded to students who achieve satisfactory scores on the CLEP general examinations and selected CLEP subject examinations.

A list of acceptable CLEP tests and scores is available at the WCCC Admissions Office. Test scores must be sent directly to the Admissions Office from the College Entrance Examination Board.

Credit by Examination

Students may demonstrate mastery of WCCC courses and obtain credit by taking examinations except for the following:

1) developmental courses
2) a course previously completed
3) a course which is a prerequisite for a course previously completed
4) a course currently registered for

To apply, students must complete the Petition for Credit by Examination form which is available in the division offices and at the Student Information Center.

A $30 fee is charged for each exam. Passing the exam is recorded on the transcript with CR. Failure to pass the exam is not recorded. Credit by exam may be attempted only once per course.

Credit for Career & Technology Center Courses

Students may receive credit for approved occupational courses completed at area career and technology centers. Contact the Admissions Office for a list of approved courses.

Advanced Placement Examinations

Credit may be awarded to students who attain a score of three or higher on the College Board Advanced Placement Examination.

Credit for Military Training

Credit may be awarded to students who take the Defense Activity for Nontraditional Education Support (DANTES) exam for skills acquired during military service. Also, military courses may be submitted for review on an individual basis. Credit is normally awarded based upon the recommendations of the American Council on Education.

Credit for Experiential Learning

Those who believe that they have acquired college level competencies through life and work experience may seek credit through portfolio development. Students are required to develop written documents which describe their competencies and relate them to WCCC courses.

The award of credit is based upon assessment of the student portfolio. A maximum of 21 semester hours of credit for experiential learning may be applied to associate degree graduation requirements. A $75 fee is charged for assessment of each course.

Placement Testing

All new students who enroll on a full-time basis (12 or more credits) are required to take placement tests. Students who have completed an associate or bachelor's degree from an accredited community college or university may be exempt upon receipt of college transcripts. Applicants for nursing and other allied health programs may be required to complete placement tests regardless of degrees completed.

All new part-time students who plan to pursue a degree are required to complete placement tests. New part-time students who do not plan on pursuing a degree or diploma are not required to take placement tests. However, placement tests are required prior to enrolling in mathematics or English courses and any course with a prerequisite of English 080. Furthermore, nondegree students are required to take placement tests after the completion of 12 credits in order to continue their enrollment. Visiting high school students are required to take placement tests.

On the basis of the placement tests, students will be advised to enroll in appropriate freshman courses, pursue developmental course work prior to taking other credit courses, or consider noncredit academic preparation before enrolling in credit course offerings at the college.

Call the Student Development Office at 724-925-4121 to schedule the placement test. There is no fee for this testing.

Registration

Dates for course registration are printed in the class schedule for each session. Registration begins approximately April 1 for the fall sessions, November 1 for the spring sessions and December 1 for the summer sessions. Class schedules are available at the Youngwood campus and the education centers. Schedules can be requested by calling 724-925-4077 or 1-800-262-2103. Class may also be viewed online at wccc.edu.

New students who have completed the Application for Admission will receive a letter from the college explaining the placement testing, advising and registration procedures. Counselors are available to assist students in planning course work for the first semester. Returning students receive letters which specify the dates for registration and identify the students' academic advisers as well as office hours of the adviser.

Students should become familiar with the required courses for their programs of study found in this catalog on pages 31-163.

Students intending to transfer should consult the catalog of the college they wish to attend or, if possible, consult with a counselor at that college. Transfer students may also receive assistance from a WCCC counselor and/or use materials in the transfer library in the Student Development Office.

All students, new and returning, have several opportunities to register for classes and receive academic advising. Students may register by phone or in person at the Student Information Center. Returning students may also register online at wccc.edu. Telephone registrations are accepted from 8 a.m. to 5 p.m., Monday through Friday. Students may register in-person from 8 a.m. to 8 p.m. Monday through Thursday and 8 a.m to 5 p.m., Friday. Registration procedures are printed in all the class schedules.

Developmental Courses

Roughly three-quarters of the students who come to WCCC qualify for developmental courses based on placement testing results. These courses in reading, writing and mathematics are specifically designed to prepare students for success in their academic careers. Students may qualify for one to three development courses per semester for one or two semesters. While developmental courses serve as prerequisites, they are not applied to degree requirements. Those students who actively participate in the developmental program are more likely to succeed and complete their course of study.

Personal Development Courses

First-time full-time students who place into two or more developmental courses are required to take those courses and take PDV 160 (Strategies for Academic Success). This is a one-credit course designed to help students succeed in college by exploring such topics as study skills, time management, test taking strategies and college resources. Students must successfully complete PDV 160 in order to progress to higher level courses.

Auditing Courses

Auditing is the practice of registering for a course, paying the associated tuition and fees, and waiving the receipt of credit and a letter grade.

Students may audit a course with the approval of the instructor. Forms for this purpose are available in the Student Information Center and must be submitted no later than the end of the second week of a semester. Those currently receiving financial aid should contact the Financial Aid Office before changing a course from credit to audit. Courses taken for audit are not included in determining academic load for veteran certification or eligibility for financial aid. Course audits are indicated on student transcripts with the designation "AU."

Cross Registration

The college has cross-registration arrangements with the University of Pittsburgh at Greensburg (UPG) and Seton Hill University (SHU). This allows WCCC full-time students to register for courses at these institutions and for students at UPG and SHU to register for courses at WCCC. The student must be enrolled full-time for a minimum of 12 credits and in good academic standing. A student may cross-register only for courses which meet degree requirements and which are approved by the institution from which the student will graduate. Students must complete a Cross Registration form available in the WCCC Admissions Office and obtain appropriate signatures for approval.

Change of Schedule

During the first week of each course, students may add or drop courses by completing the official forms.

Students should note that adding courses may increase the amount due for tuition and fees, while dropping courses may make them eligible for refunds. Those receiving financial aid should contact the Financial Aid Office to determine if their aid award is affected by the change in their schedule.

Students are fully responsible for completing adds and drops according to instructions and making certain that changes in their schedules will not adversely affect their progress toward graduation.

Change of Major

Students who wish to change their major program must complete a Change of Major Form in the Student Information Center. Course substitutions approved under the former major must be resubmitted for approval in the new program of study.

Withdrawal From Courses

Withdrawal from a course becomes official only after a Student Withdrawal Request is processed by the Records Office. Students who wish to withdraw from a course or courses should request Student Withdrawal Request forms at the Student Information Center in Founders Hall. Forms are also available at the education centers.

- Students who drop classes within the first three weeks of the semester will be dropped from the course and no record of the course will appear on the transcript.
- Students who officially withdraw from a course after the third week but prior to the last day of the seventh week of the semester will receive a "W" on the transcript indicating withdrawal from the course.
- Students who withdraw after the seventh week but before the end of the fourteenth week of the semester will receive a W or F grade as determined by the instructor.
- Withdrawals are not permitted after the fourteenth week.
- Students who initially attend class but, due to poor attendance and/or participation, are not making satisfactory progress, may be recommended for withdrawal by the instructor after the third week and prior to the end of the twelfth week of the semester. Students recommended for withdrawal are notified by the Records Office and receive a "W" on the transcript.

WCCC Graduate Transfers

Westmoreland County Community College maintains transfer articulation agreements with many four-year colleges and universities in the region. The agreements denote program requirements and course equivalencies to facilitate student transfer to senior institutions. In consultation with a counselor, students can use the agreements as guides to plan a program of studies most appropriate for transfer to a senior institution.

Westmoreland County Community College graduates have successfully transferred to many colleges and universities. Some of these colleges and universities include the following:

Art Institute of Pittsburgh
Bethany College
California University of Pennsylvania
Carlow University
Carnegie-Mellon University
Chatham College
Cheyney University
Clarion University of Pennsylvania
Cornell University
Davis & Elkins College
Duquesne University
Edinboro University of Pennsylvania
Fairmont State College
Franciscan University of Steubenville
Franklin University
Gannon University
Geneva College
Indiana University of Pennsylvania
Kent State University
La Roche College
Lock Haven University of Pennsylvania
Logan College of Chiropractic
Ohio State University
Pennsylvania College of Technology
Pennsylvania State University
Penn State - Fayette
Penn State - New Kensington
Point Park University
Robert Morris University
Saint Francis University
Saint Vincent College
Salem International University
Seton Hill University
Shippensburg University of Pennsylvania
Slippery Rock University of Pennsylvania
Temple University
Thiel College
University of Phoenix
University of Pittsburgh - Greensburg
University of Pittsburgh - Johnstown
University of Pittsburgh - Main Campus
Washington & Jefferson College
Waynesburg College
Westminster College
West Liberty State College
West Virginia University
Wheeling Jesuit College
Youngstown State University

Academic Passport

The Academic Passport is a transfer policy approved by the Pennsylvania State System of Higher Education for community college students who transfer to state system universities. The program eases the process for WCCC students transferring to these universities, such as California University of Pennsylvania and Indiana University of Pennsylvania. Under the provisions of the program, WCCC students earning an associate in arts degree are assured that they will be accepted into the Pennsylvania state system university of their choice. The courses completed as part of the A.A. degree will be accepted and, to the extent possible, applied toward the fulfillment of their bachelor's degree requirements at the receiving university. The student's acceptance is to the university and not necessarily to a specific program or curriculum. Students who plan to transfer are encouraged to consult with a WCCC transfer counselor to plan their course selection and educational program.

EXPENSES AND FINANCIAL AID

Tuition and Course Fees

Tuition and course fees are charged on a per credit basis. Reduction in local and/or state funding may result in an additional tuition charge. ***Tuition and fees listed in this catalog are subject to change by the Board of Trustees.*** When changes are made, notice will be given as far in advance as possible.

The examples below represent basic tuition and fees for full-time and part-time study. For full-time status, students must be enrolled for a minimum of 12 credits. Some programs and courses require additional fees.

County Resident Students

FULL-TIME (15 credits)

Tuition, per semester	$1,140
Fees	
1. Student services fee	45
2. Technology fee	165
	$1,350

PART-TIME

Tuition, per credit	$76
Fees, per credit	
1. Student services fee	3
2. Technology fee	11
	$90

Out-of-County Students

FULL-TIME (15 credits)

Tuition, per semester	$2,280
Fees	
1. Student services fee	45
2. Technology fee	165
3. Capital fee	90
	$2,580

PART-TIME

Tuition, per credit	$152
Fees, per credit	
1. Student services fee	3
2. Technology fee	11
3. Capital fee	6
	$172

Out-of-State and Foreign Students

Tuition, per credit	$228
Fees, per credit	
1. Student services fee	3
2. Technology fee	11
3. Capital fee	6
	$248

Other Course Related Fees

1. Lab fee
   (Most laboratory courses have a fee. The fees range from $5 to $20.)

Special Fees

1. Application fee for new students (one time)	$10
2. Graduation fee *(payable in the semester the student expects to graduate)*	
Degree and diploma programs	$20
Certificate programs	$15
3. Transcript fee (each)	$2
4. Returned check fee	$25
5. Credit by exam, per course	$30
6. Assessment of Experiential Learning, per course	$75

Payment Policy

The college accepts payment in the form of cash, check, and MasterCard or Visa at the main campus or any of the education centers. Check and credit card payments may also be made by mail. In addition, credit card payments may be made by telephone or online. Checks should be made payable to WCCC, and the student's social security number must be written on the check. You remain obligated for all tuition and fees unless you officially drop during the refund period.

Students cannot register for classes, receive grade reports, obtain transcripts, or graduate until all financial obligations to the college have been satisfied. If payment is not received by the due dates established each term, your registration is subject to deletion.

Refund Policy

All refunds to students or payers are calculated from the official starting date of the course.

For courses meeting for only one week or less — If you officially drop before the course starts, you may be eligible to receive a 100% refund of tuition and fees. There are no refunds after that date.

For courses two-weeks through four-weeks long — If you officially drop through the first three days of the course, you may be eligible to receive a 100% refund of tuition and fees. There are no refunds after that date.

For courses five-weeks through nine-weeks long — If you officially drop through the first week of the course, you may be eligible to receive a 100% refund of tuition and fees. There are no refunds after the first week of the course.

For courses of 10-weeks through 19-weeks long — If you officially drop through the first week of the course, you may be eligible to receive a 100% refund of tuition and fees. If you officially drop during the second week of the course, you may be eligible to receive a 60% refund of tuition. There are no refunds after the second week of the course.

For courses 20-weeks through 29-weeks long — If you officially drop through the third week of the course, you may be eligible to receive a 100% refund of tuition and fees. If you officially drop during the third or fourth week of the course, you may be eligible to receive a 60% refund of tuition. There are no refunds after the fourth week of the course.

For courses of 30-weeks or longer — If you officially drop through the third week of the course, you may be eligible to receive a 100% refund of tuition and fees. If

you officially drop during the fourth, fifth or sixth week of the course, you may be eligible to receive a 60% refund of tuition. There are no refunds after the sixth week of the course.

You must contact the Registration Center during the refund period to officially drop a course. If you do not officially drop, you remain obligated for all tuition and fees.

TuitionPay Payment Plan

Offered by WCCC in conjunction with Sallie Mae, the TuitionPay Monthly Payment Plan lets students pay educational expenses interest-free over a period of four months. To qualify for the TuitionPay Monthly Payment Plan, students must be enrolled in six or more credits per semester and pay a $35 enrollment fee. The due dates for the four monthly payments are published in the credit class schedule each semester. The payment plan is offered during the fall and spring semesters.

For more information, call the WCCC Admissions Office, 724-925-4077.

Financial Aid

Financial aid is a grant, scholarship, loan or employment opportunity which assists students with their educational expenses. Most financial aid is awarded on the basis of financial need, or the difference between the cost of education (tuition, fees, books, transportation, etc.), and the amount parents and/or students can contribute toward these expenses.

WCCC participates in several state and federal financial aid programs. (See the chart on page 14.)

Basic Eligibility Criteria

In order to be eligible for many forms of financial aid a student must:

- Be a citizen or eligible noncitizen of the United States.
- Be enrolled in a degree, diploma or certificate program (audited courses do not count toward enrollment status).
- Have a high school diploma, GED or demonstrate the ability to do college level work based upon placement test scores.
- Be registered with Selective Service if a male.
- Be in good academic standing and maintain satisfactory progress according to college, state and federal regulations.

How to Apply

1. Complete the Free Application for Federal Student Aid (FAFSA) and mail it to the processor as soon as possible after January 1. In order for the Financial Aid Office to receive the application information from the processor, students must include WCCC as one of the colleges they plan to attend. WCCC's Title IV code is 010176.
2. Submit tax returns, corrections and any other requested documentation to the Financial Aid Office in a timely manner.
3. To ensure timely consideration, students should have paperwork on file in the Financial Aid Office by April 15 for the upcoming fall term.

The application is available online at www.fafsa.ed.gov.

Minimum Standards of Academic Progress for Financial Aid

To continue to receive financial aid from the government-funded programs listed below, students must maintain financial eligibility and satisfactory academic progress in their courses of study according to the standards and practices of the granting agency and the college.

The standards include a quantitative measure (minimum standards of completion) as well as qualitative measure (grade point average). Students who earn a grade point average below 2.0 may lose financial aid for future semesters and should check with the Financial Aid Office.

The minimum standards of completion are as follows:

Pell Grant and College Work-Study — Students must successfully complete 70% of the credits they attempt.

PHEAA Grant — Students must successfully complete at least 24 credits per academic year if full-time and 12 credits if part-time.

Stafford Loan/PLUS — Students must successfully complete 70% of the credits attempted per year. In addition, they must successfully complete 30 credits each year in order to qualify for level two in the loan program.

After 12 credits are earned, academic progress will be reviewed in order to determine future eligibility for Pell or PHEAA grants. Eligibility for loans and work-study will be based on a student's past academic performance at the college. Academic performance is reviewed after each semester or loan term. Courses with an I (incomplete), W (withdrawal) or an F grade will be considered as courses attempted but not successfully completed. Financial aid may be awarded for repeated courses only if the original grade in the course is below a "C." Financial aid will not be awarded for courses repeated more than once.

Financial aid is awarded for courses that count toward a student's degree, diploma or certificate. Students who complete more than 150% of their original program credits will have their aid eligibility reviewed. Aid may not continue to pay for multiple programs.

Return of Title IV Student Aid Requirements for Students Who Withdraw from WCCC

Up through the 60 percent point in each payment period of enrollment, a pro rated schedule is used to determine the amount of Title IV funds the student has earned at the time of the withdrawal. After the 60 percent point in the payment period or period of enrollment, a student has earned 100 percent of the Title IV funds (Federal Pell Grant, Federal Stafford Subsidized and Unsubsidized Loans, Federal PLUS loan and Federal Nursing Loan).

In accordance with federal regulations, students who withdraw on or before the 60 percent of the award period will be required to repay the unearned portion of the

EXPENSES AND FINANCIAL AID

Federal Title IV student aid program. The student must complete a withdrawal form that is available from the Records Office.

An example: Student totally withdraws at the end of the fourth week of a 16-week term. The school's refund policy ends at the second week of classes. The student's tuition for the term is $2,000 and the student had a Pell Grant for $2,400. Since the student was in school for four weeks, the student earned 25% of their aid, 25% x $2,400, which is $600. Therefore the student's unearned portion of the Pell Grant must be returned to the grant and the student would owe the balance of the school's tuition, $2,000 - $600 (earned aid) is, $1,400 to the school. Students who have questions about dropping classes should always check with the Financial Aid office for clarification.

FINANCIAL AID PROGRAMS

TYPE OF AID	SOURCE	AWARD AMOUNTS	WHO IS ELIGIBLE TO APPLY	HOW TO APPLY	WHEN TO APPLY
Pell Grant	Federal Govt.	Yearly award may range from $400 to $4,700 as determined by a federal formula. Based on financial need.	Any student intending to enroll in a credit course at WCCC	Complete Free Application for Federal Student Aid. Must reapply each year. www.fafsa.ed.gov	After January 1/ at least 2 months before semester
PHEAA Grants PA Higher Educ. Assistance Agency	State of PA	Range from $200 to $2,400 per year. Amount determined by state formula. Based on financial need.	Full-time or part-time (at least 6 credits) student enrolled in two-year associate degree program, a U.S. citizen, PA resident, high school grad or GED recipient	Complete Free Application for Federal Student Aid. Must reapply each year.	By May 1
Stafford Loan (Formerly Guaranteed Student Loan Program)	Federal Govt. State of PA Local Banks	Maximum amounts, $3,500 first-year student and $4,500 second-year student. Amounts are requested by student and subject to approval by Financial Aid Office, bank and PHEAA.	Student must be enrolled at least half-time (6 credits), a U.S. citizen and a PA resident	Complete Free Application for Federal Student Aid and Master Promissory Note.	3 months before semester
PLUS (Parents Loan for Undergraduate Students)	Local Banks	Up to cost of education minus other aid. Student must be a "dependent" as defined by IRS.	Students enrolled at least half-time who pass the the necessary credit approval	Forms available from PHEAA and select local banks	2 months before semester
WCCC Work-Study Program	WCCC	Determined by WCCC Financial Aid Office	Any student enrolled at least half-time (6 credits)	Complete a student employment application	Apply any time
Federal College Work-Study Program	Federal Government	Variable; based on unmet financial need	Any student intending to enroll in a credit course at WCCC	Complete Free Application for Federal Student Aid. Must reapply each year.	Apply any time
State Vocational Rehabilitation Educational Assistance	State & Federal Government	Variable; determined by Office of Vocational Rehabilitation (OVR)	Mentally, physically or emotionally disabled students intending to enroll in a credit course at WCCC	Contact local OVR for application forms	3 months before semester
Scholarships	WCCC Foundation	Variable; see listings on pages 15-19 or contact the WCCC scholarship coordinator, 724-925-4215	Based on criteria of scholarship	Application available in WCCC Financial Aid Office	Varies by scholarship; as soon as possible
Veterans Benefits	Veterans Administration	Variable; depends on program	Based on VA program eligibility requirements	Applications available from WCCC Financial Aid Office	2 months before semester

Scholarships

Listed on the following pages are a number of scholarships available at WCCC. Interested students must submit a WCCC Scholarship Application Form. Students may inquire about scholarships at any time, but preference will be given to students who apply by May 1 unless an earlier date is indicated. Application forms are available from the WCCC Financial Aid Office, high school counselors or online at www.wccc.edu.

ACADEMIC SCHOLARSHIPS

Code	Scholarship	Donor	Amount	Eligibility Criteria
S001	President's	WCCC	• Full tuition and fees for two years (Westmoreland County graduates) • Half tuition and fees for two years (graduates from Fayette, Greene and Indiana counties) • Renewable for second year based on 3.0 GPA • Multiple awards	• 2009 Westmoreland County high school graduates • 2009 Fayette, Greene and Indiana county high school graduates • Top 10 percent of their class • High school transcript required
S002	Trustees' Meritorious	WCCC	• Full tuition for two years (Westmoreland County graduates) • Half tuition for two years (graduates from Fayette, Greene and Indiana counties) • Renewable for second year based on 2.5 GPA • Multiple awards	• 2009 Westmoreland County high school graduates • 2009 Fayette, Greene and Indiana county high school graduates • Minimum 3.0 GPA • High school transcript required
S003	Student Recognition Foundation	WCCC Education	• Tuition and fees for up to 15 credits per term for two term • Multiple awards	• Second-year WCCC student/ 24 credits • Minimum 3.5 GPA • Financial need may be reviewed • Three letters of recommendation
S048	Phi Theta Kappa Academic Excellence	Phi Theta Kappa Fraternity and Friends	• $500/term	• Academic history • Requires short essay and two lettters of recommendation
S056	Shirley Jones Music Award	WCCC	• Full tuition • Renewable for second year with 3.0 GPA	• 2009 Westmoreland County high school graduates • Top 10 percent of their class • High school transcript required • Music major

GENERAL SCHOLARSHIPS

Code	Scholarship	Donor	Amount	Eligibility Criteria
S008	WCCC Foundation Award	WCCC Education Foundation	• Varies • Multiple awards	• Based on financial need*
S023	Humanitarian Award	WCCC Education Foundation	• $250/term • Renewable for second year	• Westmoreland County resident • Minimum 3.5 GPA • Requires short essay stating need

SCHOLARSHIPS

SPECIAL CRITERIA SCHOLARSHIPS

Code	Scholarship	Donor	Amount	Eligibility Criteria
S051	Alumni Association	WCCC Alumni Association	• $250/term • Multiple awards	• Full- or part-time WCCC student • Preference given to family members of WCCC alumni (state relationship on application)
S021	Scott Brewer Early Child Care Club	Early Childhood Education Club	• Varies • Multiple awards	• Based on financial need* • Used in WCCC child care center
S027	Eberly Family Fund	Eberly Family Fund	• $500/term • Multiple awards	• Preference given to Fayette, Washington and Greene county students • Based on financial need*
S037	Elliott Company Employee	Anonymous Donor	• Varies based on funds available • Multiple awards	• Must be a past or current Elliott Company employee or spouse, child or grandchild of employee (state relationship on application) • Based on financial need* • **Requires separate application**
S087	Reschini Foundation	Reschini Foundation	• Full tuition	• Must be a family member of a Reschini employee (state relationship on application) • Preference given to employees of the Reschini Agency, Inc.
S079	Ford Business Machines	Ford Business Machines	• $250	• Resident of Fayette County • Must attend classes at Fayette County Education Center • Based on financial need*
S074	Joseph A. Hardy III	Joseph A. Hardy III	• Various • Multiple awards	• Must be Fayette County resident • Must attend classes at Fayette County Education Center • Based on financial need*
S25	Dr. Martin Luther King, Jr. Meritorious	WCCC Black Awareness Committee	• Full-time $250/term • Part-time $125/term	• African-American student • Based on academic history, com munity service and financial need • Requires short essay
S076	Michael J. Kakos Scholarship for Part-time Study	Michael and Aimee Rusinko Kakos	• $500	• Second-semester student • Part-time • Mt. Pleasant area student • **Requires separate application**
S082	Kiwanis of Greensburg	Kiwanis of Greensburg	• $1,000	• Graduates of Greensburg Central, Greensburg-Salem, Hempfield or Greater Latrobe high schools • Minimum 2.5 GPA • Based on financial need*
S035	Never Enough Boutique	Never Enough Boutique and Friends	• $750/term	• Women who need training to enter or re-enter the workforce • Based on financial need* • Requires short essay stating need
S022	New Alexandria Lions Club	New Alexandria Lions Club	• $250/term • Multiple awards	• Priority given to New Alexandria Lions Club service area
S055	New Beginnings	Dr. Steven C. and Karen G. Ender and Friends	• $250/term	• Must be a first-time student age 24 or older • Must be enrolled at least part-time • Based on financial need*

SCHOLARSHIPS

SPECIAL CRITERIA SCHOLARSHIPS *(CONTINUED)*

Code	Scholarship	Donor	Amount	Eligibility Criteria
S017	New Stanton-Youngwood Rotary Club	New Stanton-Youngwood Rotary Club	• $250/term	• Priority to students residing in the New Stanton or Youngwood area • Based on financial need*
S006	Oliver K. Painter Memorial	Oliver K. Painter	• $250/term • Renewable for second year based on GPA	• Must be a Mt. Pleasant or Southmoreland high school senior (awarded on a rotating basis)
S073	Pennsylvania Governor's Conference for Women	WCCC Education Foundation	• $750	• Female first-year student • Essay required
S078	Youngwood Lions	Youngwood Lions	• $250/term	• Residents of New Stanton-Youngwoodarea • Must attend Lions Club meeting
S088	Greater Rostraver Chamber of Commerce	Greater Rostraver Chamber of Commerce	• $1,500	• Full-time WCCC student • Minimum 2.0 GPA • Resident of Belle Vernon, North Belle Vernon, Forward Township, ElizabethTownship, Washington Township, Perryopolis & sur rounding municipalities of Allegheny, Westmoreland and Fayette counties

PROGRAM SPECIFIC SCHOLARSHIPS

Code	Scholarship	Donor	Amount	Eligibility Criteria
Business				
S080	Dr. Frances and John D. DePaul Business Scholarship	Dr. Frances and John D. DePaul	• $125/term	• Second-year student • Minimum 3.5 GPA • Short essay required
S053	Dr. Thomas Lloyd Memorial	Friends of Dr. Thomas Lloyd	• $100/term	• Must have completed 12 credits • Awarded to the applicant with highest GPA
Career Technology				
S054	Hamill Career Technology	WCCC Education Foundation and Friends	• $500/term	• Must graduate from a career technical school • Must be enrolled in a Tech Prep Program • Based on financial need*
Criminal Justice				
S039	E.E. "Duck" Cooley	WCCC Criminal Justice Fraternity	• $200/spring term	• Second semester • Minimum 3.0 GPA
S040	Eli Award	WCCC Criminal Justice Fraternity	• $200/fall term	• Returning student • Minimum 3.0 GPA • Active member of CRJ Fraternity
S042	Michael J. Kakos	Michael & Aimee Rusinko Kakos	• Varies - spring term	• Mt. Pleasant High School graduate • **Requires separate application**

SCHOLARSHIPS

PROGRAM SPECIFIC SCHOLARSHIPS *(CONTINUED)*

Code	Scholarship	Donor	Amount	Eligibility Criteria
Criminal Justice (continued)				
S077	Corporal Jason Alan Shaffer Memorial Scholarship	Family and friends of Corporal Shaffer	• $125/term	• Criminal justice • Derry Area High School graduate preferred • Based on financial need*
S007	Cecil Yates Memorial	Relatives of Cecil Yates	• $250/term	• Returning student • Based on financial need*
Culinary Arts/Hospitality				
S069	American Culinary Federation	ACF Laurel Highlands Chapter	• $500/semester	• Junior member of the ACF Laurel Highlands Chapter • 10 credits or more in the major • Based on academic achievement
S070	Chef Jack F. Braun Memorial Scholarship	Friends and family of Chef Jack F. Braun	• $1,000	• Minimum of 10 credits in the major • Based on academic achievement • Essay required
S062	Celli-Flynn Brennan Architects & Planners	Celli-Flynn Brennan Architects & Planners	• Two awards/$1,100 each	• Based on financial need*
S065	First Commonwealth	First Commonwealth	• $325/term	• Based on financial need*
S061	Highmark Blue Cross Blue Shield	Highmark Blue Cross Blue Shield	• Two awards/$1,100 each	• Based on financial need*
S063	S & T Bank	S & T Bank	• Two awards/$125/term	• Based on financial need*
S058	Donald D. Mateer	Donald D. Mateer Foundation	• $1,425/term • Renewable second year	• New student • Based on financial need* • Minimum 2.75 GPA to renew
S067	McDowell Associates, Inc.	McDowell Associates, Inc.	• $325/term	• Based on financial need*
S071	June Smith Millison Culinary Arts Scholarship	Family of June Smith Millison	• $1,200	• Minimum of 10 credits in the major • Based on academic achievements, professional activities and awards
S072	Nemacolin Woodlands Resort	Nemacolin Woodlands Resort	• Varies • Multiple awards	• Recipients must be enrolled in the Nemacolin Woodlands program • Based on financial need*
S066	Smiy Family Foundation	Smiy Family Foundation	• $325/term	• Based on financial need*
S064	Walmart	Walmart	• Two awards/$1,125 each	• Based on financial need*
S085	Wiley Publishers Book Scholarship	Wiley Publishers	• Books for one year	• Culinary student enrolled in the Nemacolin Woodlands program • Based on financial need*
Early Childhood Education				
S046	Agnes Kakos Memorial	Michael and Aimee Rusinko Kakos	• Varies - spring term	• Mt. Pleasant High School graduate • **Requires separate application**

PROGRAM SPECIFIC SCHOLARSHIPS *(CONTINUED)*

Code	Scholarship	Donor	Amount	Eligibility Criteria
Fine Arts				
S089	John Pollins Memorial Scholarship	Kathleen Dlugos and Stephen Pastor	• $300	• Currently enrolled in AFA degree program • Must maintain a 3.0 GPA • Must register for a Summer Touchstone/WCCC Class
Graphic Design				
S059	Gregory Hricenak Graphic Design	Anonymous	• $125/term	• Minimum 3.2 GPA
Horticulture				
S075	Horticulture Club	Horticulture Club	• $250	• Must have 9 credits in horticulture • Must be a member of the Horticulture Club • Based on academic achievement
S047	George Stephen Rusinko Memorial	Michael and Aimee Rusinko Kakos	• Varies - spring term	• Mt. Pleasant High School graduate • **Requires separate application**
Math or Science Major				
S052	Dr. Daniel Krezenski Scholarship	Friends of Dr. Daniel Krezenski	• $125/term	• Full-time student • Based on academic history • Based on financial need*
Nursing				
S009 Yough	Iva Jones King Memorial	Ed & Priscilla King Hogan	• $250/term	• First-year nursing student from or Belle Vernon school district • Based on financial need*
S060	Roylene Penska	Family of Roylene Penska	• $250/term	• Returning student • Minimum 3.0 GPA
S084	Kakos Evening and Weekend Nursing	Michael and Aimee Rusinko Kakos	• $500 • Multiple awards	• Must be enrolled in the Evening and Weekend Nursing Program • Based on financial need*
S045	Agnes Rusinko Memorial	Michael and Aimee Rusinko Kakos	• Varies - spring term	• Mt. Pleasant High School graduate or resident of Mt. Pleasant Township • **Requires separate application**
S061	The Thorne Group	The Thorne Group	• Full tuition and books	• Greensburg Salem High School graduate
S086	Carol L. Curey	Debra D. Woods	• $250/term	• Must maintain a minimum 2.5 GPA • Must be enrolled in Nursing Program • Based on financial need*
S090	George Stephen Rusinko Memorial Scholarship	Michael and Aimee Rusinko Kakos	• One-time scholarship	• Successful completion of the first academic term • Hourly paid employee of Westmoreland Manor (state employment position on application) • Must be enrolled in health or nursing related field

SCHOLARSHIPS

PROGRAM SPECIFIC SCHOLARSHIPS *(CONTINUED)*

Code	Scholarship	Donor	Amount	Eligibility Criteria
Office Technology (Medical) and Medical Assisting				
S049	Beverly Diehl Memorial	Daughters and friends of Beverly Diehl	• $200/term	• Returning student • Preference given to nontraditional students • Based on financial need*
Psychology/Humanities Transfer				
S081	Bruck Elizabeth Dorczuk Memorial Scholarship	Joseph and Vicki Dorczuk	• $500/term	• Psychology or humanities transfer student • Based on financial need*
Visual Arts Major				
S041	Gregory Hricenak Visual Arts	Family and friends of Greg Hricenak	• $500/term	• Minimum 2.5 GPA • Based on financial need*

Based on financial need - requires completion of the Free Application for Federal Student Aid (FAFSA)

Unit of Credit

A credit hour is the unit of credit students earn at WCCC. One credit hour usually corresponds to one 50 minute class meeting each week for 15 weeks. A course worth three hours of credit, therefore, usually requires three 50 minute class meetings plus additional work outside the class each week.

Grades and Grade Points

Letter grades are assigned to inform students how well they have learned the material in their course(s). For each letter grade there is a corresponding number called grade points. The table below shows the grades and their grade point equivalents.

Grade	Academic Achievement		Grade Points
A	superior	=	4.0
B	considerable	=	3.0
C	satisfactory	=	2.0
D	marginal	=	1.0
F	unsatisfactory	=	0.0
W	withdrawn	=	0.0
I	incomplete	=	grade to be computed upon completion of course
AU	audit	=	no credit

The Grade Point Average (GPA) is computed by multiplying the point value of each grade earned by the number of semester hours of the course for which the grade is received and then dividing by the total number of hours of work attempted. Courses numbered below 100 are not calculated into the grade point average.

Example of Grade Point Average Calculation

Grades		Grade Point Value		Semester Hours of Credit		Grade Hours
C	=	2.0	x	3	=	6
B	=	3.0	x	4	=	12
A	=	4.0	x	3	=	12
C	=	2.0	x	3	=	6
B	=	3.0	x	3	=	9
				16		45

45 grade points ÷ 16 semester hours = 2.81 grade point average or GPA

Academic Forgiveness

Students who return to Westmoreland County Community College after a four-year absence may petition that the credits with D and F grades earned during their previous enrollment at the college be removed from the computation of the cumulative grade point average. This petition may be made only after completion of 12 new credits with a grade point average of 2.0 or higher for these 12 credits. Once approved, previously earned credits with D and F grades are not used for calculating the student's grade point average, however, they remain on the transcript with an appropriate notation. Students should meet with a counselor or their faculty advisor to initiate the process.

Repeating Courses

Students may repeat courses in which they receive D or F grades; however only the grade and credits earned the second time will be included in the calculation of grade point average. Such courses may be repeated only once. Any exception to this policy must be submitted to the vice president for academic affairs and student services for approval.

Incomplete Grades

"Incomplete" is appropriate when the student has completed most of the course requirements, and has contracted to make up the remaining or outstanding work. The grade of "incomplete" is given only at the discretion of the instructor if, in the instructor's judgment, the student has furnished satisfactory evidence that the work cannot be completed because of illness or other extenuating circumstances. The incomplete (I) automatically changes to an F grade if work is not completed by the date specified by the instructor, not to exceed one semester.

Grade Appeal

All final grades posted on a student's transcript at the end of a semester are considered correct unless a question is raised within one year of its recording. Students should address inquiries or appeals to the instructor of the course within one year from the end of the courses.

Attendance

Students are expected to attend all class sessions and to complete all course work as specified in the course syllabus. Should students require an extended absence, the instructor should be notified. If the faculty member cannot be reached, the director of student development should be notified. Students unable to meet the performance requirements of the course should complete an official course withdrawal form. Students should see page 11 of this college catalog for withdrawal procedures. Poor attendance may result in class withdrawal initiated by the instructor after the third week and prior to the end of the twelfth week. In programs regulated by external agencies, attendance policies may differ from the policies above. Students enrolled in such programs should consult with their faculty advisors or deans.

Student Illness

Students must contact their instructors if they expect to miss three or more consecutive class days because of illness or other circumstances beyond their control. Students must also disclose the reason for the absence. If a faculty member cannot be reached, the director of student development should be notified.

Standards of Academic Progress

All students are expected to maintain satisfactory academic progress. Satisfactory academic progress requires maintaining a cumulative grade point average of 2.0 or higher. Failure to maintain satisfactory academic progress may result in probation status or suspension.

ACADEMIC INFORMATION

Statement of Purpose

Standards of academic progress are established to assist students in reaching their highest educational goals. Academic standards procedures provide ongoing assistance to facilitate student academic success.

Early Intervention

Students with less than 12 credits and a grade point average below 2.0 will be identified and encouraged to meet with a counselor to discuss their academic progress. These students are not on probation.

Academic Probation

Students whose cumulative grade point average is below 2.0 after completing 12 but less than 36 credits will be placed on academic probation and will be subject to the following restrictions:

1. Enrollment is limited to 12 credits
2. Students must meet with a counselor to discuss their academic progress and develop an education plan before registering for classes

Students will remain on academic probation until a cumulative grade point average of 2.0 is achieved. Students on probation may be limited in their participation in student athletics and activities.

Students who believe that they should not be on academic probation may appeal their status by submitting a written request to the office of the director of student development.

Academic Suspension

Students who have completed 36 or more credits and have been on academic probation for three consecutive semesters will be suspended. Suspended students may not enroll in credit courses for one semester. Should students wish to enroll in a subsequent semester, they are subject to the following restrictions:

1. Students must meet with a counselor to review their educational goals, develop strategies for improvement, and complete an educational contract approved by the director of student development.
2. Failure to maintain a 2.0 grade point average after completing 12 additional credits will result in suspension for a full academic year.
3. Students suspended for a full academic year will be required to apply for readmission to the college.

Appeal Process

A student who has been notified of academic suspension may appeal the suspension by completing the appropriate form available from the office of the director of student development. The appeal must be submitted to the office of the director of student development who will make a determination on the appeal.

Readmission

Those students suspended for one year must submit a written request at least six weeks prior to the semester in which they wish to enroll. An appointment with a counselor must be made to establish an educational plan.

Learning Resources Center

The Learning Resources Center supports the instructional process by providing library, audiovisual and digital database services. The LRC also coordinates interactive television (ITV) classes, online classes offered via the Blackboard system, and the Credit for Experiential Learning process. Students who have questions or comments about LRC services should contact the Director of Learning Resources and Special Projects, 724-925-4101.

Library

The library's print, audiovisual and digital collections are selected to support the college curricula and to provide materials for leisure reading. Collectively, these include over 50,000 books, 10,000 periodical titles, hundreds of instructional videos and a variety of other materials. A qualified professional staff is available during library hours to assist students in the use of library materials. Coin-operated copiers are available for student use.

Student Access to Library Resources

All WCCC students have access to the library's print and audiovisual materials at the Youngwood campus. Students who take classes exclusively at education centers may request books through the library's catalog or by telephone, and materials are delivered via courier to the appropriate education center. All currently registered students also have access to the digital systems to which the library subscribes by logging in to CampusConnections.

WCCC participates in the Westmoreland County Academic LIbraries Reciprocal Borrowing Program which provides the opportunity for WCCC students to borrow library materials directly from the following libraries: Penn State-New Kensington, Saint Vincent College, Seton Hill University, and the University of Pittsburgh at Greensburg. Students must present a valid ID card when requesting borrowing privileges or reference assistance.

The library also participates in regional and national consortia which facilitate interlibrary book lending and interlibrary photocopy services for materials not held locally.

College Learning Center

Located in rooms 560 and 565 of Founders Hall, the College Learning Center offers WCCC credit students comprehensive services which are essential to academic success.

Tutorial services are offered through the College Learning Center (CLC) at no cost to students. The coordinator works closely with a staff of professional and peer tutors who provide individual and small group tutoring in most courses. The CLC also offers a writing lab, study skills assistance, and computer-assisted instruction.

Videocassette course, placement testing, and make-up testing are also administered in the CLC. Students are required to show the test monitor a current WCCC student photo ID card. No personal items will be allowed in the testing area. These items should be stowed prior to

entering the CLC. Students may stow their personal items in the lockers outside the testing area. Personal items include, but are not limited to; cell phones, book bags, purses, textbooks and loose paper. All tests are filed by the course instructor's last name; therefore, students should know their instructor's name prior to coming to the CLC. Following these procedures will help to provide an efficient and effective testing service.

GED Testing and Scholarship Program

WCCC is designated by the Commonwealth of Pennsylvania as an official GED Testing Center and provides a high quality, secure testing facility for adults who wish to earn a GED. WCCC offers a GED Scholarship Program for income-eligible Westmoreland County residents.

The cost to take the full GED tests for the first time is $50 and those who successfully complete the test will be refunded $50 through the WCCC GED Scholarship Program. Eligibility is based on federal poverty-level guidelines.

In addition, those who successfully complete the GED test at WCCC are entitled to enroll for one three-credit course at WCCC tuition free. To be eligible, GED graduates must provide proof of Westmoreland County residency and the GED Commonwealth Secondary School Diploma and must inquire within 90 days of receipt of the GED diploma.

WCCC administers the GED test on a monthly basis in the College Learning Center at the Youngwood campus. The test is usually conducted during a two-day session and lasts approximately four hours each. In addition, the WCCC Continuing Education Division offers GED test preparation classes to help students prepare for the exam.

For more information about the GED testing or the GED Scholarship Program, call 724-925-4133.

Cooperative Education

Cooperative education is a work experience program designed to supplement formal classroom study with supervised on-the-job learning experiences in college-approved work locations. Academic credit may be earned for work experience if the student's job is related to the field of study or vocational goals. Cooperative education is offered in most career fields. Interested students should contact the cooperative education coordinator at 724-925-4058 the semester prior to planned participation.

Information Technology Center

The Information Technology Center provides the college with a powerful and flexible academic computing and communications environment. A college-wide computer network links the Youngwood campus with the education centers providing access to an online library circulation system, several special-capacity workstations, WCCC web services and the Internet. Using a combination of outside services such as Blackboard and CampusConnections, as well as dedicated lines and equipment, the college offers online courses linking the campus to Internet functions.

Instructional computer facilities include 29 microcomputer classrooms and 14 personal computer laboratories, 20 electronic classrooms and seven distance education rooms at the Youngwood campus and the education centers. Each microcomputer classroom provides file sharing and access to a laser printer and the Internet, while the personal computer laboratories provide specialized software, tutorial support and open computer usage. The purpose of the laboratories is to help students gain practical experience in microcomputer applications and learn how computers are used within particular disciplines. Programs available include word processing, e-mail, spreadsheets, database management, graphics, several programming languages, file transfer, remote login, World Wide Web, tutorials, drafting and several operating systems. The labs are available to all registered students and are open more than 65 hours per week during the regular semesters.

The Information Technology Department maintains the infrastructure of WCCC, including telephones, networks and distance education.

Academic Honors

President's List/Dean's List

At the end of each semester, full-time students who have achieved a semester grade point average (GPA) of 4.0 are named to the President's List; full-time students who obtain a GPA between 3.50 to 3.99, with no D or F grades are named to the Dean's List. Developmental courses are not included in the calculation of the GPA.

Part-time students who have achieved a GPA of 4.0 are named to the President's List. The GPA is calculated upon the completion of at least 12 credits; 24 credits; 36 credits; and 48 credits.

Part-time students who have achieved a GPA of 3.5 to 3.99 with no D or F grades are named to the Dean's List. The GPA is calculated upon the completion of at least 12 credits; 24 credits; 36 credits; and 48 credits.

Graduation Honors

Students who have earned an overall grade point average of 4.0 are graduated "with highest honors." Students who have earned an overall grade point average of at least 3.75 and below 4.0 are graduated with "high honors." Students who have earned an overall grade point average of at least 3.50 and below 3.75 are graduated "with honors."

Recognition of Achievement

The college encourages student achievement in scholarship and leadership and formally honors students at commencement and other suitable occasions. Students who have distinguished themselves through academic excellence are honored annually at the Academic Awards Dinner. The Student Awards Ceremony recognizes those who have excelled in cocurricular activities.

Graduation Requirements

To be eligible for graduation, all students must:

- Complete the requirements for their program of study as listed in the catalog in effect at the time of initial enrollment or any subsequent catalog including the current one, provided the catalog does not exceed six years prior to the anticipated graduation date.
- Earn at least 30 credits of degree requirements or 15 credits of diploma requirements at WCCC under faculty instruction and evaluation. This does not include transfer credits, credits awarded for CLEP and other standardized exams, credit by exam or portfolio.
- Maintain a grade point average of 2.0 or better in all course work required and maintain a 2.0 average or better in the major.
- Fulfill all financial obligations to the college.
- File an application for graduation at the Student Information Center and pay the required nonrefundable graduation fee. Those who fail to meet graduation requirements must notify the Records Office to reactivate their graduation files.

Note that developmental courses (those courses which have course numbers below 100) carry no quality points, may not be used to meet graduation requirements and will not transfer to all senior institutions.

Additional Degrees

Students may earn more than one associate in applied science degree from WCCC subject to the following conditions:

1. Two or more degrees may be earned, provided the specific requirements listed in the curriculum for each program of study are met.
2. Multiple degrees may be pursued concurrently or sequentially.
3. Only one associate in arts degree may be earned.

Learning Outcomes Assessment at the Course, Degree and Institutional Levels

Specific learning outcomes are essential components of all credit courses and are delineated in the course outline and syllabus. Students should expect to receive the course outline and syllabus at the start of each class. Assessment of the learning outcomes throughout the course provides the basis to determine the extent to which student learning has occurred. Procedures for evaluation of learning outcomes are delineated in the course syllabus. Questions regarding course learning outcomes should be first addressed to the instructor of the course and then the appropriate division dean.

Student learning outcomes at the program level are delineated in the respective competency profiles for each degree, diploma and certificate. Students achieve competency of the outcomes by satisfactory completion of all program course requirements.

Institutional learning outcomes have been adapted from *Learning Outcomes for the 21st Century* and have been approved as the framework for general education at WCCC. Students are expected to achieve competency in all of these outcomes through satisfactory completion of the general education course distribution and program course requirements for all associate degree programs.

Institutional learning outcomes include:

Communication *(reading, writing, speaking, listening)*

1. Students will be able to read, understand and apply information from written materials.
2. Students will be able to illustrate through their writing, the ability to interpret and explain their own ideas as well as those of others.
3. Students will be able to write and speak, using correct grammar.
4. Students will be able to interpret ideas expressed verbally and apply these ideas to classroom discussion and assignments.

Computation *(understanding and applying mathematical concepts and reasoning, analyzing and using numerical data)*

1. Students will be able to interpret and apply information from graphs, charts and tables.
2. Students will interpret and apply statistical data.
3. Students will be able to integrate and apply mathematical skills to solve quantitative problems.

Community *(citizenship, diversity/pluralism, local community, global environmental awareness)*

1. Students will demonstrate citizenship through active participation in service learning projects.
2. Students will demonstrate an understanding and appreciation of cultural diversity.
3. Students will demonstrate an understanding and appreciation of a global society.
4. Students will demonstrate an awareness of environmental issues.
5. Students will be able to identify responsibilities of citizenship at the local, state and national levels.
6. Students will be able to compare and contrast different forms of governments and economic systems.

Critical Thinking *(analysis, synthesis, evaluation, decision making, creative thinking)*

1. Students will be able to collect, analyze and evaluate information to support decision making.
2. Students will be able to analyze and solve problems.
3. Students will formulate accurate conclusions based on data.
4. Students will be able to demonstrate the ability to support arguments with relevant evidence.
5. Students will use divergent thinking for problem-solving applications.

Information Literacy Skills *(collecting, analyzing, and organizing information for a variety of sources)*

1. Students will demonstrate an awareness of the variety of information resources for use in a learning environment.
2. Students will be able to differentiate the relative merit of information sources.
3. Students will be able to locate, retrieve and evaluate electronic and printed materials for research and information purposes.
4. Students will be able to demonstrate the ability to present information in an appropriate, organized manner.
5. Students will be able to develop the skills to collect and analyze relevant information.

Interpersonal *(teamwork, relationship management, conflict resolution, workplace skills)*

1. Students will be able to work effectively in groups.
2. Students will be able to resolve interpersonal conflicts in a respectful and positive manner.
3. Students will demonstrate appropriate workplace protocol.
4. Students will develop and will be able to utilize effective listening skills.
5. Students will appreciate the value of others' viewpoints and contributions.

Personal *(ability to understand and manage self, management of change, learning to learn, personal responsibility, aesthetic, responsiveness, wellness)*

1. Students will demonstrate time-management skills.
2. Students will be able to identify and demonstrate socially acceptable behavior in academic and professional settings.
3. Students will demonstrate an awareness of healthy lifestyles.
4. Students will demonstrate an understanding of, and commitment to, academic integrity.

Technology *(computer literacy, Internet skills, retrieving and managing information via technology)*

1. Students will be able to recognize the need to adapt to changing technology.
2. Students will be able to develop an awareness and appreciation of the impact of computer technology in the contemporary world.
3. Students will be able to demonstrate computer literacy through the effective use of technology.
4. Students will be able to integrate technology into their program of study.
5. Students will be able to compose and transmit a document.

Act 48

WCCC is an approved provider for Act 48 courses/training in the Commonwealth of Pennsylvania. Educators wishing to take WCCC courses to fulfill Act 48 requirements should check their course selection with their school district. When registering at WCCC, students should identify their interest in Act 48 by completing the Act 48 Continuing Professional Education Career Verification form.

Transcripts

Students who want transcripts of their academic records should complete the Transcript Request Form at the Student Information Center at least one week before the transcript is needed. Transcripts are issued only at the request of the student; official transcripts are sent directly to the institution or agency specified. All financial obligations to the college must be paid before a transcript is issued.

Transcript/Grade Report Abbreviations

In addition to grades, the following abbreviations may be found on the transcript and grade report.

GPA — Grade point average. A GPA is computed by multiplying the credits for each course times the grade points earned, adding the total and dividing by the total number of credits. A minimum overall GPA of 2.0 is required to graduate.

CR — Credit awarded. No grade points.

I — Incomplete. Indicates that the student has not completed all requirements for the course. The incomplete (I) automatically changes to an F grade if work is not completed by the date specified by the instructor, not to exceed one semester.

**** — Academic Forgiveness.** Credits and grade points not calculated in the overall GPA.

AU — Audit. No credit and no grade points.

W — Withdrawal. Indicates withdrawal by the seventh week of the semester or withdrawal, passing, after the seventh week. No grade points.

Z — No grade submitted. Indicates that instructor has not submitted a grade. No grade points.

Developmental Courses — Placement test results may require enrollment in developmental courses. These are courses numbered below 100. Grades in developmental courses are not calculated in the grade point average (GPA), and these courses are not applied to degree requirements for the associate in arts or associate in applied science degrees. Developmental courses are designed to help students learn the skills necessary for college work. By completing developmental courses, students will impvove their chances for success in their academic program.

Academic Information

Academic Guarantee

The WCCC board of trustees adopted the Academic Guarantee in July 2001 as an affirmation of the college's confidence in the quality of its programs and graduates. The Academic Guarantee provides up to 15 additional credit hours of course work tuition free for graduates of WCCC associate in applied science degree programs whose competencies do not meet the expectations of their employers. The guarantee, which is effective for students graduating in 2002 and beyond, stipulates that the alumnus must be employed full time in a position related to his or her field of study within one year of graduation. Following an employer's written notification of a graduate's lack of entry-level skills, WCCC will develop an educational plan to address the specific skill deficiency.

Delivery of Academic Programs

Courses in academic programs are taught via a variety of formats: traditional classrooms and laboratories; interactive videoconferencing, media-enhanced classrooms utilizing SmartBoard technology; and individualized learning experiences such as independent study, honors seminars, self-paced courses, videocassette courses and online courses.

Interactive Television (ITV)

WCCC offers courses using interactive video technology which links the Youngwood campus with the Armstrong County, Bushy Run, Fayette County, Greene County, Indiana County, Laurel, Mon Valley and New Kensington education centers. The instructor teaches from various sites during the semester; students can see, hear, and interact with the instructor and other students at any of the sites.

Online Courses

Online courses available via the Blackboard system offer students the opportunity to take courses using their home computers or computers located in other sites such as public libraries or the WCCC computer labs. Students have the opportunity to do course work at times convenient to them. Interaction with the instructor, as well as with other students in the class, enhances and personalizes the learning experience.

Independent Study

Independent study courses allow students to pursue a special interest which is not offered as a regular course in the curriculum. The distinguishing differences between an independent study experience and a regular course are the degree of responsibility that the student assumes, the subject matter and the content of the study. Students are required to assume responsibility for most aspects of the learning process normally assumed by the instructor in a regular course.

To enroll in an independent study course, students must determine with an instructor a valid area of investigation and/or activity and propose a series of activities to complete the course requirements.

Honors Seminar

Honors Seminar is designed for students who have demonstrated academic excellence and have shown a high degree of motivation and interest in pursuing knowledge independently.

A student enrolled in the Honors Seminar is required to develop an intellectually challenging project which demonstrates outstanding academic achievement.

Each student also must select a faculty mentor to supervise and evaluate the project. In addition, Honors Seminar students meet throughout the semester to discuss the progress of their projects, receive peer evaluations and showcase their results at the conclusion of the semester.

PROGRAMS OF STUDY

ACCOUNTING
Accounting, AAS. 42
Computer Accounting and Tax Specialist, Certificate . . 43

ALLIED HEALTH
Dental Assisting, Diploma 91
Dental Hygiene, AAS 93
Diagnostic Medical Sonography, AAS 95
Dietetic Technician/Nutritional Services
Management, AAS 99
Expanded Functions Dental Assisting, Certificate. . . . 109
Medical Assisting, Diploma. 136
Nursing, AAS, Diploma 142-146
Phlebotomy/Specimen Processing, Certificate. 155
Radiology Technology, AAS 157-160

ASSOCIATE IN FINE ARTS
Studio Arts Option, AFA 40

BUSINESS
Business 52
Financial Management Option, AAS, Certificate . 53, 60
General Management Option, AAS, Certificate . . 54, 60
Human Resources Management Option, AAS,
Certificate 55, 61
Marketing Management Option, AAS, Certificate . . 56, 61
Real Estate Management Option, AAS, Certificate . . 57, 62
Small Business Management Option, AAS,
Certificate 58, 62
Diploma. 59

COMPUTER INFORMATION SYSTEMS
Computer Information Security, AAS, Certificate . . 64, 65
Computer Systems Electronics Technology, AAS
Electro-Optics Option. 68
Networking Option 69
Computer Technology. 70
Networking Option, AAS, Certificate. 71, 79
Programming for the Enterprise Option, AAS. 72
Technical Support Option, AAS 73
Telecommunications Option, AAS, Diploma 74, 76
Computer Technology, Diploma 75
Database Application Development, Certificate 77
Fiber Optic Technologies, Certificate 78
Microcomputer Applications, Certificate. 77
PC Repair/A+, Certificate. 79
Programming, Certificate 80
Web Development, Certificate. 80

CULINARY ARTS/HOSPITALITY MANAGEMENT
Baking and Pastry, AAS, Certificate, Diploma 45-50
Casino/Gaming, Certificate 63
Culinary Arts, AAS, Diploma 84-90
Dietetic Technician/Nutritional Services
Management, AAS 99
Dining Room Management, Certificate 101
Hotel/Motel Management, Certificate 128
Restaurant/Culinary Management, AAS. 161
Travel, Tourism and Lodging
Management, AAS 163

ENGINEERING SCIENCE AND INDUSTRIAL TECHNOLOGY
Architectural Drafting and Design, AAS 44
Bionanotechnology, AAS. 51
Computer Numerical Control
Technology, AAS, Certificate 66, 67
Computer Systems Electronics Technology, AAS
Electro-Optics Option 68
Networking Option. 69
Drafting and Design Technology, AAS
Computer Aided Drafting and Design/Computer
Aided Manufacturing Option 102
Mechanical Drafting and Design Option. 103
Electronics Engineering Technology, AAS. 107
Engineering Technology, AAS. 108
Fire Science Technology, AAS,
Diploma, Certificate. 111-113
Heating, Ventilation, Air-Conditioning,
and Refrigeration, AAS, Certificate. 120, 121
Machine Technology, AAS, Certificate. 131, 132
Manufacturing Technology, AAS
Manufacturing Maintenance Apprentice Option . . . 133
Manufacturing Process Technology Option. 134
Nanofabrication Manufacturing Option 135
Robotics Technology, AAS 162
Welding Engineering Technology,
AAS, Certificate 168, 169

GRAPHIC DESIGN AND ANIMATION
Graphic Design and Animation 114
Flash Design Option, AAS 115
Graphic Design Option, AAS, Certificate 116, 117
2-D Animation, Certificate 118
3-D Animation, Certificate 119

PROGRAMS OF STUDY

HORTICULTURE

Floriculture Option, AAS, Certificate 122, 125
Landscape Design, Installation and Maintenance Option, AAS 123
Turfgrass Management Option AAS, Certificate . 124, 127
Horticulture, Certificate 125
Landscape Design, Certificate 126
Landscape Installation and Maintenance, Certificate 126

PUBLIC SERVICES

Criminal Justice, AAS 81
Information Security Option, AAS 82
Corrections Officer, Certificate 83
Early Childhood Education, AAS, Diploma, Certificate 104-106
Early Childhood Director, Certificate 106
Fire Science Technology, AAS, Diploma, Certificate 111-113
Human Services, AAS 129
Library Science, Certificate 130
Paralegal, AAS, Diploma 130, 131

LIBERAL ARTS AND SCIENCE (Transfer Options) *(All options lead to an associate in arts degree.)*

Art 32
Biology 32
Business 32
Chemistry 33
Chiropractic 33
Communication 33
Computer Science/Information Systems 34
Criminal Justice 34
Engineering 34
English/Writing/Literature 35
Health and Physical Education 35
Health Professions 35
History 36
Humanities 36
Library Science 36
Mathematics 37
Physics 37
Political Science 37
Psychology 37
Sociology 38
Teacher Education 39
Undecided 38

MULTIMEDIA AND PHOTOGRAPHY

Multimedia Technology Option, AAS 138
Adobe Video Studio, Certificate 140
Photography, AAS, Certificate 139, 140
Video/Television, Certificate 141

OFFICE TECHNOLOGY

Medical Administration Option, AAS, Certificate 147, 151
Medical Transcription, Diploma 149
Medical Coding/Billing, Certificate 151
Office Administration Option, AAS, Diploma, Certificate 148, 150, 152

WEB TECHNOLOGY

Web Commerce Option, AAS 165
Web Publishing Option, AAS, Certificate 166, 167
Web Development, Certificate 167

ACADEMIC PROGRAMS

WCCC offers the associate in arts degree, the associate in applied science degree, diploma programs, and certificate programs.

Associate in Arts Degree (A.A.)

The associate in arts degree requires a minimum of 60 credits. All associate degree students are required to complete a core of 38-40 credit hours of general education courses, designed to broaden and enhance their educational experience, and 21-24 credit hours of transfer electives. The general education requirements are distributed over the areas of communications, humanities, social science, mathematics, natural science and computer science as outlined on page 30. The transfer electives may also be selected from the courses listed on page 30 or up to 15 of the 24 credit hours may be selected from courses listed on page 31. When selecting transfer electives, it is recommended that the student seek the guidance of a counselor or his/her academic advisor.

Associate in Applied Science Degree (A.A.S.)

The associate in applied science degree requires the completion of at least 60 credit hours. Students take 15 hours of general education, one computer technology course, and specific program courses. Many courses completed for the associate in applied science degree may transfer to a four-year college. However, some credits may not transfer. The transfer of credits earned in an A.A.S. degree depends on the senior institution's requirements.

Associate in Fine Arts Degree (A.F.A.)

The associate in fine arts degree requires 61 credits. Students complete 19 general education credits distributed over the areas of communication, mathematics, and social and natural sciences. Students also complete 24 credits in the major. The remaining 18 credits are taken as required courses and restricted electives related to the major but which allow the student to explore individual areas of interest within the field. It is recommended that students seek the guidance of an academic advisor when selecting elective courses.

Diploma and Certificate

Diploma programs require a minimum of 30 credit hours and are designed for students interested in specific career courses. Certificate programs consist of 15-23 credits and are specialized, short-term programs which focus on work force entry and/or development of specialized career skills.

General Education

All associate degree programs include general education course requirements. For the associate in arts degree, courses that satisfy general education are listed on page 29 by areas. Courses that satisfy general education requirements for the associate in applied science degree are listed by area on page 41.

The 21st Century Core Competencies, adopted from *Learning Outcomes for the 21st Century*, have been approved as the framework for General Education at WCCC.

Transfer to Four-Year Colleges and Universities

Westmoreland County Community College offers courses which parallel those offered at four-year colleges and universities during the freshman and sophomore years and lead to the baccalaureate degree. Therefore, it is possible to complete the first two years of a baccalaureate program at WCCC and transfer to a four-year institution. Students can be assured that with appropriate planning the transfer experience will be a successful one. The WCCC counseling staff or assigned academic advisor will help to develop a plan to make the transfer process smooth.

Students who plan to transfer should realize that it is usually not necessary to select a major until the sophomore year. This gives students some time to explore different areas of study during the freshman year. However, by the sophomore year students will want to select courses which meet the requirements of the program at the four-year college to which they plan to transfer.

If there is a senior institution being considered, WCCC will help students select the courses which will work best at that institution. If a student has not selected a four-year institution, the counseling center at WCCC has a large collection of college catalogs and other materials to help in the selection. Many senior institutions will visit WCCC to talk with prospective students. Once a major and a senior institution have been chosen, students are able to select the remainder of their courses with more specific requirements in mind.

Westmoreland County Community College offers the associate in arts (A.A.) and associate in fine arts (A.F.A.) degrees which are designed for students planning to transfer. Suggested courses are listed on pages 32-40 for specific majors in baccalaureate programs. This list is not all inclusive and students should contact the four-year institution to which they plan to transfer to ensure compatibility with program requirements. Not all majors are listed; however, students who have not made decisions about majors or senior institutions can generally take courses that will transfer by using the course selections in general education areas (page 31).

Career degree (A.A.S.) programs prepare students for employment and therefore concentrate on job-related courses. A.A.S. degree students who decide to transfer to four-year colleges or universities may find some courses cannot be applied toward the baccalaureate degree. Transfer of credit to a baccalaureate program is not the primary purpose of career programs even though some courses may be acceptable as electives at a transfer institution.

Associate in Arts Degree (A.A)

Degree Requirements

The requirements of the associate in arts degree are:

- **38-40 semester hours of general education from the courses listed below.**
  To meet the general education requirement, 38 credit hours should be taken in the six areas designed below. Specific courses are listed for each area.

- **21-24 semester hours of transfer electives***
  Transfer electives may be selected from courses listed below or up to 15 credits may be chosen from courses listed on page 30.

I English 6 semester hours	II Humanities 9 semester hours (in 2 areas)		III Social Science 9 semester hours (in 2 areas)	IV Mathematics 3 semester hours	V Natural Science** 8-10 semester hours	VI Computer Science 3 semester hours
ENG 161	ART 155	HUM 156	ECN 155	MTH 157	BIO 107	CPT 145
ENG 164	ART 158		ECN 156	MTH 158	BIO 120	CPT 150
	ART 160	MUS 155	ECN 158	MTH 160	BIO 145	CPT 151
	ART 162	MUS 160		MTH 161	BIO 155	
			GEO 155	MTH 172	BIO 156	
	ASL 101	PHL 155		MTH 180	BIO 171	
	ASL 102	PHL 160	HIS 155	MTH 185	BIO 172	
	ENG 159	PHL 161	HIS 156		BIO 265	
	ENG 165	PHL 165	HIS 249			
	ENG 245		HIS 255		CHM 107	
	ENG 255	REL 171	HIS 256		CHM 108	
	ENG 256	REL 181	HIS 257		CHM 155	
	ENG 258		HIS 262		CHM 156	
	ENG 260	SPA 155				
	ENG 264	SPA 156	POL 155		EPS 150	
	ENG 270		POL 200		EPS 160	
	ENG 271	SPC 155			EPS 163	
	ENG 275	SPC 156	PSY 160			
	ENG 276	SPC 157	PSY 161		GEO 160	
	ENG 277	SPC 158	PSY 163			
	ENG 279	SPC 255	PSY 165		PHY 153	
	ENG 280		PSY 167		PHY 155	
	ENG 290	THR 160	PSY 260		PHY 156	
		THR 161	PSY 265		PHY 255	
	FRN 155	THR 170	PSY 267		PHY 256	
	FRN 156		PSY 268			
			PSY 270			
			SOC 155			
			SOC 157			
			SOC 161			
			SOC 162			
			SOC 165			
			SOC 255			

*While these courses are designed for transfer, students are reminded that the requirements for a bachelor's degree vary among four-year colleges and universities. For this reason students are cautioned to select courses which fulfill the requirements of the school to which they intend to transfer. They should contact the WCCC transfer counselor before their first semester and be guided by the catalog of the college or university they wish to attend after earning their associate degree.

**Natural Science distribution may be satisfied by: completion of two coures with lab science (8 credits), completion of one course with lab science and two courses without (10 credits), or completion of three courses without lab science (9 credits).

Associate in Arts Degree (A.A.)

Elective Courses for Students Planning to Transfer to a Four-Year College or University

Students in the associate in arts degree program are required to complete 21-24 semester hours of transfer elective courses, all of which can be chosen from the courses listed on page 29. Students may choose up to 15 credit hours from the list below. The remaining electives must be chosen from the courses listed on page 29. Students who intend to transfer are strongly encouraged to select courses in consultation with their advisor or transfer counselor and an academic official from the four-year institution to which they plan to transfer.

ACC 155	CPT 162	FRN 255	MTH 108
ACC 156	CPT 163	FRN 256	MTH 109
ACC 219	CPT 180		MTH 173
ACC 222	CPT 181	GCT 115	MTH 271
ACC 230	CPT 182	GCT 160	MTH 272
ACC 234	CPT 183		
ACC 250	CPT 213	HMS 155	MUS 131
	CPT 235	HMS 157	
ART 161	CPT 242	HMS 170	PHY 258
ART 163	CPT 286	HMS 171	
ART 164		HMS 172	POL 156
ART 165	CRJ 155		POL 255
ART 168	CRJ 160	HON 295	POL 256
	CRJ 162	HON 296	
BUS 158	CRJ 163	HON 297	SOC 160
BUS 159	CRJ 180	HON 298	
BUS 160	CRJ 255		SPA 255
BUS 205	CRJ 261	HPE 156	SPA 256
BUS 206	CRJ 263	HPE 157	
BUS 240	CRJ 265	HPE 176	THR 160
BUS 241	CRJ 290	HPE 178	THR 161
BUS 244			THR 170
BUS 245	ECE 180	LIS 100	
BUS 246	ECE 188	LIS 110	WEB 140
BUS 249	ECE 233	LIS 120	WEB 150
BUS 260		LIS 130	WEB 235
BUS 261	EDU 155	LIS 140	
BUS 275	EDU 200		
BUS 285		MED 105	
	ENG 162	MED 110	
CHM 250	ENG 163	MED 155	
CHM 251	ENG 166	MED 158	
CHM 264	ENG 240	MED 160	
	ENG 245	MED 170	
		MED 255	
	FSM 159	MED 256	

The list of courses is not all inclusive and other courses may be approved on an individual basis.

To assist students and advisors/counselors in selecting courses to fulfill associate in arts degree requirements, the following courses are suggested for transfer to bachelor's degree majors listed below. Students should be aware that this list is not all inclusive and that through discussions with officials at the four-year college or university, other appropriate courses may be identified. This list does not contain all possible majors at four-year institutions. Course work for other majors can be taken at WCCC; for assistance see an advisor or counselor. If undecided about a major refer to page 37. General education requirements must be taken from specified lists on page 29.

If planning a bachelor's degree major in: Art

Suggested courses for the associate in arts degree are:

General Education	Sem. Hrs.
ART 155 Introduction to Art History	3
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
Computer Science Elective	3
Humanities Electives	6
Mathematics Elective	3
Natural Science Electives	8
Social Science Electives	9

Major and Support Electives	Sem. Hrs.
ART 160 2-D Design	3
ART 161 3-D Design	3
ART 162 Drawing I	3
ART 163 Drawing II	3
ART 164 Color Concepts	
or	3
ART 165 Painting I	
Electives*	9

*These may be art or other courses selected on the basis of requirements of the college or university to which the student plans to transfer.

The student can prepare for transfer to a four-year program in either studio arts, art history, graphic design, or photography. The broad range of professions in museums, education, galleries, and corporate cultural divisions may determine the focus and/or choice of electives. To ensure successful transfer of course work, students are strongly urged to consult with their advisor and receiving institution transfer counselor before the end of the first year at WCCC.

If planning a bachelor's degree major in: Biology

Suggested courses for the associate in arts degree are:

General Education	Sem. Hrs.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
BIO 155 General Biology I	4
BIO 156 General Biology II	4
MTH 157 College Algebra (or higher level math)	3-4
Computer Science Elective	3
Humanities Electives	9
Social Science Electives	9

Major and support electives	Sem. Hrs.
CHM 155 General Chemistry I	4
CHM 156 General Chemistry II	4
Restricted Elective* – select from courses with prefixes of MTH, CHM, BIO, PHY	16

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If planning a bachelor's degree major in: Business

Suggested courses for the associate in arts degree are:

General Education	Sem. Hrs.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
ECN 155 Macroeconomics	3
ECN 156 Microeconomics	3
MTH 157 College Algebra	3
Computer Science Elective	3
Humanities Electives	9
Natural Science Electives	8
Social Science Elective	3

Major and Support Electives	Sem. Hrs.
ACC 155 Accounting I	3
ACC 156 Accounting II	3
MTH 158 Precalculus Mathematics	3
Electives*	15

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If planning a bachelor's degree major in: Chemistry

Suggested courses for the associate in arts degree are:

GENERAL EDUCATION	SEM. HRS.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
CHM 155 General Chemistry I	4
CHM 156 General Chemistry II	4
MTH 158 Precalculus Mathematics	3
Computer Science Elective	3
Humanities Electives	9
Social Science Electives	9

MAJOR AND SUPPORT ELECTIVES	SEM. HRS.
CHM 250 Organic Chemistry I	4
CHM 251 Organic Chemistry II	4
MTH 172 Analytical Geometry and Calculus I	4
MTH 173 Analytical Geometry and Calculus II	4
PHY 255 Engineering Physics I	5
PHY 256 Engineering Physics II	5

If planning a bachelor's degree major in: Chiropractic

Suggested courses for the associate in arts degree are:

GENERAL EDUCATION	SEM. HRS.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
BIO 155 General Biology I or	
BIO 171 Anatomy and Physiology I	4
BIO 156 General Biology II or	
BIO 172 Anatomy and Physiology II	4
MTH 157 College Algebra	3
PSY 160 General Psychology	3
Computer Science Elective	3
Humanities Electives	9
Social Science Electives	9

MAJOR AND SUPPORT ELECTIVES	SEM. HRS.
CHM 155 General Chemistry I	4
CHM 156 General Chemistry II	4
CHM 250 Organic Chemistry I	4
CHM 251 Organic Chemistry II	4
PSY 155 College Physics I	4
PSY 156 College Physics II	4
Electives*	8

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If planning a bachelor's degree major in: Communication

Suggested courses for the associate in arts degree are:

GENERAL EDUCATION	SEM. HRS.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
MTH 157 College Algebra (or higher level math)	3
PSY 160 General Psychology	3
SPC 155 Effective Speech	3
Computer Science Elective	3
Humanities Electives	6
Natural Science Electives	8
Social Science Electives	6

MAJOR AND SUPPORT ELECTIVES	SEM. HRS.
Electives*	24

There are many options within a communication major, including advertising, media, public relations, and speech and rhetoric. Selection of courses will depend on the specific option chosen by the student and on the requirements of the college to which the student is transferring. Subjects used to meet these major requirements often come from disciplines such as English, business, media, speech, theater and graphic arts. Students should contact their advisor or the transfer counselor concerning the appropriate choice of courses.

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If planning a bachelor's degree major in: Computer Science/Information Systems

Suggested courses for the associate in arts degree are:

General Education	Sem. Hrs.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
MTH 158 Precalculus Mathematics (or higher level math)	3
Computer Technology Elective	3
Humanities Electives	9
Natural Science Electives	8
Social Science Electives	9

Major and Support Electives	Sem. Hrs.
Computer Technology/ Mathematics Electives*	12-15
Electives**	9-12

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

**Students' specific educational or career goals will determine the choice of support courses. Additional courses in mathematics may be appropriate for those planning to major in Computer Science. Students planning to major in Information Systems may be encouraged to take courses in business, social science, or other related areas. Students should consult with their advisor or transfer counselor to determine which courses will meet the requirements of the receiving institution.

If planning a bachelor's degree major in: Criminal Justice

Suggested courses for the associate in arts degree are:

General Education	Sem. Hrs.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
PSY 160 General Psychology	3
SOC 155 Principles of Sociology	3
Computer Science Elective	3
Humanities Electives	9
Mathematics Elective	3
Natural Science Electives	8
Social Science Elective	3

Major and Support Electives	Sem. Hrs.
CRJ 155 Introduction to Criminal Justice	3
CRJ 160 Criminal Law I	3
Electives*	18

There are many specialized areas within criminal justice, including corrections, counseling, forensics, investigations, probation, and parole. Depending on the specialty chosen, students will be encouraged to take additional CRJ courses or related courses in subject areas such as business, natural science, psychology, and sociology.

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If planning a bachelor's degree major in: Engineering

Suggested courses for the associate in arts degree are:

General Education	Sem. Hrs.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
MTH 172 Analytical Geometry and Calculus I	4
PHY 255 Engineering Physics I	5
PHY 256 Engineering Physics II	5
Computer Science Elective	3
Humanities Electives	9
Social Science Electives	9

Major and Support Electives	Sem. Hrs.
CHM 155 General Chemistry I	4
CHM 156 General Chemistry II	4
MTH 173 Analytical Geometry and Calculus II	4
Electives*	7-8

Students planning to major in engineering are cautioned to communicate with their transfer institution prior to the completion of their first year of study at WCCC. This will assist in ensuring successful transfer of course work.

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If planning a bachelor's degree major in: English/Writing/Literature

Suggested courses for the associate in arts degree are:

GENERAL EDUCATION	SEM. HRS.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
SPC 155 Effective Speech	3
Computer Science Elective	3
Humanities Electives	6
Mathematics Elective	3
Natural Science Electives	8
Social Science Electives	9

GENERAL EDUCATION	SEM. HRS.
Electives*	24

A student's specific educational or career goals will determine the choice of support courses. Additional courses in the humanities may be appropriate for those planning on graduate work in English literature while those planning on entering the work force after the bachelor's degree may be encouraged to take courses in business, social science, or other related areas. Students should consult with their advisor or transfer counselor to determine which courses will meet requirements of the receiving institution.

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If planning a bachelor's degree major in: Health & Physical Education

Suggested courses for the associate in arts degree are:

GENERAL EDUCATION	SEM. HRS.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
PSY 160 General Psychology	3
Computer Science Elective	3
Humanities Electives	9
Mathematics Electives	6
Natural Science Electives	8
Social Science Electives	6

MAJOR AND SUPPORT ELECTIVES	SEM. HRS.
Electives**	15

*Required for teacher certification.

**The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If planning a bachelor's degree major in: Health Professions

Suggested courses for the associate in arts degree are:

GENERAL EDUCATION	SEM. HRS.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
BIO 171 Anatomy and Physiology I	4
and	
BIO 172 Anatomy and Physiology II	4
or	
BIO 155 General Biology I	4
and	
BIO 156 General Biology II	4
MTH 157 College Algebra or	
MTH 160 Introduction to Statistics	3
PSY 160 General Psychology	3
Computer Science Elective	3
Humanities Electives	9
Social Science Electives	6

MAJOR AND SUPPORT ELECTIVES	SEM. HRS.
CHM 155 General Chemistry I	4
CHM 156 General Chemistry II	4
Electives*	16

Health professions include majors such as dietetics, medical technology, occupational therapy, physician's assistant, and physical therapy. Each specialization has its own set of prerequisites with some emphasizing the natural sciences and others stressing the social sciences or related subject areas. Major and support courses should be selected according to the requirements of the specific baccalaureate program.

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If planning a bachelor's degree major in: History

Suggested courses for the associate in arts degree are:

GENERAL EDUCATION	SEM. HRS.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
Computer Science Elective	3
Humanities Electives	9
Mathematics Elective	3
Natural Science Electives	8
Social Science Electives (other than history)	9

MAJOR AND SUPPORT ELECTIVES	SEM. HRS.
Electives*	24

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If planning a bachelor's degree major in: Humanities

Suggested courses for the associate in arts degree are:

GENERAL EDUCATION	SEM. HRS.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
Computer Science Elective	3
Humanities Electives	9
Mathematics Elective	3
Natural Science Electives	8
Social Science Electives	9

MAJOR AND SUPPORT ELECTIVES	SEM. HRS.
Electives*	24

Disciplines within the humanities include art, English, foreign languages, music, philosophy, and speech. Selection of major and support courses will be determined by the student's educational and career goals and the requirements of the receiving institution.

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If planning a bachelor's degree major in: Library Science

Suggested courses for the associate in arts degree are:

GENERAL EDUCATION	SEM. HRS.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
SPC 155 Effective Speech	3
Computer Science Elective	3
Humanities Electives (in 2 areas)	6
Mathematics Elective	3
Natural Science Electives	8
Social Science Electives (in 2 areas)	9

MAJOR AND SUPPORT ELECTIVES	SEM. HRS.
LIS 100 Intro to Library Science	3
LIS 110 Cataloging and Classification	3
LIS 120 Information Sources and Services	3
LIS 130 Materials Selection (Collection Dev.)	3
EDU 155 Foundations of Education	3
EDU 200 Intro to Instructional Technology	3
PSY 160 General Psychology	3
PSY 165 Educational Psychology	3

This program is designed to facilitate transfer into a Bachelor of Science in Education in Library Science degree program leading to Pennsylvania School Library Certification, grades K-12.

If planning a bachelor's degree major in: Mathematics

Suggested courses for the associate in arts degree are:

GENERAL EDUCATION	SEM. HRS.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
MTH 172 Analytical Geometry and Calculus I	4
Computer Science Elective	3
Humanities Electives	9
Natural Science Electives	8
Social Science Electives	9

MAJOR AND SUPPORT ELECTIVES	SEM. HRS.
MTH 173 Analytical Geometry and Calculus II	4
MTH 271 Analytical Geometry and Calculus III	4
Electives*	15

Additional courses in computer science or natural sciences are advisable. Specific selection of these courses should be based on the requirements of the receiving institution.

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If planning a bachelor's degree major in: Physics

Suggested courses for the associate in arts degree are:

GENERAL EDUCATION	SEM. HRS.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
CHM 155 General Chemistry I	4
CHM 156 General Chemistry II	4
MTH 172 Analytical Geometry and Calculus I	4
Computer Science Elective	3
Humanities Electives	9
Social Science Electives	9

MAJOR AND SUPPORT ELECTIVES	SEM. HRS.
MTH 173 Analytical Geometry and Calculus II	4
MTH 271 Analytical Geometry and Calculus III	4
MTH 272 Diffential Equations	3
PHY 255 Engineering Physics I	5
PHY 256 Engineering Physics II	5
Elective*	3

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If planning a bachelor's degree major in: Political Science

Suggested courses for the associate in arts degree are:

GENERAL EDUCATION	SEM. HRS.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
Computer Science Elective	3
Humanities Electives	9
Mathematics Elective	3
Natural Science Electives	8
Social Science Electives (other than political science courses)	9

MAJOR AND SUPPORT ELECTIVES	SEM. HRS.
POL 155 American National Government	3
Electives*	21

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If planning a bachelor's degree major in: Psychology

Suggested courses for the associate in arts degree are:

GENERAL EDUCATION	SEM. HRS.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
MTH 157 College Algebra or MTH 160 Introduction to Statistics	3
Computer Science Elective	3
Humanities Electives	9
Natural Science Electives	8
Social Science Electives (other than psychology courses)	9

MAJOR AND SUPPORT ELECTIVES	SEM. HRS.
PSY 160 General Psychology	3
Electives*	21

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If planning a bachelor's degree major in: Sociology

Suggested courses for the associate in arts degree are:

General Education	Sem. Hrs.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
MTH 157 College Algebra or	
MTH 160 Introduction to Statistics	3
Computer Science Elective	3
Humanities Electives	9
Natural Science Electives	8
Social Science Electives (other than sociology courses)	9

Major and Support electives	Sem. Hrs.
SOC 155 Principles of Sociology	3
Electives*	21

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If planning a bachelor's degree major in: Teacher Education

Suggested courses for the associate in arts degree are:

General Education	Sem. Hrs.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
PSY 160 General Psychology	3
Computer Science Elective	3
Humanities Electives	9
Mathematics Electives	6
Natural Science Electives	8
Social Science Electives	6

Major and Support Electives	Sem. Hrs.
EDU 155 Introduction to Education	3
EDU 200 Introduction to Instructional Technology	3
PSY 165 Educational Psychology	3
Electives*	15

Additional courses will be determined by the specific option within education chosen by the student and by the requirements of the receiving institution.

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

If undecided about a bachelor's degree major

Suggested courses for the associate in arts degree are:

General Education	Sem. Hrs.
ENG 161 College Writing	3
ENG 164 Advanced Composition	3
Computer Science Elective	3
Humanities Electives	9
Mathematics Elective	3
Natural Science Electives	8
Social Science Electives	9

Major and Support Electives	Sem. Hrs.
Electives*	24

*The choice of these courses is dependent on the four-year college or university to which the student plans to transfer.

Teacher Education, AA

Division of Public Service/Humanities/Social Sciences

The Teacher Education program is designed to provide course work necessary for transfer to a baccalaureate program in Early Childhood, Elementary, Secondary or Special Education.

Career Opportunities

Upon the completion of this program students can obtain a job as a teaching assistant while pursuing a bachelor's degree in teaching.

Competency Profile

This curriculum is designed to prepare students to:

- identify the state and national educational standards that relate to their specific area of interest
- recognize typical developmental levels of students and recognize when student development differs from typical development
- explain how diversity influences learning and demonstrate effective responses to the diversity in the classroom
- demonstrate effective classroom management skills
- identify and use verbal, nonverbal and media communication techniques effectively
- describe a variety of assessments for use in the classroom, including formal and informal assessments
- identify state certification requirements of teaching professionals for initial certification and continuous professional development
- defend the statement that "learning is a partnership." (The student will describe and defend the importance of school, parent/guardian and community working together for the success of the learner.)
- take the Praxis I
- discuss changes in education and the trends from analyzing professional journal articles
- identify the essential characteristics of effective teachers and schools
- describe how changes in the student population are leading to educational change
- develop a personal philosophy of education that will include, but not be limited to: how students learn, the purpose of school, the importance of parent involvement and the role of the teacher and school

PROGRAM REQUIREMENTS (TOTAL CREDITS — 62-64)

General Education

CPT 150	Microcomputer Con.	3
ENG 161	College Writing	3
ENG 164	Advanced Composition	3
PSY 160	General Psychology	3
SPC 155	Effective Speech	3
British or Ameri. Lit. Elective		3
Humanities Elective (art, music, theater)		3
Math Electives (MTH 157+)		6
Natural Science Elective		8-10
Social Science Elective (one multicultural and one history)		6
		41-43

Major

EDU 155	Intro to Education	3
ECE 188/ EDU 188	Exceptional Dvlpmt.	3
EDU 200	Intro to Instruc. Tech.	3
PSY 165	Educational Psychology	3
PSY 265 or PSY 268	Child Psychology / Adolescent Psychology	3
		15

Other Required Courses

General Elective	3
Restricted Electives*	3
	6

***Restricted Electives**

ECE 233/ENG 233 Children's Lit.
SOC 155 Principles of Sociology
SOC 165 Cultural Diversity
SOC 255 Cultural Anthropology
HMS 170 Racial & Ethnic Minorities
GEO 155 Intro to Human Geography
HIS 255 Early U.S. & Pa. History
HIS 256 Modern U.S. & Pa. History
HPE 156 Health & Physical Education

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
CPT 150	3
ENG 161	3
EDU 155	3
PSY 160	3
SPC 155	3
	15

Spring Semester**	
EDU 200	3
ENG 164	3
PSY 165	3
Humanities Elective	3
Math Elective	3
	15

Fall Semester***	
PSY 265 or PSY 268	3
Brit./Ameri. Lit. Elective	3
Math Elective	3
Natural Science Elective	3/4
Social Science Elective (multicultural)	3
	15/16

Spring Semester	
ECE 188/EDU 188	3
General Elective	3
Natural Science Elective	3/4
Social Science Elective (history)	3
Restricted Elective	3
	15/16

**After completeing 30 credits, students should contact their senior institution.
***Students should take the Praxis I exam after this semester.

Associate in Fine Arts Degree, A.F.A.

STUDIO ARTS OPTION

Public Service/Humanities/Social Sciences

The associate in fine arts degree program in studio arts offers a foundation curriculum parallel to the first two years of a baccalaureate in fine arts (BFA). As a transfer program, students will begin a direction in either two dimensional or three dimensional studio practice by the end of their second year before moving to a senior institution. Students completing the AFA program are prepared for a range of higher education options such as arts education, art therapy, arts management or museum related careers. The program is designed to develop technical, conceptual, creative problem-solving, visual and critical thinking skills that lay the groundwork for specialized academic study, self employment or careers in creative industries. Before degree completion, students undertake the art capstone portfolio class in their final semester. This class requires the student to stage a professional art exhibition or art internship project. The components of this program develop a strong foundation in visual literacy that will equip students with a broad range of options for their future in the visual arts.

Competency Profile

This curriculum is designed to prepare students to:

- effectively employ two and three dimensional visual communication principles
- demonstrate a required level of technical and conceptual proficiency in their medium
- execute images that reflect their own creative problem-solving ideas and concepts
- identify historical, cultural and global development of works of art
- explore diversity in western and non-western visual traditions
- recognize their own cultural context in the choices of image making
- develop a consistent body of work reflecting a concept/theme
- critically develop and evaluate their own artwork and portfolio
- communicate informed personal reactions to works of art
- expand and explore the relationship between visual and verbal communication skills

PROGRAM REQUIREMENTS (TOTAL CREDIT—61)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 164	Advanced Comp.	3
MTH 157	College Algebra	3
Social Science Elective		3
Natural Science Elective		4
		?

Major

ART 155	Intro to Art History	3
ART 160	2-D Design	3
ART 162	Drawing I	3
ART 161	3-D Design	
or		3
ART 163	Drawing II	
ART 164	Color Theory	
or		3
ART 165	Painting I	
ART 249	Art Portfolio	
ART 156	Non-Western Art	
or		
ART 157	Contemporary Art	3
or		
ART 158	Intro to American Art	
Exhibition or Internship✦		3
		24

✦*capstone course*

Other Required Courses

BUS 260	Small Business Mgmt.	3
GCT 160	Photoshop	3
Restricted Electives*		12
		?

***Restricted Electives**

ART 140 Illustration	3
ART 142 Typography	3
ART 143 Printmaking	3
ART 150 Airbrush Techniques	3
ART 166 Painting II	3
ART 183 Book Arts I	3
ART 188 Textiles I	3
Any partnership course with Touchstone Center for Crafts	3-9

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
ART 155	3	ART 161 or 163	3	BUS 260	3	Restricted Electives	9
ART 160	3	ART 164 or 165	3	Art History Selection	3	ART 249	3
ART 162	3	CPT 150	3	Restricted Elective	3	Summer Capstone	
MTH 157	3	ENG 164	3	Social Science Elective	3	Exhibition or Intern.	3
ENG 161	3	GCT 160	3	Natural Science Elective	4		**15**
	15		**15**		**16**		

Associate in Applied Science Degree (A.A.S.)

Degree Requirements

All associate degree students are required to complete a core of general education courses designed to broaden and enhance their educational experience. General education requirements are included in the course requirements list for each associate degree program. These courses have been included with the course requirements. In some programs they are listed as electives limited to a specific area, such as "Social Science Elective." Other programs may list specific courses which have been determined to best meet the needs of that particular career field. The distribution of general education requirements and the courses which meet these requirements are shown in the list below.

Requirements of the associate in applied science degree include:

- 18 semester hours of general education as outlined below
- 42-69 semester hours of program courses

To meet minimum requirements, 18 hours are required in four areas as shown below, selected from the courses listed.

I English 6 semester hours	II Humanities 0-3 semester hours	III Social Science 3 semester hours	IV Mathematics 3 semester hours	V Science 0-4 semester hours	VI Computer Skills 3 semester hours
ENG 161	ART 155 MUS 155	ECN 155	MTH 100	BIO 107	ARC 210
ENG 162	ART 158 MUS 160	ECN 156	MTH 108	BIO 120	
ENG 163	ART 160	ECN 158	MTH 109	BIO 145	CPT 145
ENG 164	ART 162 PHL 155		MTH 157	BIO 155	CPT 150
ENG 166	PHL 160	GEO 155	MTH 158	BIO 171	CPT 151
	ENG 159 PHL 161		MTH 160		
	ENG 165 PHL 165	HIS 155	MTH 161	CHM 105	DFT 258
	ENG 245	HIS 156	MTH 172	CHM 107	
	ENG 255 REL 161	HIS 249	MTH 180	CHM 108	GCT 115
	ENG 256 REL 171	HIS 255		CHM 155	GCT 120
	ENG 258 REL 181	HIS 256	BUS 120		GCT 160
	ENG 260	HIS 257	BUS 244	EPS 150	
	ENG 264 SPA 155			EPS 160	MED 105
	ENG 270 SPA 156	POL 155		EPS 163	
	ENG 271	POL 200			WEB 150
	ENG 275 SPC 155			GEO 160	
	ENG 276 SPC 156	PSY 160			
	ENG 277 SPC 157	PSY 161		PHY 107	
	ENG 280 SPC 158	PSY 163		PHY 150	
	ENG 290 SPC 255	PSY 165		PHY 153	
		PSY 260		PHY 155	
	FRN 155 THR 160	PSY 265		PHY 255	
	FRN 156 THR 161	PSY 268			
		PSY 270			
	HUM 156				
		SOC 155			
		SOC 160			
		SOC 161			
		SOC 162			
		SOC 166			
		SOC 255			

Accounting, AAS

Division of Computer Technology/Business

The field of accounting is particularly suitable for those with an aptitude for mathematics and computer software, the ability to concentrate on detail, and the ability to analyze, compare and interpret facts and figures.

At WCCC the academic program is designed to prepare students without prior experience in accounting for a variety of entry level positions in business, industry, and government. Accounting majors must complete a minimum of 60 credits with a heavy concentration in accounting, computer and business management courses.

Successful completion of this program of study leads to the associate in applied science degree.

Career Opportunities

Recent graduates of the accounting program have accepted jobs with the following titles: junior accountant, accounts payable clerk, assistant accountant, assistant to the CPA, assistant auditor, accounting clerk, payroll accountant and accounting technician.

Competency Profile

This curriculum is designed to prepare students to:

- appropriately record financial transactions and prepare pertinent financial statements for sole proprietorships, partnerships and corporations
- prepare various types of tax returns including individual, C-corporation, S-corporation and partnership returns and related schedules
- effect cost accounting practices
- utilize the microcomputer for various bookkeeping, accounting and financial functions, and tax reporting
- apply appropriate laws and generally accepted accounting principles to accounting situations
- practice positive interpersonal and communication skills as a member of a business office work team
- utilize sound judgment skills practice ethical conduct in the making of business decisions
- view accounting as an integrated system providing information to investors, managers, governmental agencies and others to allow them to make intelligent decisions regarding the business

PROGRAM REQUIREMENTS (TOTAL CREDITS — 60)

General Education

BUS 120	Math of Business	3
CPT 150	Microcomputer Con.	3
ENG 161	College Writing	3
ENG 163	Business Comm.	
or		3
ENG 164	Advanced Composition	
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Commun.	
Social Science Elective		3
		18

Major

ACC 155	Accounting I	3
ACC 156	Accounting II	3
ACC 219	Managerial Accounting	3
ACC 222	Principles of Auditing	3
ACC 230	Integ. Acct. Software	3
ACC 250	Prin. of Taxation	3
ACC 255	Intermed. Accounting I	3
ACC 256	Intermed. Accounting II	3
ACC 260	Adv. Acctg. Issues✦	3
		27

✦*capstone course*

Other Required Courses

ACC 234	Payroll & Spread. Soft.	
or		3
CPT 195	Excel for Windows	
ACC 251	Tax Prep. Software	
or		3
BUS 244	Business Statistics	
BUS 159	Business Finance	3
BUS 160	Intro. to Business	3
Business or Computer Elective		3
		15

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
ACC 155	3	ACC 156	3	ACC 222	3	ACC 219	3
BUS 120	3	ACC 234 or CPT 195	3	ACC 230	3	ACC 256	3
BUS 160	3	ACC 250	3	ACC 251 or BUS 244	3	ACC 260	3
CPT 150	3	BUS 159	3	ACC 255	3	BUS or CPT Elective	3
ENG 161	3	ENG 163 or ENG 164	3	SPC 155 or SPC 156	3	Social Science Elective	3
	15		**15**		**15**		**15**

Accounting, Certificate

COMPUTER ACCOUNTING & TAX SPECIALIST

Division of Computer Technology/Business

The computer accounting and tax specialist certificate program is designed to provide entry level general bookkeeping skills, as well as proficiency in the use of microcomputers to perform accounting and tax functions. The curriculum is designed to provide the student with computer experience in several specialty fields within accounting including the preparation of tax returns.

Career Opportunities

Students who complete this program may be employed in general bookkeeping positions including payroll, accounts receivable or payable, or in the preparation of individual and business income tax returns.

Competency Profile

This curriculum is designed to prepare students to:

- appropriately record financial transactions and prepare pertinent financial statements for sole proprietorships, partnerships, and corporations
- prepare tax returns for individual payers with various types of income and deductions
- prepare business tax returns including C Corporation, S Corporation, and partnerships
- utilize the microcomputer for accounting, financial and tax reporting
- apply appropriate laws and generally accepted accounting principles to accounting situations
- practice positive interpersonal and communication skills as a member of a business office work team
- utilize sound judgment and practice ethical conduct in making business decisions

PROGRAM REQUIREMENTS (TOTAL CREDITS-16)

ACC 120	Quickbook - Basics	1
ACC 155	Accounting I	3
ACC 230	Integrated Acctg. Sftwr.	3
ACC 234	Payroll & Sprdsht. Sftwr.	3
ACC 250	Principles of Taxation	3
ACC 251	Tax Preparation Sftwre.	3
		16

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
ACC 120	1	ACC 230	3
ACC 155	3	ACC 234	3
ACC 250	3	ACC 251	3
	7		**9**

Architectural Drafting and Design, AAS

Workforce Development Division of Technologies/Culinary Arts

Students in the architectural drafting and design program learn to translate the ideas, rough sketches, specifications and calculations of architects into working drawings for production and construction.

Successful completion of this program of study leads to the associate in applied science degree.

Career Opportunities

Graduates of this program will accept jobs with the following titles: architectural draftsman, architectural drafting technician, architectural drafting technician trainee and first-level CADD operators.

Competency Profile

This curriculum is designed to prepare students to:

- analyze and translate architectural and construction problems by presenting them visually as working drawings
- develop the ability to execute quantitative design of construction
- apply concepts from physics, engineering, architectural mechanics, mathematics, and drafting and apply them to the synthesis of construction
- communicate effectively and appropriately; record and report information significant to the job
- perform an infinite number of two-dimensional drawings using a stand-alone mini-computer
- identify the basic components of a CADD system
- perform an infinite number of 2-D design math computations necessary to produce drafting design
- implement the basic commands necessary to apply the operational skills needed to effect a 2-D CADD system
- utilize construction industry vocabulary
- originate and interpret drawings using these construction industry standards
- determine cost estimates
- apply appropriate specifications, building codes and local ordinances in a job assignment
- effectively network with building inspectors

PROGRAM REQUIREMENTS (TOTAL CREDITS — 61)

General Education

ARC 210	Arch. AutoCAD I	4
ENG 161	College Writing	3
ENG 162	Technical Comm.	3
MTH 108	Math for the Tech. I	4
PHY 107	Applied Physics	4
Social Science Elective		3
		21

Major

ARC 101	Bldg. Materials & Estim.	3
ARC 102	Contracts and Specs.	3
ARC 105	Arch. Drafting I	4
ARC 106	Arch. Drafting II	4
ARC 119	Intro to Surveying	3
ARC 211	Arch. AutoCAD II	4
ARC 215	Arch. Presentation	4
ARC 262	Piping, Struc. & Elec. Mech.	4
		29

Other Required Courses

EGR 220	Statics/Strength of Mat.	3
MTH 109	Math for the Tech. II	4
Restricted Elective*		4
		11

*Restricted Electives are courses with the prefix ARC, DFT, EGR, HAC

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
ARC 101	3	ARC 102	3	ARC 119	3	ARC 215	4
ARC 105	4	ARC 106	4	ARC 211	4	ARC 262	4
ENG 161	3	ARC 210	4	EGR 220	3	Restricted Elective	4
MTH 108	4	ENG 162	3	PHY 107	4	Social Science Elective	3
	14	MTH 109	4		**14**		**15**
			18				

Baking and Pastry, AAS

APPRENTICESHIP OPTION

Workforce Development Division of Technologies/Culinary Arts

The baking and pastry apprenticeship program is one of eight majors comprising the college's culinary arts/hospitality program and is accredited by the Accrediting Commission of the American Culinary Federation Education Foundation. This apprenticeship program is sponsored by The American Culinary Federation Laurel Highlands Chapter (ACFLHC) and WCCC. A cooperative program, it combines 63 credits of academic course work with 4,000 hours of supervised on-the-job training in a participating restaurant, club, hotel, institution, resort or wholesale/retail bakery for an associate degree. Classes are scheduled so that students have a sufficient block of uninterrupted time to complete their 40-hour week. Academic work can be completed as a full-time student in two years or as a part-time student over a period of three years.

Students enrolled in this program are registered with the U.S. Department of Labor as apprentices and are required to join the ACFLHC as junior members. Registration and membership fees are payable to the ACF and are required to become a registered apprentice.

Students are expected to be well-groomed in compliance with the standards of sanitation. Students will be required to present medical proof of good physical health. Uniforms, cutlery set and decorative tips are required for all lab classes. Business attire may be required for some class assignments.

Employment must be secured in a facility that will provide full-time employment. The employer will agree to abide by the apprenticeship guidelines. Having fulfilled employment requirements, applicants will complete the Pennsylvania Apprenticeship and Training Council Agreement and American Culinary Federation (ACF) Apprenticeship Registration Card. At the completion of the program, students may apply for certification with the ACF.

The baking and pastry degree apprenticeship option may be completed through a partnership with Nemacolin Woodlands Resort. For more information, call the WCCC Admissions Office at 724-925-4077.

Career Opportunities

Graduates of the baking and pastry program may accept positions as: pastry cook, pastry chef, executive pastry chef, baker, cake decorator, baking sales representative, institutional baker/pastry chef, retail baker/pastry chef, wholesale baker/pastry chef, production supervisor, food batch maker, operations manager, sales representative or training specialist.

Competency Profile

This curriculum is designed to prepare students to:

- prepare yeast rolls, breads, pies, tarts, cookies, doughnuts and frozen desserts based on local, regional and international traditions and diversity
- prepare and decorate cakes, cookies and centerpieces
- prepare specialty pastry items and confectionery items
- write recipes and make mathematical yield adjustments
- collect, organize and identify information regarding quality standards in bakery products
- utilize positive personal and interpersonal skills needed for supervision of employees and in the area of customer relations
- utilize technology to affect successful systems operation within the bakery and pastry industry
- demonstrate the ability to function with all other related departments that exist in food operations in a team environment
- demonstrate basic food preparation skills with additional attention to food cost
- creatively design and prepare artistic showpieces and centerpieces

PROGRAM REQUIREMENTS (TOTAL CREDITS - 63)

General Education

CPT 150	Microcomputer Con.	3
ENG 161	College Writing	3
ENG 163	Business Comm.	
or		3
ENG 164	Advanced Composition	
Humanities Elective		
or		3
FSM 170	Food Culture & Religion	
Mathematics Elective		3
Social Science Elective		3
		18

Major

BKP 141	Baking I	4
BKP 142	Baking II	3
BKP 243	Healthy Cooking Trends	4
BKP 245	Decorating Techniques	3
BKP 247	Specialty/Artistic Tech.	4
CUL 121	Apprenticeship I	2
CUL 122	Apprenticeship II	2
CUL 123	Apprenticeship III	2
CUL 224	Apprenticeship IV	2
FSM 105	Foods I	4
FSM 118	Sanitation	2
FSM 215	Food Purch. & Menu Mgmt.	3
		35

Other Required Courses

FSM 103	Intro to Hospitality	
or		3
FSM 113	Customer Service	
FSM 117	Wait Staff/Din. Rm. Trng.	1
FSM 218	Hospitality Marketing	
or		3
BKP 242	Bakery Deli Merch.	
FSM 235	Supervision/Training	3
		10

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
BKP 141	4
CUL 121	2
FSM 103 or FSM 113	3
FSM 117	1
FSM 118	2
	12

Spring Semester	
BKP 142	3
CUL 122	2
FSM 105	4
FSM 218 or BKP 242	3
	12

Summer Semester*	
ENG 161	3
CPT 150	3
	6

Fall Semester	
BKP 243	4
BKP 245	3
CUL 123	2
FSM 215	3
	12

Spring Semester	
BKP 247	4
CUL 224	2
FSM 235	3
Math Elective	3
	12

Summer Semester*	
ENG 163 or ENG 164	3
Humanities Elective or FSM 170	3
Social Science Elective	3
	9

*These courses may be taken in the fall and spring semester resulting in the student having full-time status. However, given the 40 hours per week required apprenticeship, it is recommended that students take these courses during the summer.

Baking and Pastry, Diploma

APPRENTICESHIP OPTION

Workforce Development Division of Technologies/Culinary Arts

The baking and pastry apprenticeship program is one of eight majors comprising the college's culinary arts/hospitality program. This apprenticeship program is sponsored by The American Culinary Federation Laurel Highlands Chapter (ACFLHC) and WCCC. A cooperative program, it combines 45 credits of course work with 4,000 hours of supervised on-the-job training in a participating restaurant, club, hotel, institution, resort or wholesale/retail bakery. Classes are scheduled so that students have a sufficient block of uninterrupted time to complete their 40-hour week. Academic work can be completed as a full-time student in two years or as a part-time student over a period of three years.

Students enrolled in this program are registered with the U.S. Department of Labor as apprentices and are required to join the ACFLHC as junior members. Registration and membership fees are payable to the ACF and are required to become a registered apprentice.

Students are expected to be well-groomed in compliance with the standards of sanitation. Students will be required to present medical proof of good physical health. Uniforms, cutlery set and decorative tips are required for all lab classes. Business attire may be required for some class assignments.

Employment must be secured in a facility that will provide full-time employment. The employer will agree to abide by the apprenticeship guidelines. Having fulfilled employment requirements, applicants will complete the Pennsylvania Apprenticeship and Training Council Agreement and American Culinary Federation (ACF) Apprenticeship Registration Card. At the completion of the program, students may apply for certification with the ACF.

The baking and pastry diploma apprenticeship option may be completed through a partnership with Nemacolin Woodlands Resort. For more information, contact the WCCC Admissions Office, 724-925-4077.

Career Opportunities

Graduates of the culinary arts program have accepted jobs with the following titles: pastry cook, pastry chef, executive pastry chef, baker, cake decorator, institutional baker/pastry chef, retail baker/pastry chef, wholesale baker/pastry chef, production supervisor, food batch maker, operations manager, sales representative or training specialist.

Competency Profile

This curriculum is designed to prepare students to:

- prepare yeast rolls, breads, pies, tarts, cookies, doughnuts and frozen desserts based on local, regional and international traditions and diversity
- prepare and decorate cakes, cookies and centerpieces
- prepare specialty pastry items and confectionery items
- write recipes and make mathematical yield adjustments
- collect, organize and identify information regarding quality standards in bakery products
- utilize positive personal and interpersonal skills needed for supervision of employees and in the area of customer relations
- utilize technology to affect successful systems operation within the bakery and pastry industry
- demonstrate the ability to function with all other related departments that exist in food operations in a team environment
- demonstrate basic food preparation skills with additional attention to food cost
- creatively design and prepare artistic showpieces and centerpieces

PROGRAM REQUIREMENTS (TOTAL CREDITS – 45)

General Education

None Required

Major

BKP 141	Baking I	4
BKP 142	Baking II	3
BKP 243	Healthy Cooking Trends	4
BKP 245	Decorating Techniques	3
BKP 247	Specialty/Artistic Tech.	4
CUL 121	Apprenticeship I	2
CUL 122	Apprenticeship II	2
CUL 123	Apprenticeship III	2
CUL 224	Apprenticeship IV	2
FSM 105	Foods I	4
FSM 118	Sanitation	2
FSM 215	Food Purch. & Menu Mgmt.	3
		35

Other Required Courses

FSM 103	Intro to Hospitality	
or		3
FSM 113	Customer Service	
FSM 117	Wait Staff/Din. Rm. Trng.	1
FSM 218	Hospitality Marketing	
or		3
BKP 242	Bakery Merch. Tech.	
FSM 235	Supervision/Training	3
		10

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
BKP 141	4	BKP 142	3	BKP 243	4	BKP 247	4
CUL 121	2	CUL 122	2	BKP 245	3	CUL 224	2
FSM 103 or 113	3	FSM 105	4	CUL 123	2	FSM 235	3
FSM 117	1	FSM 218 or BKP 242	3	FSM 215	3		**9**
FSM 118	2		**12**		**12**		
	12						

Baking and Pastry, AAS

NON-APPRENTICESHIP OPTION

Workforce Development Division of Technologies/Culinary Arts

Baking and pastry is one of eight majors comprising the college's culinary arts/hospitality program. This curriculum is designed to prepare students for various positions in the baking industry. The program of study provides students with skills necessary for the production of a wide range of bakery products. Students are expected to be well groomed in compliance with standards of sanitation. Students will be required to provide medical proof of good physical health. Uniforms, decorative tips and a cutlery set are required for all lab classes. Business attire may be required for some class assignments.

This program is accredited by the Accrediting Commission of the American Culinary Federation Education Foundation.

Career Opportunities

Graduates of the baking and pastry program may accept positions as: pastry cook, pastry chef, executive pastry chef, baker, cake decorator, baking sales representative, institutional baker/pastry chef, retail baker/pastry chef, wholesale baker/pastry chef, production supervisor, food batch maker, operations manager, sales representative or training specialist.

Competency Profile

This curriculum is designed to prepare students to:

- prepare yeasts rolls, breads, pies, cookies, doughnuts and frozen desserts based on local, regional and international traditions and diversity
- prepare and decorate cakes, cookies and centerpieces
- prepare specialty pastry items and confectionary items
- prepare and evaluate baked items using both scratch and convenience techniques and products as to market usage
- write recipes and make mathematical yield adjustments
- collect, organize and identify information regarding quality standards in bakery products
- utilize positive personal and interpersonal skills needed for supervision of employees and in the area of customer relations
- utilize technology to affect successful systems operation within the bakery and pastry industry
- demonstrate the ability to function with all other related departments that exist in food operations in a team environment
- demonstrate basic food preparation skills with additional attention to food cost
- creatively design and prepare artistic showpieces and centerpieces

PROGRAM REQUIREMENTS (TOTAL CREDITS — 60)

General Education

CPT 150	Microcomputer Con.	3
ENG 161	College Writing	3
ENG 163	Business Comm.	
or		3
ENG 164	Advanced Composition	
Humanities Elective		
or		3
FSM 170	Food Culture & Religion	
Mathematics Elective		3
Social Science Elective		3
		18

Major

BKP 141	Baking I	4
BKP 142	Baking II	3
BKP 144	Baking III	3
BKP 242	Bakery/Deli Merch. Tech.	3
BKP 243	Healthy Cooking Trends	4
BKP 245	Decorating Techniques	3
BKP 247	Specialty/Artistic Tech.	4
FSM 118	Sanitation	2
FSM 219	Hospitality Internship	3
		29

Other Required Courses

FSM 103	Intro to Hospitality	
or		3
FSM 113	Customer Service	
FSM 105	Foods I	4
FSM 215	Food Purch. & Menu Mgmt.	3
FSM 235	Supervision & Training	3
		13

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
BKP 141	4
ENG 161	3
FSM 103 or FSM 113	3
FSM 105	4
FSM 118	2
	16

Spring Semester	
BKP 142	3
BKP 245	3
CPT 150	3
ENG 163 or ENG 164	3
FSM 235	3
	15

Fall Semester	
BKP 144	4
BKP 243	3
FSM 215	3
Humanities Elective or FSM 170	3
Mathematics Elective	3
	16

Spring Semester	
BKP 242	3
BKP 247	4
FSM 219	3
Social Science Elective	3
	13

Baking & Pastry, Diploma

NON-APPRENTICESHIP OPTION

Workforce Development Division of Technologies/Culinary Arts

Baking and pastry is one of eight majors comprising the college's culinary arts/hospitality program. This curriculum is designed to prepare students for various positions in the baking industry. The program of study provides students with skills necessary for the production of a wide range of bakery products. Students are expected to be well-groomed in compliance with standards of sanitation. Students will be required to provide medical proof of good physical health. Uniforms, decorative tips and a cutlery set are required for all lab classes. Business attire may be required for some class assignments.

Career Opportunities

Graduates of the baking and pastry program may accept positions as: pastry cook, pastry chef, executive pastry chef, baker, cake decorator, baking sales representative, institutional baker/pastry chef, retail baker/pastry chef, wholesale baker/pastry chef, production supervisor, food batch maker, operations manager, sales representative or training specialist.

Competency Profile

This curriculum is designed to prepare students to:

- prepare yeast rolls, breads, pies, cookies, doughnuts and frozen desserts based on local, regional and international traditions and diversity
- prepare and decorate cakes, cookies and centerpieces
- prepare specialty pastry items and confectionary items
- prepare and evaluate baked items using both scratch and convenience techniques and products as to market usage
- write recipes and make mathematical yield adjustments
- collect, organize and identify information regarding quality standards in bakery products
- utilize positive personal and interpersonal skills needed for supervision of employees and in the area of customer relations
- utilize technology to affect successful systems operation within the bakery and pastry industry
- demonstrate the ability to function with all other related departments that exist in food operations in a team environment
- demonstrate basic food preparation skills with additional attention to food cost
- creatively design and prepare artistic showpieces and centerpieces

PROGRAM REQUIREMENTS (TOTAL CREDITS – 42)

General Education

None Required

Major

BKP 141	Baking I	4
BKP 142	Baking II	3
BKP 144	Baking III	3
BKP 242	Bakery/Deli Merch. Tech.	3
BKP 243	Healthy Cooking Trends	4
BKP 245	Decorating Techniques	3
BKP 247	Specialty/Artistic Tech.	4
FSM 118	Sanitation	2
FSM 219	Hospitality Internship	3
		29

Other Required Courses

FSM 103	Intro to Hospitality	
or		3
FSM 113	Customer Service	
FSM 105	Foods I	4
FSM 215	Food Purch. & Menu Mgmt.	3
FSM 235	Supervision & Training	3
		13

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**	
BKP 141	4	BKP 142	3	BKP 144	4
FSM 103	3	BKP 243	3	BKP 242	3
FSM 105	4	BKP 245	3	BKP 247	4
FSM 118	2	FSM 215	3	FSM 219	3
	13	FSM 235	3		**14**
			15		

Baking and Pastry, Certificate

NON-APPRENTICESHIP OPTION

Workforce Development Division of Technologies/Culinary Arts

The certificate is designed to provide entry and intermediate skills in the baking, deli and food production operations of the hospitality industries. A laboratory component is included in the Foods I, Baking I and Decorating Techniques courses. Sanitation standards are addressed through ServSafe as provided by the Educational Foundation of the National Restaurant Association. Uniforms, cutlery set and decorative tips are required for all lab classes. Students are expected to be well groomed in compliance with standards of sanitation. Business attire may be required for some class assignments. Medical proof of good physical health is required.

Career Opportunities

Graduates of the baking and pastry certificate program may accept positions as: pastry cook, pastry chef, executive pastry chef, baker, cake decorator, baking sales representative, institutional baker/pastry chef, retail baker/pastry chef, wholesale baker/pastry chef, production supervisor, food batch maker, operations manager, sales representative or training specialist.

Competency Profile

This curriculum is designed to prepare students to:

- prepare yeast rolls, breads, pies, cookies, doughnuts and frozen desserts based on local, regional and international traditions and diversity
- prepare and decorate cakes and cookies
- write recipes and be able to make mathematical yield adjustments
- utilize technology to affect successful systems operation within the bakery and pastry industry
- demonstrate basic food preparation skills
- practice basic interpersonal and customer service skills and techniques

PROGRAM REQUIREMENTS (TOTAL CREDITS — 16)

BKP 141	Baking I	4
BKP 245	Decorating Techniques	3
FSM 105	Foods I	4
FSM 113	Customer Service	3
FSM 118	Sanitation	2
		16

Bionanotechnology, AAS

Division of Mathematics/Sciences

This program focuses on the preparation of students for work in such fields as biotechnology and pharmaceutical research and manufacturing. Students learn to work with materials at the nano-level in analysis, production and data collection. Students will complete the first three semesters at WCCC and complete nanotechnology courses at the Nanofabrication Facility at Penn State University in University Park, Pa. Students need to apply for admission for the nanofabrication program by the end of their first year at WCCC. Tuition for MPT courses completed at Penn State will be WCCC tuition.

Career Opportunities

Students enrolled in this program can work in occupations such as laboratory technician, quality control, and manufacturing technician in such fields as bionanotechnology research, medical laboratories and pharmaceutical manufacturing.

Competency Profile

This curriculum is designed to prepare students to:

- measure AC and DV voltages and current using a variety of measuring devices
- demonstrate knowledge of computer technology
- work in a bionanotechnology laboratory or manufacturing facility
- demonstrate an understanding of bionanotechnology principles and concepts
- apply statistics to analyze scientific results
- operate and maintain bionanotechnology electromechanical equipment
- apply laboratory results to experimental applications

PROGRAM REQUIREMENTS (TOTAL CREDITS — 65)

General Education		
CHM 107	Intro to Concepts Chem. I	4
CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 164	Advanced Composition	3
MTH 157	College Algebra	3
Social Science Elective		3
		19

Major		
MPT 211	Mat. Sfty. Equip. for Nano.	3
MPT 212	Basic Nanofab. Proc.	3
MPT 213	Thin Film in Nanofab.	3
MPT 214	Lithog. for Nanofab.	3
MPT 215	Mat. Modif. in Nanofab.	3
MPT 216	Char. Pkg./Test. of Nano.	3
		18

(These courses will be completed at PSU)

Other Required Courses		
BIO 171	Anatomy & Physiology I	4
BIO 172	Anatomy & Physiology II	4
BIO 265	Microbiology	4
CHM 108	Intro/Concepts Chem II	4
ELC 105	Inst. & Measurements	2
ELC 106	Circuits I	3
MTH 160	Statistics	3
PHY 107	Applied Physics	4
		28

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		Spring Semester		Fall Semester		Spring Semester	
CHM 107	4	BIO 171	4	BIO 172	4	MPT 211	3
ELC 105	2	CHM 108	4	BIO 265	4	MPT 212	3
ELC 106	3	ENG 161	3	CPT 150	3	MPT 213	3
MTH 157	3	ENG 164	3	Social Science Elective	3	MPT 214	3
PHY 107	4	MTH 160	3		**14**	MPT 215	3
	16		**17**			MPT 216	3
							18

Business

The growth of the Internet and the shift to a service-based economy, in which it is estimated that 98 percent of future job growth will be in service producing industries, has transformed the substantive content of the practice of management. The impact of these changes in the labor market has led to the need for new educational requirements and job skills both for those individuals currently employed in the field of management and for those who seek future careers in this field. These changes have led to an increased demand for management professionals in financial management, general management, human resources management, marketing management, real estate management, and small business management.

The Business Department

In response to the new dynamics of a service-based economy, the business department at WCCC offers a wide range of programs and courses designed to prepare students for the new challenges that await them in the field of management. The associate in applied science degree in business offers six options that comprise programs of study in finance, general management, human resources, marketing, real estate and small business. A diploma in business is offered as a short-term (36 credits) program that includes course coverage that can be considered to be foundational to possible future study in one of the six associated degree programs in business. The business department also offers a choice of six business certificate programs that cover advanced business topics in depth. Like the diploma offering, the certificate programs are also short-term (16-21 credits), and can be a foundation for future study in associate degree programs.

Associate in Applied Science Degree

The associate in applied science business degree program is offered in six areas of concentration: financial management, general management, human resources management, marketing management, real estate management and small business management. All of the AAS areas of concentration contain a common business core of seven general management courses (21 credits). This common core is augmented, in each of the different areas of concentration, by four or five courses (12-15 credits) that are specific to each area of concentration. These areas of concentration were carefully selected to satisfy the current and projected needs of the business community. The associate in applied science degree provides a solid academic and applied background in the designated area and can be completed in two years of full-time study.

Business Diploma

The business diploma (36 credits) is offered as a two-semester program that is designed to be a shorter alternative to the more comprehensive associate degree program. When compared to the associate degree programs, the business diploma program provides a more general, interdisciplinary insight into the field of business at an introductory level. This diploma program includes many courses that can be applied to the associate degree programs. A student can use the business diploma program either as a final educational outcome or as an intermediate step toward the attainment of an associate degree in one of the seven areas of concentration.

Business Certificate

WCCC offers a total of six business certificates covering advanced topics in business. Certificates are available in: financial management, general management, human resources management, marketing management, real estate management and small business management. These short programs are designed for the student who is seeking a concentrated educational focus in a specific aspect of business. Business certificates are particularly advantageous for any college graduate or current student who is currently in the workforce and needs to update, upgrade or expand his or her education and/or training in a specific, advanced topical area.

Complete descriptions of these programs appear on pages 53-62.

Business, AAS

FINANCIAL MANAGEMENT OPTION

Division of Computer Technology/Business

The financial management option of the business degree is designed to provide students with a broad basis in general business topics with an emphasis on corporate finance and banking.

Career Opportunities

Graduates of the financial management option can expect to find employment as bank managers, consumer loan officers, commercial lending managers, investment managers, insurance agents and financial analysts. Job opportunities will be available in the financial departments in large corporations and in commercial lending companies, consumer finance organizations, banks and insurance companies.

Competency Profile

This curriculum is designed to prepare students to:

- participate in corporate financial planning and analysis
- engage in the financial management of organizations
- function in entry-level banking positions
- participate in the consumer and commercial lending process
- plan and execute an investment portfolio
- practice effective decision-making skills

PROGRAM REQUIREMENTS (TOTAL CREDITS — 60)

General Education

BUS 120	Math of Business	3
CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 163	Business Communication	
or		3
ENG 164	Advanced Composition	
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Commun.	
Social Science Elective		3
		18

Major

BUS 158	Prin. of Management	3
BUS 159	Business Finance	3
BUS 160	Intro to Business	3
BUS 205	Business Law I	3
BUS 240	Techniques of Selling	3
BUS 241	Human Resource Mgmt.	3
BUS 245	Principles of Marketing	3
		21

Concentration

BUS 190	Credit Management	3
BUS 191	Financial Institutions	3
BUS 244	Business Statistics	3
BUS 246	Risk Management	3
BUS 259	Investments	3
		15

Other Required Courses

ACC 165	Acctg. for Managers	3
Economics Elective		3
		6

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
BUS 120	3	ACC 165	3	BUS 159	3	BUS 244	3
BUS 160	3	BUS 158	3	BUS 190	3	BUS 245	3
CPT 150	3	BUS 205	3	BUS 191	3	BUS 246	3
ENG 161	3	BUS 240	3	BUS 241	3	BUS 259	3
Economics Elective	3	ENG 163 or ENG 164	3	SPC 155 or SPC 156	3	Social Science Elective	3
	15		**15**		**15**		**15**

Business, AAS

GENERAL MANAGEMENT OPTION

Division of Computer Technology/Business

The general management option is designed to prepare students for entry-level management positions in a variety of organizations. The program of study develops basic competence in a broad range of essential business functions.

Career Opportunities

Graduates of the general management option can expect to find employment as assistant managers, production managers, management trainees, department supervisors, quality control officers, warehouse managers and inventory managers. Job opportunities will be available in large corporations, a variety of small businesses and nonprofit organizations.

Competency Profile

This curriculum is designed to prepare students to:

- implement marketing/sales skills applicable to the customer orientation of the employer
- communicate effectively and relate positively to others
- effect the organizing, marketing, purchasing, producing, staffing and financial management skills
- supervise human resources in an organization
- practice effective decision-making skills

PROGRAM REQUIREMENTS (TOTAL CREDITS — 60)

General Education

BUS 120	Math of Business	3
CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 163	Business Communication	
or		3
ENG 164	Advanced Composition	
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Commun.	
Social Science Elective		3
		18

Major

BUS 158	Prin. of Management	3
BUS 159	Business Finance	3
BUS 160	Intro to Business	3
BUS 205	Business Law I	3
BUS 240	Techniques of Selling	3
BUS 241	Human Resources Mgmt.	3
BUS 245	Prin. of Marketing	3
		21

Concentration

BUS 206	Business Law II	3
BUS 244	Business Statistics	3
BUS 249	Labor Relations	3
BUS 258	Supervisory Mgmnt.	3
BUS 261	International Business	3
		15

Other Required Courses

ACC 165	Acctg. for Managers	3
Economics Elective		3
		6

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
BUS 120	3	ACC 165	3	BUS 159	3	BUS 206	3
BUS 160	3	BUS 158	3	BUS 241	3	BUS 245	3
CPT 150	3	BUS 205	3	BUS 244	3	BUS 258	3
ENG 161	3	BUS 240	3	BUS 249	3	BUS 261	3
Economics Elective	3	ENG 163 or ENG 164	3	SPC 155 or SPC 156	3	Social Science Elective	3
	15		**15**		**15**		**15**

Business, AAS

HUMAN RESOURCES MANAGEMENT OPTION

Division of Computer Technology/Business

The human resources management option is designed to prepare students for entry-level human resources management positions in a variety of organizations. The program of study develops basic competence in a focused range of essential human resources functions.

Career Opportunities

Graduates of the human resources management option can expect to find employment as compensation management specialists, safety management specialists, and general human resources management specialists. Job opportunities will be available in large corporations, a variety of small businesses, and nonprofit organizations.

Competency Profile

This curriculum is designed to prepare students to:

- implement marketing/sales skills applicable to the customer orientation of the employer
- communicate effectively and relate positively to others
- effect the organizing, marketing, purchasing, producing, staffing, and financial management skills
- supervise human resources in an organization
- practice effective decision-making skills
- utilize negotiating skills with employees and/or local union officials

PROGRAM REQUIREMENTS (TOTAL CREDITS — 60)

General Education

BUS 120	Math of Business	3
CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 163	Business Communication	
or		3
ENG 164	Advanced Composition	
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Comm.	
Social Science Elective		3
		18

Major

BUS 158	Prin. of Management	3
BUS 159	Business Finance	3
BUS 160	Intro to Business	3
BUS 205	Business Law I	3
BUS 240	Techniques of Selling	3
BUS 241	Human Resource Mgmt.	3
BUS 245	Prin. of Marketing	3
		21

Concentration

BUS 246	Risk Management	3
BUS 249	Labor Relations	3
BUS 258	Supervisory Mgmnt.	3
BUS 275	Organizational Behavior	3
BUS 285	Compensation Mgmt.	3
		15

Other Required Courses

ACC 165	Acctg. for Managers	3
Economics Elective		3
		6

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
BUS 120	3	ACC 165	3	BUS 159	3	BUS 245	3
BUS 160	3	BUS 158	3	BUS 241	3	BUS 246	3
CPT 150	3	BUS 205	3	BUS 249	3	BUS 258	3
ENG 161	3	BUS 240	3	BUS 275	3	BUS 285	3
Economics Elective	**3**	ENG 163 or ENG 164	3	SPC 155 or SPC 156	3	Social Science Elective	3
	15		**15**		**15**		**15**

Business, AAS

MARKETING MANAGEMENT OPTION

Division of Computer Technology/Business

The marketing management option provides an introduction to business and the basic principles of management with emphasis on marketing. The courses develop an understanding of the marketing process and provide insight into the use of advertising, sales, promotion and public relations.

Career Opportunities

Graduates of the marketing option can expect to find employment as assistant marketing managers, junior advertising executives, product managers, product designers, administrative assistants, project managers, and in positions in public relations and media. Job opportunities will be available in large corporations, small businesses and nonprofit organizations.

Competency Profile

This curriculum is designed to prepare students to:

- participate in gathering marketing data through standard survey techniques
- perform basic public relations functions such as maintaining files on company activities, searching secondary data sources for information, and maintaining schedules and obtaining cost estimates for publicity events
- act as administrative assistants to senior personnel in advertising departments, and in sales and sales promotion departments in television stations, radio stations and newspapers
- gain entry-level positions in advertising agency departments such as traffic and media, and perform account coordinator work in account service departments

PROGRAM REQUIREMENTS (TOTAL CREDITS — 60)

General Education

BUS 120	Math of Business	3
CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 163	Business Communication	
or		3
ENG 164	Advanced Composition	
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Comm.	
Social Science Elective		3
		18

Major

BUS 158	Prin. of Management	3
BUS 159	Business Finance	3
BUS 160	Intro to Business	3
BUS 205	Business Law I	3
BUS 240	Techniques of Selling	3
BUS 241	Human Resource Mgmt.	3
BUS 245	Prin. of Marketing	3
		21

Concentration

MKT 242	Retailing	3
MKT 251	Consumer Behavior	3
MKT 252	Public Relations	3
MKT 253	Global Marketing	3
MKT 254	Advertising & Promotion	3
		15

Other Required Courses

ACC 165	Acctg. for Managers	3
Economics Elective		3
		6

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
BUS 120	3	ACC 165	3	BUS 159	3	BUS 245	3
BUS 160	3	BUS 158	3	BUS 241	3	MKT 242	3
CPT 150	3	BUS 205	3	MKT 251	3	MKT 252	3
ENG 161	3	BUS 240	3	MKT 254	3	MKT 253	3
Economics Elective	3	ENG 163 or ENG 164	3	SPC 155 or SPC 156	3	Social Science Elective	3
	15		**15**		**15**		**15**

Business, AAS

REAL ESTATE MANAGEMENT OPTION

Division of Computer Technology/Business

The real estate management option of the business degree program provides an introduction to business and the basic principles of management with a major emphasis on real estate practices and real estate management.

Career Opportunities

Graduates of the real estate management option will find employment as real estate brokers, property managers, property developers and personal financial planners. Job opportunities will be available in real estate firms, property management firms and in corporations that have real estate departments.

Competency Profile

This curriculum is designed to prepare students to:

- participate in the buying and selling of real estate for investment
- manage rental properties
- engage in real estate brokerage
- participate in real estate marketing and sales activities

PROGRAM REQUIREMENTS (TOTAL CREDITS — 61)

General Education

BUS 120	Math of Business	3
CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 163	Business Communication	
or		3
ENG 164	Advanced Composition	
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Comm.	
Social Science Elective		3
		18

Major

BUS 158	Prin. of Management	3
BUS 159	Business Finance	3
BUS 160	Intro to Business	3
BUS 205	Business Law I	3
BUS 240	Techniques of Selling	3
BUS 241	Human Resource Mgmt.	3
BUS 245	Prin. of Marketing	3
		21

Concentration

RLS 101	Fund. of Real Estate	2
RLS 102	Real Estate Practices	2
RLS 107	Real Estate Brokerage	3
RLS 205	Property Management	
or		3
RLS 211	Real Estate Appraisal	
RLS 209	Real Estate Finance	3
RLS 210	Law of Real Estate	3
		16

Other Required Courses

ACC 165	Acctg. for Managers	3
Economics Elective		3
		6

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
BUS 120	3	ACC 165	3	BUS 159	3	BUS 245	3
BUS 160	3	BUS 158	3	BUS 241	3	RLS 209	3
CPT 150	3	BUS 205	3	RLS 101	2	RLS 210	3
ENG 161	3	BUS 240	3	RLS 102	2	RLS 205 or 211	3
Economics Elective	3	ENG 163 or ENG 164	3	RLS 107	3	Social Science Elective	3
	15		**15**	SPC 155 or SPC 156	3		**15**
					16		

Business, AAS

SMALL BUSINESS MANAGEMENT OPTION

Division of Computer Technology/Business

The small business management option provides students with an introduction to business and the basic principles of management and emphasizes the skills needed to operate and administer a small business enterprise.

Career Opportunities

Graduates of the small business management option can expect to find employment as assistant managers, junior department heads, administrative assistants and front-line supervisors in small businesses. Job opportunities will be available in small businesses, nonprofit organizations, and in franchise ownership and management.

Competency Profile

This curriculum is designed to prepare students to:

- participate in operating and managing small businesses
- assist small business owners in running their businesses
- start, operate and manage entrepreneurial organizations
- become competent in small business finance and operations

PROGRAM REQUIREMENTS (TOTAL CREDITS — 61)

General Education

BUS 120	Math of Business	3
CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 163	Business Communication	
or		3
ENG 164	Advanced Composition	
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Comm.	
Social Science Elective		3
		18

Major

BUS 158	Prin. of Management	3
BUS 159	Business Finance	3
BUS 160	Intro to Business	3
BUS 205	Business Law I	3
BUS 240	Techniques of Selling	3
BUS 241	Human Resource Mgmt.	3
BUS 245	Prin of Marketing	3
		21

Concentration

BUS 155	Personal Finance	3
BUS 260	Small Business Mgmt.	3
BUS 262	Efft. Entrepreneurship	3
BUS 263	Small Business Finance	3
BUS 264	Small Business Oper.	3
		15

Other Required Courses

ACC 120	QuickBooks - Basics	1
ACC 165	Acctg. for Managers	3
Economics Elective		3
		7

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
BUS 120	3	ACC 165	3	ACC 120	1	BUS 155	3
BUS 160	3	BUS 158	3	BUS 159	3	BUS 245	3
CPT 150	3	BUS 205	3	BUS 241	3	BUS 263	3
ENG 161	3	BUS 240	3	BUS 260	3	BUS 264	3
Economics Elective	3	ENG 163 or ENG 164	3	BUS 262	3	Social Science Elective	3
	15		**15**	SPC 155 or SPC 156	3		**15**
					16		

Business, Diploma

Division of Computer Technology/Business

The business diploma program is designed to provide the student with a selection of general business management courses.

Career Opportunities

Graduates of the general management option can expect to find employment as assistant managers, production managers, management trainees, quality control officers, warehouse managers and inventory managers.

Competency Profile

This curriculum is designed to prepare students to:

- participate in business management functions
- conduct marketing analysis and manage sales
- conduct financial analysis and manage finances
- join a small business as a member of management

PROGRAM REQUIREMENTS (TOTAL CREDITS — 36)

General Education

BUS 120	Math of Business	3
CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
Social Science Elective		3
		12

Major

BUS 158	Prin. of Management	3
BUS 159	Business Finance	3
BUS 160	Intro to Business	3
BUS 205	Business Law I	3
BUS 240	Techniques of Selling	3
BUS 241	Human Resources Mgmt.	3
BUS 245	Prin. of Marketing	3
		21

Other Required Courses

ACC 165	Acctg. for Managers	3
		3

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**	
ACC 165	3	BUS 159	3
BUS 120	3	BUS 205	3
BUS 158	3	BUS 240	3
BUS 160	3	BUS 241	3
CPT 150	3	BUS 245	3
ENG 161	3	Social Science Elective	3
	18		**18**

Business, Certificate

FINANCIAL MANAGEMENT
Division of Computer Technology/Business

The financial management certificate offers students the opportunity to gain proficiency in managing the financial function in a business.

Career Opportunities

Graduates of the financial management option can expect to find employment as bank managers, consumer loan officers, commercial lending managers, investment managers, insurance agents and financial analysts. Job opportunities will be available in the financial departments in large corporations and in commercial lending companies, consumer finance organizations, banks and insurance companies.

Competency Profile

This curriculum is designed to prepare students to:

- participate in developing and implementing a financial plan
- manage the financial activities in a business organization
- engage in investment planning and credit management

PROGRAM REQUIREMENTS (TOTAL CREDITS — 18)

ACC 165	Accounting for Mgrs.	3
BUS 159	Business Finance	3
BUS 190	Credit Management	3
BUS 191	Financial Institutions	3
BUS 246	Risk Management	3
BUS 259	Investments	3
		18

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
ACC 165	3	BUS 159	3
BUS 190	3	BUS 191	3
BUS 246	3	BUS 259	3
	9		**9**

Business, Certificate

GENERAL MANAGEMENT
Division of Computer Technology/Business

The general management certificate is designed to provide an introductory view of general management in an enterprise environment.

Career Opportunities

The general management certificate provides students with employment opportunities as assistant managers, production managers, management trainees, department supervisors, quality control officers, warehouse managers and inventory managers. Job opportunities will be available in large corporations, a variety of small businesses and nonprofit organizations.

Competency Profile

This curriculum is designed to prepare students to:

- participate in the management of a variety of business types
- become skilled in organizing and managing human resources
- act as an administrative assistant to business executives and managers

PROGRAM REQUIREMENTS (TOTAL CREDITS — 18)

ACC 165	Acctg. for Managers	3
BUS 120	Math of Business	3
BUS 158	Prin. of Management	3
BUS 159	Business Finance	3
BUS 160	Intro to Business	3
BUS 245	Prin. of Marketing	3
		18

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
BUS 120	3	ACC 165	3
BUS 158	3	BUS 159	3
BUS 160	3	BUS 245	3
	9		**9**

Business, Certificate

HUMAN RESOURCES MANAGEMENT
Division of Computer Technology/Business

The human resources management certificate is designed to prepare students for entry-level human resources management positions in a variety of organizations. The program of study develops basic competence in a focused range of essential human resources functions.

Career Opportunities

Graduates of the human resources management certificate can expect to find employment as compensation management specialists, safety management specialists and general human resources management specialists. Job opportunities will be available in large corporations, a variety of small businesses and nonprofit organizations.

Competency Profile

This curriculum is designed to prepare students to:

- implement marketing/sales skills applicable to the customer orientation of the employer
- supervise human resources in an organization
- utilize negotiating skills with employees and/or local union officials

PROGRAM REQUIREMENTS (TOTAL CREDITS — 18)

BUS 241	Human Resources Mgmt.	3
BUS 246	Risk Management	3
BUS 249	Labor Relations	3
BUS 258	Supervisory Mgmt.	3
BUS 275	Organizational Behavior	3
BUS 285	Compensation Mgmt.	3
		18

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
BUS 241	3	BUS 246	3
BUS 249	3	BUS 258	3
BUS 275	3	BUS 285	3
	9		**9**

Business, Certificate

MARKETING MANAGEMENT
Division of Computer Technology/Business

The marketing management certificate offers students the opportunity to gain proficiency in managing the marketing function in a business.

Career Opportunities

Graduates of the marketing option can expect to find employment as assistant marketing managers, junior advertising executives, product managers, product designers, administrative assistants, project managers, and in positions in public relations and media. Job opportunities will be available in large corporations, small businesses and in nonprofit organizations.

Competency Profile

This curriculum is designed to prepare students to:

- participate in developing and implementing a marketing plan
- manage advertising, promotion and public relations activities in a marketing organization
- engage in planning and developing global marketing tasks

PROGRAM REQUIREMENTS (TOTAL CREDITS — 18)

BUS 245	Prin. of Marketing	3
MKT 242	Retailing	3
MKT 251	Consumer Behavior	3
MKT 252	Public Relations	3
MKT 253	Global Marketing	3
MKT 254	Advertising & Promotion	3
		18

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
BUS 245	3	MKT 242	3
MKT 251	3	MKT 252	3
MKT 254	3	MKT 253	3
	9		**9**

Business, Certificate

REAL ESTATE MANAGEMENT
Division of Computer Technology/Business

The real estate management certificate offers students the opportunity to gain proficiency in real estate brokerage and management.

Career Opportunities

Graduates of the real estate management option will find employment as real estate brokers, property managers, property developers and personal financial planners. Job opportunities will be available in real estate firms, property management firms and in corporations that have real estate departments.

Competency Profile

This curriculum is designed to prepare students to:

- participate in the buying and selling of real estate for investment
- manage rental property
- engage in real estate brokerage

PROGRAM REQUIREMENTS (TOTAL CREDITS — 16)

RLS 101	Fund. of Real Estate	2
RLS 102	Real Estate Practices	2
RLS 107	Real Estate Brokerage	
or		3
RLS 211	Real Estate Appraisal	
RLS 205	Property Management	3
RLS 209	Real Estate Finance	3
RLS 210	Law of Real Estate	3
		16

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
RLS 101	2	RLS 205	3
RLS 102	2	RLS 209	3
RLS 107 or 211	3	RLS 210	3
	7		**9**

Business, Certificate

SMALL BUSINESS MANAGEMENT
Division of Computer Technology/Business

The small business management certificate is designed to provide the student with an introduction to the ownership, operation and management of small business ventures.

Career Opportunities

Graduates of the small business management option can expect to find employment as assistant managers, junior department heads, administrative assistants and front-line supervisors in small businesses. Job opportunities will be available in small businesses, nonprofit organizations, and in franchise ownership and management.

Competency Profile

This curriculum is designed to prepare students to:

- participate in the management of small businesses
- become skilled in starting and managing small businesses
- act as an administrative assistant to a small business owner

PROGRAM REQUIREMENTS (TOTAL CREDITS —16)

ACC 120	Quickbooks - Basic	1
BUS 155	Personal Finance	3
BUS 260	Small Business Mgmt.	3
BUS 262	Effective Entrepreneurship	3
BUS 263	Small Business Finance	3
BUS 264	Small Business Oper.	3
		16

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
BUS 155	3	ACC 120	1
BUS 260	3	BUS 263	3
BUS 262	3	BUS 264	3
	9		**7**

Casino/Gaming Certificate

Workforce Development Division of Technologies/Culinary Arts

The Casino/Gaming certificate is designed to provide students with an introduction to the casino/gaming industry which includes operations, marketing, customer service, surveillance and security, the legal and regulatory aspects, and the relationship of the casino industry to tourism in general. Business attire may be required for some class assignments.

Competency Profile

This curriculum is designed to prepare students to:

- identify organizational structures and functions of the departments within a casino/gaming operation
- identify casino security issues and investigative techniques
- maintain financial records and data required of the casino/gaming industry
- define, evaluate and implement effective casino/gaming marketing plans
- use interpersonal skills to effectively communicate within a casino/gaming environment
- anticipate and satisfy diverse customer expectations within casino/gaming facilities
- recognize the economic and social impact of gaming to the local and regional areas
- utilize computer technology necessary to maintain casino/gaming operation
- adhere to regulations governing the casino/gaming industry

Career Opportunities

Graduates of the Casino/Gaming Certificate program may accept positions as casino hosts, change attendants, slot floor attendants, slot floor supervisors, marketing representatives, cage cashiers, surveillance/security personnel, wait staff bartenders and bar assistants.

PROGRAM REQUIREMENTS (TOTAL CREDITS – 16)

FSM 113	Customer Service	3
FSM 117	Wait Staff/Din. Rm. Trng.	1
FSM 119	Beverage Management	1
HMT 170	Casino/Gaming Operations	3
HMT 172	Casino Marketing	2
HMT 174	Intro/Casino Surveillance & Security	1
HMT 176	Intro/Casino Fin. Controls	2
SPC 156	Interpersonal Comm.	3
		16

Computer Information Security, AAS

Division of Computer Technology/Business

The Computer Information Technology program provides students with extensive hands-on instruction in all facets of information security, network security, and PC security. Students will gain experience with the tools and techniques of security professionals. Topics covered include computer forensics, intrusion detection, anti-virus software, and firewalls, among others.

Career Opportunities

Graduates may find employment as analysts or consultants in private investigation firms, private security firms and supporting positions with local, state, and federal law enforcement agencies. Networking professionals may find employment as corporate security managers, Internet security consultants, security technicians, or other network positions with an emphasis on security.

Competency Profile

This curriculum is designed to prepare students to:

- identify and assess potential security risks against PCs, web sites, programs and networks
- develop and implement a security plan to minimize security threats and manage security risks
- develop familiarity with current security software and hardware
- assume the duties and responsibilities of a corporate or government agency security officer
- adhere to a moral code of ethics and understand the legal responsibilities in the security field
- develop oral, written and listening communication skills

Students enrolled in information security courses must obtain a current criminal record check.

PROGRAM REQUIREMENTS (TOTAL CREDITS — 61)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Communication	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Composition	
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Comm.	
Mathematics Elective		3
Social Science Elective		3
		18

Major

CIS 168	Prin. of Info Security	3
CIS 209	LAN Security	3
CIS 210	Internet Security	3
CIS 212	Computer Forensics	3
CIS 250	Network Intrusion Detect.	3
CIS 252	Digital Forensics I	3
CIS 253	Commun. Security✦	3
CIS 262	Digital Forensics II	3
		24

✦*capstone course*

Other Required Courses

CPT 120	Intro to the Internet	1
CPT 182	Operating Systems	3
CPT 183	Local Area Networks	3
CPT 214	Wireless Commun.	3
CPT 238	Wide Area Networking	3
CPT 248	PC Hardware	3
CPT 256	Linux Desktop	3
		19

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
CIS 168	3	CIS 210	3	CIS 209	3	CIS 250	3
CPT 120	1	CPT 182	3	CIS 212	3	CIS 253	3
CPT 150	3	CPT 183	3	CIS 252	3	CIS 262	3
ENG 161	3	CPT 238	3	CPT 214	3	CPT 248	3
Mathematics Elective	3	ENG 162, 163 or 164	3	SPC 155 or 156	3	CPT 256	3
Social Science Elective	3		**15**		**15**		**15**
	16						

Computer Information Security, Certificate

Division of Computer Technology/Business

This certificate is designed to provide an introduction to the theories and practices associated with information security. Law enforcement professionals can enhance their knowledge of cyber crimes by becoming more familiar with the intricacies of computer evidence handling and documentation, and cyber crime determination, evaluation, and prosecution. Current computer professionals can expand upon their existing networking experience by increasing their knowledge of information security and expanding their careers into the information security discipline. This certificate is currently available online.

Career Opportunities

Graduates may find employment opportunities in private investigation firms, private security firms as well as local law enforcement agencies. Networking professionals may find employment as corporate security managers, Internet security consultants, security technicians or other network positions with an emphasis on security.

Competency Profile

This curriculum is designed to prepare students to:

- communicate with law enforcement professionals and network professionals with respect to cyber crimes and information security
- determine the scope and cost of specific security intrusions
- evaluate potential security vulnerabilities
- administer local area network (LAN), wide area network (WAN), and Internet security procedures and devices

Students enrolled in information security courses must obtain a current criminal record check.

PROGRAM REQUIREMENTS (TOTAL CREDITS — 18)

General Education		
CIS 168	Prin. of Info Security	3
CIS 209	LAN Security	3
CIS 210	Internet Security	3
CIS 212	Computer Forensics	3
CPT 182	Operating Systems	3
CPT 183	Local Area Networks	3
		18

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
CIS 168	3	CIS 209	3
CPT 182	3	CIS 210	3
CPT 183	3	CIS 212	3
	9		**9**

Computer Numerical Control Technology, AAS

Workforce Development Division of Technologies/Culinary Arts

In Westmoreland County, employment in the machining industry is increasing at a steady rate, creating a need for more trained machinists. In order to compete with foreign manufacturers, Westmoreland County shops are increasing the number of computer numerical controlled machines as well as other automated equipment. This has created a need for technicians, programmers and operators that is not being met at the present time.

Career Opportunities

Students completing this program can expect to be employed as CNC programmers, technicians and coordinators. This program can also benefit those who have a desire to be designers or managers.

Competency Profile

This curriculum is designed to prepare students to:

- develop the ability to execute quantitative design of machine products
- identify the basic components of a CADD/CAM system (hardware and software)
- perform an infinite number of 2-D machine tool path computations necessary to produce an advanced drafting and design portfolio
- apply concepts from physics, engineering, mechanics, mathematics, and drafting to the synthesis of durable mechanical machines and products
- analyze and select appropriate materials and components for designing and manufacturing industrial products
- communicate effectively and appropriately; record and report information significant to the job

PROGRAM REQUIREMENTS (TOTAL CREDITS — 62)

General Education

DFT 258	AutoCAD	4
ENG 161	College Writing	3
ENG 162	Technical Commun.	3
MTH 108	Math for the Tech. I	4
PHY 107	Applied Physics	4
Social Science Elective		3
		21

Major

CNC 100	Intro to CNC	3
CNC 200	CNC I	4
CNC 201	CNC II	4
DFT 266	Inventor	4
		15

Other Required Courses

DFT 105	Technical Drafting I	4
DFT 112	Intro to Design Mat. & Pro.	3
EGR 105	Manufacturing Proced.	3
MTH 109	Math for the Tech. II	4
MTT 100	Intro to Metalworking	3
MTT 102	Geom. Dimen. & Toler.	3
MTT 105	Lathe I	3
MTT 110	Mill I	3
		26

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
DFT 105	4	CNC 100	3	CNC 200	4	CNC 201	4
DFT 112	3	MTH 109	4	DFT 258	4	DFT 266	4
MTH 108	4	MTT 102	3	ENG 161	3	EGR 105	3
MTT 100	3	MTT 105	3	PHY 107	4	ENG 162	3
	14	MTT 110	3		**15**	Social Science Elective	3
			16				**17**

Computer Numerical Control Technology, Certificate

Workforce Development Division of Technologies/Culinary Arts

In Westmoreland County, employment in the machining industry is increasing at a steady rate, creating a need for more trained machinists. In order to compete with foreign manufacturers, Westmoreland County shops are increasing the number of computer numerical controlled machines as well as other automated equipment. This has created a need for technicians, programmers and operators that is not being met at the present time.

Career Opportunities

Students completing this program can expect to be employed as CNC programmers, technicians and coordinators. This program can also benefit those who have a desire to be designers or managers.

Competency Profile

This curriculum is designed to prepare students to:

- develop the ability to execute quantitative design of machine products
- identify the basic components of a CADD/CAM system (hardware and software)
- perform an infinite number of 2-D machine tool path computations necessary to produce an advanced drafting and design portfolio
- apply concepts from physics, engineering, mechanics, mathematics, and drafting to the synthesis of durable mechanical machines and products
- analyze and select appropriate materials and components for designing and manufacturing industrial products
- communicate effectively and appropriately; record and report information significant to the job

This program is designed for those students with a machining background.

PROGRAM REQUIREMENTS (TOTAL CREDITS — 23)

	Major	
CNC 100	Intro to CNC	3
CNC 200	CNC I	4
CNC 201	CNC II	4
DFT 258	AutoCAD	4
DFT 259	Advanced AutoCAD	4
DFT 266	Inventor	4
		23

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**		**Fall Semester**	
CNC 100	3	CNC 200	4	CNC 201	4
DFT 258	4	DFT 259	4	DFT 266	4
	7		**8**		**8**

Computer Systems Electronics Technology, AAS

ELECTRO-OPTICS OPTION

Division of Computer Technology/Business

The electro-optics option of the computer systems electronics technology program combines the technologies of fiber optics and electronics. The fundamental courses in electronics are taught along with specialized courses in digital communications and computer circuits. The electro-optics option will address the fundamentals of telecommunications and fiber optics light generating processes used to transport digital information for data communications.

Career Opportunities

Students graduating with the electro-optics option can obtain employment as technicians to build and maintain telecommunications systems, and to install and operate fiber-optics and electro-optical telecommunications systems.

Competency Profile

This curriculum is designed to prepare students to:

- work effectively with customers, consumers and associates
- operate various types of standard and specialized equipment to troubleshoot microprocessor based or electro-optics based computer equipment
- identify, analyze and troubleshoot problems using a systems approach
- configure, design and implement computer based systems or fiber optic/laser systems
- communicate, effectively and appropriately: record and report information significant to the job
- apply concepts from physics, engineering mathematics and computer architecture to the synthesis and repair of electro-optical systems
- integrate and apply mathematical skills to solve quantitative problems
- read, understand and apply information from oral and written material

PROGRAM REQUIREMENTS (TOTAL CREDITS — 65)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Comm.	
or		
ENG 163	Business Comm.	3
or		
ENG 164	Advanced Composition	
MTH 108	Math for Technologies I	4
PHY 155	College Physics I	4
Social Science Elective		3
		20

Major

CPT 160	Intro to Programming	3
CPT 171	Telecomm. Fund.	5
CPT 180	C++ Programming	3
CPT 198	Fiber Optics	3
CPT 219	Fiber Optic Analysis & Design	3
CPT 222	Fiber Optics Testing	3
ELC 102	Electronic Devices	4
ELC 105	Elect. Instru. & Mea.	2
ELC 106	Circuit Analysis I	3
ELC 114	Digital Techniques	4
ELC 202	Linear Electronics	4
ELC 211	Fiber Optics/Laser Tech.	4
PHY 156	College Physics II	4
		45

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
CPT 150	3	CPT 160	3	CPT 180	3	CPT 22	3
CPT 171	5	CPT 198	3	CPT 219	3	ELC 105	2
PHY 155	4	ELC 102	4	ELC 114	4	ELC 211	4
MTH 108	4	ELC 106	3	ELC 202	4	ENG 162, 163 or 164	3
	16	PHY 156	4	ENG 161	3	Social Science Elective	3
			17		**17**		**15**

Computer Systems Electronics Technology, AAS

NETWORKING OPTION

Division of Computer Technology/Business

The networking option in computer systems electronics technology combines electronics and computer technologies. The fundamental courses in electronics are taught along with the specialized courses in digital and computer circuits. Students in this program will develop skills in troubleshooting and interfacing basic computer systems. Students will also gain experience in computer languages with advanced course work in networking systems.

Career Opportunities

This program is designed to prepare computer system technicians that have a blend of hardware and software skills. Positions will span the spectrum of occupational opportunities from system development and system manufacturing to field service.

Competency Profile

This curriculum is designed to prepare students to:

- work effectively with customers, consumers and associates
- operate various types of standard as well as specialized equipment to troubleshoot microprocessor based and computer equipment
- identify, analyze and troubleshoot problems using systems approach
- configure, design and implement computer based systems
- communicate effectively and appropriately; record and report information significant to the job
- apply concepts from physics, engineering, mathematics and computer architecture to the synthesis and repair of systems
- integrate and apply mathematical skills to solve quantitative problems
- read, understand and apply information from oral and written material

PROGRAM REQUIREMENTS (TOTAL CREDITS — 64)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Composition	
MTH 108	Math for Tech. I	4
PHY 155	College Physics I	4
Social Science Elective		3
		20

Major

CPT 171	Telcom. Fundamentals	5
CPT 182	Operating Systems	3
CPT 198	Fiber Optic Tech	
or		3
CPT 256	Linux Desktop	
CPT 248	PC Hardware	3
CPT 249	PC Troubleshooting	3
CPT 262	Windows Client Server	3
CPT 264	Windows Server Mgmt.	5
ELC 102	Electronic Devices	4
ELC 105	Elect. Instru. & Measure.	2
ELC 106	Circuit Analysis I	3
ELC 114	Digital Techniques	4
ELC 206	Microprocessors	4
ELC 211	Fiber Optics/Laser Tech.	
or		4
ELC 213	Microprocessor Applica.	
		42

Other Required Courses

None Required

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

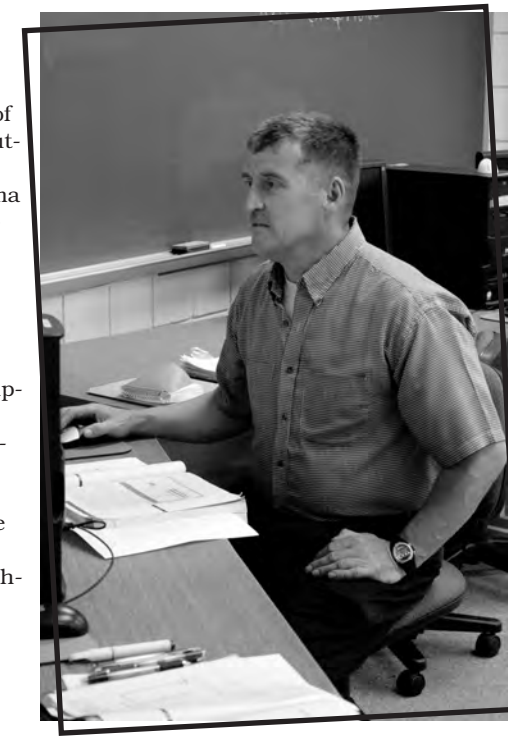
Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
CPT 171	5	CPT 182	3	CPT 262	3	CPT 198 or 256	3
CPT 150	3	CPT 248	3	ELC 206	4	CPT 249	3
ELC 105	2	ELC 102	4	ENG 162, 163 or 164	3	CPT 264	3
ELC 106	3	ELC 114	4	PHY 155	4	ELC 211 or 213	4
MTH 108	4	ENG 161	3		**14**	Social Science Elective	3
	17		**17**				**16**

Computer Technology

Technology and Change

Changes in the information technology industry are coming at an accelerated rate. The impact of the rapid growth of the Internet on our society is profound and far-reaching. As a stimulus, the Internet has led to new computer programming languages, the expanded use of databases and wide-area networking, and Web site development for electronic commerce. Theses changes have created an unprecedented demand for computer professionals with a wide variety of skills and knowledge.

The Computer Technology Department



The computer technology department at WCCC recognizes the changing nature of the computing profession and offers a wide range of programs and courses designed to prepare students for the challenges in the field of information technology. The associate in applied science degree in computer technology offers four options or concentrations: database/programming, networking, technical support and telecommunications. The diploma in computer technology is a shorter-term program that covers the fundamentals of computer technology. There are also six computer technology certificate programs that cover advanced topics in depth.

Associate in Applied Science Degree

The computer technology associate in applied science degree program is offered as four options: database/programming, networking, technical support and telecommunications. Each of these areas of concentration was chosen to reflect the projected needs of the information technology industry. The AAS degree program options provide a solid background along with a strong concentration in each area. The courses in these programs have been carefully selected to reflect those disciplines and skills that are in strong demand in the computing profession and that have significant growth potential. The associate in applied science degree in computer technology has been designed for completion in two years of full-time study.

Computer Technology Diploma

The computer technology diploma is a two-semester program designed to be a shorter alternative to the more comprehensive associate degree program. The diploma program provides an interdisciplinary look at computer technology at the introductory level. It includes many courses that can be applied to the associate degree. The diploma program can be used by the student as a final product or as an intermediate step toward the attainment of the associate degree.

Computer Technology Certificate

WCCC offers a total of seven certificates covering advanced technical topics. Certificates are available in: database development, fiber optic technologies, networking, microcomputer applications, programming, PC Repair/A+, and Web development. These short programs are designed for the student who is seeking a concentrated education in a specific aspect of computer technology. Certificates are particularly advantageous for the WCCC graduate or student in the workforce who needs to upgrade or expand his or her technical skills.

Complete descriptions of these programs appear on pages 71-80.

Computer Technology, AAS

NETWORKING OPTION

Division of Computer Technology/Business

The networking option of the computer technology program provides students with extensive hands-on instruction in all facets of local area network operation and administration. Students will learn to install, operate, maintain and troubleshoot these products in a corporate enterprise-networking environment.

Career Opportunities

Graduates of the networking option can expect to find employment as network administrators, network engineers, systems analysts, network technicians, technical sales representatives, customer service representatives, technical support analysts or IT trainers. Job opportunities will be available with network consulting and design firms as well as with any company that deploys a local area network.

Competency Profile

This curriculum is designed to prepare students to:

- install, configure, maintain and troubleshoot computer hardware
- analyze and design networking solutions for the organization
- configure and maintain network resources to satisfy organization requirements
- provide training and support to end users of networked equipment
- identify the resources needed to advance technical skills as the networking field changes
- establish proficiency in Microsoft Windows and Linux networking operating systems
- develop oral, written and listening communication skills
- integrate and apply mathematical skills to solve quantitative problems

PROGRAM REQUIREMENTS (TOTAL CREDITS — 63)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Composition	
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Comm.	
Mathematics Elective		3
Social Science Elective		3
		18

Major

CIS 209	LAN Security	3
CPT 145	Intro/Computer Tech.	3
CPT 151	Advanced Office Applica.	3
CPT 181	Intro to Telecomm.	3
CPT 182	Operating Systems	3
CPT 183	Local Area Networks	3
CPT 198	Fiber Optic Tech.	3
CPT 214	Wireless Commun.	3
CPT 219	Fiber Optics Anlys. Dsgn.	3
CPT 248	PC Hardware	3
CPT 249	PC Troubleshooting	3
CPT 256	Linux Desktop	3
CPT 262	Windows Client Server	3
CPT 264	Windows Server Mgmt.✦	3
CPT 286	System Analysis & Dsgn.	3
		45

✦*capstone course*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
CPT 145	3	CPT 151	3	CPT 198	3	CIS 209	3
CPT 150	3	CPT 182	3	CPT 214	3	CPT 219	3
CPT 181	3	CPT 183	3	CPT 256	3	CPT 249	3
ENG 161	3	CPT 248	3	CPT 262	3	CPT 264	3
Mathematics Elective	3	ENG 162, 163 or 164	3	SPC 155 or SPC 156	3	CPT 286	3
	15	Social Science Elective	3		**15**		**15**
			18				

Computer Technology, AAS

PROGRAMMING FOR THE ENTERPRISE OPTION

Division of Computer Technology/Business

Behind every application lies a database of storage of one of the most valuable assets of any enterprise - its data. Developed in consultation with professionals in the field, the programming for the enterprise option provides the student with a strong background in the programming and data extraction skills necessary for success as a programmer by providing hands-on experience in Visual Basic, JAVA, SQL and server programming tools of the day. Working independently or in teams, students learn to design, develop and debug programs to process this data to solve problems typically found in an enterprise.

Career Opportunities

Graduates of the programming for the enterprise option can expect to find employment as computer programmers, junior systems analysts, programmer analysts, technical sales representatives, technical support analysts, or web developers. Job opportunities will be available with consulting firms, Internet companies, Web development firms, and in organizations requiring development of in-house decision support or ad hoc systems.

Competency Profile

This curriculum is designed to prepare students to:

- analyze problems for development and design of information processing solutions
- use a programming language to develop efficient and well-structured application programs
- function as a member of a development team to determine program intent, output requirements, input needed and processing sequences for new programs
- maintain existing programs as internal and external requirements change
- develop test modules to verify program accuracy
- identify the resources needed to advance technical skills as the computer field changes
- develop oral, written, and listening communication skills

PROGRAM REQUIREMENTS (TOTAL CREDITS – 62)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Composition	
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Comm.	
Mathematics Elective		3
Social Science Elective		3
		18

Major

CPT 122	Visio	1
CPT 145	Intro/Computer Tech.	3
CPT 160	Intro to Programming	3
CPT 162	Visual Basic	3
CPT 163	Java Programming	3
CPT 182	Operating Systems	3
CPT 196	Access for Windows	3
CPT 203	XHTML and CSS	3
CPT 206	JavaScript	3
CPT 208	Advanced Access	3
CPT 213	Java Programming II	3
CPT 235	Database Mgmnt. Sys.	3
CPT 242	Visual Basic II	3
CPT 271	Oracle SQL	3
CPT 286	Sys. Analysis & Dsgn.✦	3
		43

✦*capstone course*

Other Courses

OFT 100	Basic Keyboarding	1
		1

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
CPT 145	3
CPT 150	3
CPT 160	3
ENG 161	3
OFT 100	1
Mathematics Elective	3
	16

Spring Semester	
CPT 122	1
CPT 162	3
CPT 182	3
CPT 196	3
CPT 203	3
CPT 242	3
ENG 162. 163 or 164	3
	16

Fall Semester	
CPT 163	3
CPT 208	3
CPT 235	3
CPT 242	3
SPC 155 or 156	3
	15

Spring Semester	
CPT 206	3
CPT 213	3
CPT 271	3
CPT 286	3
Social Science Elective	3
	15

Computer Technology, AAS

TECHNICAL SUPPORT OPTION

Division of Computer Technology/Business

The technical support option of the computer technology program provides students with a strong foundation in microcomputer applications, including operating systems, PC hardware, productivity applications and networking. Emphasis will be placed on the installation, configuration, operation, maintenance and troubleshooting of microcomputer hardware systems, operating systems and application software.

Career Opportunities

Graduates of the technical support option can expect to find employment as technical support technicians, LAN technicians, junior systems analysts, technical sales representatives, customer service technicians, help-desk analysts and IT trainers. Job opportunities will be available with companies in the fields of hardware manufacturing, software publishing, PC consulting, IT engineering and sales, and any company deploying microcomputers in the workplace.

Competency Profile

This curriculum is designed to prepare students to:

- understand the concepts of computer design and operation
- install, configure and troubleshoot a variety of operating systems
- install, configure and troubleshoot popular microcomputer applications
- describe the principles of WAN/LAN network administration
- access and evaluate current telecommunications technology
- troubleshoot and repair computer hardware and software
- install and configure network operating systems
- develop competency in the Microsoft Office productivity suite
- develop oral, written and listening communication skills
- integrate and apply mathematical skills to solve quantitative problems

PROGRAM REQUIREMENTS (TOTAL CREDITS — 63)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Composition	
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Comm.	
Mathematics Elective		3
Social Science Elective		3
		18

Major

CPT 120	Intro to the Internet	1
CPT 145	Intro/Computer Tech.	3
CPT 181	Intro to Telecomm.	3
CPT 182	Operating Systems	3
CPT 183	Local Area Networks	3
CPT 185	PowerPoint	1
CPT 190	Word for Windows	3
CPT 195	Excel for Windows	3
CPT 196	Access for Windows	3
CPT 201	Web Design/Web Stndrds.	3
CPT 230	Integrated Office Applica.✦	3
CPT 248	PC Hardware	3
CPT 249	PC Troubleshooting	3
CPT 259	User Support Operations	3
CPT 262	Windows Client Server	3
CPT 286	System Analysis & Dsgn.	3
		44

✦*capstone course*

Other Required Courses

OFT 100	Basic Keyboarding	1
		1

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
CPT 145	3	CPT 120	1	CPT 183	3	CPT 230	3
CPT 150	3	CPT 181	3	CPT 185	1	CPT 249	3
ENG 161	3	CPT 182	3	CPT 196	3	CPT 259	3
OFT 100	1	CPT 190	3	CPT 201	3	CPT 262	3
Mathematics Elective	3	CPT 195	3	CPT 248	3	CPT 286	3
Social Science Elective	3	ENG 162, 163 or 164	3	SPC 155 or SPC 156	3		**15**
	16		**16**		**16**		

Computer Technology, AAS

TELECOMMUNICATIONS OPTION

Division of Computer Technology/Business

The telecommunications option of the computer technology program provides an intensive, hands-on curriculum focusing on the emerging field of telecommunications technology. This program of study will prepare students to design, build, maintain and troubleshoot advanced computer networks. Emphasis will be placed on local and wide-area network systems, the Internet, IP telephony, fiber-optic media and wireless communications. Four Cisco Networking Academy classes are included in this program.

Career Opportunities

Graduates of the telecommunications option can expect to find employment as network support technicians, WAN/LAN technicians, junior systems analysts, customer service representatives, help-desk analysts or IT trainers. Job opportunities are available with companies in the fields of telecommunications, consulting, the Internet, e-commerce, IT engineering and sales, and any business deploying a local- or wide-area network.

Competency Profile

This curriculum is designed to prepare students to:

- understand the fundamentals of telecommunications systems
- install, configure, maintain and troubleshoot telecommunications hardware devices
- design and specify a telecommunications network
- design, configure, maintain and troubleshoot wireless communications systems
- configure, maintain and troubleshoot network routers and switches
- deploy the technology of IP telephony and digital voice communications systems
- develop expertise with long- and short-haul fiber optic media and associated equipment
- implement Windows-based networks in an enterprise environment
- employ proper troubleshooting methods for optimal diagnosis and repair of telecom problems
- develop oral, written and listening communication skills
- integrate and apply mathematical skills to solve quantitative problems
- read, understand and apply information from oral and written material

PROGRAM REQUIREMENTS (TOTAL CREDITS — 62)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Composition	
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Comm.	
Mathematics Elective		3
Social Science Elective		3
		18

Major

CIS 210	Internet Security	3
CPT 143	IP Telephony	3
CPT 171	Telecom Fundamentals	5
CPT 182	Operating Systems	3
CPT 198	Fiber-Optic Tech.	3
CPT 211	Routing Technologies	5
CPT 214	Wireless Commun.	3
CPT 248	PC Hardware	3
CPT 256	Linux Desktop	3
CPT 257	Switching Technologies	5
CPT 262	Windows Client Server	3
CPT 291	WAN Technologies✦	5
		44

✦*capstone course*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
CPT 150	3	CPT 143	3	CPT 214	3	CIS 210	3
CPT 171	5	CPT 182	3	CPT 248	3	CPT 256	3
ENG 161	3	CPT 198	3	CPT 257	5	CPT 291	5
Mathematics Elective	3	CPT 211	5	CPT 262	3	Social Science Elective	3
	14	ENG 162, 163 or 164	3	SPC 155 or SPC 156	3		**14**
			17		**17**		

Computer Technology, Diploma

COMPUTER TECHNOLOGY

Division of Computer Technology/Business

Students develop skills in functional applications of the computer to a business environment. The diploma program introduces students to various aspects of the computer field and can be used as a goal or as an interim step in obtaining the AAS degree.

Career Opportunities

Graduates of the computer technology diploma program can expect to find employment as technical support technicians, technical sales representatives, customer service technicians, help-desk analysts and IT trainers.

Competency Profile

This curriculum is designed to prepare students to:

- install and maintain computer hardware and software
- use office productivity software to implement software solutions
- identify the resources needed to advance technical skills
- develop oral, written and listening communication skills

PROGRAM REQUIREMENTS (TOTAL CREDITS — 31)

General Education		
CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Composition	
Mathematics Elective		3
		12

Major		
CPT 120	Intro to the Internet	1
CPT 145	Intro/Computer Tech.	3
CPT 151	Advanced Office Applica.	3
CPT 181	Intro to Telecomm.	3
CPT 182	Operating Systems	3
CPT 248	PC Hardware	3
CPT 249	PC Troubleshooting	3
		19

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
CPT 150	3
CPT 182	3
CPT 248	3
ENG 161	3
Mathematics Elective	3
	15

Spring Semester	
CPT 120	1
CPT 145	3
CPT 151	3
CPT 181	3
CPT 249	3
ENG 162, 163, or 164	3
	16

Computer Technology, Diploma

TELECOMMUNICATIONS

Division of Computer Technology/Business

The telecommunications diploma provides an intensive, hands-on curriculum focusing on the emerging field of telecommunications technology. This program of study will prepare students to design, build, maintain and troubleshoot advanced computer networks. Emphasis will be placed on local and wide-area network systems, the Internet, fiber-optic media and wireless communications. Four Cisco Networking Academy classes are included in this program.

Career Opportunities

Graduates of the telecommunications option can expect to find employment as network support technicians, WAN/LAN technicians, junior systems analysts, customer service representatives, help-desk analysts or IT trainers. Job opportunities are available with companies in the fields of telecommunications, consulting, the Internet, e-commerce, IT engineering and sales, and any business deploying a local or wide-area network.

Competency Profile

This curriculum is designed to prepare students to:

- understand the fundamentals of telecommunications systems
- install, configure, maintain and troubleshoot telecommunications hardware devices
- design and specify a telecommunications network
- design, configure, maintain and troubleshoot wireless communications systems
- configure, maintain and troubleshoot network routers and switches
- develop expertise with long- and short-haul fiber optic media and associated equipment
- implement Windows-based networks in an enterprise environment
- employ proper troubleshooting methods for optimal diagnosis and repair of telecom problems
- integrate and apply mathematical skills to solve quantitative problems
- read, understand and apply information form oral and written materials

PROGRAM REQUIREMENTS (TOTAL CREDITS – 32)

Major		
CPT 171	Telecom Fundamentals	5
CPT 182	Operating Systems	3
CPT 198	Fiber Optic Technologies	3
CPT 211	Routing Technologies	5
CPT 214	Wireless Communication	3
CPT 219	Fiber Optic Anlys. & Dsgn.	3
CPT 257	Switching Technologies	5
CPT 291	WAN Technologies✦	5
		32

✦capstone course

RECOMMENDED SEQUENCE OF COURSES

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
CPT 171	5	CPT 211	5	CPT 257	5	CPT 291	5
CPT 182	3	CPT 198	3	CPT 214	3	CPT 219	3
	8		**8**		**8**		**8**

Computer Technology, Certificate

DATABASE APPLICATION DEVELOPMENT

Division of Computer Technology/Business

The database application development certificate provides students with an intensive experience in relational database management systems with emphasis on Access and Oracle SQL products.

Career Opportunities

Graduates of the database application development certificate can expect to find employment as database administrators, database operators, customer service representatives, technical sales representatives, technical support analysts and database trainers.

Competency Profile

This curriculum is designed to prepare students to:

- analyze problems for development and design of information processing solutions
- use appropriate design techniques to create data structures that provide for data accuracy
- become proficient in the use of current database management software

PROGRAM REQUIREMENTS (TOTAL CREDITS — 16)

CPT 110	Exploring Windows	1
CPT 196	Access for Windows	3
CPT 208	Advanced Access	3
CPT 235	Database Mgmt. Sys.	3
CPT 271	Oracle SQL I	3
CPT 286	Sys. Analysis & Dsn.	3
		16

RECOMMENDED SEQUENCE

Fall Semester		**Fall Semester**	
CPT 110	1	CPT 208	3
CPT 196	3	CPT 235	3
	4		**6**
Spring Semester		**Spring Semester**	
CPT 271	3	CPT 286	3
	3		**3**

Computer Technology, Certificate

MICROCOMPUTER APPLICATIONS

Division of Computer Technology/Business

The microcomputer applications certificate offers instruction in the Microsoft Office suite of office productivity software products and will guide students toward professional certification.

Career Opportunities

Graduates of the microcomputer applications certificate can expect to find employment as technical support technicians, junior systems analysts, technical sales representatives, customer service technicians, help-desk analysts and IT trainers.

Competency profile

This curriculum is designed to prepare students to:

- analyze and solve business-related problems using applications in the Office suite
- design and create documents, spreadsheets, databases and presentations for business functions
- manage business related electronic communications

PROGRAM REQUIREMENTS (TOTAL CREDITS — 16)

CPT 110	Intro to Windows	1
CPT 120	Intro to the Internet	1
CPT 122	Visio	1
CPT 185	PowerPoint	1
CPT 190	Word for Windows	3
CPT 195	Excel for Windows	3
CPT 196	Access for Windows	3
CPT 230	Integrated Office Applic.	3
		16

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
CPT 110	1	CPT 190	3
CPT 120	1	CPT 195	3
CPT 122	1	CPT 196	3
CPT 185	1		**9**
	4		
		Fall Semester	
		CPT 230	3
			3

Computer Technology, Certificate

FIBER OPTIC TECHNOLOGIES

Division of Computer Technology/Business

The fiber optic technologies certificate provides the student with an intensive, hands-on educational experience in fiber optic technologies, focusing on multimode and single-mode fiber optic applications, installation, restoration, design and troubleshooting analysis. This certificate places emphasis on "fiber to the home" cabling systems, which is important to meeting the current employment opportunities for deploying "fiber to the home" technology upgrades in the telecommunication industry. Fiber optic laser based systems will be investigated. Fiber to the premise system installation, restoration and troubleshooting along with optical electronic interfacing will be deployed in the state-of-the-art fiber optics lab. This program of study will prepare students to design, build, maintain, and troubleshoot fiber optic networks.

Career Opportunities

Graduates of fiber optics technologies certificate can expect to find employment as fiber optic technicians, fiber optic cable installation technicians, fiber optic cable restoration specialists, technical sales representatives, customer service representatives, fiber optic technical support analysts or as fiber optics procurement specialists used with marketing and purchasing support functions.

Competency Profile

This curriculum is designed to prepare students to:

- understand the fundamentals of fiber optic systems
- install, configure, maintain, and troubleshoot fiber optic systems
- design and specify a fiber optic network
- design, configure, maintain, and troubleshoot fiber optic systems
- design and planning of fiber optic inside and outside plant cabling systems
- restore fiber optic systems
- develop expertise with long and short haul fiber optic media and associated equipment
- employ proper troubleshooting methods for optimal diagnosis and repair of fiber optic systems problems utilizing state of the art optic instrumentation or test equipment

PROGRAM REQUIREMENTS (TOTAL CREDITS – 16)

	Major	
CPT 120	Intro to the Internet	1
CPT 183	Local Area Networks	3
CPT 198	Fiber Optic Tech.	3
CPT 219	Fiber Optic Anlys. & Dsg.	3
CPT 222	Fiber Optic Sys. Testing	3
CPT 238	Wide Area Networking	3
		16

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
CPT 120	1	CPT 219	3
CPT 183	3	CPT 222	3
CPT 198	3	CPT 238	3
	7		**9**

Computer Technology, Certificate

NETWORKING

Division of Computer Technology/Business

The networking certificate provides students with an intensive educational experience in local area networking, focusing on the Microsoft Windows 2000 network operating system.

Career Opportunities

Graduates of the networking certificate can expect to find employment as network administrators, network technicians, technical sales representatives, customer service representatives, technical support analysts or IT trainers.

Competency Profile

This curriculum is designed to prepare students to:

- install, configure, operate and troubleshoot Windows desktop client and server network operating systems
- implement and solve network operating system problems
- implement and maintain Windows client and server software in an enterprise environment

PROGRAM REQUIREMENTS (TOTAL CREDITS — 16)

CPT 122	Visio	1
CPT 182	Operating Systems	3
CPT 183	Local Area Networks	3
CPT 198	Fiber Optic Tech.	3
CPT 262	Windows Client Server	3
CPT 264	Windows Server Mgmt.	3
		16

RECOMMENDED SEQUENCE

Fall Semester	
CPT 122	1
CPT 182	3
CPT 183	3
	7

Spring Semester	
CPT 198	3
CPT 262	3
	6

Fall Semester	
CPT 264	3
	3

Computer Technology, Certificate

PC REPAIR/A+

Division of Computer Technology/Business

The PC repair certificate program prepares the student for employment as a PC repair technician and provides the instructional material to prepare for the A+ industry certification exam.

Career Opportunities

Graduates of the PC Repair/A+ certificate program can expect to find employment as technical support technicians, computer repair technicians, technical sales representatives, customer service technicians, help-desk analysts and IT trainers.

Competency Profile

This curriculum is designed to prepare students to:

- install, configure and operate MS-DOS, Windows 9x and Linux operating systems
- understand the architecture and troubleshoot several popular PC operating systems
- become proficient in the installation and configuration of PC hardware

PROGRAM REQUIREMENTS (TOTAL CREDITS — 17)

CPT 150	Microcomputer Concepts	3
CPT 182	Operating Systems	3
CPT 183	Local Area Networks	3
CPT 248	PC Hardware	3
CPT 249	PC Troubleshooting	3
CPT 274	A+ Certification Review	2
		17

RECOMMENDED SEQUENCE

Fall Semester	
CPT 150	3
CPT 248	3
	6

Spring Semester	
CPT 182	3
CPT 183	3
	6

Fall Semester	
CPT 249	3
	3

Spring Semester	
CPT 274	2
	2

Computer Technology, Certificate

PROGRAMMING

Division of Computer Technology/Business

The programming certificate offers the student a firm foundation in Visual Basic and Java, two of the most popular programming languages being used in industry.

Career Opportunities

Graduates of the programming certificate can expect to find employment as computer programmers, programmer analysts, technical sales representatives, technical support analysts and web developers.

Competency Profile

This curriculum is designed to prepare students to:

- build full-featured Windows application programs
- enhance application design with object-oriented programming skills
- create, test and debug computer programs

PROGRAM REQUIREMENTS (TOTAL CREDITS — 20)

CPT 122	Visio	1
CPT 160	Intro to Programming	3
CPT 162	Visual Basic	3
CPT 163	Java Programming I	3
CPT 180	C++ Programming	3
CPT 213	Java Programming II	3
CPT 242	Visual Basic II	3
OFT 100	Basic Keyboarding	1
		20

RECOMMENDED SEQUENCE

Fall Semester		**Fall Semester**	
CPT 122	1	CPT 213	3
CPT 160	3	CPT 242	3
OFT 100	1		**6**
	5		
Spring Semester			
CPT 162	3		
CPT 163	3		
CPT 180	3		
	9		

Computer Technology, Certificate

WEB DEVELOPMENT

Division of Computer Technology/Business

The Web development certificate offers the student exposure to a variety of Web page development tools and modern programming languages.

Career Opportunities

Graduates of the Web development certificate program can expect to find employment as computer programmers, systems analysts, PC technicians, programmer analysts, technical sales representatives, technical support analysts or Web developers.

Competency Profile

This curriculum is designed to prepare students to:

- design and create Internet and intranet based Web solutions
- enhance Web sites with interactivity for real-time processing
- identify and correct problems associated with Web sites

PROGRAM REQUIREMENTS (TOTAL CREDITS — 17)

CPT 120	Intro to the Internet	1
CPT 201	Web Design/Web Stndrds.	3
CPT 203	XHTML and CSS	3
CPT 206	JavaScript	3
CPT 277	E Commerce Tech.	3
WEB 102	Acrrobat Essentials	1
WEB 150	Web Design	3
		17

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
CPT 120	1	CPT 206	3
CPT 201	3	CPT 277	3
CPT 203	3	WEB 102	1
WEB 150	3		**7**
	10		

Criminal Justice, AAS

Division of Public Service/Humanities/Social Sciences

The criminal justice career option is designed for those who want to seek entry level employment after earning their associate degree.

The required courses provide a broad-based introduction to the field of criminal justice. In addition, credits of elective courses allow students to focus their study on areas of particular interest.

Successful completion of this program of study leads to the associate in applied science degree.

Career Opportunities

Recent graduates of the criminal justice program have obtained jobs with the following titles: corrections officer, security manager, police officer and youth worker.

Competency Profile

This curriculum is designed to prepare students to:

- apply relevant laws, regulations and procedures to a law enforcement situation
- learn to apply critical thinking skills in a law enforcement environment
- analyze information from criminal justice agencies and sources
- manage criminal justice information via technology
- analyze and evaluate data and research relating to the criminal justice profession
- practice positive interaction with the criminal justice community and other related agencies
- understand community diversification in a law enforcement environment
- develop effective police/community relations
- practice positive interpersonal and communication skills as a member of the criminal justice environment
- effect relevant procedures for handling a juvenile delinquent case
- practice appropriate investigative techniques
- adhere to accepted practices involved in criminal procedures related to assist, force, search and seizure
- develop effective decision making abilities
- evaluate criminal justice programs
- develop criminal justice relationships and workplace skills
- understand the importance of physical fitness as a law officer

In addition, students may opt to acquire additional skills in the following areas:

- correctional institution care of adults and juveniles
- administering probation and parole
- analysis of criminal evidence in the laboratory
- participation in community relations programs
- adhere to practices found in the criminal justice system

PROGRAM REQUIREMENTS (TOTAL CREDITS — 60)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		
ENG 164	Advanced Composition	3
or		
ENG 166	Spcl. Topics/CRJ Writing	
PSY 160	General Psychology	3
Humanities Elective		3
Mathematics Elective		3
		18

Major

CRJ 155	Intro. to Crim. Justice	3
CRJ 160	Criminal Law I	3
CRJ 162	Police Administration I	3
CRJ 163	Criminal Evidence	3
CRJ 172	Drug & Alcohol Depend.	3
CRJ 255	Juvenile Delinquency	3
CRJ 263	Investigative Concepts	3
CRJ 290	Prin. of Criminology	3
Criminal Justice Electives		9
		33

Other Required Courses

SOC 155	Principles of Sociology	
or		3
POL 255	Amer., State & Local Gov.	
SPC 155	Effective Speech	3
General Elective		3
		9

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
CPT 150	3
CRJ 155	3
CRJ 160	3
ENG 161	3
PSY 160	3
	15

Spring Semester	
CRJ 163	3
CRJ 172	3
ENG 162, 164 or 166	3
SOC 155 or POL 255	3
Criminal Justice Elective	3
Mathematics Elective	3
	15

Fall Semester	
CRJ 255	3
CRJ 263	3
CRJ 290	3
Criminal Justice Elective	3
Humanities Elective	3
	15

Spring Semester	
CRJ 162	3
SPC 155	3
Criminal Justice Elective	6
General Elective	3
	15

Criminal Justice, AAS

INFORMATION SECURITY OPTION

Division of Public Service/Humanities/Social Sciences

The information security option of the criminal justice program provides students with extensive hands-on instruction in all facets of information security, network security, and PC security. Students will be exposed to the tools and techniques of security and law enforcement professionals. Topics covered include computer forensics, intrusion detection, anti-virus software, firewalls, criminal law, evidence gathering and investigation techniques. A degree option with greater emphasis on computer technology can be found on page 55.

All accepted applicants must submit evidence of (ACT 33-34) criminal record check and Pennsylvania Child Abuse History Clearance at the applicant's expense. Specific information regarding this requirement will be provided to qualified applicants.

Career Opportunities

Law enforcement/computer technology professionals may find employment opportunities in private investigation firms, private security firms as well as local law enforcement agencies. Networking professionals may find employment as a corporate security manager, Internet security consultant, security technician or other network position with an emphasis on security.

Competency Profile

This curriculum is designed to prepare students to:

- apply relevant laws, regulations and procedures to a law enforcement situation
- practice appropriate investigative techniques
- adhere to accepted practices involved in criminal procedures related to search and seizure
- identify and assess potential security risks against PCs, web sites, programs and networks
- develop and implement a security plan to minimize security threats and manage security risks
- develop familiarity with current security software and hardware
- understand the duties and responsibilities of a corporate security officer
- demonstrate a moral code of ethics and understand the legal responsibilities in the security field

Students enrolled in information security courses must obtain a current criminal record check.

PROGRAM REQUIREMENTS (TOTAL CREDITS — 63)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Composition	
SOC 155	Intro to Sociology	3
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Commun.	
Mathematics Elective		3
		18

Major

CRJ 155	Intro. to Crim. Justice	3
CRJ 163	Criminal Evidence	3
CRJ 195	Intro to Private Security	
or		3
CRJ 220	Research Methods	
CRJ 263	Investigative Concepts	3
CRJ 265	White Collar Crime	
or		3
CRJ 296	Intro to Criminalistics	
		15

Other Required Courses

CIS 168	Prin. of Info Security	3
CIS 209	LAN Security	3
CIS 210	Internet Security	3
CIS 212	Computer Forensics	3
CIS 250	Network Intrusion Det.	3
CIS 252	Digital Forensics	3
CIS 253	Commun. Security	3
CPT 182	Operating Systems	3
CPT 183	Local Area Networks	3
CPT 238	Wide Area Networking	3
		30

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
CIS 168	3	CIS 209	3	CIS 212	3	CIS 252	3
CPT 150	3	CIS 210	3	CIS 250	3	CIS 253	3
CPT 183	3	CPT 182	3	CPT 238	3	CRJ 265 or 296	3
CRJ 155	3	CRJ 163	3	CRJ 195 or 220	3	SOC 155	3
ENG 161	3	ENG 162, 163 or 164	3	CRJ 263	3	SPC 155 or 156	3
	15	Mathematics Elective	3		**15**		**15**
			18				

Criminal Justice, Certificate

CORRECTIONS OFFICER

Division of Public Service/Humanities/Social Sciences

The corrections officer certificate is designed for those who seek entry level employment with a corrections facility.

Competency Profile

This curriculum is designed to prepare students to:

- provide correctional institution care of adults and/or juveniles
- apply relevant laws, regulations and procedures within a correctional facility
- adhere to practices found in the criminal justice system

PROGRAM REQUIREMENTS (TOTAL CREDITS — 18)

CRJ 155	Intro to Criminal Just.	3
CRJ 180	Corrections	3
CRJ 255	Juvenile Delinquency	3
CRJ 283	Inst. Trtmnt. of Ad. & Jvnl.	3
CRJ 290	Criminology	3
CRJ 172	Drug & Alcohol Dpdncy.	3
		18

Culinary Arts, AAS

APPRENTICESHIP OPTION

Workforce Development Division of Technologies/Culinary Arts

The culinary arts apprenticeship program is one of eight majors comprising the college's culinary arts/hospitality program. This apprenticeship program, sponsored by The American Culinary Federation Laurel Highlands (ACFLHC) Chapter and WCCC, is accredited by the Accrediting Commission of the American Culinary Federation Education Foundation. A cooperative program, it combines 63 or 64 credits of academic course work with 4,000 hours of supervised on-the-job training in a participating restaurant, club, hotel, resort or institution for an associate degree. Classes are scheduled so that students have a sufficient block of uninterrupted time to complete their 40-hour week. Academic work can be completed as a full-time student in two years or as a part-time student over a period of three years.

Students enrolled in this program are registered with the U.S. Department of Labor as apprentices and are required to join the ACF Laurel Highlands Chapter as junior members. Registration and membership fees are payable to the ACF and are required to become a registered apprentice.

Students are expected to be well-groomed in compliance with the standards of sanitation. Students will be required to present medical proof of good physical health. Uniforms, decorative tips and a cutlery set are required for all lab classes.

Employment must be secured in a facility that will provide full-time employment. The employer will agree to abide by the apprenticeship guidelines. Business attire may be required for some class sssignments.

Having fulfilled employment requirements, applicants will complete the Pennsylvania Apprenticeship and Training Council Agreement and ACF Apprenticeship Registration Card.

At the completion of the program, students may apply for certification with the ACF.

The culinary arts associate degree apprenticeship option may be completed through a partnership with Nemacolin Woodlands Resort. For information, contact the WCCC Admissions Office, 724-925-4077.

Career Opportunities

Graduates of the culinary arts program have accepted jobs with the following titles: cook, working chef, sous chef, personal chef, sales representative, executive chef, culinary educator and manager.

Competency Profile

This curriculum is designed to prepare students to:

- research, prepare, season and cook according to recipe and local, regional and international traditions and diversity: soups, sauces, salads, meats, fish poultry, game, vegetables and desserts using acceptable standards of sanitation and safety
- adhere to standards of nutrition and wellness in food preparation
- creatively design set up and prepare complete buffets and serve meals
- research, select and develop recipes and entire menus with descriptive wording, layout and design
- plan and execute food production, requisition and purchase foodstuffs, and operate a working budget in food and labor costing
- research, evaluate and recognize quality standards in fresh vegetables, meats, poultry, game and all other foodstuffs
- demonstrate supervisory and interpersonal skills in the production operations of a food service team
- demonstrate basic skills in culinary artistries including ice carving, tallow sculpting, cake decorating and garniture display
- utilize the high-tech approach to maintain acceptable systems of operation

Culinary Arts, AAS

APPRENTICESHIP OPTION (CONTINUED)

Workforce Development Division of Technologies/Culinary Arts

PROGRAM REQUIREMENTS (TOTAL CREDITS — 63/64)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 163	Business Commun.	
or		3
ENG 164	Adv. Composition	
Humanities Elective		
or		3
FSM 170	Food Culture & Religion	
Mathematics Elective		3
Social Science Elective		3
		18

Major

BKP 141	Baking I	4
CUL 121	Chef Apprenticeship I	2
CUL 122	Chef Apprenticeship II	2
CUL 123	Chef Apprenticeship III	2
CUL 132	Garde Manger	3
CUL 224	Chef Apprenticeship IV	2
CUL 232	Food Specialties	3
		18

Other Required Courses

FSM 103	Intro. to Hospitality Ind.	
or		3
FSM 113	Customer Service	
FSM 105	Foods I	4
FSM 112	Quantity Foods	4
FSM 117	Wait Staff/Din. Rm. Trng.	1
FSM 118	Sanitation	2
FSM 119	Beverage Mgmt.	1
or		
FSM 120	Wine Appre. & Serv.	1
FSM 159	Nutrition	
or		3/4
BKP 243	Healthy Cooking Trends	
FSM 215	Food Purchasing & Menu Mgmt.	3
FSM 218	Hospitality Marketing	3
FSM 235	Supervision & Training	3
		27/28

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
CUL 121	2
FSM 103 or 113	3
FSM 105	4
FSM 117	1
FSM 118	2
	12

Spring Semester	
BKP 141	4
CUL 122	2
FSM 235	3
FSM 218	3
	12

Summer Semester*	
CPT 150	3
ENG 161	3
	6

Fall Semester	
CUL 123	2
FSM 112	4
FSM 215	3
CUL 132	3
	12

Spring Semester	
CUL 224	2
CUL 232	3
FSM 119 or 120	1
FSM 159 or BKP 243	3/4
Mathematics Elective	3
	12/13

Summer Semester*	
ENG 163 or ENG 164	3
Humanities Elective or FSM 170	3
Social Science Elective	3
	9

***These courses may be taken in the fall and spring semester resulting in the student having full-time status. However, given the 40 hours per week required apprenticeship, it is recommended that students take these courses during the summer.**

Culinary Arts, Diploma

APPRENTICESHIP OPTION

Workforce Development Division of Technologies/Culinary Arts

The culinary arts apprenticeship program is one of eight majors comprising the college's culinary arts/hospitality program. This apprenticeship program is sponsored by the American Culinary Federation Laurel Highlands (ACFLHC) Chapter and WCCC. A cooperative program, it combines 45/46 credits of course work with 4,000 hours of supervised on-the-job training in a participating restaurant, club, hotel or institution. Classes are scheduled so that students have a sufficient block of uninterrupted time to complete their 40-hour week. Academic work can be completed as a full-time student in two years or as a part-time student over a period of three years.

Students enrolled in this program are registered with the U.S. Department of Labor as apprentices and are required to join the ACF Laurel Highlands Chapter as junior members. Registration and membership fees are payable to the ACF and are required to become a registered apprentice.

Students are expected to be well-groomed in compliance with the standards of sanitation. Students will be required to present medical proof of good physical health. Uniforms, decorative tips and a cutlery set are required for all lab classes. Business attire may be required for some class assignments

Employment must be secured in a facility that will provide full-time employment. The employer will agree to abide by the apprenticeship guidelines.

Having fulfilled employment requirements, applicants will complete the Pennsylvania Apprenticeship and Training Council Agreement and ACF Apprenticeship Registration Card.

At the completion of the program, students may apply for certification with the ACF. The culinary arts apprenticeship option certificate program may be completed through a partnership with Nemacolin Woodlands Resort. For more information, contact the WCCC Admissions Office, 724-925-4077.

Career Opportunities

Graduates of the culinary arts program have accepted jobs with the following titles: cook, station chef, working chef, sous chef, personal chef, sales representative, executive chef, culinary educator and manager.

Competency Profile

This curriculum is designed to prepare students to:

- research, prepare, season and cook according to recipe and local, regional and international traditions and diversity: soups, sauces, salads, meats, fish poultry, game, vegetables and desserts using acceptable standards of sanitation and safety
- adhere to standards of nutrition and wellness in food preparation
- creatively design set up and prepare complete buffets and serve meals
- research, select and develop recipes and entire menus with descriptive wording, layout and design
- plan and execute food production, requisition and purchase foodstuffs, and operate a working budget in food and labor costing
- research, evaluate and recognize quality standards in fresh vegetables, meats, poultry, game and all other foodstuffs
- demonstrate supervisory and interpersonal skills in the production operations of a food service team
- demonstrate basic skills in culinary artistries including ice carving, tallow sculpting, cake decorating and garniture display
- utilize the high-tech approach to maintain acceptable systems of operation

Culinary Arts, Diploma

APPRENTICESHIP OPTION (CONTINUED)

Workforce Development Division of Technologies/Culinary Arts

PROGRAM REQUIREMENTS (TOTAL CREDITS – 45/46)

General Education

None Required

Major

BKP 141	Baking I	4
CUL 121	Apprenticeship I	2
CUL 122	Apprenticeship II	2
CUL 123	Apprenticeship III	2
CUL 132	Garde Manger	3
CUL 224	Apprenticeship IV	2
Food Specialities		3
		18

Other Required Courses

FSM 103	Intro to Hospitality Ind.	
or		3
FSM 113	Customer Service	
FSM 105	Foods I	4
FSM 112	Quantity Foods	4
FSM 117	Wait Staff/Din. Rm. Trng.	1
FSM 118	Sanitation	2
FSM 119	Beverage Management	
or		1
FSM 120	Wine Apprec. & Service	
FSM 159	Nutrition	
or		3/4
BKP 243	Healthy Cooking Trends	
FSM 215	Food Purchasing & Menu Mgmt.	3
FSM 218	Hospitality Marketing	3
FSM 235	Supervision & Training	3
		27/28

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
CUL 121	2	BKP 141	4	CUL 123	2	CUL 224	2
FSM 103 or 113	3	CUL 122	2	CUL 132	3	CUL 232	3
FSM 105	4	FSM 218	3	FSM 112	4	BKP 243 or FSM 159	3/4
FSM 117	1	FSM 235	3	FSM 215	3	FSM 119 or 120	1
FSM 118	2		**12**		**12**		**9/10**
	12						

Culinary Arts, AAS

NON-APPRENTICESHIP OPTION

Workforce Development Division of Technologies/Culinary Arts

The culinary arts non-apprenticeship program is one of eight majors comprising the college's culinary arts/hospitality program. This curriculum is planned to meet the increasing employment needs of the 21st century for trained chefs and culinary experts. The program includes classroom and food laboratory experiences and requires students to complete an internship. This option accommodates both part- and full-time students and is available in two-year and 16-month programs. Students are expected to be well-groomed in compliance with standards of sanitation. Students will be required to provide medical proof of good physical health. Uniforms, decorative tips and a cutlery set are required for all lab classes. Business attire may be required for some class assignments.

Although the non-apprenticeship program accommodates part-time students, full-time students may complete the program in two years.

The program is accredited by the Accrediting Commission of the American Culinary Federation Education Foundation.

Career Opportunities

Graduates of the culinary arts program have accepted jobs with the following titles: cook, working chef, station chef, sous chef, personal family chef, sales representative, executive chef, culinary educator and manager.

Competency Profile

This curriculum is designed to prepare students to:

- research, prepare, season and cook according to recipe and local, regional and international traditions and diversity: soups, sauces, salads, meats, fish, poultry, game, vegetables and desserts using acceptable standards of sanitation and safety
- adhere to standards of nutrition and wellness in food preparation
- creatively design set up and prepare complete buffets
- research, select and develop recipes and entire menus with descriptive wording, layout and design
- plan and execute food production, requisition and purchase foodstuffs, and operate a working budget in food and labor costing
- research, evaluate and recognize quality standards in fresh vegetables, meats, poultry, game and all other foodstuffs
- demonstrate supervisory and interpersonal skills in the production operations of a food service team
- demonstrate the personal skills needed to function with all other related departments that exist in a food operation team
- demonstrate basic skills in culinary artistries including ice carving, tallow sculpting, cake decorating and garniture display
- utilize the high-tech approach to maintain acceptable systems of operation

PROGRAM REQUIREMENTS (TOTAL CREDITS — 68/69)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 164	Advanced Composition	
or		3
ENG 163	Business Commun.	3
Humanities Elective		
or		3
FSM 170	Food Culure & Religion	
Mathematics Elective		3
Social Science Elective		3
		18

Major

CUL 130	Basic Culinary Skills	3
CUL 132	Garde Manger	3
CUL 232	Food Specialties	3
FSM 103	Intro. to Hospitality Ind.	
or		3
FSM 113	Customer Service	
FSM 105	Foods I	4
FSM 112	Quantity Foods	4
FSM 117	Wait Staff/Din. Rm. Trng.	1
FSM 118	Sanitation	2
FSM 119	Beverage Mgmt.	1
or		
FSM 120	Wine Appre. & Serv.	1
FSM 159	Nutrition	
or		3/4
BKP 243	Healthy Cooking Trends	
FSM 213	A la Carte Kitchen	4
FSM 215	Food Purch. & Menu Mgmt.	3
FSM 218	Hospitality Marketing	3
FSM 219	Hospitality Internship	3
FSM 235	Supervision & Training	3
		43/44

Other Required Courses

BKP 141	Baking I	4
BKP 142	Baking II	3
		7

Culinary Arts, AAS

NON-APPRENTICESHIP OPTION (CONTINUED)

Workforce Development Division of Technologies/Culinary Arts

RECOMMENDED SEQUENCE (Two-year Program)

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
CPT 150	3
CUL 130	3
FSM 103 or 113	3
FSM 105	4
FSM 117	1
FSM 118	2
FSM 119 or FSM 120	1
	17

Spring Semester	
BKP 141	4
ENG 161	3
FSM 112	4
FSM 215	3
Mathematics Elective	3
	17
Summer Semester	
ENG 163 or ENG 164	3
	3

Fall Semester	
CUL 132	3
FSM 159 or BKP 243	3/4
FSM 213	4
FSM 219	3
Humanities Elective or FSM 170	3
	16/17

Spring Semester	
BKP 142	3
CUL 232	3
FSM 218	3
FSM 235	3
Social Science Elective	3
	15

RECOMMENDED SEQUENCE (Accelerated Program - 16 months)

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
CPT 150	3
CUL 130	3
FSM 103 or 113	3
FSM 105	4
FSM 118	2
FSM 159 or BKP 243	3/4
	18/19

Spring Semester	
CUL 132	3
ENG 161	3
FSM 112	4
FSM 117	1
FSM 215	3
FSM 218	3
	17

Summer Semester	
BKP 141	4
ENG 163 or ENG 164	3
Humanities Elective or FSM 170	3
Mathematics Elective	3
Social Science Elective	3
	16

Fall Semester	
BKP 142	3
CUL 232	3
FSM 119 or FSM 120	1
FSM 213	4
FSM 219	3
FSM 235	3
	17

Culinary Arts, Diploma

NON-APPRENTICESHIP OPTION

Workforce Development Division of Technologies/Culinary Arts

The culinary arts non-apprenticeship program is one of eight majors comprising the college's culinary arts/hospitality program. This curriculum is planned to meet the increasing employment needs of the 21st century for trained chefs and culinary experts. The program includes classroom and food laboratory experiences and requires students to complete an internship. This option accommodates both part- and full-time students. Students are expected to be well-groomed in compliance with standards of sanitation. Students will be required to provide medical proof of good physical health. Uniforms, decorative tips and a cutlery set are required for all lab classes. Business attire may be required for some class assignments.

Although the non-apprenticeship program accommodates part-time students, full-time students may complete the program in two years.

Career Opportunities

Graduates of the culinary arts program may accept jobs with the following titles: cook, working chef, station chef, sous chef, personal family chef, sales representative, executive chef, culinary educator and manager.

Competency Profile

This curriculum is designed to prepare students to:

- research, prepare, season and cook according to recipe and local, regional and international traditions and diversity: soups, sauces, salads, meats, fish, poultry, game, vegetables and desserts using acceptable standards of sanitation and safety
- adhere to standards of nutrition and wellness in food preparation
- creatively design, set up and prepare complete buffets
- research, select and develop recipes and entire menus with descriptive wording, layout and design
- plan and execute food production, requisition and purchase foodstuffs, and operate working budget in food and labor costing
- research, evaluate and recognize quality standards in the production operations of a food service team
- demonstrate the personal skills needed to function with all other related departments that exist in a food operation team
- demonstrate basic skills in culinary artistries including ice carving, tallow sculpting, cake decorating and garniture display
- utilize the high-tech approach to maintain acceptable systems of operation

PROGRAM REQUIREMENTS (TOTAL CREDITS – 50/51)

General Education

None Required

Major

CUL 130	Basic Culinary Skills	3
CUL 132	Garde Manger	3
CUL 232	Food Specialities	3
FSM 103	Intro to Hospitality Ind.	
or		3
FSM 113	Customer Service	
FSM 105	Foods I	4
FSM 112	Quantity Foods	4
FSM 117	Wait Staff/Din. Rm. Trng.	1
FSM 118	Sanitation	2
FSM 119	Beverage Mgmt.	
or		1
FSM 120	Wine Appre. & Serv.	
FSM 159	Nutrition	
or		3/4
BKP 243	Healthy Cooking Trends	
FSM 213	Ala Carte Kitchen	4
FSM 215	Food Purc. & Menu Mgmt.	3
FSM 218	Hospitality Marketing	3
FSM 219	Hospitality Internship	3
FSM 235	Supervision & Trng.	3
		43/44

Other Required Courses

BKP 141	Baking I	4
BKP 142	Baking II	3
		7

RECOMMENDED SEQUENCE (TWO-YEAR PROGRAM)

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
CUL 130	3
FSM 103 or 113	3
FSM 105	4
FSM 118	2
	12

Spring Semester	
BKP 141	4
FSM 112	4
FSM 215	3
FSM 119 or FSM 120	1
FSM 117	1
	13

Fall Semester	
CUL 132	3
FSM 159 or BKP 243	3/4
FSM 213	4
FSM 219	3
	13/14

Spring Semester	
BKP 142	3
CUL 232	3
FSM 218	3
FSM 235	3
	12

Dental Assisting, Diploma

Division of Health Professions

The dental assisting program offers the academic preparation and clinical training necessary to secure employment as a dental assistant. Dental assistants are employed by dentists in general and specialty practices as well as hospital dental clinics.

The program includes clinical experience in all phases of dentistry while rotating through departments at the University of Pittsburgh School of Dental Medicine and private dental offices.

Upon successful completion of DAS 105, students are eligible to apply to take the Pennsylvania Radiologic Exam. Upon successful completion of the Dental Assisting Program, students are eligible to apply to take the Dental Assisting National Board Examination.

The program is accredited by the Commission on Dental Accreditation of the American Dental Association. The commission is a special accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at 312-440-2719 or at 211 East Chicago Ave., Chicago, Illinois 60611.

Special Admission and Selection Criteria

Since this program requires a clinical placement, enrollments may be limited.

- Applicants must be graduates of accredited secondary school programs or those who hold GED equivalency certificates prior to selection. High school preparation should include one year of biology and chemistry. If high school chemistry and biology were not successfully completed with a C or better, the preadmission requirements can also be met by completing CHM 107 and BIO 107.
- Applicants must complete and submit a WCCC Applicaton for Admission and Allied Health Programs Application to the Admissions Office by January 5 prior to the fall semester for which enrollment is anticipated. The forms must be accompanied by official transcripts from all secondary schools attended, GED programs and any other formal educational programs attended beyond high school.
- Applicants must take the computerized placement test (Accuplacer) and have successfully completed any required developmental courses prior to acceptance for the dental assisting program. All developmental course work including science course prerequisites must be completed with a grade of C prior to program enrollment. (C minus grade not accepted.)
- Applicants who have completed college-level credit courses must have a 2.0 GPA or higher.
- Applicants selected for admission must submit satisfactory results from pre-entrance physical, dental, hearing and eye examinations obtained at the candidate's expense. Specific information regarding the examinations will be provided to accepted applicants.
- Applicants must purchase student liability insurance.
- Applicants are required to submit:
  - Pennsylvania Child Abuse History Clearance (CY-113). Any record results in denial of admission to the dental assisting program.
  - Pennsylvania State Police Request for Criminal Record Check (SP4-164). Positive records will be evaluated individually. If an applicant has not established residency in the state of Pennsylvania for more than one year, they will need to submit FBI Cards for School Employees (FD258).
- Please be aware that based on ongoing changes occurring in the dental profession, it may be necessary to modify courses listed in this catalog to meet changing practice competencies.

Students enrolled in the dental assisting program must be certified in CPR-BLS for Health Care Providers Annual Certification prior to the start of the second semester.

Competency Profile

This curriculum is designed to prepare students to:

- perform clinical dental assisting procedures with competence
- manage asepsis, infection and hazard control protocol consistent with published professional guidelines
- perform procedures specific to the work of the dental assistant, e.g. taking preliminary impressions, charting and data collection, etc.
- obtain and record accurate medical/dental histories and vital signs
- assist in the management of medical and dental emergencies
- provide oral health instruction and communicate effectively with patients and dental health team members
- expose, process and evaluate all types of oral radiography
- perform laboratory procedures associated with chairside assisting
- operate all dental equipment safely, effectively and efficiently
- perform basic office business procedures accurately
- successfully complete the Dental Assisting National Board Exam and applicable state credentialing
- assume responsibility for their own actions within the legal and ethical framework of dental assisting
- develop an attitude of responsibility for continued professional development, through encouragement to participate in professional organizations and continuing education opportunities

Dental Assisting, Diploma

(CONTINUED)

Division of Health Professions

PROGRAM REQUIREMENTS (TOTAL CREDITS — 42)

General Education

BIO 107	Human Biology	3
ENG 161	College Writing	3
PSY 160	General Psychology	3
SPC 156	Interpersonal Comm.	3
		12

Major

DAS 100	Intro/Dental Assisting	4
DAS 101	Oral Anatomy	2
DAS 102	Dental Mtrl. for Dent. Asst.	2
DAS 103	Dental Assisting Lab	4
DAS 104	Dental Science	4
DAS 105	Dent. Rad. for Dent. Asst.	3
DAS 106	CLN Dental Assisting I	5
DAS 108	CLN Dental Assisting II	4
DAS 109	Practice Management	2
		30

Other Required Courses

None Required

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Fall Semester	
BIO 107	3
DAS 100	4
DAS 101	2
DAS 102	2
DAS 103	4
DAS 105	3
	18

Spring Semester	
DAS 104	4
DAS 106	5
ENG 161	3
PSY 160	3
	15

Summer Semester	
DAS 108	4
DAS 109	2
SPC 156	3
	9

Dental Hygiene, AAS

Division of Health Professions

The dental hygiene program offers the academic preparation and clinical training needed for a variety of dental hygiene careers. While most dental hygienists practice in private dental offices, others provide services in dental specialty practices, hospital and industrial clinics, correctional institutions, government health agencies, insurance companies and military services. With additional education through degree completion programs, dental hygienists also work in school systems, dental and dental hygiene education programs, dental sales and research.

The program includes clinical experience in the college campus facility. Patients will come to campus for prophylactic dental care; however, students may need to secure patients to meet clinical requirements.

The program is accredited by the Commission on Dental Accreditation of the American Dental Association. The commission is a specialized accrediting agency recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at 312-440-2719 or at 211 East Chicago Avenue, Chicago, Illinois 60611.

Special Admission and Selection Criteria

Admission to the dental hygiene program is highly competitive and enrollment is limited. Specific criteria for admission and selection are listed below.

- Applicants must be graduates of an accredited secondary school program, or high school seniors enrolled in an accredited secondary school program, or those who hold a GED equivalency certificate prior to selection.
- High school preparation should include one year each of biology, chemistry and algebra. If these courses were not taken in high school, BIO 107, CHM 107 and MTH 052 must be completed prior to testing for the dental hygiene program.
- College prerequisite coursework includes completion of CHM 264-Chemistry for the Health Sciences, BIO 171-Anatomy and Physiology I, and SOC 160-Applied Human Relations with a minimum grade of C. (C minus grade not accepted.)
- Applicants must complete and submit a WCCC Application for Admission and Allied Health Programs Application to the Admissions Office by January 5 prior to the fall semester in which enrollment is anticipated. The forms must be accompanied by official transcripts from all secondary schools attended, GED programs and any other formal education program attended beyond high school.
- Applicants must take the computerized placement test (Accuplacer) and have successfully completed any required developmental courses and/or high school course work with a minimum grade of C prior to taking the dental hygiene admission examination. (C minus grade not accepted.) Also, applicants who have completed credit courses must have a 2.5 GPA prior to taking the dental hygiene admission examination. Only courses necessary to meet the dental hygiene program requirements are considered when calculating the GPA. If the GPA is less than 2.5, one or more of these courses can be repeated in order to meet this requirement before testing.
- Those who apply must take a Dental Hygiene admissions test administered by WCCC. Applicants will be notified of testing dates. Candidates will be selected until available seats are filled.
- Applicants selected for admission must submit satisfactory results from pre-entrance physical, dental, hearing and eye examinations obtained at the candidate's expense. Specific information regarding the examination will be provided to students upon acceptance.
- Applicants must have successfully completed CPR-BLS for Health Care Providers Annual Certification prior to the start of the second semester of program enrollment.
- Applicants must purchase student liability insurance.
- Conviction of a felonious act may result in the Pennsylvania State Board of Dentistry denying licensure.
- Please be aware that based on ongoing changes in the dental hygiene profession, it may be necessary to modify courses listed in this catalog to meet changing practice competencies.

Competency Profile

This curriculum is designed to prepare students to:

- provide dental hygiene care for the child, adolescent, adult, geriatric and medically compromised patient with an awareness of cultural diversity within the community
- provide the dental hygiene process of care that includes assessment, planning, implementation and evaluation utilizing critical thinking and information management skills
- provide dental hygiene care for all types of classifications of periodontal disease, including patients who exhibit moderate to severe periodontal disease
- operate all dental equipment safely, effectively and efficiently
- expose, process and evaluate all types of oral radiography
- apply computation skills to provide safe exposure to oral radiation
- develop interpersonal and communication skills to effectively interact with diverse population groups

Dental Hygiene, AAS

(CONTINUED)

Division of Health Professions

- develop competency in assessing, planning, implementing and evaluating community based oral health programs, including health promotion and disease prevention activities with awareness of local community needs
- provide appropriate life-support measures for medical emergencies that may be encountered in dental hygiene practice
- apply ethical, legal and regulatory concepts to the provision and/or support of oral health care services
- manage self to adapt to the changing demands of the oral health care profession
- accept personal responsibility to prepare for professional development through lifelong learning
- utilize computer literacy to assess current scientific literature
- be competent in the evaluation of current scientific literature

PROGRAM PREREQUISITES

BIO 171	Anatomy & Physiology	4
CHM 264	Chem. for the Hlth. Sci.	4
SOC 160	Applied Human Rel.	3
		11

PROGRAM REQUIREMENTS (TOTAL CREDITS — 75)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 163	Business Commun.	3
SPC 156	Interpersonal Comm.	3
		12

Major

DAH 101	Intro to Dentistry	3
DAH 102	Dental Materials	2
DAH 103	Medical Emergencies	1
DAH 104	Head, Neck & Dental Anat.	4
DAH 105	Dental Radiology	3
DAH 106	Nutritional Biochemistry	2
DAH 109	Oral Pathology	2
DAH 111	Dental Hygiene Lecture	3
DAH 112	Dental Hygiene Lab	4
DAH 113	Histology/Embryology	2
DAH 114	Periodontics I	3
DAH 115	Clinical Dental Hyg. I	5
DAH 205	Periodontics II	1
DAH 206	Clinical Dental Hyg. II	6
DAH 207	Pharmacology	2
DAH 208	Clinical Dental Hyg. III	6
DAH 209	Community Dental Hlth.	3
		52

Other Required Courses

BIO 172	Anatomy & Physiology II	4
BIO 265	Microbiology	4
BUS 120	Math of Business	3
		11

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester

BIO 172	4
DAH 101	3
DAH 102	2
DAH 104	4
ENG 161	3
	16

Spring Semester

DAH 103	1
DAH 105	3
DAH 111	3
DAH 112	4
DAH 113	2
DAH 114	3
	16

Summer Semester

CPT 150	3
DAH 106	2
DAH 109	2
DAH 115	5
	12

Fall Semester

BIO 265	4
DAH 205	1
DAH 206	6
DAH 207	2
DAH 209	3
	16

Spring Semester

BUS 120	3
DAH 208	6
ENG 163	3
SPC 156	3
	15

Diagnostic Medical Sonography, AAS

Division of Health Professions

The diagnostic medical sonography program offers the academic preparation, laboratory and clinical training for a career as a diagnostic medical sonographer. This curriculum provides students with the entry-level skills needed to use diagnostic ultrasound equipment under the supervision of a physician for the use and interpretation of ultrasound procedures. Sonographers assist in gathering sonographic data necessary to reach diagnostic decisions. Sonographers work in a variety of healthcare settings, including regional medical centers, hospitals, diagnostic centers, clinics and doctors' offices. They perform their duties in diagnostic labs, trauma centers, emergency rooms, operating rooms, interventional suites, labor and delivery facilities, and at the bedside.

Students who successfully complete all requirements of the program are eligible to apply to take the American Registry in Diagnostic Medical Sonography Exam.

Mission and Goals

The mission of the program is to prepare graduates with a complete educational experience for those who wish to become healthcare providers. The diagnostic medical sonography program provides each student opportunities to learn and develop competence in patient care which includes:

- communications skills
- critical thinking
- technical skills which adapt to ever changing technologies
- necessary computation skills
- information literacy skills appropriate to the discipline and professional development
- therapeutic interpersonal skills
- personal skills that enhance healthy lifestyles, academic integrity and acceptable professional behavior
- skills necessary to perform in the healthcare environment at various levels

The program goals seek to develop graduates who:

- perform in entry-level diagnostic medical sonography positions
- perform safely the basic principles of diagnostic medical sonography and its disciplines
- demonstrate the role of diagnostic medical sonographer in relationship to the interdisciplinary functions and members of the health care team
- demonstrate individual honesty, integrity and caring
- demonstrate individual professional proficiency and currency in skills and patient care
- show the importance of quality patient care in the healthcare setting
- apply self evaluation and life-long learning
- achieve a passing grade on the American Registry of Diagnostic Medical Sonographers' examinations

Special Admission and Selection Criteria

Since this program requires a clinical placement, enrollment is selective and enrollment is limited by the clinical placement necessary to complete the diagnostic medical sonography course requirements. Students may be required to interview at one or more clinical sites on their own time and expense.

Clinical site preference is not guaranteed. There may be a possibility that clinical placement is deferred a semester if appropriate clinical site placement is not available.

- Applicants must be graduates of an accredited secondary school program, or high school seniors enrolled in an accredited secondary school program, or those who hold a GED equivalency certificate prior to selection.
- High school preparation should include one year each of biology, physics, chemistry and algebra. If these courses were not taken in high school, BIO 107, PHY 107 or PHY 153, CHM 107 and MTH 052 must be completed prior to testing for the diagnostic medical sonography program and must be completed with a C grade or better (C minus grade not accepted.).
- College prerequisite coursework includes completion of ALH 122 - Medical Terminology, with a minimum grade of C (C minus grade not accepted.)
- Applicants must complete and submit a WCCC Application for Admission and Allied Health Programs Application to the Admissions Office by May 15 prior to the spring semester in which enrollment is anticipated. Official transcripts from all secondary schools attended, GED programs, and any other formal education program attended beyond high school must accompany the forms.
- Applicants must take the computerized placement test (Accuplacer) and have successfully completed any required developmental courses and/or high school course work with a minimum grade of C prior to taking the diagnostic medical sonography admission examination. (C minus grade not accepted.) In addition, applicants who have completed credit courses must have a 2.5 or better GPA prior to taking the Diagnostic Medical Sonography admission examination. Only courses necessary to meet the diagnostic medical sonography program requirements are considered when calculating the GPA. If the GPA is less than 2.5, one or more of these courses can be repeated in order to meet this requirement before testing. Transfer courses are not calculated into the GPA.
- Students who have attempted developmental courses in math or science three or more times will not be considered for admission.

- Applicants to the diagnostic medical sonography program should review the following web sites for specific information:
  - Joint Review Committee on Education in Diagnostic Medical Sonography (JRCDMS)
  - Commission on Accreditation of Allied Health Educational Programs (CAAHEP)
  - American Registry of Diagnostic Medical Sonographers (ARDMS) in Abdomen, Obstetrics & Gynecology, Neurosonology and Adult Echocardiography
- Those who apply must take a diagnostic medical sonography admissions test administered by WCCC. Applicants will be notified of testing dates.
- Admission to the diagnostic medical sonography program requires the applicant to submit information regarding criminal conviction and/or crimes of moral turpitude. Upon initial acceptance into the program, a criminal record check and child abuse history must be obtained at the applicant's expense. Individuals who are residents of Pennsylvania for less than one year must submit a current FBI clearance. These records must be submitted to the diagnostic medical sonography program within two weeks of the date of notification of initial program acceptance. Admission is conditional pending receipt and evaluation of the background information to determine whether there is any conviction, which may bar the student from admission to the diagnostic medical sonography program.

NOTE: Admission decisions are based on three factors which contribute to the overall admission score: GPA, Diagnostic Medical Sonography Entrance Exam Score, and evidence of success in courses already taken. Admission to the diagnostic medical sonography program is competitive and there are a limited number of seats.

Child Abuse Clearance

Any record results in denial of admission to the diagnostic medical sonography program.

Criminal Record Check

Any felony conviction may result in denial of admission to the diagnostic medical sonography program. Any misdemeanor will be individually evaluated.

Urine Drug Screen

A positive drug screen may result in denial of admission to the diagnostic medical sonography program or continuation in the diagnostic medical sonography program. The program reserves the right to require random drug screens while the student is enrolled.

Essential Cognitive, Physical and Behavioral Functions for the Diagnostic Medical Sonography Program

Diagnostic medical sonography students must be able to meet the following physical and mental abilities for successful completion of the diagnostic medical sonography program:

- Must have the physical ability to move sonography equipment and manipulate the hand-held transducer
- Stand and walk for extended periods of time (several hours)
- Utilize a keyboard
- Discriminate subtle sounds
- Lift and/or support at a minimum 75 pounds in order to lift and carry accessories
- Push heavy equipment up to 200 pounds
- Have the ability to appropriately position patients for procedures and safely transfer patients who may weigh in excess of 300 pounds (in wheelchairs and/or liters)
- Ability to articulate clear verbal commands to the patient while the patient is being positioned for a procedure from a distance of a few feet
- See in a very dim light
- Have good right and left wrist and hand grip and maintain prolonged arm positions for scanning
- Ability to keep arm and hand steady while manipulating transducer
- Feel anatomical landmarks
- Distinguish textures
- Must be able to manage stressful situations that relate to patient care, procedure, and technical standards
- Must be able to evaluate proper patient positioning and other essential factors for the purpose of quality control
- Have hearing corrected, with the ability to hear patients at a distance of 3-5 feet
- Have sufficient tactile ability in order to asses a patient's pulses, in addition to changes in a patient's physiologic status (i.e. changes in edema, skin temperature, etc.) and adapt or change small knobs or settings
- Have the ability to smell odors that may signify a change in the physiologic status of a patient or an unsafe environmental condition
- Have the ability to read and comprehend written class room material, documents and settings on computer screens, medical documents, and institution procedures and policies
- Have the ability to write legibly in English in a style that is readable

- Must be able to move freely with full manual dexterity of both upper and lower extremities, have unrestricted movement of neck, shoulder, back and hips in order to assess, observe and perform emergency patient care, assist with all aspects of patient care, and be able to touch the floor for the removal of environmental hazards
- Must not be highly allergic to latex products, and film processing chemicals (developer or fixer)
- Distinguish colors and interpret color flow signals
- Cannot be dependent on any chemical or substance
- Have the ability to react appropriately and quickly in emergency situations
- Must be poised, well groomed and neat in appearance, discreet, tactful, diplomatic, professional, versatile, ethical and dependable
- Must be able to complete assigned tasks in reasonable and acceptable time frame
- Must have the ability to comprehend written and verbal instructions correctly in academic and clinical health care settings
- Must exhibit the capacity for reasoned judgment and calm in a health care environment
- Must not have physical or mental medical disorders that limit the ability to perform the duties of a diagnostic medical sonography student
- Must be stable emotionally; this type of work involves life and death situations
- Must show honesty and integrity in all matters with peers, faculty, staff and patients
- Must display compassion, empathy and concern for others
- Must demonstrate accountability, problem solving and listening skills at all times
- Enjoy working with people and patient contact
- Give and receive information over the phone
- Interpret audible Doppler Waveforms

Students will be removed from the program if a health, cognitive, psychomotor or behavioral condition significantly limits the student from performing the routine functions of a diagnostic medical sonography student and/or present a danger to the safety and health of patients and/or agency staff.
After starting the diagnostic medical sonography program, students will immediately notify the program director if any of these stated functions change. An evaluation may occur to determine if students are able to continue in the program.

Final Admission Criteria

Accepted applicants will be required to attend a mandatory information session and orientation session as the final step in the admission process. Specific information regarding the following additional program requirements will be provided to applicants at that time. These include:

- Complete physical examination, lab tests, proof of immunizations, and urine drug screen
- CPR-Basic Life Support for Health Care Providers Annual Certification required
- Evidence of a student's liability insurance policy

All of the above must be submitted to the diagnostic medical sonography program by Oct. 30 or program acceptance will be withdrawn. It should be noted that due to changes in clinical agency requirements, finger printing may be a mandatory requirement in the future for some clinical sites.

It should be noted that at times criteria and requirements may change due to modifications that take place in various agencies and other external rules and regulations of the program and clinical sites. At times these are not known at the time of admission to the program.

Diagnostic Medical Sonography, AAS

(CONTINUED)

Division of Health Professions

PROGRAM REQUIREMENTS (TOTAL CREDITS – 74)

Prerequisite		
ALH 122	Medical Terminology	3
		3

General Education		
BIO 171	Anatomy & Physiology I	4
BIO 172	Anatomy & Physiology II	4
CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Commun.	3
HUM 156	Critical Thinking	3
SPC 156	Interpersonal Commun.	3
MTH 157	College Algebra	3
PHY XXX	Physics/Hlthcr. Prov.	3
		29

Major		
DMS 103	Cross Sect. Anat. for Ultrasound	2
DMS 105	Abdominal I	4
DMS 205	Abdominal II	4
DMS 106	Obstetrics I	3
DMS 206	Obstetrics	3
DMS 204	Gynecology	4
DMS 207	Small Parts, Breast & Neuro.	2
DMS 208	Intro to Vascular	2
DMS 201	Patient Care/Legal/ Ethical Issues	2
DMS 210	Clinical I	3
DMS 211	Clinical II	3
DMS 212	Clinical III	3
DMS 213	Acoustical Prin. & Instrument. I	4
DMS 214	Acoustical Prin. & Instrument. II	3
		42

RECOMMENDED SEQUENCE

Part-time students can complete this program by taking one or more courses each semester.

Prerequisite	
ALH 122	3
	3
Spring	
BIO 171	4
DMS 103	2
DMS 105	4
DMS 106	3
SPC 156	3
	16

Summer	
CPT 150	3
MTH 157	3
	6
Fall	
BIO 172	4
DMS 201	2
DMS 205	4
DMS 206	3
	13

Spring	
DMS 204	4
DMS 208	2
DMS 210	3
ENG 161	3
PHY XXX	3
	15
Summer	
DMS 207	2
DMS 211	3
DMS 213	4
	9

Fall	
DMS 212	3
DMS 214	3
ENG 162	3
HUM 156	3
	12

Dietetic Technician/Nutritional Services Management, AAS

Workforce Development Division of Technologies/Culinary Arts

Dietetic Technician/Nutritional Services Management is one of the majors included in the college's culinary arts/hospitality program. Students enrolling in this program may seek employment in long-term care facilities, retirement centers, child nutrition and school lunch programs, nutrition programs for the elderly, hospitals, public health nutrition programs, and food service systems management firms as dietetic technicians, dietary managers or health care support workers. Students complete 60 credit hours of classroom/laboratory work along with a three credit capstone practicum in area facilities/related activities. Students are responsible for securing a practicum site which meets the program requirements. A physical examination is required for enrollment in the practicum course. Components required in this exam are contingent upon the practicum site and immunizations may be required. Graduates of the nutritional services option of dietetic technology are eligible to become members of the Dietary Managers Association and to write the certification examination to become a Certified Dietary Manager (CDM). The program also requires a general physical examination to begin the first laboratory course. Students are expected to be well groomed in compliance with standards of sanitation. Uniforms, decorative tips, a cutlery set and transportation to the practicum site are required. Special attire may be required at the practicum site as students are expected to conform to the dress code and regulation of the facility. Business attire may be required for some class assignments.

Competency Profile

This curriculum is designed to prepare students to function as an integral part of the nutrition care team and/or foodservice management team to:

- assist in the organization, development, implementation and evaluation of nutrition care and wellness plans
- obtain and record diet history, analyze clients nutritional care status, utilize communication skills to counsel clients and families from diverse backgrounds in medical nutrition therapy
- work as part of a production team to prepare quantity foods
- monitor and evaluate food quality and meal acceptance
- utilize interpersonal skills to supervise nutrition clerks and foodservice employees and to communicate with the other members of the health care team
- procure and receive supplies and equipment
- apply organizational and communication skills in supervising food production
- implement cost control procedures applying mathematical concept
- enforce safety standards; instruct staff on sanitation
- develop and write job descriptions, specifications and work schedules for nutritional services employees
- design menus, analyze specialized meal patterns and create standardized recipes
- retrieve and manage nutrition information using the latest technology
- utilize computer technology to plan, organize and document food service and nutrition related information

Dietetic Technician/Nutritional Services Management, AAS

(CONTINUED)

Workforce Development Division of Technologies/Culinary Arts

PROGRAM REQUIREMENTS (TOTAL CREDITS – 63)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 163	Business Commun.	
or		3
ENG 164	Advanced Composition	
Humanities Elective		
or		3
FSM 170	Food Culture & Religion	
Mathematics Elective		3
Social Science Elective		3
		18

Major

BKP 141	Baking I	4
BKP 243	Healthy Cooking Trends	4
DTT 111	Intro to Dietetics	3
DTT 114	Topics in Nutr. & Health	3
FSM 105	Foods I	4
FSM 112	Quantity Foods	4
FSM 118	Sanitation	2
FSM 159	Nutrition	3
FSM 215	Food Purch. & Menu Mgmt.	3
FSM 235	Supervision & Training	3
		33

Other Required Courses

ACC 165	Acctg. for Managers	3
CUL 135	Speed Scratch Cooking	3
DTT 199	Nutritional Services Mgmt. Practicum	3
FSM 113	Customer Service	3
		12

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
CPT 150	3
DTT 111	3
FSM 105	4
FSM 118	2
FSM 159	3
	15

Spring Semester	
CUL 135	3
DTT 114	3
ENG 161	3
FSM 112	4
Math Elective	3
	16

Summer Semester	
BKP 141	4
	4

Fall Semester	
ACC 165	3
BKP 243	4
ENG 163 or 164	3
FSM 215	3
Social Science Elective	3
	16

***Spring Semester**	
DTT 199	3
FSM 113	3
FSM 235	3
Humanities Elective or FSM 170	3
	12

**It is recommended to take no more than 12 credits in this semester to allow time for the practicum experience.*

Dining Room Management, Certificate

Workforce Development Division of Technologies/Culinary Arts

Dining room management is one of eight majors comprising the culinary arts/college's hospitality program. The certificate in dining room management is designed to provide entry and intermediate level skills for employment within resorts, restaurants, lodging and institutional facilities. Customer service and sanitation standards are both emphasized. Courses within this program also include information on beverage and wine service, techniques of service and marketing as it relates to this industry. Dining room attire required. Business atire may be required for some class assignments.

Competency Profile

This curriculum is designed to prepare students to:

- use interpersonal and personal skills to effectively work within the hospitality operation
- identify the characteristics of successful service techniques
- practice the technical service skills needed for dining room employees
- research and apply the basic laws of food and beverage service
- anticipate and satisfy diverse customer expectations
- collect and organize marketing information to reflect local, regional and international differences
- utilize the high-tech approach to maintain acceptable dining room systems of operation

Career Opportunities

Graduates of the dining room management certificate program may accept positions as: dining room manager, maitre'd, customer service specialist or training specialist.

PROGRAM REQUIREMENTS (TOTAL CREDITS — 17)

FSM 103	Intro to Hospitality	3
FSM 113	Customer Service	3
FSM 117	Wait Staff/Din. Rm. Trng.	1
FSM 118	Sanitation	2
FSM 119	Beverage Mgmt.	1
FSM 120	Wine Apprecia. & Ser.	1
FSM 218	Hospitality Marketing	3
FSM 219	Hospitality Internship	3
		17

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
FSM 103	3	FSM 119	1
FSM 113	3	FSM 120	1
FSM 117	1	FSM 218	3
FSM 118	2	FSM 219	3
	9		**8**

Drafting and Design Technology, AAS

COMPUTER AIDED DRAFTING & DESIGN (CADD)/COMPUTER AIDED MANUFACTURING (CAM)

Workforce Development Division of Technologies/Culinary Arts

The associate degree program provides the student drafter with computer aided drafting and design and computer aided manufacturing hands-on CADD/CAM applications using a micro stand-alone terminal workstation.

Career Opportunities

Students completing this program will be qualified to enter the work world as a first level CADD/CAM operator. Significant hands-on experience is essential for CADD/CAM operators to eventually qualify for positions as designers, design technicians or design specialists at a computer terminal.

The following personnel will benefit from a CADD/CAM education: mechanical designers, project engineers, specialists, supervisors, detailers, casual users, vocational trainers and support personnel.

Competency Profile

This curriculum is designed to prepare students to:

- develop the ability to execute quantitative design of machine products
- identify the basic components of a CADD/CAM system (hardware and software)
- perform an infinite number of 2-D machine tool path computations necessary to produce and advance drafting and design portfolio
- implement the basic commands necessary to apply the operational skills needed to effect a 2-D CADD/CAM system
- apply concepts from physics, engineering, mechanics, mathematics, and drafting and apply them to the synthesis of durable mechanical machines and products
- communicate effectively and appropriately record and report information significant to the job

PROGRAM REQUIREMENTS (TOTAL CREDITS — 62)

General Education		
DFT 258	Auto CAD	4
ENG 161	College Writing	3
ENG 162	Technical Commun.	3
MTH 108	Math for the Tech. I	4
PHY 107	Applied Physics	4
Social Science Elective		3
		21

Major		
DFT 105	Technical Drafting I	4
DFT 106	Technical Drafting II	4
DFT 112	Intro to Design Mat. & Pro.	3
DFT 259	Advanced AutoCAD	4
DFT 262	Piping, Structural Detail. & Elec. Drafting	4
DFT 266	Inventor	4
		23

Other Required Courses		
CNC 100	Intro to CNC	3
CNC 200	CNC I	4
CNC 201	CNC II	4
EGR 220	Statics/Strength of Mat.	3
MTH 109	Math for the Tech. II	4
		18

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		Spring Semester		Fall Semester		Spring Semester	
DFT 105	4	CNC 100	3	CNC 200	4	CNC 201	4
DFT 112	3	DFT 106	4	DFT 259	4	DFT 262	4
ENG 161	3	DFT 258	4	EGR 220	3	DFT 266	4
MTH 108	4	MTH 109	4	PHY 107	4	ENG 162	3
	14		**15**	Social Science Elective	3		**15**
					18		

Drafting and Design Technology, AAS

MECHANICAL DRAFTING AND DESIGN OPTION

Workforce Development Division of Technologies/Culinary Arts

Students in the mechanical option of the drafting and design technology program learn to translate the ideas, rough sketches, specifications and calculations of engineers into working drawings for production and assembly.

Successful completion of this program of study leads to the associate in applied science degree.

Career Opportunities

Recent graduates of this program have accepted jobs with the following titles: draftsman, drafting technician, drafting technician trainee and CADD first-level entry position.

Competency Profile

This curriculum is designed to prepare students to:

- analyze and translate problems by presenting them visually
- develop the ability to execute quantitative design of machines and products
- identify the basic components of a CADD system
- perform an infinite number of 2-D design math computations necessary to produce drafting design
- implement the basic commands necessary to apply the operational skills to effect a 2-D CADD system
- apply concepts from physics, engineering, mechanics, mathematics, and drafting and apply them to the synthesis of durable mechanical machines and products
- communicate effectively and appropriately record and report information significant to the job
- perform an infinite number of two-dimensional drawings using a stand-alone mini-computer

PROGRAM REQUIREMENTS (TOTAL CREDITS — 60)

General Education

DFT 258	AutoCAD	4
ENG 161	College Writing	3
ENG 162	Technical Commun.	3
MTH 108	Math for the Tech. I	4
PHY 107	Applied Physics	4
Social Science Elective		3
		21

Major

DFT 105	Technical Drafting I	4
DFT 106	Technical Drafting II	4
DFT 112	Intro to Design, Mat. & Pro	3
DFT 207	Tool Design	3
DFT 208	Product Design	3
DFT 259	Advanced AutoCAD	4
DFT 262	Piping Struct. & Electro. Mech.	4
DFT 266	Inventor	4
		29

Other Required Courses

EGR 110	Descriptive Geometry	3
EGR 220	Statics/Strength of Mat.	3
MTH 109	Math for the Tech. II	4
		10

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
DFT 105	4	DFT 106	4	DFT 207	3	DFT 208	3
DFT 112	3	DFT 258	4	DFT 259	4	DFT 262	4
ENG 161	3	ENG 162	3	EGR 110	3	DFT 266	4
MTH 108	4	MTH 109	4	EGR 220	3	Social Science Elective	3
	14		**15**	PHY 107	4		**14**
					17		

Early Childhood Education, AAS

Division of Public Service/Humanities/Social Sciences

The early childhood education program reflects the standards established by the National Association of Education for Young Children for students in the field of early childhood education. The program provides a solid foundation in the who, what, and why of effective early childhood education. Under supervision, students complete two practicum experiences in which they apply theoretical knowledge to actual early childhood education settings.

Career Opportunities

Graduates of the early childhood education program have accepted positions with the following titles: preschool teacher, group supervisor, assistant group supervisor, center supervisor and homevisitor. Other graduates have started their own child care centers, family day care home or group day care home.

Competency Profile

This curriculum is designed to prepare students to:

- develop, support and value relationships with families and communities
- demonstrate the use of systematic observations and other effective assessments in partnership with families and other professionals to positively influence children's development
- integrate their understanding of children and developmentally effective approaches to teaching to design, implement, and evaluate experiences that promote positive development and learning in all young children
- identify and use ethical guidelines and other professional standards related to early childhood practices
- use their understanding of young children's characteristics and needs, and of multiple interacting influences on children's development and learning, to create environments that are healthy, respectful, supportive, and challenging for all children
- communicate effectively and respectfully with children, parents, and other professionals working with young children
- use technological resources to obtain, organize and manage information related to the field of early childhood education

Students enrolled in the associate degree program must be certified in first aid/CPR prior to graduation.

PROGRAM REQUIREMENTS (TOTAL CREDITS — 62)

General Education

CPT 150	Microcomp. Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Composition	
PSY 160	General Psychology	3
SPC 155	Effective Speech	3
Mathematics Elective		3
		18

Major

ECE 179	Infant & Toddler Dev.	3
ECE 180	Child Growth & Dev.	3
ECE 183	Creative Experiences	3
ECE 184	Early Chldhd. Ed. Pract. I	4
ECE 185	Intro Early Chldhd. Ed.	3
ECE 186	Family and Society	3
ECE 187	Child Care Management	3
ECE 188	Intro to Except. Dev.	3
ECE 190	Child Hlth./Sfty./Nut.	3
ECE 194	Ed. Yg. Child./Spec. Needs	3
ECE 233	Children's Literature	3
ECE 284	Early Chldhd. Ed. Practicum II	4
		38

Other Required Courses

Restricted Electives*		6
		6

***Restricted Electives**

ART 155	Intro to Art
ASL 101	American Sign Language I
CRJ 255	Juvenile Delinquency
ECE 191	Observation & Assessment
EDU 155	Intro to Education
HMS 155	Intro to Human Services
HPE 156	Health & Phys. Ed.
MUS 155	Intro to Music
PHL 165	Social Ethics
PSY 161	Human Growth & Dev.
PSY 165	Educational Psychology
PSY 270	Abnormal Psychology
SOC 155	Principles of Sociology
SOC 161	Marriage & Family

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
ECE 179	3	ECE 180	3	ECE 184	4	ECE 187	3
ECE 185	3	ECE 183	3	ECE 186	3	ECE 284	4
ECE 190	3	ECE 188	3	ECE 193	3	Mathematics Elective	3
ENG 161	3	ENG 162, 163, or 164	3	ECE 194	3	Restricted Elective*	6
PSY 160	3	SPC 155	3	CPT 150	3		**16**
	15		**15**		**16**		

Early Childhood Education, Diploma

Division of Public Service/Humanities/Social Sciences

This curriculum focuses on the theories of child growth and development of children from birth to eight years, developmentally appropriate practices addressing health, safety, nutrition, and inclusive curriculum, and a practicum experience which provides students the opportunity to apply their knowledge to an actual early childhood setting. Credits earned in this program can be applied toward the requirements of the associate degree.

Competency Profile

This curriculum is designed to prepare students to:

- develop and implement developmentally appropriate curriculum for infants, toddlers, and preschool children
- demonstrate the use of authentic assessment to positively influence children's development
- integrate their understanding of all children by designing and evaluating healthy, safe and responsive learning environments
- apply their understanding of social and cultural variables that may have an impact on a young child's life
- use effective communication skills with parents, children and other professionals
- demonstrate knowledge of the child growth and development within the framework of an early childhood setting

Students enrolled in this diploma program must be certified in CPR and first aid prior to graduation.

PROGRAM REQUIREMENTS (TOTAL CREDITS — 31)

General Education

ENG 161	College Writing	3
		3

Major

ECE 179	Infant & Toddler Dev.	3
ECE 180	Child Growth & Dev.	3
ECE 183	Creative Experiences	3
ECE 184	Early Chldhd. Ed. Pract. I	4
ECE 185	Intro Early Chldhd. Ed.	3
ECE 186	Family and Society	3
ECE 188	Intro to Except. Dev.	3
ECE 190	Child Hlth./Sfty./Nut.	3
		25

Other Required Courses

Restricted Elective*	3
	3

*Restricted Electives listed for Early Childhood Education, AAS, page 90

RECOMMENDED SEQUENCE

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**	
ECE 179	3	ECE 180	3	ECE 184	4
ECE 185	3	ECE 183	3		**4**
ECE 186	3	ECE 188	3		
ECE 190	3	Restricted Elective	3		
ENG 161	3		**12**		
	15				

Early Childhood Education, Certificate

Division of Public Service/Humanities/Social Sciences

Credits earned in this program can be applied toward the requirements of the diploma or associate degree.

Competency Profile

This curriculum is designed to prepare students to:

- develop an understanding of child growth and development from birth to eight years
- demonstrate an understanding of developmentally appropriate curriculum for young children
- describe the components of child health, safety and nutrition in early childhood education

Students enrolled in ths diploma progrtam must be certified in CPR and first aid prior to graduation.

PROGRAM REQUIREMENTS (TOTAL CREDITS — 15)

	Major	
ECE 179	Infant & Toddler Dev.	3
ECE 180	Child Growth & Dev.	3
ECE 183	Creative Experiences	3
ECE 185	Intro Early Chldhd. Ed.	3
ECE 188	Exceptional Dvlpmnt.	3
		15

Early Childhood Education, Certificate

DIRECTOR CREDENTIAL

Division of Public Service/Humanities/Social Sciences

The nine-credit credential program is designed to prepare personnel to increase their knowledge and understanding of the role of the Early Childhood Director, as defined in Section 3270.34, Chapter 55, Commonwealth of Pennsylvania Child Day Care Center Regulations, and to meet the requirements for Staff Education, STAR #3 in the Keystone STARS Quality Improvement Initiative Performance Standards.

In order to enroll in the Pennsylvania Early Childhood Core Credential program, students must: 1) have an associate degree in early childhood education, child development, special education, elementary education or social science field; 2) have an associate degree in any other field, including 30 hours of early childhood education, child development, special education, elementary education or social science field; 3) have a bachelor's degree in early childhood education, child development, special education, elementary education or social science field; or 4) have a bachelor's degree in any other field, including 30 credit hours in early childhood education, child development, special education, elementary education or social science field.

Competency Profile

This curriculum is designed to prepare directors of early childhood programs to:

- apply knowledge of ages and stages of development in program planning
- create learning environments and curriculums that reflect children's ages, abilities, interests and diverse home culture
- evaluate and select assessment tools to be used with children, staff, and center
- demonstrate effective communication skills with children, parents, staff and community
- demonstrate professional behavior and interpersonal skills while adhering to early childhood professional code of ethics
- evaluate and ensure that health, safety, and nutritional practices are compliant with all standards
- analyze the organization, administration, management, budget and the daily operations of an early childhood facility

For a candidate to be awarded a director credential, the candidate's choice of three three-credit courses must be pre-approved by the the granting institution faculty advisor based on the candidates prior academic record and prior experience. Successful completion of each of the three courses means a grade of "C" or better.

PROGRAM RECOMMENDATIONS (Minimum credits – 9)

ECE 179	Infant & Toddler Dev.	3	ECE 190	Child Hlth./Sfty./Nut.	3	CPT 150	Microcomputer Concepts	3
ECE 180	Child Growth & Dev.	3	ECE 191	Obv. & Assmnt./Yg. Ch.	3	CPT 151	Advanced Office Appl.	3
ECE 183	Creative Experiences	3	ECE 194	Ed. Yg. Child./Spec. Needs	3	ENG 163	Business Commun.	3
ECE 185	Intro Early Ch. Curr.	3	BUS 120	Math of Business	3	EDU 155	Intro to Education	3
ECE 186	Family & Society	3	BUS 160	Intro to Business	3	HMS 155	Intro to Human Serv.	3
ECE 187	Child Care Mgmt.	3	BUS 241	Human Resource Mgmt.	3	PSY 165	Educat. Psychology	3
ECE 188	Intro to Except. Dev.	3	BUS 258	Supervisory Mgmt.	3	SOC 161	Marriage & Family	3

Electronics Engineering Technology, AAS

GENERAL OPTION

Workforce Development Division of Technologies/Culinary Arts

Electronics engineering technology is based on applied physics and mathematics.

Successful completion of this program of study leads to the associate in applied science degree.

Career Opportunities

Recent graduates of the electronics engineering technology program have accepted jobs with the following titles: electrical mechanic, electronics technician, audio technician and tester of electronic equipment.

Competency Profile

This curriculum is designed to prepare students to:

- design and construct basic circuitry based on an in-depth knowledge of electronic circuits and devices
- apply mathematics through elementary integral and differential calculus to the development of ideas based on scientific and engineering principles
- install, maintain and repair electronic circuits and systems using extensive knowledge of laboratory test equipment and procedures
- apply understanding of electronic devices, circuits, systems, and procedures to practical situations
- adapt and extend knowledge of electronics to new devices, circuits and systems
- communicate technological ideas and information with others verbally, graphically and in writing
- accept the role and responsibility of citizenship both within the profession and in society

PROGRAM REQUIREMENTS (TOTAL CREDITS — 60/61)

General Education

DFT 258	AutoCAD	4
ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Composition	
MTH 108	Math for the Tech. I	4
PHY 155	College Physics I	4
Social Science Elective		3
		21

Major

ELC 102	Electronic Devices	4
ELC 105	Elec. Instru. & Measure.	2
ELC 106	Circuit Analysis I	3
ELC 107	Circuit Analysis II	3
ELC 114	Digital Techniques	4
ELC 202	Linear Electronics	4
ELC 206	Microprocessors	4
ELC 213	Microprocessor Appli.	4
Restricted Electives*		3/4
		31/32

Other Required Courses

MTH 109	Math for the Tech. II	4
PHY 156	College Physics II	4
		8

***Restricted Electives**

Courses with an ELC prefix

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
DFT 258	4
ELC 105	2
ELC 106	3
ENG 161	3
MTH 108	4
	16

Spring Semester	
ELC 102	4
ELC 107	3
ELC 114	4
MTH 109	4
	15

Fall Semester	
ELC 202	4
ELC 206	4
ENG 162, 163 or 164	3
PHY 155	4
	15

Spring Semester	
PHY 156	4
ELC 213	4
Restricted Elective	3/4
Social Science Elective	3
	14/15

Engineering Technology, AAS

Workforce Development Division of Technologies/Culinary Arts

The engineering technology program is designed to provide students with the skills and knowledge they need to function as assistants to engineers. Graduates will be prepared to practice as engineering technicians.

Successful completion of this program of study leads to the associate in applied science degree.

Competency Profile

This curriculum is designed to prepare students to:

- demonstrate basic quantitative skills through the study of mathematics and the application of mathematics to the physical world through the study of physics
- expand basic skills to encompass mechanical skills, such as drafting, spatial relations, and force and motion analysis
- demonstrate product design capability
- develop skills in communications and business methods
- demonstrate computer literacy
- independently read and understand technical documents
- communicate effectively, and appropriately record and report information significant to the job

PROGRAM REQUIREMENTS (TOTAL CREDITS — 62)

General Education

ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Comoposition	
MTH 108	Math for the Tech. I	4
PHY 155	College Physics	4
Computer Science Elective		3
Social Science Elective		3
		20

Major

EGR 104	Engineering Materials	3
EGR 105	Manufacturing Proce.	3
EGR 110	Descriptive Geometry	3
EGR 210	Quality Control	3
EGR 220	Statics/Strength of Mat.	3
EGR 227	Kinematics	3
		18

Other Required Courses

DFT 105	Technical Drafting I	4
DFT 106	Technical Drafting II	4
DFT 258	AutoCAD	4
MTH 109	Math for the Tech. II	4
MTH 172	Calculus I	4
PHY 156	College Physics II	4
		24

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
DFT 105	4	DFT 106	4	EGR 105	3	DFT 258	4
ENG 161	3	EGR 104	3	EGR 110	3	EGR 210	3
MTH 108	4	ENG 162, 163, or 164	3	EGR 220	3	EGR 227	3
Computer Science Elective	3	MTH 109	4	MTH 172	4		**10**
Social Science Elective	3	PHY 155	4	PHY 156	4		
	17		**18**		**17**		

Expanded Functions Dental Assisting, Certificate

Division of Health Professions

The Expanded Functions Dental Assisting Program is designed to provide advanced training in the skills that are delegated as legal functions for the expanded functions dental assistant by the Pennsylvania State Board of Dentistry. These functions include:

1. placing and removing rubber dams
2. placing and removing matrices
3. placing and removing wedges
4. applying cavity liners and bases
5. placing and condensing amalgam restorations
6. carving and contouring amalgam restorations
7. placing and finishing composite resin restorations and/or sealant material

Candidates for the certificate must have a CDA or RDH license prior to entrance to the program. On-the-job trained dental assistants must have at least two years experience as a dental assistant and successfully complete the Dental Assisting National Board Examination prior to entrance to the program.

The program includes lab experience in the college campus facility and clinical experience in a dental office. Students are responsible to secure a clinical site to complete the clinical portion of the curriculum.

Special Admission and Selection Criteria

Admission to the expanded functions dental assisting program is highly competitive and enrollment is limited. Specific criteria for admission and selection are listed below.

- Applicants must be graduates of an accredited secondary school program or high school seniors enrolled in an accredited secondary school program, or those who hold a GED equivalency certificate prior to selection.

- Applicants must complete and submit a WCCC Application for Admission Form and Allied Health Programs Application to the Admissions Office by January 5 prior to the fall semester in which enrollment is anticipated. The form must be accompanied by official transcripts from all secondary schools attended, GED programs and any other formal education program attended beyond high school.

- All applicants must have passed the Dental Assisting National Board certification examination and present a copy of the certificate with the application. If the applicant is a registered dental hygienist, the applicant must submit a copy of their current Pennsylvania dental hygiene license. If the applicant is on the job trained, submit a letter from the employer verifying the training and indicating competency.

- All applicants must submit a letter from current employer indicating employment status and verifying a minimum two-year employment in the dental field.

- Applicants selected for admission must submit satisfactory results from pre-entrance medical examination and immunization obtained at the candidate's expense. Specific information regarding the examination will be provided to students upon acceptance.

ADMISSION CRITERIA:

- Upon initial acceptance into the program, a criminal background check, child abuse history and drug screening must be obtained at the applicant's expense. The following admission criteria are required:
  - Child Abuse – Any record results in denial of admission to the Dental Hygiene Program
  - Drug Screening - Required 10 days prior to the beginning of the semester
  - Criminal Background Check - Conviction of a felonious act may result in the Pennsylvania State Board of Dentistry denying licensure; therefore students with a felony conviction will be denied admission to the Dental Hygiene Program.

- Applicants must have successfully completed CPR-BLS for Health Care Providers prior to the start of the second semester of program enrollment.

- Applicants must purchase student liability insurance.

- **Please be aware that based on ongoing changes occurring in the dental assisting profession, it may be necessary to modify courses listed in this catalog to meet changing practice competencies.**

Expanded Functions Dental Assisting, Certificate

(CONTINUED)

Division of Health Professions

Competency Profile

This curriculum is designed to prepare students to be competent in:

- Placing and removing rubber dams
- Placing and removing matrices
- Placing and removing wedges
- Applying cavity liners and bases
- Placing and condensing amalgam restorations
- Carving and contouring amalgam restorations
- Placing and finishing composite resin restorations and/or sealant material

PROGRAM REQUIREMENTS (TOTAL CREDITS - 17)

General Education			Major			Other Required Courses
CPT 150	Microcomp. Concepts	3	DAE 100	Dental Anatomy	2	None
SPC 156	Interpersonal Comm.	3	DAE 101	EFDA I	6	
		6	DAE 102	EFDA II	3	
					11	

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Fall Semester		Spring Semester	
DAE 100	2	DAE 102	3
DAE 101	6	CPT 150	3
SPC 156	3		**6**
	11		

Fire Science Technology, AAS

MUNICIPAL FIRE SERVICE OPTION

Workforce Development Division of Technologies/Culinary Arts

Graduates of the municipal fire service option of the fire science technology program are prepared to function as leaders in the fire science team.

Successful completion of this program of study leads to the associate in applied science degree.

Career Opportunities

Recent graduates of the fire science program have accepted jobs with the following titles: arson investigator, housing inspector, 911 dispatcher and firefighter.

Competency Profile

This curriculum is designed to prepare students to:

- employ scientific processes, methods and computer-based research and common business computer software to solve firefighting problems
- deploy appropriate resources for the extinguishment of fires and non-emergency departmental functions by analyzing existing policies and procedures
- function as part of a management team to evaluate fire prevention and inspection policies based on new technologies and conducting organizational studies
- communicate effectively by preparing departmental reports on: incidents, budgets, training, personnel and equipment, standard operating procedures, mutual aid agreements and other operational issues
- collect and analyze information to specify mobile and portable fire suppression equipment
- analyze existing building code compliance and fire hazards and issue reports to comply with community, state and national regulations

* employ effective decision making while functioning within the local, state and national legal system to maintain legal immunity

- maintain personal, social and mental well being while functioning within a dynamic, yet hazardous occupational setting

PROGRAM REQUIREMENTS (TOTAL CREDITS — 60)

General Education

CHM 105	Technical Chemistry	4
ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		3
ENG 163	Business Commun.	
MTH 108	Math. for the Tech. I	4
SOC 160	Applied Human Rel.	3
Computer Technology Elective		3
		20

Major

FST 101	Intro to Fire Science	3
FST 103	Fire Service Admin.	3
FST 104	Fire Service Hydraulics	3
FST 105	Public Fire Education	3
FST 109	Bldg. Codes/Standards	3
FST 220	Firefighting Tactics I	3
FST 222	Legal Asp./PA Fire Serv.	3
Fire Science Electives		9
		30

Other Required Courses

PHY 107	Applied Physics	4
Mathematics Elective		3
Social Science Elective		3
		10

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
ENG 161	3	CHM 105	4	FST 103	3	FST 222	3
FST 101	3	ENG 162 or ENG 163	3	FST 109	3	PHY 107	4
FST 105	3	FST 104	3	FST 220	3	SOC 160	3
MTH 108	4	Fire Science Elective	3	Fire Science Elective	3	Fire Science Elective	3
Computer Tech. Elective	3	Mathematics Elective	3	Social Science Elective	3		**13**
	16		**16**		**15**		

Fire Science Technology, Diploma

Workforce Development Division Technologies/Culinary Arts

Competency Profile

This curriculum is designed to prepare students to:

- deliver oral presentations on fire behavior, control and prevention methods, using prepared materials, when assigned to do so
- function in a management support role in a community-based fire service organization as part of a suppression or prevention task force
- analyze fire ground water movement problems and operate pressure-producing pumps to effectively supply a variety of fire control streams
- participate as part of an organizational team to deploy human and capital resources to achieve the organization's mission, goals, and objectives
- inspect and issue written reports on the proper operation of fire detection and suppression systems
- evaluate current and potential fire and emergency situations and issue verbal, written and radio transmission reports that effectively manages personnel to mitigate the situation

PROGRAM REQUIREMENTS (TOTAL CREDITS — 31)

General Education		
ENG 161	College Writing	3
MTH 108	Math for the Tech. I	4
SOC 160	Applied Human Rel.	3
		10

Major		
FST 101	Intro to Fire Science	3
FST 103	Fire Service Admin.	3
FST 104	Fire Service Hydraulics	3
FST 105	Public Fire Education	3
FST 107	Fire Protection Suppres.	3
FST 220	Firefighting Tactics I	3
Fire Science Elective		3
		21

Other Required Courses

None Required

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		Spring Semester	
ENG 161	3	FST 104	3
FST 101	3	FST 107	3
FST 103	3	FST 220	3
FST 105	3	SOC 160	3
MTH 108	4	Fire Science Elective	3
	16		**15**

Fire Science Technology, Certificate

Workforce Development Division of Technologies/Culinary Arts

Competency Profile

This curriculum is designed to prepare students to:

- identify past and present building hazards that have caused catastrophic loss of life events and make oral or written recommendations to prevent future catastrophes
- complete written forms to document operating status of fire detection and suppression systems
- assist with the delivery of fire behavior and fire education programs by communicating effectively using prepared materials
- identify basic fire prevention inspection deficiencies for existing buildings and compile written reports using prepared forms
- collect organizational budget, incident and personnel data using existing forms and compile written summary reports
- interact with other fire science team members and the local community by using effective interpersonal and workplace life skills

PROGRAM REQUIREMENTS (TOTAL CREDITS — 19)

ENG 161	College Writing	3
FST 101	Intro to Fire Science	3
FST 103	Fire Service Admin.	3
FST 105	Public Fire Education	3
FST 107	Fire Protection Sup.	3
MTH 108	Math for the Tech. I	4
		19

Graphic Design and Animation

Showcase Your Creative Skills

The specialized programs in Graphic Design & Animation provide creative education in the expressive interaction of words, images and media to inform, educate, persuade and entertain. Students strive to become innovative, intelligent and responsible designers using existing skills while developing new skills to explore creative possibilities and work effectively with other creative individuals to develop cross-media workflows for creative and productive careers including the areas of:

- concept design, illustration, digital design and matte painting
- color management, color correction and digital prepress
- dynamic publishing for print and digital media
- digital output and finishing for sign art, specialty and environmental graphics
- 2D art and 3D models for games, commercial, TV shows and films
- interactive and web media design, and mobile communications

Graphic Design & Animation

The Graphic Design & Animation programs provide not only the theory and technical aspects of graphic design and animation, but also interdisciplinary thinking while providing an understanding of the creative processes to stimulate he student's mind and spark imagination–all the while producing a broad range of visual concepts and media. While the graphic designer's goals remains the same, the technologies, methods of delivery and global marketplace provides new challenges and opportunities for students to visually communicate their message in their personal style and creative interpretation.

Associate in Applied Science Degree

The Graphic Design & Animation associate in applied science degree program is offered as two options: Flash Design and Graphic Design. These programs serve to stimulate the mind and spark the imagination in visual design, academics, computer-based and job-related skills that prepare graduates for entry-level employment in today's traditional print media, motion and interactive media, and specialty graphics fields.

Our internships provide students the opportunity to work in a variety of off-site environments and participate in professional workshops to gain work experience, make contacts, and refine their skills and portfolios.

Upon completion, graduates will have a solid understanding of the latest digital technologies and techniques, and the creative and technical processes of design, print, interactive and web media, and mobile communications. The utilization of new technologies combined with individual interpretation and persistence provide the key set of skills: creativity, imagination and innovation; demanded by government, media, telecommunications, nonprofit, and business and industry for current and future job opportunities.

Graphic Design & Animation Certificates

WCCC offers various certificates to individuals active or interested in Flash Design, Graphic Design and Maya 3D. These certificate programs provide individual with the technical knowledge, skills and hands-on experience to: increase their value to their organization; earn credentials for proof of concentrated study; update and strengthen current knowledge and skills; explore a career or change careers; start a business of their own; or pursue an area of personal interest.

Graphic Design and Animation, AAS

FLASH DESIGN OPTION

Division of Computer Technology/Business

Flash Design, a dynamic and rapidly evolving media content development discipline, provides instruction in the principles, concepts, tools and techniques involved in the design, development, production and publication of timed-based digital elements and downloadable/streaming media. Coursework provides extensive hands-on education that emphasizes creativity, critical thinking and teamwork. Students master the production challenges of today and tomorrow using Adobe® Windows® and Intel® based Macintosh® software for broadcast quality digital imaging and animation, video and audio editing, motion graphics and visual effects, and interactive media, as well as DVD, Blu-ray Disc and mobile authoring. Deadline-based class exercises help refine the student's design ability, writing proficiency, critical thinking, visual communication and interative design skills in the production of effective screen-based media.

Career Opportunities

Graduates of the associate degree program may be prepared for entry-level employment within in-house business and corporate communication departments, advertising and marketing agencies, broadcast media production houses or educational institutions. Some students are also successful with their own businesses or working as freelance designers/technicians.

Competency Profile

The curriculum is designed to prepare students to:

- plan and create effective, cohesive design solutions using a variety of Web media
- create documents for media production such as proposals, scripts, story boards, budgets, and schedules
- create communications informed and inspired by design research into communities and cultural spaces
- apply project management and teamwork skills to address digital media industry issues

- create motion graphics and visual effects with the industry standard, Macintosh®/Windows®-based software
- capture edit and deliver video online, on air, on disc or on mobile devices
- deliver projects via DVD and Blu-ray Disc authoring as well as SWF file export or the web
- evaluate the technical proficiency of media productions within the design disciplines and media trends, global market places and popular culture

PROGRAM REQUIREMENTS (TOTAL CREDITS — 62)

General Education

ENG 161	College Writing	3
GCT 160	Photoshop - Basic	3
SPC 156	Interper. Commun.	3
English Elective		3
Mathematics Elective		3
Social Science Elective		3
		18

Major

GCT 100	Macintosh OS	1
GCT 115	Digital Design - 2D	3
GCT 120	Flash - Design	3
GCT 150	Illustrator - Basic	3
GCT 163	Web Graphics	3
GCT 180	Flash - Animation	3
GCT 199	Graphic Internship	3
GCT 220	Flash - Web Media	3
GCT 280	Flash - Dsgn. & Prod.	3
		25

Other Required Courses

MED 103	Podcasting Basics	1
MED 105	Multimedia for Web	3
MED 240	Sound Booth	3
MED 250	Premiere Pro I	3
MED 260	Encore	3
MED 270	Premiere Pro II	3
MED 290	After Effects	3
		19

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
GCT 100	1	GCT 163	3	ENG 161	3	GCT 199	3
GCT 115	3	GCT 180	3	GCT 220	3	GCT 280	3
GCT 125	3	MED 260	3	MED 240	3	MED 270	3
GCT 150	3	Mathematics Elective	3	MED 250	3	MED 290	3
GCT 160	3	Social Science Elective	3	SPC 156	3	English Elective	3
MED 103	1		**15**		**15**		**15**
MED 105	3						
	17						

Graphic Design and Animation, AAS

GRAPHIC DESIGN OPTION

Division of Computer Technology/Business

The Graphic Design program provides students the opportunity to become technically proficient cross-media designers for print and digital publishing using the industry's most widely used Adobe® Windows® and Intel® based Macintosh® software applications and computer hardware in the areas of animation, illustration, typography, publication design, digital painting, image editing and prepress. Students also incorporate design and communication theory and principles to develop the fundamental skills and knowledge they need for their specific educational goals and career needs for traditional print of interactive publications. Whether students are working with pixels, pigments or vinyl, as a creative problem-solver, they need to arrange, clarify and enhance the words and images to best convey their message through print, interactive, web or mobile media for today's communication-oriented culture.

Career Opportunities

The types of entry level career paths which students could pursue upon graduation as a graphic design major may include: advertising design, exhibition design, graphic design, publication and print media design, marketing and promotion design, retail graphics design, signage, specialty graphics imaging or Web design. Some of these occupations may require additional training, certification, education or experience. Some students are also successful with their own businesses or as freelance designers.

Competency Profile

The curriculum is designed to prepare students to:

- plan and create effective, cohesive design solutions for cross-media under tight deadlines
- incorporate effective typography, graphic design, digital imaging, illustration techniques, and color theory and prepress principles in problem-solving
- utilize industry standard software and technology to plan and create digital compositions in the production of graphic images for print and digital media
- conceive, design and produce effective, efficient and engaging web media: graphics, banners and animations
- produce unique logo identities to attract potential customers and promote small business in the marketplace
- apply project management and teamwork skills to address digital design industry production issues
- participate as a member of a creative team during the research, design and production of visual communications
- assist in identifying career and transfer options and assume a professional role in the workplace
- incorporate academic knowledge required of all graduates including competencies in: critical thinking, writing, information literacy, oral communication and quantitative reseasoning in the graphic design and animation fields

PROGRAM REQUIREMENTS (TOTAL CREDITS — 62)

General Education

ENG 161	College Writing	3
GCT 160	Photoshop: Basic	3
ART 160	2D Design	
or		3
ART 162	Drawing I	
English Elective		3
Mathematics Elective		3
Social Science Elective		3
		18

Major

GCT 100	Macintosh OS	1
GCT 115	Digital Design - 2D	3
GCT 125	Flash: Design	3
GCT 130	InDesign: Page Layout	3
GCT 150	Illustrator: Basic	3
GCT 163	Web Graphics	3
GCT 215	Digital Production	3
GCT 231	InDesign: Pub. Dsgn.	3
GCT 253	Illustrator: Advanced	3
GCT 261	Photoshop: Studio	3
GCT 285	Photoshop: Prepress	3
GCT 287	Digital Workflow	3
		34

Other Required Courses

MED 103	Podcasting - Basic	1
Restricted Electives*		9
		10

***Restricted Electives**

GCT 155	Vector-Based Graphics
GCT 180	Flash: Animation
GCT 199	Graphic Internship
GCT 210	Logo Design for Small Bus.
GCT 220	Flash: Web Media
or	
GCT 145	Auto Art

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
ENG 161	3	GCT 120	3	GCT 215	3	GCT 287	3
GCT 100	1	GCT 130	3	GCT 231	3	Mathematics Elective	3
GCT 115	3	GCT 163	3	GCT 285	3	Social Science Elective	3
GCT 150	3	GCT 253	3	English Elective	3	Restricted Elective	3
GCT 160	3	GCT 261	3	Restricted Elective	3	Restricted Elective	3
ARt 160 or 162	3	MED 103	1		**15**		**15**
	16		**16**				

Graphic Design and Animation, Certificate

GRAPHIC DESIGN

Division of Computer Technology/Business

The graphic design certificate is designed to equip students with the skills and knowledge required to conceptualize and produce the graphic art and visual materials necessary to effectively communicate visual and conceptual information for a variety of media. Students will explore the many facets of graphic design and art direction, industry-based technology, typography, corporate, editorial and information design, and design theory.

Career Opportunities

Graduates of the graphic design certificate enjoy exciting entry-level positions in the visual/graphic arts industry such as advertising, graphic design, illustration, digital prepress and signage. Some students may choose to be a self-employed or a freelance designers.

Competency Profile

This curriculum is designed to prepare students to:

- function as a member of a creative team in the research, design and preparation of print communications
- hone skills in creative problem solving to learn how to meet the needs of clients quickly, creatively and economically
- incorporate typography, graphic deign, and illustration techniques in the production of graphic images and publications
- integrate scanned images with digital editing/retouching techniques to create images for commercial printing
- demonstrate working knowledge of layout and design integrating illustrations, photographic images with page layout software

PROGRAM REQUIREMENTS (TOTAL CREDITS — 16)

GCT 100	Macintosh OS	1
GCT 115	Digital Design - 2D	3
GCT 130	InDesign - Page Layout	3
GCT 150	Illustrator - Basic	3
GCT 160	Photoshop - Basic	3
GCT 261	Photoshop - Studio	3
		16

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
GCT 100	1	GCT 130	3
GCT 115	3	GCT 261	3
GCT 150	3		**6**
GCT 160	3		
	10		

Graphic Design and Animation, Certificate

2D ANIMATION

Division of Computer Technology/Business

The 2D animation certificate provides students with extensive hands-on experience in the design and delivery of cross-platform, low-bandwidth animations, presentations and Web graphics. The program focuses on project requirements, Web design and structure, and stresses the importance of usability, optimization and performance.

Career Opportunities

Graduates will have acquired the skills necessary for entry-level positions such as Web designer, digital artist, Flash designer, Internet marketing designer, digital media producer and project coordinator.

Competency Profile

This curriculum is designed to prepare students to:

- identify important components of effective planning and implement visual design, motion design, optimization and publishing output in a complex Flash application
- function as a member of a creative team in the research, design and preparation of Web communications
- structure Flash documents effectively by using the timeline, layers and movie clips
- incorporate QuickTime, Shockwave and Flash for delivery on CD-ROM and over the Web

PROGRAM REQUIREMENTS (TOTAL CREDITS — 17)

GCT 100	Macinstosh OS	1
GCT 125	Flash - Design	3
GCT 150	Illustrator - Basic	3
GCT 163	Web Graphics	3
GCT 180	Flash - Animation	3
GCT 220	Flash: Web Media	3
MED 103	Podcasting Basics	1
		17

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
GCT 100	1	GCT 180	3
GCT 125	3	GCT 220	3
GCT 150	3	MED 103	1
GCT 163	3		**7**
	10		

Graphic Design and Animation, Certificate

3D ANIMATION

Division of Computer Technology/Business

If you are looking to create video game artwork or any other type of 3D project, the 3D Animation certificate will begin your journey into the creative world of 3D art and animation. Autodesk Maya combines powerful tools for the major areas in 3D content creation: modeling, animation, texturing and rendering. Many of today's top video games are created in Maya. Students complete assignments using industry standards and production workflows through hands-on instruction in Maya: from characters and models to levels and more. This certificate will provide a student with a spectrum of skills, knowledge and opportunities, providing a balanced integration of theory, practice and production that is reflected in the diverse range of careers that they can pursue. No previous 3D or animation experience is required; however, Macintosh OS X or Windows XP/Vista experience is strongly recommended.

Career Opportunities

Students completing the certificate in 3D Animation can seek careers not only in the film, broadcast and gaming arenas, but also in the traditional fields of education, advertising, marketing and the military. Potential job titles include but are not limited to animators, modelers, technical directors, texture artists, digital matte painters, pre-visualization artists and multimedia producers.

Competency Profile

This curriculum is designed to prepare students to:

- create and refine high quality 3D models that maximize technology and that fulfill the requirements of a project's functional, artistic, and technical specifications
- work well on multiple projects with overlapping schedules
- work directly with clients to understand project requirements, gather necessary reference material, and obtain approval for final project deliverables
- follow art and technical direction
- deliver work product in accordance with established schedule estimates

PROGRAM REQUIREMENTS (TOTAL CREDITS — 18)

GCT 150	Illustrator - Basic	3
GCT 170	Maya - Basic	3
GCT 173	Maya - Modeling	3
GCT 176	Maya - Animation	3
GCT 215	Digital Production	3
GCT 270	Maya - Special Effects	3
		18

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**		**Summer Semester**	
GCT 150	3	GCT 173	3	GCT 215	3
GCT 170	3	GCT 176	3	GCT 270	3
	6		**6**		**6**

Heating, Ventilation, Air-Conditioning and Refrigeration, AAS

Workforce Development Division of Technologies/Culinary Arts

This program provides students with an in-depth background of the heating, ventilation, air-conditioning and refrigeration industry. By combining theory and practical shop experiences, students will develop the skills needed for design, installation, maintenance and troubleshooting HVAC&R systems for residential and commercial applications.

Successful completion of this program leads to the associate in applied science degree.

Career Opportunities

Recent graduates of the HVAC&R program have obtained jobs with the following titles: HVAC instructor, service technician, installer, inside salesperson, maintenance technician, contractor and troubleshooter.

Competency Profile

This curriculum is designed to prepare students to:

- work as a team to solve problems
- use control logic to find, fix and repair problems in HVAC&R systems
- utilize tables, graphs, and calculators to design and select equipment
- use computers to determine heating and cooling loads, air distribution systems, and hydronic systems
- identify and demonstrate the proper use of refrigeration and heating hand tools, materials and equipment
- become universally certified under the Clean Air Act, Title VI, Section 608
- design and fabricate duct work from metal as well as fiberglass duct board
- read electrical schematic and ladder diagrams as used in HVAC&R equipment
- use the library and the WCCC computer network to research problems and find solutions to problems in the industry
- communicate effectively and appropriately; record and report information significant to the job

PROGRAM REQUIREMENTS (TOTAL CREDITS — 60/62)

General Education

ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Composition	
MTH 108	Math for the Tech. I	4
Computer Technology Elective		3
Science Elective		3/4
Social Science Elective		3
		19/20

Major

HAC 101	Heating & Cooling Fund.	4
HAC 150	Psychro. & Heat Load Est.	3
HAC 170	HAC&R Control Systems	3
HAC 230	Air Dist. Design & Code	3
HAC 240	Sheet Metal for HAC&R	4
HAC 250	Air-Conditioning I	4
HAC 255	Air-Conditioning II	4
HAC 260	Hydronics	4
		29

Other Required Courses

ELC 105	Elec. Instru. & Measure.	2
ELC 106	Circuit Analysis I	3
HAC 280	Residential Wiring	4
Drafting Elective		3/4
		12/13

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
ELC 105	2	HAC 150	3	ENG 162, 163 or 164	3	HAC 255	4
ELC 106	3	HAC 170	3	HAC 230	3	HAC 260	4
ENG 161	3	HAC 240	4	HAC 250	4	Computer Elective	3
HAC 101	4	Drafting Elective	3/4	HAC 280	4	Social Science Elective	3
MTH 108	4	Science Elective	3/4		**14**		**14**
	16		**16/18**				

Heating, Ventilation, Air-Conditioning and Refrigeration, Certificate

Workforce Development Division of Technologies/Culinary Arts

The heating, ventilation, air-conditioning and refrigeration certificate program provides students the basic skills to work in an entry level position in the HVAC&R field. The class and lab experiences will help the student develop skills in installation, maintenance and troubleshooting for residential as well as commercial applications.

Career Opportunities

Graduates of this program can obtain jobs as service technicians, installers, maintenance technicians or troubleshooters.

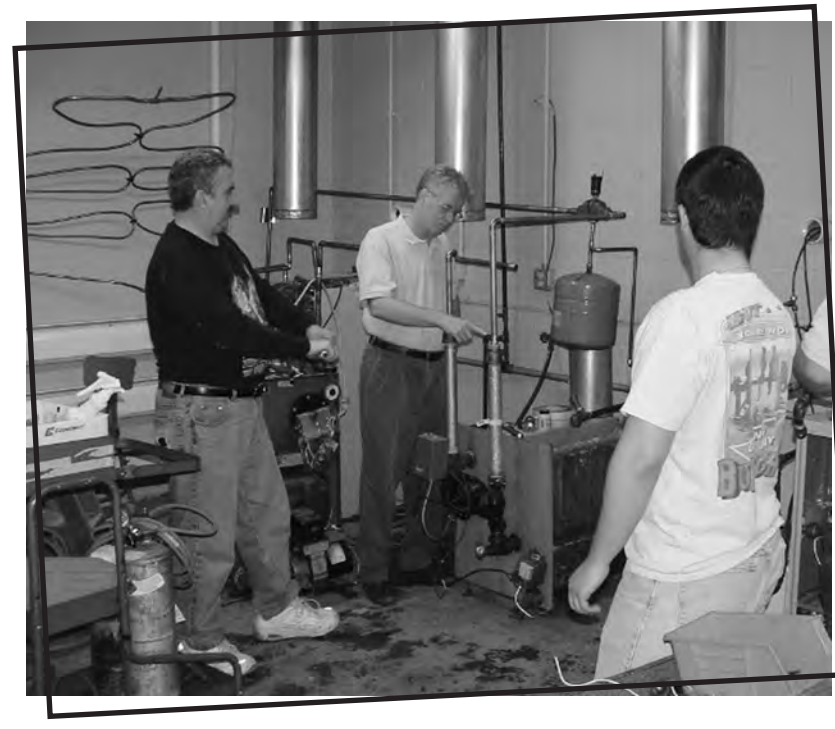
Competency Profile

This curriculum is designed to prepare students to:

- work as a team to solve problems
- identify and demonstrate the proper use of refrigeration and heating hand tools, materials and equipment
- design and fabricate duct work from metal as well as fiberglass duct board
- read schematic and ladder diagrams as used in HVAC&R equipment

PROGRAM REQUIREMENTS (TOTAL CREDITS – 26)

HAC 101	Heating & Cooling Fund.	4
HAC 170	HVAC&R Control Sys.	3
HAC 240	Sheet Metal for HVAC&R	4
HAC 250	Air-Conditioning I	4
HAC 255	Air-Conditioning II	4
HAC 260	Hydronics	4
HAC 290	Refrigeration Recovery	3
		26



RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
HAC 101	4	HAC 170	3
HAC 240	4	HAC 255	4
HAC 250	4	HAC 260	4
	12	HAC 290	3
			14

Horticulture, AAS

FLORICULTURE OPTION

Division of Mathematics and Sciences

This option of the horticulture degree is designed to provide students with the necessary skills to work in areas of greenhouse management, garden center management, interior plantscaping and floral shop management.

Career Opportunities

Graduates of this option can be self-employed or obtain jobs as greenhouse growers, garden center managers, interior plantscapers, floral shop managers or professionals in related fields.

Competency Profile

This curriculum is designed to prepare students to:

- identify and properly utilize important species of annuals and herbaceous perennials
- identify and properly utilize important species of ornamental trees and shrubs
- design, install and maintain interior landscaping
- schedule and produce common greenhouse crops
- make floral arrangements for general use and special occasions
- identify and control common pests that infest plants
- perform calculations related to fertilization and pesticide application
- communicate effectively with customers with letters or e-mails
- demonstrate basic knowledge of computer technology

PROGRAM REQUIREMENTS (TOTAL CREDITS – 61)

General Education		
CHM 107	Intro Concepts/Chem.	4
CPT 150	Microcomp. Concepts	3
ENG 161	College Writing	3
ENG 163	Business Commun.	3
Mathematics Elective		3
Social Science Elective		3
		19

Major		
HOR 105	Intro to Horticulture	3
HOR 125	Ornamental Shrubs	3
HOR 126	Ornamental Trees	3
HOR 155	Soils and Soil Fertility	4
HOR 157	Plant Pests	4
HOR 212	Pruning	3
		20

Concentration		
HOR 107	Landscape Drawing	3
HOR 170	Floral Dsgn. & Arranging	3
HOR 199	Internship	3
HOR 215	Annuals & Herb. Perennials	3
HOR 240	Greenhouse Mgmt.	3
HOR 250	Int. Plants & Plantscaping	4
HOR 270	Floriculture	3
		22

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
CPT 150	3
HOR 105	3
HOR 125	3
Mathematics Elective	3
	12

Spring Semester	
CHM 107	4
HOR 107	3
HOR 126	3
HOR 155	4
	14

Summer Semester	
HOR 212	3
HOR 250	4
	7

Fall Semester	
ENG 161	3
HOR 157	4
HOR 199	3
HOR 215	3
HOR 240	3
	16

Spring Semester	
ENG 163	3
HOR 170	3
HOR 270	3
Social Science Elective	3
	12

Horticulture, AAS

LANDSCAPE DESIGN, INSTALLATION AND MAINTENANCE OPTION

Division of Mathematics and Sciences

This option of the horticulture degree is designed to provide students with the necessary skills to work in the landscaping industry.

Career Opportunities

Graduates of this option can be self-employed as landscapers or obtain jobs as landscape designers, managers, estimators, and technicians in landscape installation and maintenance and related fields.

Competency Profile

This curriculum is designed to prepare students to:

- identify and properly utilize important species of annuals and herbaceous perennials
- identify and properly utilize important species of ornamental trees and shrubs
- design residential and non-commercial properties
- install landscapes according to blue prints
- properly maintain established landscapes
- start and maintain lawns
- perform calculations related to turf fertilization, liming, and pesticide application
- perform calculations necessary for running a landscaping business
- prepare bidding packages for residential and commercial properties
- communicate effectively with customers with letters or e-mails
- demonstrate basic knowledge of computer technology

PROGRAM REQUIREMENTS (TOTAL CREDITS – 61)

General Education			Major			Concentration		
CHM 107	Intro Concepts/Chem.	4	HOR 105	Intro to Horticulture	3	HOR 107	Landscape Drawing	3
CPT 150	Microcomp. Concepts	3	HOR 125	Ornamental Shrubs	3	HOR 110	Intro to Turfgrass Mgmt.	3
ENG 161	College Writing	3	HOR 126	Ornamental Trees	3	HOR 199	Internship	3
ENG 163	Business Commun.	3	HOR 155	Soils and Soil Fertility	4	HOR 205	Residential Landscap.	3
Mathematics Elective		3	HOR 157	Plant Pests	4	HOR 207	Adv. Landscaping	3
Social Science Elective		3	HOR 212	Pruning	3	HOR 215	Annuals & Herb. Perennials	3
		19			**20**	HOR 275	Landscp. Equip. Inst. & Maint.	4
								22

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		Spring Semester		Fall Semester		Spring Semester	
CPT 150	3	CHM 107	4	ENG 161	3	ENG 163	3
HOR 105	3	HOR 107	3	HOR 157	4	HOR 199	3
HOR 125	3	HOR 110	3	HOR 205	3	HOR 207	3
Mathematics Elective	3	HOR 126	3	HOR 215	3	Social Science Elective	3
	12	HOR 155	4		**13**		**12**
			17				
		Summer Semester					
		HOR 212	3				
		HOR 275	4				
			7				

Horticulture, AAS

TURFGRASS MANAGEMENT OPTION

Division of Mathematics and Sciences

This option of the horticulture degree is designed to provide students with the necessary skills to work in the field of turfgrass management.

Career Opportunities

Graduates of this option can be self-employed as turf care professionals or obtain jobs as golf course or athletic field superintendants, and technicians in lawn care companies and related fields.

Competency Profile

This curriculum is designed to prepare students to:

* identify and characterize the cultural requirements of the important turfgrass species used in lawns, golf courses, and sports fields
- select the right turfgrass species for specific locations
- operate and maintain turf care equipment
- install and maintain different types of turf
- identify and control turfgrass insects, diseases, and weeds
- calibrate and operate spray equipment
- perform calculations related to turf fertilization, liming, and pesticide application
- identify and properly utilize important species of ornamental trees and shrubs
- communicate effectively with customers with letters or e-mails
- manage employees effectively
- demonstrate basic knowledge of computer technology

PROGRAM REQUIREMENTS (TOTAL CREDITS – 62)

General Education

CHM 107	Intro Concepts/Chem.	4
CPT 150	Microcomp. Concepts	3
ENG 161	College Writing	3
ENG 163	Business Commun.	3
Mathematics Elective		3
Social Science Elective		3
		19

Major

HOR 105	Intro to Horticulture	3
HOR 125	Ornamental Shrubs	3
HOR 126	Ornamental Trees	3
HOR 155	Soils and Soil Fertility	4
HOR 157	Plant Pests	4
HOR 212	Pruning	3
		20

Concentration

HOR 110	Intro to Turfgrass Mgmt.	3
HOR 120	Turfgrass Equip. Mech.	4
HOR 150	Spec. Turfgrass Mgmt.	3
HOR 199	Internship I	3
HOR 275	Landsc. Equip. Inst. & Maint.	4
HOR 299	Internship II	3
		20

Other Required Coures

BUS 158	Principles of Mgmt.	3
		3

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester

CPT 150	3
HOR 105	3
HOR 125	3
Mathematics Elective	3
	12

Spring Semester

CHM 107	4
HOR 110	3
HOR 126	3
HOR 155	4
	14

Summer Semester

HOR 212	3
HOR 275	4
	7

Fall Semester

ENG 161	3
HOR 120	4
HOR 157	4
HOR 199	3
	14

Spring Semester

ENG 163	3
BUS 158	3
HOR 150	3
HOR 299	3
Social Science Elective	3
	15

Horticulture, Certificate

FLORICULTURE

Division of Mathematics and Sciences

This certificate program provides students with the necessary skills for working in garden centers, greenhouses and floral shops.

Career Opportunities

Graduates of this program can be self-employed or obtain jobs as technicians in garden centers greenhouses, floral shops and related businesses.

Competency Profile

This curriculum is designed to prepare students to:

- identify and properly utilize important species of annuals and herbaceous perennials
- design, install and maintain interior landscaping
- schedule and produce common greenhouse crops
- make floral arrangements for general use and special occasions

PROGRAM REQUIREMENTS (TOTAL CREDITS – 19)

HOR 105	Intro to Horticulture	3
HOR 170	Floral Dsgn. & Arranging	3
HOR 215	Annuals & Herb. Peren.	3
HOR 240	Greenhouse Mgmt.	3
HOR 250	Interior Plantscaping	4
HOR 270	Floriculture	3
		19

RECOMMENDED SEQUENCE

Fall Semester		**Summer Semester**	
HOR 105	3	HOR 250	4
	3		**4**
Spring Semester		**Fall Semester**	
HOR 170	3	HOR 215	3
HOR 270	3	HOR 240	3
	6		**6**

Horticulture, Certificate

Division of Mathematics and Sciences

This certificate program provides students with the necessary skills for identifying and properly utilizing trees, shrubs, and annual and herbaceous perennial flowers in landscapes. It also prepares them for soil and pest management.

Career Opportunities

Graduates of this program can obtain jobs as technicians in nurseries, garden centers or landscaping companies.

Competency Profile

This curriculum is designed to prepare students to:

- identify and properly utilize trees, shrubs, and bedding plants
- identify problems related to soil and make recommendations for improvement
- identify and control important insects, diseases, and weeds
- calculate the amount of fertilizers, pesticides needed for a given area
- apply pesticides safely

PROGRAM REQUIREMENTS (TOTAL CREDITS – 20)

HOR 105	Intro to Horticulture	3
HOR 125	Ornamental Shrubs	3
HOR 126	Ornamental Trees	3
HOR 155	Soils & Soil Fertility	4
HOR 157	Insects & Dis. of Plants	4
HOR 215	Annuals & Herb. Peren.	3
		20

RECOMMENDED SEQUENCE

Fall Semester		**Fall Semester**	
HOR 105	3	HOR 157	3
HOR 125	3	HOR 215	4
	6		**7**
Spring Semester			
HOR 126	3		
HOR 155	4		
	7		

Horticulture, Certificate

LANDSCAPE DESIGN
Division of Mathematics and Sciences

The landscape design certificate program provides students with the necessary skills for developing landscape designs for residential, commercial and other properties. It also prepares students for estimating landscape cost for various properties and doing bidding packages.

Career Opportunities

Graduates of this program can obtain jobs as landscape designers for landscaping companies, landscape consultants, and landscape technicians overseeing the installation of landscape designs.

Competency Profile

This curriculum is designed to prepare students to:

- develop landscape design programs
- prepare landscape designs for residential properties
- prepare landscape designs for commercial properties and other non residential properties
- estimate costs of landscaping based on different designs
- prepare bidding packages based on different designs

PROGRAM REQUIREMENTS (TOTAL CREDITS – 18)

HOR 105	Intro to Horticulture	3
HOR 107	Landscape Drawing	3
HOR 125	Ornamental Shrubs	3
HOR 126	Ornamental Trees	3
HOR 205	Residential Landscaping	3
HOR 207	Adv. Landscaping	3
		18

RECOMMENDED SEQUENCE

Fall Semester		**Fall Semester**	
HOR 105	3	HOR 205	3
HOR 125	3		**3**
	6		
		Spring Semester	
Spring Semester		HOR 207	3
HOR 107	3		**3**
HOR 126	3		
	6		

Horticulture, Certificate

LANDSCAPE INSTALLATION AND MAINTENANCE
Division of Mathematics and Sciences

This certificate program provides students with the necessary skills for installing and maintaining residential and commercial landscapes

Career Opportunities

Graduates of this program can start their own landscaping businesses or obtain jobs as technicians and/or foremen in landscape installation and maintenance for landscaping companies.

Competency Profile

This curriculum is designed to prepare students to:

- construct important landscape structures such as patios, retaining walls, sidewalks and so on
- plant trees and shrubs under various conditions
- start new lawns with seeds or sod
- prune trees and shrubs properly
- maintain and improve existing landscapes

PROGRAM REQUIREMENTS (TOTAL CREDITS – 23)

HOR 105	Intro to Horticulture	3
HOR 110	Intro o Turfgrass Mgmt.	3
HOR 125	Ornamental Shrubs	3
HOR 126	Ornamental Trees	3
HOR 157	Insects & Disease of Plants	4
HOR 212	Pruning	3
HOR 275	Landsc. Equip. Inst. & Main.	4
		23

RECOMMENDED SEQUENCE

Fall Semester		**Summer Semester**	
HOR 105	3	HOR 212	3
HOR 125	3	HOR 275	4
	6		**7**
Spring Semester		**Fall Semester**	
HOR 110	3	HOR 157	4
HOR 126	4		**4**
	7		

Horticulture, Certificate

TURFGRASS MANAGEMENT
Division of Mathematics and Sciences

This certificate program provides students with the necessary skills for starting and maintaining lawns, athletic fields, and golf courses.

Career Opportunities

Graduates of this program may obtain jobs as technicians in golf courses, athletic fields, and landscaping companies taking care of a variety of turfs.

Competency Profile

This curriculum is designed to prepare students to:

- identify and properly utilize imporatn species of turfgrass
- start lawns or other types of turf with seed or sod
- identify important insects, diseases, and weeds that infest turf
- properly operate and maintain turf equipment
- apply pesticides safely

PROGRAM REQUIREMENTS (TOTAL CREDITS – 17)

HOR 105	Intro to Horticulture	3
HOR 110	Intro to Turfgrass Mgmt.	3
HOR 120	Turfgrass Equip. Mech.	4
HOR 150	Spec. Turfgrass Mgmt.	3
HOR 155	Soils & Soil Fertility	4
		17

RECOMMENDED SEQUENCE

Fall Semester		**Fall Semester**	
HOR 105	3	HOR 120	4
	3		**4**
Spring Semester		**Spring Semester**	
HOR 110	3	HOR 150	3
HOR 155	4		**3**
	7		

Hotel/Motel Management, Certificate

Workforce Development Division of Technologies/Culinary Arts

The certificate in hotel/motel management is designed to provide entry and intermediate level skills for employment within the lodging industry. Customer service and computer applications are emphasized. Courses within this program also include information on front office skills, housekeeping management, and lodging and property management.

Business attire may be required for some class assignments.

Career Opportunities

Students earning a certificate in this program may be employed in positions such as hotel assistant managers; food, beverage and banquet managers or assistants; convention and special event coordinators; sales managers, department managers or assistants for lodging facilities.

Competency Profile

This curriculum is designed to prepare students to:

- anticipate and satisfy diverse customer expectations
- utilize interpersonal and personal skills in a lodging facility
- practice technical skills needed for front office management which includes preparation of daily reports
- develop and monitor standard housekeeping practices within the lodging industry
- utilize computer technology to manage lodging systems
- learn the procedures and responsibilities of departmental teams within a lodging operation

PROGRAM REQUIREMENTS (TOTAL CREDITS — 17)

ACC 105	Fin. Recordkeeping	3
CPT 150	Microcomputer Concepts	3
FSM 113	Customer Service	3
FSM 118	Sanitation	2
HMT 160	Exec. Houskpg./Front Office	3
HMT 262	Lodg. & Property Mgmt.	3
		17

Human Services, AAS

Division of Public Service/Humanities/Social Sciences

The human services program prepares students for employment in agencies that provide many kinds of support to people in need. The course of study permits students classroom instruction and firsthand knowledge in a human service setting. Students choosing a human service major are motivated by a sincere concern and desire to help others.

As part of the AAS degree in human services, students are required to complete two semesters of field placement known as a practicum (HMS 258 and HMS 259). It is through this experience that human services students acquire some of their most valuable education and experience. The practicums are an opportunity for students to test and use the knowledge and skills they have gained in the classroom and through their own life experiences. It is also very common for students to be offered a job by their practicum placements.

Career Opportunities

Students who complete this program of study may be employed as entry level case aides or caseworkers, resident counselors in youth and adult programs, and other entry level human service positions in nonprofit agencies.

Competency Profile

This curriculum is designed to prepare students to:

- use their local human services system to access services for themselves and others
- identify target populations according to their need for services
- provide basic casework services to clients
- access and use the appropriate technology for providing services to clients
- use appropriate and effective communication skills in the helping environment
- conduct an information-gathering interview with those seeking service
- prepare an assessment of client needs
- use a basic problem-solving method to help individuals address their needs
- organize and facilitate a support, educational or task group
- write a basic social history report
- organize a standard social services record of information and services
- devise an action plan for services for clients
- identify client strengths and weaknesses
- work with clients from a variety of cultures and abilities
- utilize a basic knowledge of substance abuse issues when identifying and treating client problems
- understand how human services are funded and the impact of the political process on programs and services

PROGRAM REQUIREMENTS (TOTAL CREDITS — 62)

General Education

ENG 161	College Writing	3
ENG 164	Advanced Composition	
or		3
ENG 166	Sp. Topics/Tech. Comm.	
SOC 155	Principles of Sociology	3
SPC 155	Effective Speech	3
Computer Technology Elective		3
Mathematics Elective		3
		18

Major

HMS 155	Intro to Human Services	3
HMS 156	Comm. for HMS Workers	3
HMS 157	Intvwing./Recrdkpg. Sk.	3
HMS 160	Group Process	3
HMS 170	Racial & Ethnic Minorities	3
HMS 172	Drug/Alcohol Depend.	3
HMS 258	HMS Practicum I	4
HMS 259	HMS Practicum II	4
		26

Other Required Courses

PSY 160	General Psychology	3
PSY 161	Human Growth & Dev.	
or		3
PSY 270	Abnormal Psychology	
Restricted Electives*		12
		18

***Restricted Electives**

CHC 186	Cult./Soc./Dev. of Child
CHC 188	Exceptional Development
CRJ 255	Juvenile Delinquency
HMS 162	Prob. Solving/Couns. Sk.
HMS 171	Intro to Gerontology
PSY 167	Death & Dying
PSY 260	Social Psychology
PSY 265	Child Psychology
PSY 268	Adolescent Psychology
PSY 270	Abnormal Psychology
SOC 161	Marriage and Family
SOC 162	Contemp. Soc. Problems

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
ENG 161	3	ENG 163 or 164	3	HMS 160	3	HMS 162	3
HMS 155	3	HMS 157	3	HMS 258	4	HMS 259	4
HMS 156	3	HMS 172	3	SPC 155	3	Mathematics Elective	3
PSY 160	3	PSY 161 or PSY 270	3	Computer Tech. Elective	3	Restricted Elective*	6
SOC 155	3	Restricted Elective*	3	Restricted Elective*	3		**16**
	15		**15**		**16**		

Library Science, Certificate

Division of Public Service/Humanities/Social Sciences

The library science certificate program provides students with the knowledge and skills to work in entry level positions in libraries in a variety of settings.

Career Opportunities

Graduates of this program can expect to obtain employment in libraries or information centers, schools, government agencies, hospitals, corporations, law firms, museums, and professional associations. Individuals who hold a bachelor's degree in any field and complete this certificate program will be eligible to apply for certification as Provisional Librarians in Pennsylvania.

Competency Profile

This curriculum is designed to prepare students to:

- assist library users in locating and evaluating information resources in print and online
- utilize computer and information technology skills to perform tasks associated with the acquisition and preparation of materials for library collections
- perform tasks associated with the circulation of materials, administrative services, and programming for special populations

PROGRAM REQUIREMENTS (TOTAL CREDITS – 16)

CPT 120	Intro to the Internet	1
LIS 100	Intro to Library Science	3
LIS 110	Cataloging & Classifi.	3
LIS 120	Info Sources & Services	3
LIS 130	Materials Sel. (Coll. Dev.)	3
LIS 140	Library Administration	3
		16

Machine Technology, AAS

Workforce Development Division of Technologies/Culinary Arts

This program prepares students for employment and advancement in the machine tool field. Machinists are skilled workers who are able to read and interpret prints, use common hand tools, set up and operate metal cutting machines, and use precision measuring instruments. This program curriculum parallels the National Institute of Metalworking Skills Standards. Advanced placement in this program is possible for experienced machinists. Apprenticeship advanced standing credit is available.

Career Opportunities

Graduates of this program can accept jobs with the following titles: mold maker, tool maker, die maker, metal worker, machinist, and foreman.

Competency Profile

This curriculum is designed to prepare students to:

- produce jobs, fixtures, gauges and other devices used in the manufacture of precision metal parts
- construct metal forms (dies) to shape metal in stamping and forging operations
- make metal molds for the die castings and for molding plastics
- assist in designing tools and dies
- appropriately utilize metals and alloys
- interpret prints and sketch orthographically in two and three dimension
- effectively plan and sequence work operations
- communicate effectively and appropriately; record and report information significant to the job
- utilize effective mathematics skills
- apply concepts from physics, engineering and mathematics to the synthesis of durable products

PROGRAM REQUIREMENTS (TOTAL CREDITS – 64)

General Education		
CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Commun.	3
MTH 108	Math for the Tech. I	4
PHY 107	Applied Physics	4
Social Science Elective		3
		20

Major		
MTT 100	Intro to Metalworking	3
MTT 102	Geo. Dimen. & Toler.	3
MTT 105	Lathe I	3
MTT 110	Mill I	3
MTT 206	Lathe II	3
MTT 211	Mill II	3
MTT 215	Grinding I	3
		21

Other Required Courses		
CNC 100	Intro to CNC	3
CNC 200	CNC I	4
CNC 201	CNC II	4
DFT 110	Blueprint Reading	2
DFT 112	Intro Design, Mat. & Proc	3
DFT 266	Autodesk Inventor	4
EGR 210	Quality Control	3
		23

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		Spring Semester		Fall Semester		Spring Semester	
DFT 110	2	CNC 100	3	CNC 200	4	CNC 201	4
DFT 112	3	ENG 162	3	MTT 206	3	CPT 150	3
ENG 161	3	MTT 102	3	MTT 211	3	DFT 266	4
MTH 108	4	MTT 105	3	MTT 215	3	EGR 210	3
MTT 100	3	MTT 110	3	Social Science Elective	3	PHY 107	4
	15		**15**		**16**		**18**

Machine Technology, Certificate

Workforce Development Division of Technologies/Culinary Arts

The machine technology certificate program provides students with the basic skills to work in an entry level position in the machining field. The class and lab experiences will help the student develop skill in the use of common hand tools, operation of metal cutting machines, and the use of precision measuring instruments.

Career Opportunities

Graduates of this program can obtain jobs as metal workers, machine operators or machinists.

Competency Profile

This curriculum is designed to prepare students to:

- work as a team to solve problems
- produce fixtures, gauges and other devices used in the manufacture of metal parts
- make various processes in the manufacturing of various metal parts
- read and interpret prints

PROGRAM REQUIREMENTS (TOTAL CREDITS – 20)

CNC 100	Intro to CNC	3
DFT 110	Blueprint Reading	2
DFT 112	Intro to Dgn., Mat. & Pro.	3
MTT 100	Intro to Metalworking	3
MTT 102	Geo. Dimen. & Toler.	3
MTT 105	Lathe I	3
MTT 110	Mill I	3
		20

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
DFT 110	2	CNC 100	3
DFT 112	3	MTT 102	3
MTT 100	3	MTT 105	3
MTT 102	3	MTT 110	3
	11		**12**

Manufacturing Technology, AAS

MANUFACTURING MAINTENANCE APPRENTICESHIP OPTION

Workforce Development Division of Technologies/Culinary Arts

This program focuses on the maintenance and repair requirements of the manufacturing industry. Students learn how to operate, maintain and repair electrical and associated machinery and are able to detect, identify and correct any trouble that develops. They use hand and power tools to make repairs that range from replacing a part to a complete overhaul. In addition, students develop and implement building or plant safety procedures.

This program is designed to be taken on a part-time basis.

Career Opportunities

Students enrolled in this program are registered with the U.S. Department of Labor as apprentices. Career opportunities for manufacturing maintenance technicians exist in the areas of industrial maintenance as equipment repair technicians.

Competency Profile

This curriculum is designed to prepare students to:

- measure AC and DC voltages and current using a variety of measuring devices
- demonstrate knowledge of computer technology
- contrast codes, standards, recommendation practices and laws
- recognize and correct safety hazards in the workplace
- repair and maintain hydraulic equipment
- repair and maintain electromechanical equipment
- perform oxyacetylene, arc and TIG welding
- apply concepts from physics, chemistry and mathematics to the synthesis of durable products
- communicate effectively and appropriately; record and report information significant to the job

PROGRAM REQUIREMENTS (TOTAL CREDITS — 62)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Commun.	3
MTH 108	Math for Tech. I	4
PHY 107	Applied Physics	4
Social Science Elective		3
		20

Major

MPT 100	Prog. Logic Control I	4
MPT 121	Manufac. Main. Appren. I	2
MPT 122	Manufac. Main. Appren. II	2
MPT 123	Manufac. Main. Appren. III	2
MPT 221	Manufac. Main. Appren. IV	2
MPT 222	Manufac. Main. Appren. V	2
MPT 223	Manufac. Main. Appren. VI	2
		16

Other Required Courses

ELC 106	Circuits I	3
DFT 110	Blueprint Reading	2
DFT 112	Intro Dsgn. Mat. Proc.	3
EGR 105	Manufacturing Proced.	3
EGR 180	Industrial Hydraulics	4
MPT 200	Prog. Logic Control II	4
PHY 150	Energy & Society	3
WEL 125	Welding I	4
		26

RECOMMENDED SEQUENCE

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
DFT 110	2
DFT 112	3
ELC 106	3
ENG 161	3
MTH 108	4
	15

Spring Semester	
CPT 150	3
ENG 162	3
MPT 100	4
MPT 121	2
MPT 122	2
PHY 150	3
	17

Falll Semester	
EGR 180	4
MPT 123	2
MPT 200	4
MPT 221	2
WEL 125	4
	16

Spring Semester	
EGR 105	3
MPT 222	2
MPT 223	2
PHY 107	4
Social Science Elective	3
	14

Manufacturing Technology, AAS

MANUFACTURING PROCESS TECHNOLOGY OPTION

Workforce Development Division of Technologies/Culinary Arts

The manufacturing process technology option is designed to prepare students to gain entry level positions working with automated systems. Graduates work in positions requiring skills in product flow, quality control and problem solving.

Career Opportunities

Many positions are available as manufacturing technicians, automation technicians, electromechanical technicians, plant technicians, method analysis technicians, and testing and quality control technicians.

Competency Profile

This curriculum is designed to prepare students to:

- test, operate, program, modify and repair automated manufacturing systems
- schedule production, test materials, integrate systems
- perform quality control functions and make appropriate adjustments
- apply concepts from chemistry, engineering, electronics, mathematics and drafting to the synthesis of durable products
- identify, analyze and troubleshoot problems using systems approach
- apply understanding of flexible manufacturing systems to practical situations
- communicate effectively and appropriately; record and report information significant to the job

PROGRAM REQUIREMENTS (TOTAL CREDITS — 63)

General Education

CHM 107	Intro to Con. Chem. I	4
CPT 150	Microcomputer Con.	3
ENG 161	College Writing	3
ENG 162	Technical Commun.	3
MTH 108	Math for Tech. I	4
Social Science Elective		3
		20

Major

MPT 100	Prog. Logic Control I	4
MPT 112	Intro to Dsgn. Mat. Pro.	3
MPT 199	MPT Internship	
or		3
MPT 201	Prog. Logic Control III	
MPT 200	Prog. Logic Control II	4
MPT 209	Man. Process Control	4
MPT 240	Intro to Auto Manufac.	3
		21

Other Required Courses

EGR 180	Prin. of Ind. Hydraulics	4
EGR 210	Quality Control	3
ELC 105	Electronic Inst./Meas.	2
ELC 106	Circuits I	3
MTH 160	Intro to Statistics	3
PHY 107	Applied Physics	4
PHY 150	Energy & Society	3
		22

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
MPT 112	3	CHM 107	4	PHY 107	4	EGR 210	3
ELC 105	2	CPT 150	3	EGR 180	4	MPT 199 or MPT 201	3
ELC 106	3	ENG 162	3	MPT 200	4	MPT 240	3
ENG 161	3	MPT 100	4	MPT 209	4	MTH 160	3
MTH 108	4	PHY 150	3		**16**	Social Science Elective	3
	15		**17**				**15**

Manufacturing Technology, AAS

NANOFABRICATION MANUFACTURING OPTION

Workforce Development Division of Technologies/Culinary Arts

The nanofabrication manufacturing option is designed to prepare students to gain entry level positions working in the nanomanufacturing/semiconductor manufacturing industry. Students will study manufacturing at WCCC for three semesters and complete their degree requirements at the Nanofabrication Facility at Penn State University. Graduates work in positions requiring skills in product flow, quality control and problem solving.

Career Opportunities

Many positions are available as manufacturing technicians with industries that include semiconductor manufacturing, opto electronics, biomedical applications and microelecro mechanical devices.

Competency Profile

This curriculum is designed to prepare student to:

- properly operate equipment used in basic nanofabricator manufacturing
- schedule production, test materials, integrate systems
- perform quality control functions and make appropriate adjustments
- apply concepts from chemistry, engineering, electronics and mathematics to the synthesis of durable products
- identify, analyze and troubleshoot problems using systems approach
- apply understanding of nanofabrication manufacturing systems to practical situations
- communicate effectively and appropriately; record and report information significant to the job

PROGRAM REQUIREMENTS (TOTAL CREDITS — 68)

General Education

CHM 107	Intro to Con. Chem. I	4
CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Commun.	3
MTH 108	Math for Tech. I	4
Social Science Elective		3
		20

Major

MPT 112	Intro to Dsgn. Mat. Proc.	3
MPT 211	Mat. Sfty. Equip. for Nan.	3
MPT 212	Basic Nanofab. Proc.	3
MPT 213	Thin Film in Nanofab.	3
MPT 214	Lithog. for Nanofab.	3
MPT 215	Mat. Modif. in Nanofab.	3
MPT 216	Char. Pkg. & Test. of Nan.	3
		21

Other Required Courses

ELC 102	Electronic Devices	4
ELC 105	Electronic Instr. & Mea.	2
ELC 106	Circuit Analysis I	3
ELC 114	Digital Techniques	4
ELC 206	Microprocessors	4
PHY 107	Applied Physics	4
PHY 150	Energy & Society	3
MTH 160	Intro to Statistics	3
		27

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
ELC 105	2	ELC 102	4	CHM 107	4	MPT 211	3
ELC 106	3	ELC 114	4	CPT 150	3	MPT 212	3
ENG 161	3	ENG 162	3	ELC 206	4	MPT 213	3
MPT 112	3	PHY 150	3	MTH 160	3	MPT 214	3
MTH 108	3	Social Science Elective	3	PHY 107	4	MPT 215	3
	15		**17**		**18**	MPT 216	3
							18

Medical Assisting, Diploma

Division of Health Professions

The medical assisting program prepares the graduate to assist the physician with the care and treatment of patients in both administrative and clinical procedures. Some of these administrative functions include patient reception and scheduling appointments, word processing and forms preparation, ordering and maintaining supplies and equipment, and maintaining patient records. Examples of clinical functions include assisting with general physical examination and related patient procedures, collection and processing of laboratory specimens, administering medications, and instructions to patients as specified by the physician.

Career Opportunities

In this role, the medical assistant may be employed in doctor's offices, clinics and health maintenance organizations.

Special Admission and Selection Criteria

- Applicants must be graduates of an accredited secondary school program or hold a GED equivalency certificate prior to selection. Evidence of proficiency in keyboarding and word processing are program prerequisites. A proficiency examination can be completed by submitting a request to the Division of Computer Technology/Business. This requirement also can be met by successfully completing OFT 110 Document Processing I.

- Applicants must have completed high school biology with a grade of C or better within the past 10 years.

- Applicants must complete and submit a WCCC Application for Admission and an Allied Health Programs Application to the Admissions Office by January 5 prior to the fall semester for which enrollment is anticipated to be guaranteed consideration. Since this program requires a supervised clinical placement, enrollment may be limited. Applicants who are selected will be scheduled for an interview with the program director prior to program enrollment.

- Applicants must also take the computerized placement test (Accuplacer) and have successfully completed any required developmental courses prior to program acceptance. All developmental courses and high school coursework must be completed with a minimum grade of C prior to program acceptance. (C minus grade not accepted.)

- Applicants who have completed credit courses must have a 2.0 GPA. Only courses necessary to meet the Medical Assisting program requirements are considered when calculating GPA. If the GPA is less than 2.0, one or more of the courses can be repeated in order to meet this requirement. The student must maintain a 2.0 GPA in order to progress in the program.

- Applicants who are accepted must have successfully completed CPR/Basic Life Support for Health Care Providers Annual Certification and a first aid training program prior to program enrollment.

- Applicants who are accepted must submit satisfactory results from pre-entrance physical, dental, hearing, and eye examinations obtained at the applicant's expense. Specific information regarding the examination will be provided to selected applicants.

- Applicants who are accepted must purchase student liability insurance coverage upon program enrollment.

- Applicants must provide evidence of Pennsylvania State Police Request for Criminal Record Check (SP4-164) and Pennsylvania Child Abuse History Clearance (CY-113) at the candidate's expense. Any child abuse record results in denial of admission to the medical assisting program. Any felony conviction within the past 10 years results in denial of admission to the medical assisting program. Any misdemeanor will be evaluated based on the nature of the offense, length of time since the offense, and explanatory letter/materials submitted by applicant. (Any punishment over one year indicates a felony according to federal sentencing guidelines.) If an applicant has not established residency in the state of Pennsylvania for more than one year, they will need to submit FBI Cards for School Employees (FD-258)

- Students are required to have negative urine drug screen 10 days before MAS 100 and their practicum experience (MAS 120). It is the student's responsibiity to pay for the screening exam.

Competency Profile

This curriculum is designed to prepare students to:

- collect, transport, handle, and process laboratory specimens for analysis
- demonstrate professional conduct, stress management, and interpersonal and communication skills with patients, the public, peers and other health care personnel
- display an understanding of requisitioning and the legal implications of their work environment
- recognize and act upon individual needs for continuing education as a function of growth and maintenance of professional competence

Medical Assisting, Diploma

(CONTINUED)

Division of Health Professions

Functional Abilities Guidelines

Functional abilities are physical, mental and attitudes needed to practice safely, with or without accommodations. Accommodations must be first evaluated and documented by a behaviors physician and then evaluated by the college's counselor for special populations and individual healthcare programs.

- move freely to observe and assess patients
- full manual dexterity of upper extremities, including neck and shoulders, and unrestricted movement of both upper and lower extremities in order to position to complete tasks
- lift and support at least 75 pounds
- visually able to perform tasks safely
- hear sounds of spoken word and verbal communications
- demonstrate tactile ability to assess blood draw procedures
- ability to speak to patients and communicate essential directions
- write in legible manner and be able to document concise information
- exercise proper judgment and insight
- ability to complete task after verbal or written instructions
- ability to demonstrate new procedures in clinical application
- demonstrate respect, honestly and integrity at all times
- demonstrate privacy and confidentiality at all times
- ability to perform gross and fine motor skills in order to complete procedures
- ability to adapt to changing environmental/stress and deal with the unexpected
- perform multiple responsibilities concurrently
- establish rapport with patients and coworkers
- effectively and accurately speak on telephone and convey information through writing and verbal manner
- able to follow directions from others

PROGRAM REQUIREMENTS (TOTAL CREDITS — 37)

General Education

PSY 160	General Psychology	3
		3

Major

MAS 100	Intro to Med. Assisting	4
MAS 105	Adminis. Procedures	2
MAS 110	Clinical Procedures	4
MAS 120	Practicum	3
		13

Other Required Courses

ALH 120	General Pharmacology	3
ALH 122	Medical Terminology	3
CPT 150	Microcomputer Concepts	3
OFT 130	A & P for Medica. Offic.	3
OFT 150	Medical Billing Mgmt.	3
OFT 250	Diagnostic Med. Coding	3
OFT 260	Procedural Med. Cod.	3
		21

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Fall Semester	
ALH 122	3
CPT 150	3
MAS 100	4
OFT 150	3
	13

Spring Semester	
ALH 120	3
MAS 105	2
MAS 110	4
OFT 130	3
OFT 260	3
	15

Summer Semester	
MAS 120	3
PSY 160	3
OFT 250	3
	9

Multimedia and Photography, AAS

MULTIMEDIA TECHNOLOGY OPTION

Division of Computer Technology/Business

The multimedia technology option is designed to prepare students for employment in commercial, industrial and educational settings as audiovisual technicians. Program graduates are prepared to provide for the operation of various multimedia equipment. Students will acquire production skills in the areas of instructional graphics, television, audio recording, digital photography and interactive multimedia. Under supervision, students complete an internship experience in which they apply theoretical knowledge to workplace situations.

Career Opportunities

Career opportunities for multimedia technology graduates exist within in-house corporate audiovisual departments as well as in advertising agencies and sound or video production houses. A large number of individuals working in the media field are self-employed free-lancers working on a variety of creative and technical multimedia projects.

Competency Profile

This curriculum is designed to prepare students to:

- systematically design, produce, and analyze nonbroadcast media and messages such as computer presentation, video, multi-image, graphics/print, photography and interactive computer-based media
- apply knowledge of the theory, application, utilization and management of nonbroadcast communication technologies
- communicate effectively and appropriately using vocabulary indicative to the technology
- design and implement computer-based imagery by producing effective presentations
- apply communication principles to training and communications within organizations
- effectively function with associates as a member of a visual communications production team
- operate various types of standard as well as specialized media related equipment
- practice appropriate safety procedures inherent to the industry
- evaluate instructional media and organizational communication

PROGRAM REQUIREMENTS (TOTAL CREDITS — 64)

General Education

ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Composition	
MED 110	Digital Presentation	3
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Comm.	
Mathematics Elective		3
Social Science Elective		3
		18

Major

MED 103	Podcasting Basic	1
MED 105	Multimedia for Web	3
MED 155	Intro to Multimedia	3
MED 156	Television Production I	3
MED 158	History of Cinema	3
MED 240	Sound Booth	3
MED 250	Premiere Pro I	3
MED 170	Digital Photography	3
MED 255	Public Relations	3
MED 256	Advertising	3
MED 257	Television Production II	3
MED 260	Encore	3
MED 270	Premiere Pro II	3
MED 271	Adv. Digital Photography	3
MED 290	After Effects	3
MED 299	Internship	3
		46

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
ENG 161	3	MED 110	3	ENG 162, 163 or 164	3	MED 270	3
MED 103	1	MED 156	3	MED 260	3	MED 290	3
MED 105	3	MED 158	3	MED 256	3	MED 271	3
MED 155	3	MED 250	3	MED 257	3	MED 299	3
MED 170	3	MED 255	3	Mathematics Elective	3	Social Science Elective	3
MED 240	3	SPC 155 or 156	3		**15**		**15**
	16		**18**				

Multimedia and Photography, AAS

PHOTOGRAPHY OPTION

Division of Computer Technology/Business

The photography option prepares students to function in entry level positions within commercial, industrial and educational settings. Students will acquire production skills in state-of-the-art computer-based photographic imaging. Under supervision, students complete an internship experience in which they apply theoretical knowledge to workplace situations.

Career Opportunities

Career opportunities for photography graduates exist with advertising agencies, studios, service bureaus and corporate in-house photographic/advertising/public relations departments. A large portion of individuals working in this field are self-employed persons working on various creative and technical projects.

Competency Profile

This curriculum is designed to prepare students to:

- produce a portfolio which demonstrates the ability to implement theory with practical situations
- employ processes and methods to produce photo imagery significant to the job
- communicate effectively and appropriately using vocabulary indicative of the technology
- design and implement computer-based imagery by producing effective digital presentations
- demonstrate the ability to meet deadlines of required assigned tasks
- effectively function with associates as a member of a visual communications production team
- operate various types of standard as well as specialized photographically related equipment
- practice appropriate safety procedures inherent to the industry
- effectively network with art directors, designers, printers and others within the field

PROGRAM REQUIREMENTS (TOTAL CREDITS — 64)

General Education

ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Composition	
MED 110	Digital Presentation	3
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Comm.	
Mathematics Elective		3
Social Science Elective		3
		18

Major

MED 103	Podcasting Basics	1
MED 105	Multimedia for Web	3
MED 159	Basic Video Prod.	3
MED 160	Basic Photography	3
MED 161	Portrait Photography	3
MED 170	Digital Photography	3
MED 199	Internship	3
MED 200	Portfolio Development	3
MED 250	Premiere Pro I	3
MED 255	Public Relations	3
MED 256	Advertising	3
MED 260	Encore	3
MED 263	Photojournalism	3
MED 265	Color Photography	3
MED 266	Studio/Location Photog.	3
MED 271	Adv. Digital Photography	3
		46

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
ENG 161	3	ENG 162, 163 or 164	3	MED 250	3	MED 199	3
MED 103	1	MED 159	3	MED 256	3	MED 200	3
MED 105	3	MED 161	3	MED 265	3	MED 260	3
MED 110	3	MED 255	3	MED 271	3	MED 263	3
MED 160	3	SPC 155 or 156	3	Mathematics Elective	3	MED 266	3
MED 170	3		**15**	Social Science Elective	3		**15**
	16				**18**		

Multimedia and Photography, Certificate

ADOBE VIDEO STUDIO

Division of Computer Technology/Business

The Adobe Video Studio certificate option provides students with an intensive experience in Windows-based video, audio and DVD digital software.

Career Opportunities

Graduates of the Adobe Video Studio certificate program can expect to find employment as computer support specialists in the field of multimedia as technicians and/or customer sales or service representatives.

Competency Profile

This curriculum is designed to prepare students to:

- organize and incorporate basic images in the creation of complex graphics
- produce motion animations and special video effects
- effectively utilize software to encode, author and burn DVDs
- identify, analyze, manipulate and fix common audio problems

PROGRAM REQUIREMENTS (TOTAL CREDITS — 16)

MED 103	Podcasting Basics	1
MED 240	Sound Booth	3
MED 250	Premiere Pro I	3
MED 260	Encore	3
MED 270	Premiere Pro II	3
MED 290	After Effects	3
		16

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
MED 103	1	MED 260	3
MED 240	3	MED 270	3
MED 250	3	MED 290	3
	7		**9**

Multimedia and Photography, Certificate

PHOTOGRAPHY

Division of Computer Technology/Business

The photography certificate option provides students with an intensive experience in traditional and digital photographic techniques and processes.

Career Opportunities

Graduates of the photography certificate program can expect to find employment as photographers, photographic technicians, customer sales or service representatives.

Competency Profile

This curriculum is designed to prepare students to:

- incorporate basic lighting manipulation skills in the creation of complex images
- produce a portfolio demonstrating the ability to handle various photographic situations
- effectively utilize the computer as a photographic tool

PROGRAM REQUIREMENTS (TOTAL CREDITS — 16)

GCT 100	Macintosh OS	1
MED 160	Basic Photography	3
MED 170	Digital Photography	3
MED 265	Color Photography	3
MED 266	Studio/Location Photo.	3
MED 271	Adv. Digital Photography	3
		16

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
GCT 100	1	MED 265	3
MED 160	3	MED 271	3
MED 170	3		**6**
	7		
		Fall Semester	
		MED 266	3
			3

Multimedia and Photography, Certificate

VIDEO/TELEVISION

Division of Computer Technology/Business

The video/television certificate option provides students with an intensive experience in video and television production techniques and processes.

Career Opportunities

Graduates of the video/television certificate program can expect to find employment as entry level video camera and editing technicians, customer sales or service representatives.

Competency Profile

This curriculum is designed to prepare students to:

- utilize applicable production procedures to produce broadcast media
- effectively utilize software to produce digital audio effects
- operate linear/non-linear video related equipment
- design and implement commercial/industrial audio-video productions
- produce complex motion animations and special video effects

PROGRAM REQUIREMENTS (TOTAL CREDITS — 16)

MED 103	Podcasting Basics	1
MED 156	Television Prod. I	3
MED 240	Sound Booth	3
MED 250	Premiere Pro I	3
MED 257	Television Prod. II	3
MED 290	After Effects	3
		16

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
MED 103	1	MED 240	3
MED 156	3	MED 257	3
MED 250	3	MED 290	3
	7		**9**

Nursing, AAS and Diploma

Division of Health Professions

The nursing program is a two-level curriculum. This unique nursing curriculum provides four options: (1) to exit after the first three semesters of Level I with a diploma in practical nursing; (2) to complete selected courses in both Level I and Level II to obtain the associate degree in nursing; and/or (3) to complete all the courses in Level I and Level II to obtain both the diploma in practical nursing as well as the sssociate degree in nursing; and (4) LPNs and students with prior nursing school experience may seek advanced placement to the associate degree in nursing (ADN) program. Admission to the nursing program is selective and enrollment is limited by the clinical placement necessary to complete the nursing course requirements. **All applicants must meet specific criteria before being admitted to any of the program options.**

Admission Criteria for the Practical and Associate Degree Nursing Program Guidelines

Purpose: Admission to the nursing program is a selective process because enrollment is limited by the clinical placement necessary to complete the nursing course requirements. Therefore, all applicants applying for admission must meet the criteria.

Guidelines: Applicants to the practical and associate degree nursing programs must submit the appropriate forms to the Admissions Office.

Application Process

- Complete and submit a WCCC Application for Admission
- Submit official transcript from all secondary schools attended, graduate equivalency degree (GED) programs, and any other formal educational programs beyond high school
- Submit all required documents to the Admissions Office by the following deadlines:

Level 1	Day Programs: Evening/ Weekend Greene PN and ADN students	Evening/Weekend Program ADN Students
Application Deadline	January 5 prior to fall start	May 15 prior to spring start
Testing Dates	February	July
Acceptance Notification	Mid-March	Mid-August
Start Nursing Classes	Fall Semester	Spring Semester

- Applicants must take a preadmission examination administered by WCCC; eligible candidates will be notified of the testing dates once all required information has been submitted.

Admission Criteria

- Graduate of accredited secondary school program or hold a graduate equivalency degree (GED) certificate prior to selection
- High school validating the successful completion of academic work equivalent to a standard high school program with a minimum of 16 units:
  - English (4 units)
  - Social studies (3 units)
  - Mathematics (2 units, one in algebra required)
  - Science (2 units in chemistry and biology with related laboratory)
  - If high school algebra, chemistry and biology were not successfully completed with a C grade or better, applicants may meet these preadmission requirements by completing MTH 052, CHM 107, and BIO 107 and must attain a C grade or better
- Applicants must also take the computerized placement test (Accuplacer)
- Students who test into developmental courses must complete them with a C or better
- Applicants who have completed credit courses must attain a 2.5 GPA
  - Only credit courses necessary to meet the requirements for the nursing program are considered when calculating GPA
  - If GPA is less than 2.5, one or more of these courses may be repeated to meet the requirements before testing
  - Transfer courses are not calculated into the GPA

Final Admission Criteria

Accepted applicants are to submit proof of the following requirements, at the applicants expense:

- Physical examination, laboratory studies, proof of immunizations, and urine drug screen
- CPR Basic Life Support for Health Care Providers; certification is valid for one year only
- Evidence of a nursing liability insurance policy by date specified
- Act 33-34 Clearance, e.g. current PA Criminal Record and Child Abuse Clearance, at the applicant's expense
- Residents of PA for less than one year must submit a current FBI clearance

Criminal Conviction and/or Crimes of Moral Turpitude

The State Board of Nursing prohibits issuance of licensure to applicants who have been convicted of felonious acts prohibited by "The Controlled Substance, Drug, Device, and Cosmetic Act," unless at least 10 years have elapsed since conviction and applicants can satisfactorily demonstrate personal rehabilitation to the state board.

NOTE: Admission decisions consider three factors which contribute to the overall admission score: GPA, Nursing Entrance Exam Score, and pattern of success in courses already taken. Admission to the nursing program is highly competitive and there are a limited number of seats.

Advanced Placement for Licensed Practical Nurses (LPNs) into the Associate Degree Nursing (ADN) Program Guidelines

Purpose: Admission to the nursing program is a selective process because enrollment is limited by the clinical placement necessary to complete the nursing course requirements. Therefore, all applicants applying for advanced placement admission must meet the criteria.

Guidelines: Graduate and licensed practical nurses may apply for advanced placement admission into the second year of the associate degree nursing program if they meet the following criteria before being fully accepted:

Application Criteria:

- Must hold a current Pennsylvania Practical Nursing license
- Must have at least one year of acute care clinical practice experience
- LPN applicants who do not have acute care clinical practice experience within the past five years prior to application must provide documentation of successful completion of an LPN refresher course
- LPN applicants must submit a WCCC Application for Admission Form and Allied Health Programs Application to the Admissions Office by:

Level 2 (LPNs)	Day Programs: Evening/Weekend Greene	Evening/Weekend Program
Application Deadline	August 10 prior to fall start	May 15 prior to spring start
LPN Transition Course: NSG 200	Spring semester prior to fall start	Fall semester prior to spring start
Start Nursing Classes	Fall Semester	Spring Semester

- Applicants must take the *Nursing ACE I PN-RN Foundations of Nursing* and the *ACE I PN-RN Childbearing/Care of Child* examinations administered by WCCC; eligible applicants will be notified of the testing date and fee

Criteria for Advanced Placement for LPNs:

- Graduate of accredited secondary school program or hold a graduate equivalency degree (GED) certificate
- High school validating the successful completion of academic work equivalent to a standard high school program with a minimum of 16 units:
  - English (4 units)
  - Social studies (3 units)
  - Mathematics (2 units, one in algebra required)
  - Science (2 units in chemistry and biology with related laboratory)
    - A C grade or better must be attained in high school algebra, chemistry, and biology; if a C grade or better is not attained, applicants may meet these preadmission requirements by completing MTH 052, CHM 107, and BIO 107 and must attain a C grade or better
- Applicants who have completed credit courses must attain a 2.5 GPA
  - Only credit courses necessary to meet the requirements for the nursing program are considered when calculating GPA
  - If GPA is less than 2.5, one or more of these courses may be repeated to meet the requirements before testing
  - Transfer courses are not calculated into GPA
- LPNs must also take the Accuplacer, which is a computerized placement test, and complete developmental courses
  - Students who test into developmental courses must complete all courses with a C grade or above

Pre-testing Criteria and Required Documents

- Proof of completion of required courses or enrollment in equivalent courses via high school and or college transcripts. It is students responsibility to provide transcripts to admissions office.
- WCCC transcript must include the following courses and GPA must be at least 2.5 and a C or better in the following courses:
  - BIO 171 - Anatomy and Physiology I
  - BIO 172 - Anatomy and Physiology II
  - PSY 160 - General Psychology
  - PSY 161 - Human Growth and Development
  - ENG 161 - College Writing
- Only science credits completed within the past 10 years will be accepted for transfer
- Additional required documents:
  - LPN program transcript
  - Copy of current LPN license
  - Evidence of successful completion of state board approved intravenous (IV) therapy course within the past two years of application, or validation by current employer for LPNs currently practicing IV skills

After Notice of Acceptance the Following Conditions Must Be Satisfied:

Criminal Record Check, Child Abuse Clearance, Federal Bureau of Investigation (FBI) Check Requirements:

- Applicants must submit information regarding criminal conviction and/or crimes of moral turpitude
- Upon initial acceptance into the program, applicants must obtain a criminal record check and child abuse history clearance at the applicant's expense
- Residents of PA for less than one year must submit a current FBI clearance
- All records must be received by the nursing program within two weeks of the initial date of notification of program acceptance
- Admission is conditional pending receipt and evaluation of criminal background check to determine if there is any conviction that may bar the applicant from admission to the nursing program
  - Any record of child abuse results in denial of admission to the nursing program
  - According to federal sentencing guideline, any punishment over one year indicate a felony
  - Any felony conviction within the past 10 years results in denial of admission to the nursing program; any misdemeanor will be evaluated based on the nature of the offense, length of time since the offense, and explanatory letter/materials submitted by the applicant

Please note that the PA State Board of Nursing reserves the right to deny a license to any candidate who has been convicted of any felonious act. Conviction includes a judgment, an admission of guilt or a plea of nolo contendere, probation without verdict, or incomplete Accelerated Rehabilitative Disposition (ARD). Further, the Board shall not issue a license to any applicant who had been:

1. Convicted of a felonious act prohibited by the act of April 14, 1972 (P. L. 233, No. 64) known as The Controlled Substance Drug, Device and Cosmetic Act; or
2. Convicted of a felony relating to a controlled substance in a court of law of the United States or any other state, territory, or country unless;
   a. at least 10 years have elapsed from the date of the conviction;
   b. the applicant satisfactorily demonstrates to the Board, significant progress in personal rehabilitation since the conviction such that licensure should not create a substantial risk of further violations; and
   c. the applicant otherwise satisfies the qualifications contained in this act.

Final Admission Criteria

- Accepted applicants are required to attend a mandatory group interview and information session as the final step in the admission process
- At the mandatory session, information regarding the following additional program requirements will be provided:
- Physical examination, laboratory studies, proof of immunizations, and urine drug screen
- CPR Basic Life Support for Health Care Providers annual certification
- Evidence of a nursing liability insurance policy
- All of these required documents must be submitted to the nursing program within two months before the start of the program, or program acceptance will be withdrawn

Graduate/Program Outcomes – (Practical Nursing)

This curriculum is designed to prepare the graduate to:

- apply caring constructs and knowledge from the physical, biological, and behavioral sciences into the practice of practical nursing
- gather data and intervene as part of the nursing process according to an established plan of care to meet the basic human needs of individuals and their families
- perform technical aspects of practical nursing practice competently
- use basic therapeutic communication skills when providing nursing care
- perform incidental teaching within an established plan of care
- use effective communication skills when interacting with members of the health care team
- use caring behaviors in contacts with individuals and their families
- use a systematic approach to problem solving in the practice of practical nursing
- provide care within the legal and ethical solving in the practice of practical nursing
- provide care within the legal and ethical framework of licensed practical nursing practice recognizing the influence of political, economic, societal, and cultural factors
- use learning opportunities for continued growth and development as a practical nurse
- manage the care of a group of individuals in the extended care setting under the supervision of a registered professional nurse

Graduate/Program Outcomes – (Associate Degree Nursing)

This curriculum is designed to prepare the graduate to:

- integrate caring constructs and research findings as well as knowledge from the physical, biological and behavioral sciences into the practice of nursing
- use the five steps of the nursing process to assess, diagnose, plan, implement and evaluate care to meet mutually identified needs of individuals and their families
- perform technical aspects of professional nursing practice competently
- use therapeutic communication skills when providing nursing care
- act to promote health and prevent disease as part of the comprehensive plan of care
- use effective communication skills when collaborating with multidisciplinary health team members
- use caring behaviors in contacts with individuals and their families.
- think critically when making judgments and decisions related to professional nursing practice
- implement collaborative and independent nursing actions within the legal and ethical framework of registered professional nursing practice
- analyze political, economic, societal and cultural influences on professional nursing practice
- use resources to enhance self-development and professional growth
- manage the care for a group of individuals in a variety of settings

PROGRAM REQUIREMENTS (COMBINED PN/ADN PROGRAM CREDITS – 85)

General Education

BIO 171	Anatomy & Physiology I	4
CPT 150	Microcomp. Concepts	3
ENG 161	College Writing	3
ENG 164	Advanced Composition	3
PSY 160	General Psychology	3
Mathematics Elective		3
		19

Major

NSG 110	Intro/Nsg. & Hlth. Care	1
NSG 111	Found. of Nsg. Care	8
NSG 120	Basic Care/Acute Stgs.	6
NSG 121	Basic Care/Sel. Stgs.	5
NSG 122	Mental Hlth. Concepts	1
NSG 130	PN Role/Extend. Care Stgs.*	4
NSG 131	Basic Care/ Chldb. Fam.*	3
NSG 132	Basic Care/Infant, Child & Fam.*	3
NSG 210	Role of the ADN	2
NSG 220	Nsg. Care/Chldb. Fam.	3
NSG 230	Nsg. Care/Infant, Child & Fam.	3
NSG 240	Psych./Mental Hlth. Nsg. Care	3
NSG 260	Adv. Care/Chronically Ill	3
NSG 270	Adv. Care/Acutely Ill	3
NSG 280	Manager of Nsg. Care	4
	(PN)	**31**
	(ADN)	**42**

Other Required Courses

BIO 172	Anatomy & Physiology II	4
BIO 265	Microbiology	4
PSY 161	Human Growth & Dev.	3
SOC 155	Principles of Sociology*	3
		14

*These courses are required for those students seeking the PN Diploma

RECOMMENDED SEQUENCE FOR DAY PROGRAM

All course work must be completed prior to or during corequisite semester.

LEVEL I

Fall Semester	
BIO 171	4
ENG 161	3
NSG 110	1
NSG 111	8
PSY 160	3
	19

Spring Semester	
BIO 172	4
NSG 120	6
NSG 121	5
NSG 122	1
PSY 161	3
	19

Summer Semester PN	
* NSG 130	4
* NSG 131	3
* NSG 132	3
* SOC 155	3
	13

*These courses are required for students seeking the PN Diploma

Practical Nursing Diploma – Total 51 credits

LEVEL II

Fall Semester	
BIO 265	4
ENG 164	3
NSG 210	2
NSG 220	3
NSG 230	3
NSG 240	3
	18

Spring Semester	
CPT 150	3
NSG 260	3
NSG 270	3
NSG 280	4
Mathematics Elective	3
	16

Associate Degree in Nursing – Total 72 credits

RECOMMENDED SEQUENCE FOR EVENING/WEEKEND PROGRAM

*Students would need to complete BIO 171, BIO 172, PSY 160, PSY 161, ENG 161 prior to testing for the Evening/ Weekend Program. BIO 265 completed during spring or summer of first year. All other course work completed prior to or during corequisite semester.

Program prerequisites prior to testing into Evening/Weekend Program with a GPA of 2.5 and "C" or better for each course

*BIO 171	4
*BIO 172	4
*PSY 160	3
*PSY 161	3
*ENG 161	3
	17

LEVEL I

Spring Semester	
NSG 110	1
NSG 111	8
	9
Summer Semester	
*BIO 265	4
	4

Fall Semester	
NSG 120	6
NSG 121	5
NSG 122	1
	12

LEVEL II

Spring Semester	
ENG 164	3
NSG 210	2
NSG 220	3
NSG 230	3
NSG 240	3
	18

Fall Semester	
CPT 150	3
NSG 260	3
NSG 270	3
NSG 280	4
Mathematics Elective	3
	16

Associate Degree in Nursing – Total 72 credits

Students enrolled in the nursing program must meet the course requirements specified in the program of study in effect at the time of graduation.

Office Technology, AAS

MEDICAL ADMINISTRATION OPTION

Division of Computer Technology/Business

This option combines specific course work in human biology, medical terminology, medical billing and medical coding. During the last semester, students will have he opportunity to apply their skills in a simulated work setting or may choose to do an internship to develop technical competence. This curriculum is designed to provide the student with the knowledge to enter the medical billing/coding arena.

Career Opportunities

Graduates of the medical administration AAS degree program can expect to find employment as administrative assistants, executive secretaries, medical registrars, medical secretaries, billing specialists, entry level coders, claims processors, release of medical information technicians, medical records assistants, medical transcriptionists, unit secretaries, ward clerks and quality improvement assistants.

Competency Profile

This curriculum is designed to prepare students to:

- demonstrate skills in office coordination and administration
- analyze and record billing transactions and insurance claims using a computerized medical program
- apply correct coding techniques in billing and preparing insurance claims
- demonstrate competency in accounting skills and in processing financial records
- develop skills in keyboarding, word processing, written communication, medical terminology, medical billing, coding and reimbursement
- produce and compose formatted business correspondence with speed and accuracy
- proofread and edit copy with a high degree of speed and accuracy; transcribe written, printed and voice-recorded dictation
- use appropriate office procedures in public relations, records information management, telephone communication, electronic and hard copy mail, meetings and conferences, travel arrangements, routine financial matters and principles of management for office efficiency
- develop oral, written and listening communication skills
- develop skills in using the Internet, electronic mail and the Windows operating systems
- demonstrate knowledge of professional behavior ethics

PROGRAM REQUIREMENTS (TOTAL CREDITS — 63)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 163	Business Commun.	3
SPC 155	Effective Speech	3
Mathematics Elective		3
Social Science Elective		3
		18

Major

OFT 110	Document Processing I	3
OFT 120	Document Processing II	3
OFT 130	A & P for Medical Off.	3
OFT 145	Medical Office Proced.	3
OFT 150	Med. Billing Mgmt.	3
OFT 151	Adv. Office Applica.	3
OFT 230	Medical Transcription I	3
OFT 240	Medical Transcription II	3
OFT 250	Diag. Medical Coding	3
OFT 260	Procedural Med. Coding	3
OFT 285	Adv. Medical Coding✦	3
		33

✦*capstone course*

Other Required Courses

ALH 120	Pharmacology	3
ALH 122	Medical Terminology	3
BIO 107	Human Biology	3
CPT 259	User Support Oper.	3
		12

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
ALH 122	3	ALH 120	3	OFT 145	3	CPT 259	3
BIO 107	3	ENG 163	3	OFT 150	3	OFT 240	3
CPT 150	3	OFT 120	3	OFT 230	3	OFT 285	3
ENG 161	3	OFT 130	3	OFT 260	3	Social Science Elective	3
OFT 110	3	OFT 151	3	SPC 155	3		**12**
	15	OFT 250	3	Mathematics Elective	3		
			18		**18**		

Office Technology, AAS

OFFICE ADMINISTRATION OPTION

Division of Computer Technology/Business

This option is designed to prepare students for administrative positions in an office setting. Course work is presented in general education, office technology, business procedures and computer technology.

Career Opportunities

Graduates of the office administration option of the office technology AAS degree program can expect to find employment as administrative assistants, executive office managers, office managers, executive secretaries, receptionists, personnel clerks and word processors. Opportunities are available in large corporations, small business offices, insurance offices, nonprofit organizations, legal offices and government offices.

Competency Profile

This curriculum is designed to prepare students to:

- demonstrate skill in office coordination and administration
- develop advanced keyboarding, document processing, skills and information management skills
- develop competency in word processing, spreadsheet, database application and information management skills
- effectively integrate all Microsoft Office applications
- apply knowledge of the Windows operating system, the Internet and the Outlook personal information manager software
- develop oral, written and listening communication skills
- produce properly formatted business or legal correspondence with accuracy and speed
- transcribe from written and printed copy and voice-recorded dictation with accuracy and speed
- proofread and edit copy with a high degree of accuracy and speed
- use appropriate office procedures in records information management, telephone communications, electronic and hard-copy mail, meetings and conferences, travel arrangements and financial matters
- adapt to the changing nature of technology, equipment and procedures while retaining appropriate office practices, and work independently or in teams to demonstrate effective interpersonal and problem-solving skills, attitudes and work habits
- demonstrate knowledge of professional behavior and ethics

PROGRAM REQUIREMENTS (TOTAL CREDITS — 63)

General Education

BUS 120	Math of Business	3
CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 163	Business Commun.	3
SPC 155	Effective Speech	
or		
SPC 156	Interpersonal Comm.	3
Social Science Elective		3
		18

Major

OFT 110	Document Processing I	3
OFT 120	Document Processing II	3
OFT 140	Office Procedures	3
OFT 185	PowerPoint	1
OFT 190	Word for Windows	3
OFT 195	Excel for Windows	3
OFT 196	Access for Windows	3
OFT 210	Office Technologies	3
OFT 220	Office Transcription	3
OFT 280	Office Management✦	3
		28

✦*capstone course*

Other Required Courses

ACC 105	Financial Rcrdkpg.	3
ACC 120	Quickbooks - Basic	1
BUS 160	Intro to Business	3
BUS 260	Small Business Mgmt.	3
CPT 259	User Support Oper.	3
WEB 102	Acrobat Essentials	1
WEB 140	Dreamweaver - Basic	3
		17

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
BUS 120	3	BUS 160	3	ACC 105	3	ACC 120	1
CPT 150	3	OFT 120	3	OFT 196	3	BUS 260	3
ENG 161	3	OFT 185	1	OFT 220	3	CPT 259	3
OFT 110	3	OFT 190	3	WEB 102	1	OFT 210	3
OFT 140	3	OFT 195	3	WEB 140	3	OFT 280	3
	15	ENG 163	3	Social Science Elective	3	SPC 155 or 156	3
			16		**16**		**16**

Office Technology, Diploma

MEDICAL TRANSCRIPTION

Division of Computer Technology/Business

The medical transcription diploma combines course work in human biology, medical terminology, transcription, office duties, keyboarding and word processing. During the last semester, students apply their skills in a simulated medical work setting to develop professional and technical competencies. This curriculum is designed to prepare students for the Certified Medical Transcriptionist (CMT) professional certification exam.

Career Opportunities

Graduates of the medical transcription diploma program can expect to find employment as administrative assistants, medical office managers, medical records assistants, medical transcriptionists, medical secretaries, nursing services clerks, unit secretaries, ward clerks and medical records technicians.

Competency Profile

This curriculum is designed to prepare students to:

- develop skills in keyboarding, word processing, medical terminology and medical transcription
- collect, prepare, file, store and retrieve information
- develop skills using the Internet, electronic mail and the Windows operating system
- produce formatted business correspondence with speed and accuracy
- transcribe various types of materials from tapes using microcomputers
- compose, proofread and edit copy with a high degree of accuracy and speed
- work independently or in teams to demonstrate effective interpersonal and problem-solving skills, attitudes and work habits

PROGRAM REQUIREMENTS (TOTAL CREDITS — 33)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 163	Business Commun.	3
Mathematics Elective		3
		12

Major

OFT 110	Document Processing I	3
OFT 120	Document Processing II	3
OFT 130	Applied Med. Termin.	3
OFT 230	Medical Transcription I	3
OFT 240	Medical Transcription II	3
		15

Other Required Courses

ALH 122	Medical Terminology	3
BIO 107	Human Biology	3
		6

RECOMMENDED SEQUENCE

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
ALH 122	3
CPT 150	3
ENG 161	3
OFT 110	3
	12

Spring Semester	
BIO 107	3
ENG 163	3
OFT 120	3
	9

Fall Semester	
OFT 130	3
OFT 230	3
Mathematics Elective	3
	9

Spring Semester	
OFT 240	3
	3

Office Technology, Diploma

OFFICE ADMINISTRATION

Division of Computer Technology/Business

The office administration diploma program offers course work in office administration, office procedures and computer applications.

Career Opportunities

Graduates of the office administration diploma program can expect to find employment as administrative assistants, office managers, executive secretaries, receptionists, personnel clerks and word processors. Opportunities are available in large corporations, small business offices, insurance offices, nonprofit organizations, legal offices and government offices.

Competency Profile

This curriculum is designed to prepare students to:

- key documents using touch-typing with a high degree of speed and accuracy
- understand filing principles and office procedures
- develop an understanding of the Windows operating system, electronic mail and the Internet
- achieve proficiency using Microsoft Office spreadsheet, word processing, database, presentation and desktop publishing software applications
- compose and edit business correspondence, reports and forms

PROGRAM REQUIREMENTS (TOTAL CREDITS — 31)

General Education		
BUS 120	Math of Business	3
CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 163	Business Commun.	3
		12

Major		
OFT 110	Document Processing I	3
OFT 120	Document Processing II	3
OFT 140	Office Procedures	3
OFT 185	PowerPoint	1
OFT 190	Word for Windows	3
OFT 195	Excel for Windows	3
OFT 210	Office Technologies	3
		19

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
BUS 120	3
CPT 150	3
ENG 161	3
OFT 110	3
OFT 140	3
OFT 185	1
	16

Spring Semester	
ENG 163	3
OFT 120	3
OFT 190	3
OFT 195	3
OFT 210	3
	15

Office Technology, Certificate

MEDICAL ADMINISTRATION

Division of Computer Technology/Business

The medical administration certificate program is designed for students who are interested in office administration in the medical field. Course work combines medical terminology, medical office procedures, keyboarding and word processing.

Career Opportunities

Graduates of the medical administration certificate can expect to find employment as administrative assistants, front office personnel, medical records assistants, medical secretaries, nursing services clerks, unit secretaries, medical records technicians and patient access representatives.

Competency Profile

This curriculum is designed to prepare students to:

- collect, prepare, file, store and retrieve information
- develop skills in using the Internet, electronic mail and the Windows 2000 operating system
- use correct medical terminology in medical reports with an introduction to transcription
- type routine letters, correspondence, reports and forms using microcomputers

PROGRAM REQUIREMENTS (TOTAL CREDITS — 18)

ALH 122	Medical Terminology	3
BIO 107	Human Biology	3
OFT 110	Document Processing I	3
OFT 120	Document Processing II	3
OFT 145	Medical Office Proc.	3
OFT 150	Medical Billing Mgmt.	3
		18

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
ALH 122	3	OFT 120	3
BIO 107	3	OFT 145	3
OFT 110	3	OFT 150	3
	9		**9**

Office Technology, Certificate

MEDICAL CODING/BILLING

Division of Computer Technology/Business

The medical coding/billing certificate program combines knowledge of medical billing procedures and medical terminology to provide career skills in medical coding, billing and in the processing of insurance claims. This curriculum is designed to prepare students for the Certified Coding Specialist - Physician's Office (CCS-P) national certification examination conducted by the American Health Information Management Association (AHIMA), and the Certified Coding Assistant (CCA) offered by AHIMA for entry-level inpatient coders.

Career Opportunities

Graduates of the medical coding/billing certificate can expect to find employment as medical office managers, medical records assistants, medical secretaries, medical records technicians, medical coding clerks, medical claims processors, front office personnel and patient access representatives.

Competency Profile

This curriculum is designed to prepare students to:

- analyze and record billing transactions and insurance claims
- practice positive interpersonal and communication skills to effect routine office duties
- determine correct medical coding for medical procedures

PROGRAM REQUIREMENTS (TOTAL CREDITS — 18)

ALH 122	Medical Terminology	3
BIO 107	Human Biology	3
OFT 110	Document Processing I	3
OFT 130	A & P for Medical Off.	3
OFT 250	Diagnostic Med. Coding	3
OFT 260	Procedural Med. Coding	3
		25

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
ALH 122	3	OFT 130	3
BIO 107	3	OFT 250	3
OFT 110	3	OFT 260	3
	9		**9**

Office Technology, Certificate

OFFICE ADMINISTRATION

Division of Computer Technology/Business

The office administration certificate is designed to provide a concentration in keyboarding and the Microsoft Office software products. Office applications covered include Word, Excel, Access, PowerPoint and Outlook.

Career Opportunities

Graduates of the office administrative certificate program can expect to find employment as administrative assistants, office managers, executive secretaries, receptionists, personnel clerks and word processors.

Competency Profile

This curriculum is designed to prepare students to:

- develop keyboarding, word processing, spreadsheet, database and presentation skills
- apply knowledge of the Windows operating system, electronic mail and the Internet

PROGRAM REQUIREMENTS (TOTAL CREDITS — 19)

CPT 150	Microcomputer Concepts	3
OFT 110	Document Processing I	3
OFT 120	Document Processing II	3
OFT 140	Office Procedures	3
OFT 185	PowerPoint	1
OFT 190	Word for Windows	3
OFT 195	Excel for Windows	3
		19

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
CPT 150	3	OFT 120	3
OFT 110	3	OFT 190	3
OFT 140	3	OFT 195	3
OFT 185	1		**9**
	10		

Paralegal, AAS

Division of Public Service/Humanities/Social Sciences

The paralegal associate degree program is designed to provide students with the knowledge and skills needed to perform legal services on a paraprofessional level, usually under the direct supervision of a lawyer. Typical tasks include legal research, client interviewing, investigation, drafting of pleadings, motions, memoranda and other documents, and creating and maintaining client files.

Career Opportunities

Paralegals are employed by law firms, corporations, government agencies and community legal service agencies. Many legal assistants specialize in one area of the law such as corporate law, real estate, labor law, litigation, domestic law, or estates and trusts.

Competency Profile

This curriculum is designed to prepare students to:

- demonstrate effective communication skills, orally, verbally, by actively listening, and by reading and understanding legal documents
- understand and apply mathematical concepts and numerical computational skills utilized in a legal setting
- demonstrate a thorough understanding of diversity in the workplace and in society, citizenship, ethics and human relations
- apply effective critical thinking and problem solving skills in interpersonal situations with clients and other professionals in the workplace
- collect, analyze, synthesize and organize information from clients, personnel in the legal system, and apply good research and investigative skills utilizing the appropriate legal terminology
- utilize effective interpersonal skills with others in the legal environment, including supervisors, clients, and other legal professionals
- demonstrate an ability to change and adapt to changing circumstances, including the continuing learning environment of the legal professional, along with the responsibility to change and adapt themselves, personally and professionally
- demonstrate effective use of technology, including computer-assisted legal research, the Internet, and other technology utilized for research, investigative skills and applications in a legal setting.

PROGRAM REQUIREMENTS (TOTAL CREDITS — 60)

General Education

ENG 161	College Writing	3
ENG 163	Business Commun.	
or		3
ENG 164	Advanced Composition	
HUM 156	Critical Thinking	
or		3
SPC 155	Effective Speech	
Computer Technology Elective		3
Mathematics Elective		3
Social Science Elective		3
		18

Major

LAS 101	The Legal Assistant	3
LAS 111	Legal Analysis	3
LAS 115	Torts	3
LAS 120	Estates and Trusts	3
LAS 125	Litigation I	3
LAS 140	Domestic Relations	3
LAS 150	Contracts	3
LAS 175	Property Law	3
LAS 210	Legal Writing	3
LAS 215	Legal Research	3
LAS 293	Internship	3
		33

Other Required Courses

CRJ 160	Criminal Law I	3
Restricted Electives*		6
		9

***Restricted Electives**

ACC 155	Accounting I
BIO 110	Intro to Forensic Biology
BUS 249	Labor Relations
CRJ 163	Criminal Evidence
CRJ 261	Criminal Law II
CRJ 263	Investigative Concepts
LAS 200	Amer. Constitutional Exp.

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
ENG 161	3	ENG 163 or 164	3	LAS 120	3	CRJ 160	3
LAS 101	3	HUM 156 or SPC 155	3	LAS 150	3	LAS 140	3
LAS 111	3	LAS 115	3	LAS 175	3	LAS 293	3
Computer Tech. Elective	3	LAS 125	3	LAS 215	3	Restricted Elective*	6
Mathematics Elective	3	LAS 210	3	Social Science Elective	3		**15**
	15		**15**		**15**		

Paralegal, Diploma

Division of Public Service/Humanities/Social Sciences

The paralegal diploma program is designed to provide a solid foundation in the principles and practices involved in performing certain paraprofessional services.

Career Opportunities

Graduates of the program typically work in areas involving legal research, preparation of documents, maintenance of files and client interviewing.

Competency Profile

This curriculum is designed to prepare students to:

- use good research skills
- understand basic legal terminology
- gain familiarity with computer operations and applications
- prepare, under supervision, legal documents such as deeds and mortgages

PROGRAM REQUIREMENTS (TOTAL CREDITS — 33)

General Education		
ENG 161	College Writing	3
Computer Technology Elective		3
Mathematics Elective		3
Social Science Elective		3
		12

Major		
LAS 101	The Legal Assistant	3
LAS 111	Legal Analysis	3
LAS 125	Litigation I	3
LAS 175	Property Law	3
LAS 210	Legal Writing	3
LAS 215	Legal Research	3
		18

Other Required Courses	
Restricted Elective*	3
	3

*Restricted Electives
These are listed in the legal assisting associate degree program.

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
ENG 161	3
LAS 101	3
LAS 111	3
LAS 175	3
Computer Elective	3
	15

Spring Semester	
LAS 125	3
LAS 210	3
Mathematics Elective	3
Restricted Elective*	3
Social Science Elective	3
	15

Fall Semester	
LAS 215	3
	3

Phlebotomy/Specimen Processing, Certificate

WITH PHLEBOTOMY ONLY OPTION
Division of Health Professions

The purpose of the program is twofold. First the student must function as a phlebotomist in a hospital or non-acute healthcare setting (ex. clinic, lab, skill nursing facility). The second purpose is to prepare the student to function as a laboratory specimen processor in a clinical laboratory setting.

Admission to the program is limited by the availability of clinical sites. A separate application is required. Students with previous credit or noncredit phlebotomy certificates and documented two years of clinical experience may apply to test out of the phlebotomy specific courses.

The Phlebotomy Only option is for those students who desire to only be a phlebotomist and not to learn the laboratory specimen processor skills.

Career Opportunities

As a phlebotomist, the graduate may draw blood in physicians office, blood banks, hospitals, and phlebotomy units. In addition to phlebotomy, a specimen processor will collect, evaluate and process various laboratory samples for hospital laboratories, physician office groups, and free-standing surgical facilities.

Special Admission and Selection Criteria for Phlebotomy/Specimen Processing Certificate Program

- Applicants must be graduates of an accredited secondary school program or hold a GED equivalency certificate prior to selection. **Medical Terminology, ALH 122** is a program prerequisite.
- Applicants must complete and submit a WCCC Application for Admission and a separate Allied Health Programs Application to the Admissions Office. Since this program requires a clinical placement, enrollment may be limited.
- Applicants who are accepted must have successfully completed CPR/Basic Life Support for Health Care Providers Annual Certification prior to program enrollment and maintain current status during program.
- Applicants who are accepted must submit satisfactory results from pre-entrance medical examination and immunizations obtained at the applicant's expense. Specific information regarding the examination is provided to applicants.
- Applicants who are accepted must purchase student liability insurance coverage upon program enrollment.
- Applicants must provide evidence of Criminal Record Check and Pennsylvania Child Abuse History Clearance (Act 33-34) at the candidate's expense. Any child abuse record results in denial of admission to the medical assisting program. Any felony conviction within the past 10 years results in denial of admission to the medical assisting program. Any misdemeanor will be evaluated based on the nature of the offense, length of time since the offense, and explanatory latter/materials submitted by applicant. (Any punishment over one year indicates a felony according to federal sentencing guidelines.)
- Urine Drug Screen required according to program policies.
- Applicants must be able to meet the Functional Abilities Guidelines of the Program.
- Students are expected to conduct themselves according the general professional guidelines when representing the college. In addition, students are expected to follow applicable institutional guidelines and policies when in the course setting.
- Students must notify the program director immediately, in writing, if there is any change in physical, mental, criminal, child abuse or drug screening results status.
- Protection of privacy/confidentiality is essential at all times. Violation of privacy/confidentiality acts or policies will result in dismissal of student from program and/or college.
- All prerequisite and program course work must be completed with a C grade or better. Those students who have taken developmental courses three or more times will not be considered for admission to the program.
- Student must have a college level grade point average of 2.0 or above.

Fall Admission

Applicants must complete and submit a WCCC Application for Admission and an Allied Health Programs Application to the Admissions Office by **July 1** prior to the fall semester for which enrollment is anticipated to be guaranteed consideration.

Spring Admission

Applicants must complete and submit a WCCC Application for Admission and an Allied Health Programs Application to the Admissions Office by **November 5** prior to the fall semester for which enrollment is anticipated to be guaranteed consideration.

Competency Profile

This curriculum is designed to prepare students to:

- collect, transport, handle, and process laboratory specimens for analysis
- demonstrate professional conduct, stress management, and interpersonal and communication skills with patients, the public, peers and other health care personnel
- display an understanding of requisitioning and the legal implications of their work environment
- recognize and act upon individual needs for continuing education as a function of growth and maintenance of professional competence

Phlebotomy/Specimen Processing, Certificate

WITH PHLEBOTOMY ONLY OPTION
Division of Health Professions

Functional Abilities Guidelines

Functional abilities are physical and mental attitudes and behaviors needed to practice safely, with or without accommodations. Accommodations must be first evaluated and documented by a physician and then evaluated by the college's counselor for special populations and individual healthcare programs.

- move freely to observe and assess patients
- full manual dexterity of upper extremities, including neck and shoulders, and unrestricted movement of both upper and lower extremities in order to position to complete tasks
- lift and support at least 75 pounds
- visually able to perform tasks safely
- hear sounds of spoken word and verbal communications
- demonstrate tactile ability to assess blood draw procedures
- ability to speak to patients and communicate essential directions
- write in legible manner and be able to document concise information
- exercise proper judgment and insight
- ability to complete task after verbal or written instructions
- ability to demonstrate new procedures in clinical application
- demonstrate respect, honestly and integrity at all times
- demonstrate privacy and confidentiality at all times
- ability to perform gross and fine motor skills in order to complete procedures
- ability to adapt to changing environmental/stress and deal with the unexpected
- perform multiple responsibilities concurrently
- establish rapport with patients and coworkers
- effectively and accurately speak on telephone and convey information through writing and verbal manner
- able to follow directions from others

There is the option for students to take the Phlebotomy Only Option certificate program. *The following information applies just to the Phlebotomy Only Option Program:

- Student must declare that they are enrolled for this option at the time of application for admission to the program.
- Once students begin PHB 101, they cannot change and enroll in the Phlebotomy/Specimen Processing Certificate additional courses and/or prerequisites until another semester.
- Upon successful completion of the Phlebotomy Only Option, the student may be able to seek employment as a phlebotomist only.
- Students must follow and complete all requirements to enter the Phlebotomy Only Option as identified in the Phlebotomy/Specimen Processing Certificate Program (such as: criminal check, child abuse check, health examination and immunization, etc).
- The Functional Abilities Guidelines and CPR/BLS requirements also apply to the Phlebotomy Only Option program.
- Students who have specific questions related to this program option should call either their advisor or the program director before classes begin to clarify the differences between the two programs.
- Students who have successfully completed the Phlebotomy Only Option cannot represent themselves as having experience or competence in the lab specimen processing knowledge and/or skills.
- Students who successfully complete the Phlebotomy Only Option may apply to return in another semester to take the additional required prerequisites and program courses for the Phlebotomy/Specimen Processing Certificate Program.

Phlebotomy/Specimen Processing Certificate Program

PROGRAM REQUIREMENTS (TOTAL CREDITS – 16)

Prerequisite			Major			General Education		
ALH 122	Medical Terminology	3	PHB 101	Clinical Phlebotomy	4	CPT 110	Document Proc. I	3
		3	PHB 105	Specimen Processing	4			**3**
			PHB 110	Phlebotomy and/or Spec. Proc. Practicum	5			
					13			

Phlebotomy ONLY Option Certificate Program*

PROGRAM REQUIREMENTS (TOTAL CREDITS – 9)

Prerequisite	Major		
None	PHB 101	Clinical Phlebotomy	4
	PHB 111	Phlebotomy Practicum	5
			9

Radiology Technology, AAS

Division of Health Professions

The radiology technology program offers the academic preparation and clinical training needed for a career as a radiologic technologist (radiographer). While many radiographers provide services in a hospital setting, others provide services in stand-alone medical imaging centers, mobile radiography providers and private physician offices. Radiography is the gateway to most other specialized imaging modalities. With additional education through either employer based training or formal education, radiographers can progress to careers in Computed Tomograph (CT), Magnetic Resonance Imaging (MRI), Angiography, Mammography and Quality Management. The program includes clinical experience in various off campus locations that provide radiologic imaging services.

Students who complete the radiology technology program satisfactorily are eligible to apply to take the American Registry of Radiologic Technologists (ARRT) national certification exam.

Career Opportunities

Students completing this program will be qualified to enter the work force as an entry level radiographer. Radiographers may find employment opportunities with hospitals, stand-alone medical imaging centers, mobile imaging providers and private practice physicians.

Special Admission and Selection Criteria

Since this program requires a clinical placement, enrollment is selective and enrollment is limited by the clinical placement necessary to complete the radiology technology course requirements. Students may be required to interview at one or more clinical sites on their own time and expense. Clinical site preference is not guaranteed. Specific criteria for admission and selection are listed below.

- Applicants must be graduates of an accredited secondary school program, or high school seniors enrolled in an accredited secondary school program, or those who hold a GED equivalency certificate prior to selection.
- High school preparation should include one year each of biology, physics, chemistry, and algebra. If these courses were not taken in high school, BIO 107, PHY 107 or PHY 153, CHM 107 and MTH 052 must be completed prior to testing for the radiology technology program with a minimum C grade or better (C minus grade not accepted.)
- College prerequisite coursework includes completion of BIO 171-Anatomy and Physiology I, with a minimum grade of C (C minus grade not accepted.)
- Applicants must complete and submit a WCCC Application for Admission and Allied Health Programs Application to the Admissions Office by **January 5** prior to the fall semester in which enrollment is anticipated. The forms must be accompanied by official transcripts from all secondary schools attended, GED programs, and any other formal education program attended beyond high school.
- Applicants must take the computerized placement test (Accuplacer) and have successfully completed any required developmental courses and/or high school course work with a minimum grade of C prior to taking the radiology technology admission examination (C minus grade not accepted.) Also, applicants who have completed credit courses must have a 2.5 or better GPA prior to taking the radiology technology admission examination. Only courses necessary to meet the radiology technology program requirements are considered when calculating the GPA. If the GPA is less than 2.5, one or more of these courses can be repeated in order to meet this requirement before testing.
- Students who have attempted developmental courses in math or science three or more times will not be considered for admission.
- Applicants to the radiology program should review the ARRT rules and regulations and the ARRT standard of ethics prior to submitting their application. Information can be found on the ARRT website http://www.arrt.org.
- Those who apply must take a Radiology Technology Admissions Test administered by WCCC. Applicants will be notified of testing dates. Candidates will be selected until available seats are filled.
- Admission to the radiology technology program requires the applicant to submit information regarding criminal conviction and/or crimes of moral turpitude. Upon initial acceptance into the program, a criminal record check and child abuse history must be obtained at the applicant's expense. Individuals who are residents of Pennsylvania for less than one year must submit a current FBI clearance. These records must be submitted to the radiology program within two weeks of the date of notification of initial program acceptance. Admission is conditional pending receipt and evaluation of the background information to determine whether there is any conviction which may bar the student from admission to the radiology program.

NOTE: Admission decisions are based on three factors which contribute to the overall admission score: GPA, Radiology Entrance Exam score and evidence of success in courses already taken. Admission to the radiology program is competitive and there are a limited number of seats.

Child Abuse Clearance

Any record results in denial of admission to the radiology program.

Criminal Record Check

Any felony conviction may result in denial of admission to the radiology technology program. Any misdemeanor will be individually evaluated. Conviction of a felonious act may result in the American Registry of Radiologic Technologist denying the applicant to sit for certification examination.

Urine Drug Screen

A positive drug screen may result in denial of admission to the radiology technology program or continuation in the radiology technology program.

Essential Cognitive, Physical and Behavior Functions for the Radiology Technology Program

Radiology technology students must be able to meet the following physical and mental abilities for successful completion of the radiology technology program:

- Must have the physical ability to move radiography equipment and manipulate the X-ray tube, which is located 70-80 inches above the floor
- Lift and/or support at a minimum 50 pounds in order to lift and carry X-ray accessories
- Have the ability to appropriately position patients for radiographic procedures and safely transfer patients who may weigh in excess of 300 pounds
- Must be able to push a portable X-ray machine for bedside radiography
- Ability to articulate clear verbal commands to the patient while the patient is being positioned for a procedure from a distance of 7-12 feet
- Have the ability to select and calculate proper X-ray exposure factors based on exam type and patient body habitus
- Must be able to manage stressful situations that relate to patient care, procedure and technical standards
- Must be able to evaluate radiographs for proper patient positioning, proper exposure factors, and other essential factors for the purpose of image quality control
- Have sight corrected, to observe patients from a distance of 5-20 feet, ability to read and adjust the X-ray control panel, and position patients correctly
- Have hearing corrected, with the ability to hear patients at a distance of 5-12 feet
- Have sufficient tactile ability in order to asses a patient's pulses, in addition to changes in a patient's physiologic status (i.e. changes in edema, skin temperature, etc.)
- Have the ability to smell odors that may signify a change in the physiologic status of a patient or an unsafe environmental condition
- Have the ability to read and comprehend written classroom material, medical documents, and institution procedures and policies
- Have the ability to write legibly in English
- Must be able to accurately calculate in order to prepare medications, administer proper dosage of radiographic contrast material, and count pulse and respirations
- Must be able to move freely with full manual dexterity of both upper and lower extremities, have unrestricted movement of neck, shoulder, back and hips in order to assess, observe and perform emergency patient care, assist with all aspects of patient care, and be able to touch the floor for the removal of environmental hazards
- Must not be highly allergic to contrast media, latex products, and film processing chemicals (developer or fixer)
- Cannot be dependent on any chemical or substance
- Have the ability to react appropriately and quickly in emergency situations
- Must be poised, well groomed and neat in appearance, discreet, tactful, diplomatic, professional, versatile, ethical and dependable
- Must have the ability to comprehend written and verbal instructions correctly in academic and clinical health care settings
- Must exhibit the capacity for reasoned judgment and calm in a health care environment
- Must not have physical or mental medical disorders that limit the ability to perform the duties of a radiology technology student
- Must be stable emotionally; this type of work involves life and death situations
- Must show honesty and integrity in all matters
- Enjoy working with people and patient contact

Students will be removed from the program if a health condition significantly limits the student from performing the routine functions of a radiology technology student and/or presents a danger to the safety and health of patients.
After starting the radiology technology program, students will immediately notify the program director if any of these stated functions change. An evaluation may occur to determine if students are able to continue in the program.

Student Pregnancy

Voluntary Declaration

Students who become pregnant during their enrollment in the radiology technology program have the ability to decide whether or not to notify the program. Students who decide to notify the program must do so in writing to the program director. Students who do not voluntarily disclose their pregnancy are considered not pregnant.
Upon disclosure of pregnancy, students may:

- Remain in the program on a full-time basis without modification, as requested by the student
- Remain in the program on a full-time basis with modification of clinical assignments for the first trimester, as requested by the student
- Withdraw from the radiology technology program

Safety Practices for the Pregnant Radiation Worker

The American Society of Radiologic Technologist states, "Customary radiation safety practices for pregnant radiation workers shall be followed." The recommendation suggests referencing the following:

- 10 CFR Part 20.1208
- NRC Regulatory guides #8.2, 8.7, 8.13, 8.29, 8.34, 8.36, may be obtained from the NRC via the Public Document room at 1-800-397-4209 or via the Electronic Reading room ADAMS access system on their website at www.nrc.gov
- Pregnancy Disability Law, P.L. 95-555
- EEOC "Guidelines on sex discrimination and questions and answers"
- ICRP Publication #84. Pregnancy and Medical Radiation
- NCRP report #116

Note: The WCCC Library holds the above reference material

In compliance with NCR regulation 10 CFR Part 20.1208, "Dose to an Embryo/Fetus," requires licensees to "ensure that the dose to an embryo/fetus during the entire pregnancy, due to occupational exposure of a declared pregnant woman, does not exceed 0.5 rem (5 mSv)."

These exposure limits will apply until:

- The student gives birth
- The student revokes in writing to the program director her previously declared pregnancy
- The student informs the program director in writing that she is no longer pregnant

For students who formally declare their pregnancy

- Past dosimetry reports will be reviewed
- Pregnant students will be required to purchase a second film badge to be worn at waist level and under any radiation protective apparel
- Review of radiation safety practices for pregnant radiation workers
- Notification to clinical instructors of pregnancy
- If students choose, they have the opportunity for clinical assignments that do not include fluoroscopy and portable radiography during their first trimester
- Students will submit a statement from the physician stating that the student is cleared to continue on in the program
- Students will submit monthly statements from their physician to continue after the sixth month
- Review of student's monthly radiation dosimetry report

If the student makes the decision to withdraw from the radiology technology program, she may be reinstated the following year providing space is available and she continues to meet admission criteria of the radiology technology program.

Final Admission Criteria

Accepted applicants will be required to attend a mandatory information session as the final step in the admission process. Specific information regarding the following additional program requirements will be provided to applicants at that time. These include:

- Complete physical examination, lab tests, proof of immunizations, and urine drug screen
- CPR-Basic Life Support for Health Care Providers Annual Certification required
- Evidence of a student's liability insurance policy

All of the above must be submitted to the radiology program by June 15 or program acceptance will be withdrawn.

Competency Profile

This curriculum is designed to prepare students to:

- provide radiographic imaging services within a healthcare setting for a diverse patient population with an awareness of cultural diversity within the community
- use the principle of ALARA to minimize radiation exposure to the patient, one's self and the general population
- operate all radiologic imaging equipment safely, effectively and efficiently
- expose, process and evaluate all types of radiologic images
- apply computation skills to provide safe X-ray exposure to patients
- develop competency in assessing patients and devising ways to image compromised patients
- use computers and computerized equipment in the process of imaging and caring for patients
- provide imaging procedure patient education
- respect patient confidentiality and follow HIPPA guidelines
- practice radiography in a manner consistent with the ARRT ethical guidelines
- use effective communication skills when collaborating with multidisciplinary health team members
- develop interpersonal and communication skills to effectively interact with diverse population groups
- provide appropriate life-support measures for medical emergencies that may be encountered in a radiologic imaging setting
- use resources to enhance self-development and professional growth

Radiology Technology, AAS

(CONTINUED)

Division of Health Professions

Purpose

The radiology technology program provides students with a complete educational experience for those who wish to become health-care providers. The radiology technology program provides each student opportunities to learn and develop competence in patient care, communication skills, critical thinking, and technical skills that will permit the student to become a Diagnostic Radiologic Technologist. Integrated educational activities include lecture, laboratory activities, case studies, and hands-on clinical training.

Program Mission

Our mission is to provide students with a variety of educational activities and experiences that will prepare them with a level of expertise required to become competent and successful radiographers.

Program Goals

- to produce graduates prepared for entry into the health care field
- to produce graduates who have demonstrated the skills, professional values, and ethics to function as entry-level radiographers
- to produce graduates with the ability to think independently and value lifelong learning
- to produce graduates with the ability to effectively communicate with patients and other health care providers
- to produce graduates prepared for the American Registry of Radiologic Technologist examination

PROGRAM REQUIREMENTS (TOTAL CREDITS - 73)

Prerequisite

BIO 171	Anatomy & Physiology I	4
		4

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Commun.	3
MTH 157	College Algebra	3
PSY 160	General Psychology	3
Humanities Elective		3
		18

Major

PHY 125	Physics for Radiology	3
RAD 111	Intro to Rad. Tech., Pat. Care, Pharm. & Pos, I	4
RAD 121	Prin. of Radiologic Image Capture & Display I	3
RAD 131	Prin. of Radiologic Image Capture & Display II	3
RAD 141	Prin. of Digital Imaging & Positioning II	4
RAD 146	Clinical Education I	4
RAD 211	Rad. Imaging Equip., Anlys., Path. & Pos. III	4
RAD 215	Clinical Education II	3
RAD 216	Clinical Education III	4
RAD 221	Radiation Protection, Biology & Tomog.	3
RAD 226	Clinical Education IV	5
RAD 231	Radiology Technology Capstone	1
RAD 255	Clinical Education V	3
		44

Other Required Courses

AlH 122	Medical Terminology	3
BIO 172	Anatomy & Physiology II	4
		7

RECOMMENDED SEQUENCE

Prerequisite	
BIO 171	4
	4
Fall Semester	
ALH 122	3
BIO 172	4
RAD 111	4
RAD 121	3
	14

Spring Semester	
MTH 157	3
PHY 125	3
RAD 131	3
RAD 141	4
RAD 146	4
	17
Summer Semester	
RAD 215	3
	3

Fall Semester	
CPT 150	3
ENG 161	3
PSY 160	3
RAD 211	4
RAD 216	4
	17

Semester Semester	
ENG 162	3
RAD 221	3
RAD 226	5
RAD 231	1
Humanities Elective	3
	15
Summer Semester	
RAD 255	3
	3

Restaurant/Culinary Management, AAS

Workfore Development Division of Technologies/Culinary Arts

Restaurant/culinary management is one of eight majors comprising the college's culinary arts/hospitality program. This curriculum is designed to prepare students for various levels of management positions in the food service industry. In addition to classroom and food laboratory experience, students are required to complete an internship. Students are expected to be well groomed in compliance with standards of sanitation. Uniforms, decorative tips and a cutlery set are required for all lab classes. Business attire may be required for some classes. Students will also be required to provide medical proof of good physical health. This program is accredited by the Accrediting Commission of the American Culinary Federation Education Foundation.

Career Opportunities

Graduates of the restaurant/culinary management program may accept positions as: general operations manager, catering manager, restaurant sales representative, restaurant manager, assistant restaurant manager, food service director, assistant food service director, food purchasing agent, party planner, dining room manager, sales and marketing manager, training and development specialist or customer service manager.

Competency Profile

This curriculum is designed to prepare students to:

- learn the procedures and responsibilities of departmental teams within a foodservice operation
- anticipate and satisfy diverse customer expectations
- research, prepare, season and cook according to recipe and local, regional and international traditions and diversity: soups, sauces, salads, meats, fish, poultry, game, vegetables and desserts using acceptable standards of sanitation and safety
- prepare quantity foods with emphasis on food cost controls as part of a production team
- research, evaluate, write and maintain menus; purchase orders; local, regional and international recipes; production schedules and inventories
- research and adhere to sound practices for sanitation and safety
- utilize the high-tech approach to maintain acceptable systems of operation
- research and analyze and apply marketing objectives and strategies to food service operations
- supervise a food service operation team utilizing personal and interpersonal skills

PROGRAM REQUIREMENTS (TOTAL CREDITS — 61/62)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 163	Business Commun.	
or		3
ENG 164	Adv. Composition	
Humanities Elective		
or		3
FSM 170	Food Culture & Religion	
Mathematics Elective		3
Social Science Elective		3
		18

Major

FSM 103	Intro. to Hospitality Ind.	3
FSM 105	Foods I	4
FSM 112	Quantity Foods	4
FSM 113	Customer Service	3
FSM 117	Wait Staff/Din. Rm. Trng.	1
FSM 118	Sanitation	2
FSM 119	Beverage Mgmt.	1
FSM 159	Nutrition	
or		3/4
BKP 243	Healthy Cooking Trends	
FSM 213	A la Carte Kitchen	4
FSM 215	Food Pur. & Menu Mgt.	3
FSM 218	Hospitality Marketing	3
FSM 219	Hospitality Internship	3
FSM 235	Supervision & Trng.	3
		37/38

Other Required Courses

CUL 135	Speed Scratch Ckg.	3
FSM 157	Catering	3
		6

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
ENG 161	3
FSM 103	3
FSM 105	4
FSM 117	1
FSM 118	2
FSM 119	1
	14

Spring Semester	
CPT 150	3
FSM 112	4
FSM 113	3
FSM 159 or BKP 243	3/4
Mathematics Elective	3
	16/17

Fall Semester	
CUL 135	3
ENG 163 or 164	3
FSM 213	4
FSM 215	3
Humanities Elective or	
FSM 170	3
	16

Spring Semester	
FSM 157	3
FSM 218	3
FSM 219	3
FSM 235	3
Social Science Elective	3
	15

Robotics Technology, AAS

Workforce Development Division of Technologies/Culinary Arts

The Robotics Technology program is designed to provide students with the knowledge they need to assist manufacturing, mechanical and electronics engineers in all phases of robotic design, development, production, testing and operations. A new and growing sector, robotics technology develops agile robotics systems to remotely perform complex tasks in dynamic environments.

Career Opportunities

Engineering technology jobs in robotics and automated systems are found in many industries. Graduates of the Robotics Technology program are able to design, troubleshoot, manufacture, maintain and repair robots. These technologists are also involved in the research and design of applications from other science areas for robots to perform. A growing job market is emerging in the defense robotics market. Robotics technicians are also involved in the development of intelligent vehicle highway systems and robotic aids for the handicapped. Robotics technology jobs are also found in the food processing and pharmaceutical industries.

Competency Profile

This curriculum is designed to prepare students to:

- design agile robotics systems capable of remotely performing complex tasks
- discuss the various roles of a robotics technician in the workforce
- demonstrate the use of electronics in robotics technology
- demonstrate design and use of controllers
- apply agile robotics to engineering processes
- demonstrate the use of C++ programming as applied to robotics
- apply the characteristics of swarming behavior to agile robotics
- work effectively as part of a technology team
- demonstrate all aspects of project planning and management as applied to agile robotics
- complete an agile robotics project

PROGRAM REQUIREMENTS (TOTAL CREDITS — 63)

General Education

CPT 145	Intro to Computer Tech.	3
ENG 161	College Wriing	3
ENG 162	Technical Comm.	3
MTH 157	College Algebra	3
PHY 155	College Physics	4
Social Science Elective		3
		19

Major Courses

ELC 105	Elc. Instru. & Meas.	2
ELC 106	Circuit Analysis I	3
ELC 107	Circuit Analysis II	3
ELC 114	Digital Techniques	4
ELC 206	Microprocessors	4
MPT 240	Intro to Auto. Manufac.	3
RBT 110	Agile Robotics I	4
RBT 120	Agile Robotics II	4
RBT 210	Robotic Teaming	4
RBT 280	Robotic Sys. Project✦	3
		34

✦*capstone course*

Other Courses

CPT 180	C++ Programming	3
DFT 258	AutoCAD	4
MTH 158	Precalculus Math	3
		10

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
CPT 145	3
ELC 105	2
ELC 106	3
MTH 157	3
RBT 110	4
	15

Spring Semester	
CPT 180	3
DFT 258	4
ENG 161	3
MTH 158	3
RBT 120	4
	17

Fall Semester	
ELC 114	4
ENG 162	3
PHY 155	4
RBT 210	4
	15

Spring Semester	
ELC 107	3
ELC 206	4
MPT 240	3
RBT 280	3
Social Science Elective	3
	16

Travel, Tourism and Lodging Management, AAS

Workforce Development Division of Technologies/Culinary Arts

Travel, Tourism and Lodging Management is one of the majors comprising the college's culinary arts/hospitality program. This curriculum is designed to prepare students for various positions with the travel, tourism and hotel/lodging industry. Emphasis is given to the development of knowledge and skills in such essential areas such as, social and economic tourism, salesmanship, marketing, food and beverage, event management, lodging management, amusement and property management, recreation, geography and travel planning. This program also requires the student to arrange and participate in three credits of approved internship so that class room learning can be applied or experienced at tourism and lodging facilities.

Students are expected to be well groomed in compliance with standards of sanitation. Uniforms, cutlery set and decorating tips are required for all lab classes. Business attire is required for various class assignments and internship experience. Students will also be required to provide medical proof of good physical health.

Career Opportunities

Students earning an associate degree in this program may be employed in positions such as hotel/motel managers or assistant managers; food, beverage and banquet managers or assistants; convention and special event coordinators; sales managers, department managers or assistants for lodging facilities; travel wholesalers; customer service representatives; tour guides; and tourist promotion representatives.

Competency Profile

This curriculum is designed to prepare students to:

- be aware of the importance of travel and tourism as a major industry in the local community and global environment
- recognize the impact of diversity as it relates to the host community and successful tourism
- utilize the latest computer technology to manage information as it relates to travel, tourism and lodging
- practice the technical skills needed for successful daily operation of a tourism and lodging business
- recognize the role of management in controlling and supervising the functions of the various departments, properties and activities of tourism and lodging operations
- research, analyze and apply marketing objectives and sales strategies to the operations necessary for the management of tourism lodging facilities
- understand the economic and social impact of travel and tourism to the local, regional and international economics and social structures
- utilize interpersonal and personal skills within tourism and lodging properties using acceptable procedures, practices and acquired skills
- maintain and analyze the records, financial data and systems of operation necessary for the management of tourism and lodging systems
- anticipate and satisfy diverse customer expectations

Travel, Tourism and Lodging Management, AAS

Workforce Development Division of Technologies/Culinary Arts

PROGRAM REQUIREMENTS (TOTAL CREDITS — 67)

General Education

BUS 120	Business Math	3
CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 163	Business Commun.	
or		3
BUS 164	Adv. Composition	
Humanities Elective		
or		3
FSM 170	Food Culture & Religion	
Social Science Elective		3
		18

Major

FSM 105	Foods I	4
FSM 113	Customer Service	3
FSM 117	Wait Staff/Din.Rm.Trng.	1
FSM 118	Sanitation	2
FSM 157	Catering	3
FSM 215	Food Puch. & Menu Mgmt.	3
FSM 218	Hospitality Marketing	3
FSM 219	Hospitality Internship	3
FSM 235	Supervision & Training	3
HMT 160	Exec. Houskpg./Front Off.	3
HMT 161	Rec. & Entmnt. Mgmt.	3
HMT 170	Gaming & Casino Oper.	3
HMT 262	Lodg. & Property Mgmt.	3
HMT 264	Convention/Meet. Mgmt.	3
TRV 171	Travel/Tourism Princ.	3
TRV 273	Travel Destinations	3
TRV 274	Tour Planning & Sales	3
		49

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
CPT 150	3
ENG 161	3
FSM 113	3
FSM 118	2
TRV 171	3
	14

Spring Semester	
BUS 120	3
ENG 163 or ENG 164	3
FSM 105	4
HMT 160	3
HMT 170	3
	16

Summer Semester	
Humanities Elective or FSM 170	3
Social Science Elective	3
	6

Fall Semester	
FSM 117	1
FSM 157	3
FSM 215	3
HMT 161	3
HMT 262	3
TRV 273	3
	16

Spring Semester	
FSM 218	3
FSM 219	3
FSM 235	3
HMT 264	3
TRV 274	3
	15

Web Technology, AAS

WEB COMMERCE OPTION

Division of Computer Technology/Business

Students in Web commerce will learn the computer and design skills to create an electronic commerce Web site. Emphasis is placed upon programming languages and technologies that will drive business practices in the 21st century. Course work concentrates on systems widely used throughout the global economy.

Career Opportunities

Graduates of this program are prepared to provide technical expertise and support in an integrated electronic commerce environment and may find jobs in Web design, Web development and Web programming.

Competency Profile

This curriculum is designed to prepare students to:

- blend Web design, computer technology, and business commerce expertise for delivery over the Internet
- provide a framework for building collaborative service environments for online commerce
- specify and evaluate technical solutions to e-commerce problems
- develop, test, implement, and maintain computer programs for an e-business function
- provide networking and software expertise to other members of the organization
- identify the resources necessary to maintain technical skills as electronic commerce continues to evolve

PROGRAM REQUIREMENTS (TOTAL CREDITS – 61)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Communn	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Composition	
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Comm.	
Mathematics Elective		3
Social Science Elective		3
		18

Major

CPT 120	Intro to the Internet	1
CPT 145	Intro to Computer Tech.	3
CPT 163	Java Programming I	3
CPT 181	Intro to Telecomm.	3
CPT 196	Access for Windows	3
CPT 201	Web Design/Web Strds.	3
CPT 203	XHTML and CSS	3
CPT 206	JavaScript	3
CPT 235	Database Mgmnt. Systems	3
CPT 271	Oracle SQL I	3
CPT 277	E-Commerce Technology	3
WEB 140	Dreamweaver - Basic	3
WEB 150	Web Design	3
WEB 235	Interactive Design	3
		40

Other Related Courses

BUS 245	Prin. of Marketing	3
		3

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester	
CPT 120	1
CPT 145	3
CPT 150	3
ENG 161	3
WEB 150	3
Mathematics Elective	3
	16

Spring Semester	
CPT 181	3
CPT 196	3
CPT 203	3
ENG 162, 163 or 164	3
WEB 140	3
	15

Fall Semester	
CPT 163	3
CPT 206	3
CPT 235	3
WEB 235	3
Social Science Elective	3
	15

Spring Semester	
BUS 245	3
CPT 201	3
CPT 271	3
CPT 277	3
SPC 155 or SPC 156	3
	15

Web Technology, AAS

WEB PUBLISHING OPTION

Division of Computer Technology/Business

The Web publishing option is designed to provide students with the knowledge needed to design and implement effective, dynamic Web sites. Students build static and dynamic Web sites utilizing the most current versions of industry standard applications and the scripting and programming languages that drive the Web. As sites take on an ever-more-important position in the operation of business, from commerce to communication, Web publishers play an increasingly significant role in a company's success.

Career Opportunities

Graduates have a range of expertise and interests that determine their selection of occupation within the fields of Web design, Web content management, Web master, technical support, corporate communications and Web site production.

Competency Profile

The curriculum is designed to prepare students to:

- demonstrate knowledge of design principles in the creation of images and Web pages for the Internet
- demonstrate proficiency in the design, development and administration of database systems to support workplace needs
- apply animation and digital imaging technologies in the development of Web pages and images for use on the Internet
- utilize appropriate scripting technologies to generate dynamic, interactive Web pages and perform other server and client-side processing functions
- demonstrate proficiency in the installation, configuration, and administration of Web servers and Web sites
- demonstrate knowledge of Internet-based business strategies of marketing, e-commerce and security
- work effectively as part of an information technology team and provide appropriate Web technology support to internal and external clients
- demonstrate academic knowledge required of all graduates including competency in: critical thinking, writing, information literacy, oral communication and quantitative reasoning
- identify career and transfer options and assume a professional role in the workplace

PROGRAM REQUIREMENTS (TOTAL CREDITS — 61)

General Education

CPT 150	Microcomputer Concepts	3
ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Composition	
SPC 155	Effective Speech	
or		3
SPC 156	Interpersonal Comm.	
Mathematics Elective		3
Social Science Elective		3
		18

Major

CPT 196	Access for Windows	3
CPT 201	Web Design/Web Stdrds.	3
CPT 203	XHTML & CSS	3
CPT 277	E-Commerce Technology	3
WEB 120	Flash	3
WEB 140	Dreamweaver - Basic	3
WEB 150	Web Design	3
WEB 162	Fireworks	3
WEB 200	Web Technologies	3
WEB 235	Interactive Design	3
WEB 239	Dreamweaver - Adv.	3
WEB 295	Web Architecture	
or		3
WEB 199	Web Internship	
		36

Other Required Courses

BUS 245	Prin. of Marketing	3
MKT 254	Advert. and Promo.	3
WEB 102	Acrobat Essentials	1
		7

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
CPT 150	3	BUS 245	3	CPT 203	3	CPT 277	3
ENG 161	3	CPT 196	3	SPC 155 or 156	3	MKT 254	3
WEB 120	3	CPT 201	3	WEB 102	1	WEB 295 or 199	3
WEB 140	3	ENG 162, 163 or 164	3	WEB 200	3	Social Science Elective	3
WEB 150	3	WEB 162	3	WEB 235	3	Mathematics Elective	3
	15		**15**	WEB 239	3		**15**
					16		

Web Technology, Certificate

WEB PUBLISHING
Division of Computer Technology/Business

The Web design certificate program provides students with the technical and creative skills needed for a quality educational background. Students learn a range of production skills including interface design, motion graphics, Web coding, Web graphics, production and interactive design. Students also master industry-standard software and often work in a team-based environment to create content collaboratively.

Career Opportunities

Graduates will have acquired the skills necessary for entry-level positions as a Web designer with Web design and Internet companies, and advertising and design agencies.

The Web Design certificate is available as either a classroom or completely online program of study.

Competency Profile

This curriculum is designed to prepare students to:

- plan and create effective, cohesive design solutions using a variety of Web communications
- use current software and technology to create Web site layouts while applying color theory and graphic design principles
- plan and design interactive projects that demonstrate navigational and organizational methodologies
- apply project management and teamwork skills to address industry issues
- develop skills for effective oral and written communication, presentation and critical thinking

PROGRAM REQUIREMENTS (TOTAL CREDITS — 16)

WEB 102	Acrobat Essentials	1
WEB 120	Flash - Basic	3
WEB 140	Dreamweaver - Basic	3
WEB 150	Web Design	3
WEB 162	Fireworks	3
WEB 235	Interactive Design	3
		16

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
WEB 102	1	WEB 120	3
WEB 140	3	WEB 162	3
WEB 150	3	WEB 235	3
	7		**9**

Web Technology, Certificate

WEB DEVELOPMENT
Division of Computer Technology/Business

The Web development certificate offers the student exposure to a variety of Web page development tools and modern programming languages.

Career Opportunities

Graduates of the Web development certificate program can expect to find employment as computer programmers, systems analysts, PC technicians, programmer analysts, technical sales representatives, technical support analysts or Web developers.

Competency Profile

This curriculum is designed to prepare students to:

- design and create Internet and intranet-based Web solutions
- enhance Web sites with interactivity for real-time processing
- identify and correct problems associated with Web sites

PROGRAM REQUIREMENTS (TOTAL CREDITS — 17)

CPT 120	Intro to the Internet	1
CPT 201	Web Dsgn./Web Stndrds.	3
CPT 203	XHTML and CSS	3
CPT 206	JavaScript	3
CPT 277	E-Commerce Tech.	3
WEB 102	Acrobat Essentials	1
WEB 150	Web Design	3
		17

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
CPT 120	1	CPT 206	3
CPT 201	3	CPT 277	3
CPT 203	3	WEB 102	1
WEB 150	3		**7**
	10		

Welding Engineering Technology, AAS

Workforce Development Division of Technologies/Culinary Arts

Those planning careers in welding need manual dexterity, good eyesight and good hand-eye coordination. They should have the ability to concentrate on detailed work for long periods and be physically able to bend, stoop and work in awkward positions.

Successful completion of this program of study leads to the associate in applied science degree.

Career Opportunities

Recent graduates of the welding engineering technology program have obtained jobs with the following titles: welder, welding supervisor, nuclear service technician, QA/QC inspector, QA supervisor and technical sales representative.

Competency Profile

This curriculum is designed to prepare students to:

- apply technical knowledge needed in work situations which involve the welding of materials by effecting a technical level of skills necessary to handle welding and testing equipment associated with the various methods of welding, and selecting the appropriate tools and equipment to perform welding operations
- execute mechanical skills in an effective manner to perform a proper weld by using appropriate tools and equipment; and examine diagnose and execute a proper weld and manipulate welding tools and equipment in an effective and safe manner according to manufacturer's recommended procedures
- organize work and establish work patterns
- solve problems and seek appropriate guidance when confronted with a problematic situation
- communicate effectively, keep appropriate records and report information significant to the job
- demonstrate effective computer skills by using existing software and spreadsheet operations and programming the computer to assist in weld analysis and evaluation

PROGRAM REQUIREMENTS (TOTAL CREDITS — 62)

General Education

CHM 107	Intro Concepts in Chem. I	4
ENG 161	College Writing	3
ENG 162	Technical Commun.	
or		
ENG 163	Business Commun.	3
or		
ENG 164	Advanced Composition	
MTH 108	Math for the Tech. I	4
Computer Technology Elective		3
Social Science Elective		3
		20

Major

WEL 125	Welding I	4
WEL 135	Welding II	4
WEL 207	Advanced Welding I	4
WEL 208	Advanced Welding II	4
WEL 209	Weld. Equipment	3
WEL 220	Inspec. & Code Weld Spcs.	3
WEL 221	Metal Fabrication	4
WEL 222	Fund. of Aluminum	3
WEL 224	Materials Evaluation	3
		32

Other Required Courses

DFT 110	Blueprint Reading	2
MET 105	Welding Metallurgy	4
PHY 107	Applied Physics	4
		10

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
DFT 110	2	CHM 107	4	MET 105	4	WEL 208	4
ENG 161	3	ENG 162, 163 or 164	3	PHY 107	4	WEL 209	3
MTH 108	4	WEL 135	4	WEL 207	4	WEL 224	3
WEL 125	4	Social Science Elective	3	Computer Elective	3	WEL 221	4
WEL 220	3		**14**		**15**	WEL 222	3
	16						**17**

Welding Engineering Technology, Certificate

Workforce Development Division of Technologies/Culinary Arts

The welding certificate program is a short-term program option that provides students with entry level training for work in welding and flame cutting occupations. Welding 125 and Welding 135 emphasize skill development as well as applied theory and oxy-fuel welding/cutting and shield metal arc welding. Metallurgy and technical drafting courses round out the program of study by emphasizing metal properties, weldability and understanding detail and assembly work drawings. All credits earned can be applied toward the requirements of the degree program in welding engineering technology.

Competency Profile

This curriculum is designed to prepare students to:

- perform oxy-fuel welding/cutting by manipulating welding tools and equipment in an effective and safe manner
- perform shield metal arc welding by manipulating welding tools and equipment in an effective and safe manner

PROGRAM REQUIREMENTS (TOTAL CREDITS — 24)

DFT 110	Blueprint Reading	2
MET 105	Welding Metallurgy	4
WEL 125	Welding I	4
WEL 135	Welding II	4
WEL 209	Weld. Equipment Repair	3
WEL 220	Inspec. & Code Wld. Spcs.	3
WEL 221	Metal Fabrication	4
		24

RECOMMENDED SEQUENCE

Fall Semester		**Spring Semester**	
DFT 110	2	WEL 135	4
MET 105	4	WEL 209	3
WEL 125	4	WEL 221	4
WEL 220	3		**11**
	13		

COURSE DESCRIPTIONS

Index of Courses

Accounting - ACC. 171
Allied Health - ALH 172
American Sign Language - ASL 174
Anthropology (see SOC) 210
Architecture - ARC 172
Art - ART 172
Astronomy (see EPS) 189
Baking and Pastry - BKP 175
Biology - BIO 174
Business - BUS 175
CADD/CAM (see DFT) 183
Chemistry - CHM 176
Computer Information Security - CIS 177
Computer Numerical Control - CNC 178
Computer Technology - CPT 178
Cooperative Education - CED. 176
Criminal Justice - CRJ. 180
Culinary Arts - CUL 182
Dance - DAN 183
Dental Assisting - DAS. 183
Dental Hygiene - DAH 182
Diagnostic Medical Sonography - DMS. 184
Dietetic Technician - DTT. 185
Drafting - DFT 183
Early Childhood Education - ECE 185
Earth and Planetary Science - EPS. 189
Economics - ECN 186
Education - EDU 186
Electronics - ELC 187
Engineering - EGR 186
English - ENG 187
English as a Second Language - ESL 189
Expanded Functions Dental Assisting - DAE . . 182
Fire Science - FST 191
French - FRN 189
Geography - GEO. 193
Geology (see EPS) 189
Graphic Design - GCT 192
Health and Physical Education - HPE 196
Heating, Ventilation, Air-Conditioning and Refrigeration - HAC. 193
History - HIS 194
Honors - HON 195
Horticulture - HOR. 195
Hotel/Motel Management - HMT 195
Human Services - HMS 194
Humanities - HUM. 196
Italian - ITA 197
Library Science - LIS 197
Machine Technology - MTT. 202
Manufacturing Technology - MPT. 199
Marketing - MKT 199
Mathematics - MTH 201
Medical Assisting - MAS. 198
Metallurgy - MET 199
Multimedia and Photography - MED 198
Music - MUS 202
Nursing - NSG 203
Office Technology - OFT. 205
Paralegal - LAS 197
Personal Development - PDV 206
Philosophy - PHL 206
Phlebotomy - PHB 206
Physics - PHY. 207
Political Science - POL 207
Psychology - PSY 207
Radiology Technology - RAD. 208
Reading - RDG 209
Real Estate - RLS. 209
Religion - REL 209
Restaurant/Culinary Management - FSM. 189
Robotics Technology - RBT. 209
Sociology - SOC 210
Spanish - SPA 210
Speech Communication - SPC 210
Theatre - THR 211
Travel, Tourism and Lodging Management - TRV. 211
Turfgrass Management (see HOR) 195
Web Technology - WEB 211
Welding - WEL 212

COURSE DESCRIPTIONS

All academic courses offered by WCCC are listed below. Course numbers, titles and descriptions are WCCC designations. Courses numbered below 100 may not be used to meet degree requirements. The numbers at the far right of each course title indicate the number of lecture hours per week, lab hours per week and credits per semester.

Example: 3-0-3

3 — lecture hours per week
0 — lab hours per week
3 — course credits

All courses are identified alphabetically by a three-letter program code followed by a three-digit numerical course code. The first digit in the numerical code classifies the course as follows:

0 indicates a developmental course. Developmental courses carry no quality points and may not be used to meet degree requirements.

1 indicates a course which is normally required in the freshman year of study.

2 indicates a course which is normally required in the sophomore year of study.

Before each registration period, the college publishes a schedule of the courses that will be offered in the upcoming semester. Not all courses are offered each semester.

Students should note that many courses have prerequisites and/or corequisites which must be met before registration.

A prerequisite is a course that must be successfully completed prior to registration. A corequisite is a course that must either be successfully completed prior to registration or must be taken during the same semester.

ACC–ACCOUNTING

ACC 105—FINANCIAL RECORDKEEPING 3-0-3
Introduces accounting and recordkeeping practices for a service enterprise and a merchandising concern. Emphasis is on analyzing and recording financial transactions and preparing financial statements. Not open to accounting and computer technology majors.

ACC 120—QUICKBOOKS 1-0-1
This course covers small business accounting using QuickBooks software. Topics include creating a chart of accounts, recording customer and vendor transactions, and printing reports. In addition, students will set-up a new company and learn to export financial data to Excel.

ACC 155—ACCOUNTING I 3-0-3
Introduces accounting principles and practices, primarily in the context of the sole proprietorship form of business. Emphasis is on analyzing and recording financial transactions and summarizing their effects through the preparation of financial statements. Both the merchandising and service enterprises are examined. Major topics include deferrals and accruals, inventories, plant and intangible assets, cash and receivables, and partnerships.

ACC 156—ACCOUNTING II 3-0-3
Continuation of Accounting I. Topics covered include: corporations, cash flow statements, financial statement analysis, managerial accounting concepts, job order costing, process costing, C-V-P analysis, budgetary planning and control, and incremental analysis for decision making. Prerequisite(s): ACC 155

ACC 165—ACCOUNTING FOR MANAGERS 3-0-3
This course is designed to provide business and management majors with the ability to read, understand, and use accounting information for making decisions. Topics covered include: the business environment; cost concepts and allocation costing systems; activity-based systems; cost behavior analysis; profit planning; variance analysis; performance measurement; short- and long-term decision making; quality management; and financial statement analysis.

ACC 199—INTERNSHIP IN ACCOUNTING 3-0-3
Students gain exposure and insight to the accounting industry through supervised and evaluated on-the-job experience. Students select locations for internships from instructor-approved sites which encompass Southwestern Pennsylvania. Seminars are conducted weekly for students to discuss their experiences. Transportation to off-campus locations is the responsibility of students. Prerequisite: Completion of 30 credits in major course requirements.

ACC 219—MANAGERIAL ACCOUNTING 3-0-3
Interpretation and use of accounting information by management for planning, controlling, decision-making and performance evaluation. Topics covered include cost-volume-profit analysis; operational and financial budgeting; short-term decision-making; capital budgeting; performance evaluation and quantitative methods. Microcomputers will be utilized for problem solving. Prerequisite(s): ACC 156

ACC 222—PRINCIPLES OF AUDITING 3-0-3
This course emphasizes the learning of basic auditing concepts such as risk, control, evidence, and objectivity and important relationships among these concepts. It introduces the student to generally accepted auditing standards, professional ethics, and legal liability. A conceptual theory of auditing is discussed and practical examples of auditing techniques and work programs are used to illustrate the application of theory. The course also covers the auditor's reporting standards. Prerequisite(s) ACC 156

ACC 230—INTEGRATED ACCOUNTING SOFTWARE 3-0-3
Uses a fully integrated accounting software system to set up, manipulate and maintain accounting records. Includes modules covering receivables, payables, inventory, payroll and the general ledger. Prerequisite(s): ACC 155

ACC 234—PAYROLL & SPREADSHEET SOFTWARE 3-0-3
A study of the skills required of a full-charge bookkeeper. Emphasis is on detailed preparation of a complete payroll system, including study of laws, regulations, tax return preparation and fringe benefits. Extensive use of computerized payroll system. May lead to possible certification as a payroll professional. Students will also complete comprehensive computerized general ledger packages from initial recording through year-end procedures and financial statements.

ACC 250—PRINCIPLES OF TAXATION 3-0-3
An introduction to the federal income tax as it applies to individuals. Topics covered include: conceptual framework, tax determination, inclusions and exclusions, deductions and credits, personal and business expenses including depreciation, loss limitations and property transactions. Prerequisite(s): ACC 155

ACC 251—TAX PREPARATION SOFTWARE 3-0-3
This course builds upon the concepts introduced in ACC 250 regarding the taxation of individuals. Starting with the preparation of returns by hand, the course provides a bridge between tax theory and tax preparation. This progresses from preparation by hand to preparation on the computer using professional grade software. The outcome is designed to be a true integration of tax theory and preparation.

ACC 255—INTERMEDIATE ACCOUNTING I 3-0-3
Examines the theory and concepts underlying the mechanics of accounting, including a review of the accounting process. Topics covered include: conceptual framework; income statement; balance sheet; cash flow statement; revenue recognition; cash and receivables; inventories-cost and estimation; plant and intangible assets-acquisition, use and retirement. Prerequisite(s): ACC 156

ACC 256—INTERMEDIATE ACCOUNTING II 3-0-3
Continuation of Intermediate Accounting I. Topics covered include: debt financing; equity financing; long- term investments; leases; pensions; income taxes; contingencies; business segments; accounting changes and error analysis; earnings per share. Prerequisite(s): ACC 255

ACC 260—ADVANCED ACCOUNTING ISSUES 3-0-3
This course refines and integrates those issues identified in various accounting courses into one comprehensive unit. Emphasis is shifted from "preparation" to "analysis." The core concept is to teach students to make decisions in uncertain and complex situations. Focus is on critical thinking, research skills and identifying answers to complex questions. Business values and ethics are a vital component of all decisions and are explored in this course. This capstone course encompasses all of the student outcomes found in each of the program's courses. Prerequisite(s): ACC 255 or ACC 256

ALH–ALLIED HEALTH

ALH 110—BASIC LIFE SUPPORT FOR THE HEALTH CARE PROVIDER 1-0-1
This course in Basic Life Support for the Health Care Providers provides the student with core materials for one- and two-rescuer adult cardiopulmonary resuscitation (CPR), foreign body airway obstruction management, pediatric resuscitation and automated external defibrillator. The targeted audience for this program is the healthcare provider, students entering the healthcare field, also EMS personnel, physician assistants, doctors, dentists, nurses and respiratory therapists who are required a credential (card) documenting successful completion of a CPR course. A written exam and skills testing is required for successful course completion. Tuition does not include textbook. Students receive certification from the American Heart Association. This course also includes background information about heart disease, risk factors, heart and lung function, current prevention advice and healthy living principles.

ALH 120—PHARMACOLOGY 3-0-3
Introduces the student to current concepts in pharmacology, including basic drug actions, indications and contraindications for drug therapy, toxicity, side effects and safe therapeutic ranges.

ALH 122—MEDICAL TERMINOLOGY 3-0-3
Studies definitions of medical terms. Greek and Latin word roots, prefixes and suffixes. Emphasis on application of terminology in specialized areas such as cardiology, urology, etc. Also includes discussion of the human element, medical laws and equipment, and methods.

ARC–ARCHITECTURE

ARC 101 - BUILDING MATERIALS & ESTIMATING 3-0-3
Surveys building materials and characteristics used in the construction industry. Course also covers various construction techniques, principles and cost estimating.

ARC 102—CONTRACTS AND SPECIFICATIONS 3-0-3
Covers the basic principles of written contracts and their format. Topics include specifications, language, techniques, bidding and contract responsibilities. Study of building codes and building applications for various types of structures. Prerequisite(s): ARC 105

ARC 105—ARCHITECTURAL DRAFTING I 2-4-4
Provides a practical approach as it relates to current common architectural drafting standard practices. The principle objectives are basic understanding of orthographic projection, size description and notation. National building codes UBC, SBC, and BOCA are introduced.

ARC 106—ARCHITECTURAL DRAFTING II 2-4-4
Provides students with more advanced drafting techniques and competencies by applying information about building components to draw detailed sets of architectural construction drawings and improve perception and awareness of problems related to design. Prerequisite(s): ARC 105

ARC 119—INTRODUCTION TO SURVEYING 2-2-3
Study includes linear measurements with tape; differential leveling and vertical control measurements; vertical angles with transit; closed traverse work utilizing bearing, azimuth and deflection methods; use of coordinate systems, computation of areas; stadia and topographic surveying. Bench mark and profile leveling for computation and data for application of cut and fill requirements in road or development construction will also be covered. Prerequisite(s): MTH 108

ARC 199—ARCHITECTURAL DRAFTING AND DESIGN INTERNSHIP 1-12-3
Students will obtain experience in the architectural drafting and design field through a combination of occupational instruction and on- the-job training. This course integrates classroom occupational study with a planned supervised practical work experience. Prerequisite(s): Permission of instructor

ARC 210—ARCHITECTURAL AUTOCAD I 2-4-4
Continues the study of architectural drawing, detailing and illustration through the assimilation of computer software. (Most current version of AutoCAD will be used.)

ARC 211—ARCHITECTURAL AUTOCAD II 2-4-4
A continuation of ARC 210. This course teaches advanced drawing and editing commands that may be used to create 2D architectural drawings. Ordinate dimensions, drawing/plotting scales, symbols/block usage, attributes, Xreferences and paper space applications are covered. (Most current version of AutoCAD will be used.) Prerequisite(s): ARC 210

ARC 215—ARCHITECTURAL PRESENTATION 2-4-4
Students will develop and deliver a presentation on a specific project approved by their instructor. Coordination of previous skills on independent projects utilizing manual drafting and computer graphics software for model building and design. (Most current version of AutoCAD will be used.) Prerequisite(s): ARC 210

ARC 262—PIPING, STRUCTURAL DETAILING AND ELECTROMECHANICAL DRAFTING 2-4-4
AutoCAD application course that will include piping, structural detailing, electromechanical details, and working drawings. The student will experience more complicated problems in this course, and will coordinate previous skills for the graphical solutions. (Most current version of AutoCAD will be used.) Prerequisite(s): ARC 210

ART–ART

ART 140—ILLUSTRATION 2-2-3
Introduction to contemporary illustration techniques and the techniques of noted illustrators. Enables students to develop a sense of illustrative image creation so that formal and technical elements such as composition, color and background, can work together to create editorial or narrative impact. Focuses on trends and styles of advertising, with emphasis on working with an art director, deadlines, reproduction requirements and professional attitudes. Technical concerns as well as aesthetic and legal aspects are covered.

ART 142—TYPOGRAPHY 2-2-3
Introduction to and exploration of signage design, principles and layouts. Develops and promotes creative problem-solving techniques for corporate and retail identity. Students incorporate design ideas, conceptual thinking, typographic elements, color usage and various imaging techniques. Assignments demonstrate visual solutions for realistic design problems, with emphasis on traditional as well as computer-based solutions. Technical concerns and compatibility across Macintosh and Windows platforms as well as aesthetic and legal aspects are covered.

ART 143—PRINTMAKING 1-4-3
This course provides a basic introduction to the field of printmaking through its historic and contemporary technological forms and function. It will explore the potential with the variant and edition print as discovered through relief, intaglio, lithography and screen printing processes. It will introduce an analysis of paper, print matrix, inks and the related field of paper and bookmaking. Students will examine the role of the hand-printed image, the digital reproduction and the rich hybrid between these methodologies.

ART 150—AIRBRUSH TECHNIQUES 2-2-3
An introductory course that explores the basic principles of airbrush illustration. Provides a basic overview of the nature of light and color, modulation of values, basic geometric rendering and color illustration techniques. Course projects include custom lettering and illustration for T-shirts, signs and license plates. Students are encouraged to explore various applications of airbrush rendering. Technical concerns as well as aesthetic and legal aspects are covered.

ART 155—INTRODUCTION TO ART HISTORY 3-0-3
Surveys the history and stylistic development of the visual arts. The student is introduced to the process of formal, compositional analysis as it relates to content and historical context, as well as the changing role of art and artist in culture.

ART 156—NON-WESTERN ART SURVEY 3-0-3
This survey course exams the function, form, construction and context of objects created in the non-western cultures of Africa, Western and Central Asia, India and Southeast Asia, China, Japan and Korea, the Pacific and the Americas, and establish how art objects are an unconscious representation of a culture's ideology. The arts of these areas will be examined from an anthropological approach with particular attention to the dynamic reasons for cross-fertilization of iconography, material and methodologies. Content will be explored primarily in a chronological and geographic framework.

ART 157—INTRODUCTION TO CONTEMPORARY ART 3-0-3
This course examines contemporary art from 1960s to the present. It examines the fundamental framework and critical ideas that have been documented in recent art history. It explores the major changes in the perception and function in art as it is made, where it is presented, the role of the audience and how the work is historically recorded. Rather than a chronological approach, history will be unraveled. This is achieved by examining works to discover information from external observation and basic art language. Links will then be drawn between what has been observed and what has preceded the work to reveal how ideas have been reinforced or challenged.

ART 158—AMERICAN ART 3-0-3
This course introduces the student to the historical and cultural context of American painting, sculpture, architecture and decorative arts. In addition to the history and progression of art of the United States, students will examine the role Pennsylvania artists have played in the history of American art.

ART 160—2-D DESIGN 1-4-3
Two-dimensional visual art principles will be discovered through the components of problem- solving art applications, lectures and critiques. An important aspect of this course investigates the history and theory of basic design principles as the primary language of visual thinking.

ART 161—3-D DESIGN 1-4-3
The basic elements and principles of design are implemented to create three-dimensional projects. Issues of volume, space, fabrication and construction with a variety of materials are applied to design problem-solving. Students explore three-dimensional space in relation to degree of depth from wall-relief to free-standing forms, and investigate the history and theory of spatial design principles. Prerequisite(s): ART 160 or permission of instructor

ART 162—DRAWING I 1-4-3
As the most fundamental of art skills, students will learn to think visually and imaginatively. Drawing from observation is stressed through a sequence of basic rendering techniques, which include the study of spatial relationship structure, light and shadow, linear perspective, proportion and composition.

ART 163—DRAWING II 1-4-3
Students will learn to render more complex forms and conceive more dynamic responses to a range of drawing issues. Through rendering the skeletal structure, as well as exploration of materials and techniques, students will learn the basic foundation of figure drawing, enriched by lectures on art historical depictions, and the role of drawing in traditional and contemporary art. Prerequisite(s): Art 162 or permission of instructor

ART 164—COLOR CONCEPTS 1-4-3
An introduction to the analysis and application of basic color and light theories, from early theoretical development with paint application, to more recent technological applications. Students develop a working knowledge of the expressive potential of color through numerous theoretical and compositional exercises, and are introduced to color physics, psychology and technology and its broad applications.

ART 165—PAINTING I 1-4-3
As an introduction, oil paint is the medium of choice with which students will learn the basic properties of the painters' materials, including canvas stretching and preparation. The painters' craft is stressed with color mixing and application. Within a sequence of painting problems, students reinforce their visual vocabulary by painting from observation, to prime the beginner for more interpretive, imaginative subject matter. Prerequisite(s): ART 162 or permission of instructor

ART 166—PAINTING II 1-4-3
As an intermediate level course, Painting II will focus on pictorial space, form and individual exploration of ideas, and grounded in a fundamental understanding of the painting medium. The basics of the idea-development will be studied while refining and experimenting with techniques and materials. Students will learn how to execute a series as the first step to creating body of work. An exploration of historical and contemporary paintings and artists will be offered to enhance strategies for generating ideas. Prerequisite(s): ART 165 or permission of instructor

ART 183—BOOK ARTS I 1-4-3
This course is an introduction to the materials and techniques used in creating artist's books. Lectures and demonstrations will include hand papermaking, sheet formation, paper grain and applications for book arts. Paper will be used in creating signature binding, book design, new and alternative book forms, and container construction. In addition to lectures and discussions, students will actively learn historical and contemporary binding methods. Well conceived and crafted books will be assigned to correspond with each section. Students will analyze and discuss work in progress within a group critique. Each student will produce unique books as well as small editions. Books will employ handmade paper and construction will include mock up, title, colophon page, and will be signed. The popularity of recycled materials in the field of contemporary book arts will be explored.

ART 249—BEGINNING WATERCOLOR PAINTING 1-4-3
Designed for the art student; a basic understanding of drawing is helpful. This course will cover basic techniques of the paint always working in transparency. Subject matter will vary from still life through portraiture, figure painting and landscape. Depending on the time of year and weather conditions, painting on location outside is possible. Prerequisite (s): ART 162

ART 285—PORTFOLIO DEVELOPMENT 1-4-3
This course is designed to prepare a student's work for acceptance into advanced programs of art and/or professional, competitive employment presentations. The student will be provided with a fundamental set of skills that will be used throughout their developing careers. Self-promotional tools will include: assessing and defining goals, writing an artist statement and/or career philosophy, documentation, presentation and organization of original studio work, resume and personal web page development. Students are required to enter at least one art competition or graphic publication, locate desirable job descriptions, and participate in a series of mock interviews, designed to hone skills for professional presentation.

ASL–AMERICAN SIGN LANGUAGE

ASL 101—AMERICAN SIGN LANGUAGE I 3-0-3
American Sign Language I is an introduction to the language used by members of the deaf community in the United States. This course focuses on conversation in signs, basic rules of grammar and cultural aspects of the deaf community.

ASL 102—AMERICAN SIGN LANGUAGE II 3-0-3
As the continuation of basic American Sign Language and culture study, this course furthers learners' ability to describe and discuss everyday matters and situations in a culturally appropriate manner. The focus of this course remains on conversation in signs, basic rules of grammar, and cultural aspects of the deaf community. Additional vocabulary, more complex grammatical principles, and communicative strategies which assist the deaf listeners are presented. Prerequisite(s): ASL 101

ASL 201—AMERICAN SIGN LANGUAGE III 3-0-3
American Sign Language III is an upper intermediate level course that builds on ASL II, and it is designed to develop the student's ability to master the semantics of ASL. The focus will be on the skills and knowledge necessary to effectively translate passages from either spoken or written English into American Sign Language. Student production skills will be evaluated via videotape. Students will also be required to attend Deaf events and be involved in the Deaf Community.

BIO–BIOLOGY

BIO 107—HUMAN BIOLOGY 3-0-3
Explores basic body structure and functions in terms of cellular interactions. The skeletal, muscular and nervous systems integumentary...and selected disorders and their anatomical and physiological basis are topics for discussion. Also included are discussions of the circulatory, digestive, excretory, endocrine and reproductive systems. Biological terms and meanings of appropriate terms are emphasized along with the relationships between the various organ systems in health and disease.

BIO 110—INTRODUCTION TO FORENSIC BIOLOGY 3-2-4
A survey of biological aspects of forensic science, the mechanisms leading to death and the analysis of biological evidence from crime scenes. Includes discussion of topics such as the cause and manner of death, body decomposition, assessment of the time of death, trauma, natural disease processes, the effects of environmental stressors and multidisciplinary approaches to evidence analysis. Crime laboratory topics to be discussed include toxicology, DNA evidence, biometrics (e.g. fingerprinting), drug metabolism, ballistic trauma and other related issues. Forensic autopsy will also be discussed as it relates to biological evidence.

BIO 120—ENVIRONMENTAL ISSUES 3-0-3
Assesses man's impact upon the natural world by reviewing a number of current environmental problems. Topics include ozone depletion, the greenhouse effect, habitat destruction and over population. Basic ecological concepts such as food chains, food webs, cycling of materials and energy flow through an ecosystem, and productivity will also be emphasized.

BIO 130—INTRODUCTION TO PATHOLOGY 4-0-4
A survey of pathology including dysfunction of cellular, tissue and organ, and organ system levels of the human body. The effects of inflammation, cancer, trauma, blood clotting, healing, and related topics will be discussed along with current medical treatment options for physiologic dysfunctions. Significant disease processes of the heart, lungs, liver, kidneys, brain, muscles, bones, and other organs are explained and analyzed.

BIO 145—GENERAL BOTANY 3-2-4
Studies the morphology, anatomy, physiology, life cycles, genetics, taxonomy, and evolution of representative non-vascular and vascular plants ,with emphasis on the local flora.

BIO 155—GENERAL BIOLOGY I 3-2-4
Introduces biology as a science that deals with fundamental concepts and processes common to all living organisms. Topics considered include basic ecological principles, biological chemistry, cell structure and function, cellular respiration and photosynthesis.

BIO 156—GENERAL BIOLOGY II 3-2-4
Sequel to General Biology I (BIO 155). Includes study of mitosis meiosis, Mendelian/neoMendelian/molecular genetics and deals with the diversity of organisms and their life processes. Prerequisite(s): BIO 155

BIO 160—INTRODUCTION TO FORENSIC TOXICOLOGY—Poisons, Drugs, and Death 4-0-4
A survey of the effects of poisons, drugs, heavy metals, venoms, carbon monoxide, and other toxic substances on the human body as it relates to forensic science and investigation. The mechanisms leading to toxicologic-related deaths and the biological effects of various substances on the organs of the human body are assessed. Analysis of toxicologic evidence taken from crime scenes, from victims at crime scenes, and from illicit drug labs are described. Includes discussion of topics such as the cause and manner of drug-related deaths, obtaining toxicological evidence after decomposition of the body, assessment of the time that drugs remain in the human body, effects of toxic substances on organs (especially the liver, kidneys, nervous system, and heart). The effects of natural disease processes with toxic substances, the effects of environmental toxins and multidisciplinary approaches to drug evidence analysis. Crime laboratory topics to be discussed include toxicology drug chemistry, drug metabolism, and other related issues. The findings of toxicologic deaths during the forensic autopsy will also be discussed.

BIO 171—ANATOMY AND PHYSIOLOGY I 3-2-4
Explores the basic body structure and functions in terms of cellular interactions. Discussion includes cells, tissues, Integumentary systems, skeletal system, muscular system, nervous system, the endocrine system, and selected disorders and their anatomical and physiological bases. Prerequisite(s): CHM 107, CHM 155, CHM 264 or high school chemistry, RDG 080 or satisfactory Placement Test score

BIO 172—ANATOMY AND PHYSIOLOGY II 3-2-4
Discusses cardiovascular, lymphatic, digestive, respiratory, urinary and reproductive systems. Also considers the interactions of the various body systems as well as cellular aspects of disease and defense. Prerequisite(s): BIO 171

BIO 210—ZOOLOGY 3-2-4
This course introduces students to the science of animals. It presents a survey of the animal kingdom with emphasis on diversity, evolutionary relationships, phylum characteristics, functional adaptation, and environmental interaction. This course is appropriate for science majors and nonscience majors alike.

BIO 265—MICROBIOLOGY 3-3-4
Deals with microbial organisms in general by surveying the history, methods and nature of microbiology. Bacteria and viruses are discussed in greater depth, particularly those that cause human disease. Also covered is the beneficial role played by microbes. Prerequisite(s): BIO 155 or BIO 171 and CHM 107, CHM 155, CHM 264 or high school chemistry, RDG 080 or satisfactory Placement Test score

BKP–BAKING AND PASTRY

BKP 141—BAKING I 2-4-4
The student learns the fundamentals of quantity baking which involves preparation of yeast rolls, breads, pies, cakes, cookies tarts and doughnuts. The properties of baking ingredients, use and care of commercial bake shop equipment, and storage and sanitation of baked products are studied. Uniforms, cutlery set and decorative tips required.

BKP 142—BAKING II 1-4-3
A second-level course focusing on the study and preparation of advanced breads, pastries, cakes and desserts. Laboratory preparation is coordinated with related studies in the classroom. Uniforms, cutlery set and decorative tips required. Prerequisite(s): BKP 141

BKP 144—BAKING III 1-4-3
Provides the student with experience in the study and preparation of advanced pastries, cakes, pies and tortes. Students are also introduced to Artisian and decorative breads. Emphasis is placed on introducing the student to the most up-to-date products and technologies available. Uniforms, cutlery set and decorative tips required. Prerequisite(s): BKP 142

BKP 242—BAKERY/DELI MERCHANDISING TECHNIQUES 1-4-3
Study of baking techniques involving merchandising, salesmanship, product presentation, maintenance of product, product evaluation, labeling requirements and product identification. Uniforms, cutlery set and decorative tips are required.

BKP 243—HEALTHY COOKING TRENDS 2-4-4
Allows students to research current nutritional recommendations and produce recipes which reflect sodium reduction, sugar substitution, fat replacement and other nutritional concerns. Nutritional labeling requirements are also investigated. Uniforms, cutlery set and decorative tips required Prerequisite(s): BKP 141 or FSM 105

BKP 245—DECORATING TECHNIQUES 1-4-3
Emphasizes the application of design principles to the art of decorating cakes, petit fours, centerpieces, confectionery and specialty pastry items. Uniforms, cutlery set and decorative tips required.

BKP 247—SPECIALTY/ARTISTIC TECHNIQUES 2-4-4
Involves the student in the study and preparation of advanced hot and cold specialty dessert items. Emphasis is placed on both classical and contemporary dishes. Students are also provided with the knowledge and understanding of the utilization of artistic principles to effect chocolate and sugar work for consumption and display. Uniforms, cutlery set and decorative tips required. Prerequisite(s): BKP 141

BKP 249—ADVANCED DECORATING TECHNIQUES 1-4-3
Emphasizes advanced decorating techniques. Design cakes using advanced techniques which are appropriate to the theme, occasion and level of formality. Utilizes principles of sanitation and safety in decorative work and design. Evaluate final products based on artistic design principles, uniformity and neatness. Develop a level of professional proficiency in advanced decorating techniques. Uniforms, cutlery set and decorative tips required. Prerequisite(s): BKP 245

BUS–BUSINESS

BUS 120—MATHEMATICS OF BUSINESS 3-0-3
Provides a basic knowledge and skill in the calculations necessary for a business career, including trade discounts, commissions, sales, payrolls, statistics, depreciation, interest, insurance, annuities, investment, credit and taxes. Prerequisite(s): Mathematics Placement Test

BUS 155—PERSONAL FINANCE 3-0-3
This course analyzes the personal and financial situations that confront individuals in our society today. Topics include: basic economics as it relates to individuals, budgeting and financial planning, renting versus owning a home, home financing options, purchasing versus leasing a vehicle, savings and borrowing techniques, liability and health insurance options, investment planning and strategies, retirement and estate planning, and the safety and security implications of purchasing items over the Internet.

BUS 158—PRINCIPLES OF MANAGEMENT 3-0-3
Theory and principles of organization and management with an emphasis on the management processes of planning, organizing, leading, controlling, and the business functions, concepts, and applications related to the manager's role in a decision-making environment.

BUS 159—BUSINESS FINANCE 3-0-3
Studies the basic financial management function of a firm. Topical coverage includes financial analysis and planning, working capital management, capital budgeting and selected topics. Prerequisite(s): ACC 155 or ACC 165

BUS 160—INTRODUCTION TO BUSINESS 3-0-3
Survey of the structure of business, its principle activities and typical problems. The course is designed to provide the student with a working knowledge of business terminology. It covers such facets of business as ownership, management, marketing, purchasing, production, human resources, finance, accounting and government regulation.

BUS 190—CREDIT MANAGEMENT 3-0-3
This course introduces the student to the concept of credit management as a primary contributor to worldwide economic growth as it makes goods and services available to consumers, businesses and governmental bodies. Topics covered include: consumer credit, financing of retail and service credit transactions, real estate credit, credit investigation, credit reporting agencies, business credit, and collection management and control.

BUS 191—FINANCIAL INSTITUTIONS 3-0-3
This course provides a descriptive analysis of the management and operations of the financial institutions that serve to allocate capital in our economy. Institutional coverage will include commercial banks, thrift institutions, insurance companies, security firms and investment banks, finance companies, mutual funds and pension funds.

BUS 199—INTERNSHIP 3-0-3
A coordinated period of supervised work experience in organizations that will offer students the opportunity to acquire competence in their chosen area of specialization. Prerequisite:(s) Permission of instructor

BUS 205—BUSINESS LAW I 3-0-3
Basic principles of law applicable to business action including sources of law, adversary system, crimes, torts, negligence, strict liability, common law essentials of contract law and basic general legal principles.

BUS 206—BUSINESS LAW II 3-0-3
Continuation of fundamental principles and practices as contained in Business Law I. The uniform commercial code and its application to contract law, proprietorships, corporations, agency and employment, real estate and negotiable instruments. Prerequisite(s): BUS 205

BUS 240—TECHNIQUES OF SELLING 3-0-3
Retail, wholesale and specialty selling with emphasis on mastering and applying the fundamentals of selling. Sales presentations are required.

BUS 241—HUMAN RESOURCE MANAGEMENT 3-0-3
Considers the role of human resource management as it relates to recruiting and selection procedures, equal employment opportunity orientation and training. Emphasis is placed on performance appraisals, job evaluations and the motivation of employees.

BUS 244—BUSINESS STATISTICS 3-0-3
Principles of statistics as applied to business problems. Presentation and analysis of quantitative data in tabular forms; frequency distributions; measures of central tendency and dispersion; probability theory; sampling; tests of significance and regression analysis. It is advised that students have a background in algebra. Prerequisite(s): Mathematics Placement Test

BUS 245—PRINCIPLES OF MARKETING 3-0-3
Principles and functions of marketing. Topics include: marketing research, target marketing, marketing segmentation and marketing-mix strategies. Special emphasis is placed on topics such as: product, pricing, distribution and promotion decisions.

BUS 246—RISK MANAGEMENT 3-0-3
Portrays an overview of the field of insurance as an institution applying to business, society and government. Presents fundamentals of insurance contracts, such as property and casualty, life and health, and government.

BUS 249—LABOR RELATIONS 3-0-3
Relation of management theory and the viewpoints of the behavioral science to problems of managing people in both union and non-union environments. Topics included are labor relations, contract negotiations, administration, collective bargaining and grievance arbitration.

BUS 258—SUPERVISORY MANAGEMENT 3-0-3
Investigates techniques of leadership including the motivation and the creation of incentives for others to follow. The focus will be to improve decision making at work through increased knowledge pertaining to internal and external environmental forces. A new philosophy regarding the supervisor's role regarding work assignments and control of employees is developed in this course.

BUS 259—INVESTMENTS 3-0-3
Analysis of terminology, techniques, vehicles and strategies for implementing investment goals. Risk-return trade-offs of investments will be presented in a portfolio context emphasizing diversification. Topics covered include: the investment environment, common stocks, fixed-income securities, speculation, mutual funds, real estate investments, tax shelters, saving and investing, savings and home ownership, and investment administration.

BUS 260—SMALL BUSINESS MANAGEMENT 3-0-3
Pertains to the organization and operation of small enterprises in all types of business: merchandising (both retailing and wholesaling), manufacturing and contract construction and the service trades. Topics include: organizational structure and staffing, equipment leasing, capital budgeting, financial leverage and taxation for the small business enterprise. Designed to aid individuals who are seriously considering going into their own business, as well as owners/managers who desire to increase their knowledge of modern small business operation.

BUS 261—INTERNATIONAL BUSINESS 3-0-3
Studies techniques for analyzing and understanding the entry into international business through exporting, licensing or direct investment. Terminology and conceptual frame work to comprehend the balance of trade, balance of payments, foreign currency exchange and the International Monetary System.

BUS 262—EFFECTIVE ENTREPRENEURSHIP 3-0-3
A practically oriented course focusing on the development of an entrepreneurial venture from idea generation to the opening and operation of a business. Topics include creativity, target market identification, marketing/financial planning, decision-making, recordkeeping, employee coaching and motivation, business valuation, management/control processes, and legal requirements. Designed for the person who desires to develop an entrepreneurial venture.

BUS 263—SMALL BUSINESS FINANCE 3-0-3
This course introduces the student to the use of financial controls in the administration of small businesses. Topics will include budgeting, profit analysis, development of cash flow statements, cost control, tax planning, economic order quantity analysis and how to set up records for proper business control.

BUS 264—SMALL BUSINESS OPERATIONS 3-0-3
This course introduces the student to the procedures necessary to develop and refine a business plan and to integrate the plan into the start-up of a small business. Procedural operations covered will be the preparation of loan documents, applications for licenses and permits, a fictitious name application and the development of a business support plan.

BUS 275—ORGANIZATIONAL BEHAVIOR 3-0-3
This course is designed to examine behavior modeling in the work environment. Topics include: leadership, the motivation of employees and the understanding of organizational cultures. Students will gain an understanding of the behavioral parameters of organizations that compete in both domestic and international markets. Knowledge of workforce diversity will be emphasized as a key to improving workplace performance through effective pluralistic organizational work teams. Special emphasis will be placed on conflict in negotiations, communicating through influence, power and politics, and the management of organizational change.

BUS 285—COMPENSATION MANAGEMENT 3-0-3
This course is designed to show students how to create fairness and equity when building a sound and equitable wage structure. Wage and salary administration is developed to enhance employee motivation. Job analysis, job evaluation and performance appraisal are presented as vehicles for advancing the understanding of fairness as it applies to both internal and external wage equity. Pay models are designed to be consistent with the legal framework as it applies to the job market. Competitiveness in performing a job is explored when considering a merit or seniority pay system.

BUS 299—BUSINESS INTERNSHIP II 3-0-3
A coordinated period of supervised work experience in organizations that will offer students the opportunity to acquire competence in their chosen area of specialization.

CED–COOPERATIVE EDUCATION

CED 155—COOPERATIVE EDUCATION EXPERIENCE I 1-12-3
A work experience program designed to supplement formalized classroom study with supervised on-the-job learning experiences in college approved work locations. Academic credit may be earned for work experience if the student's job is related to his field of study or vocational goal. Prerequisite(s): Completion of 12 hours of course work with a minimum grade point average of 2.0, and approval of the coordinator of job placement and cooperative education.

CED 255—COOPERATIVE EDUCATION EXPERIENCE II 1-12-3
A work experience program for students with clearly defined career objectives in which a work setting integrates academic study and employment activities. Academic credit may be earned under the supervision of a member of the college faculty. Prerequisite(s): CED 155, completion of 30 hours of course work with a minimum grade point average of 2.5, and the approval of the coordinator of job placement and cooperative education.

CHM–CHEMISTRY

CHM 010—PREPARATORY CHEMISTRY 3-0-3
Designed for people with little or no background in chemistry. This course will prepare the student for General Chemistry. Includes topics such as: how to study the discipline of chemistry, basic math concepts used in chemistry, and introductory chemical principles.

CHM 105—TECHNICAL CHEMISTRY 3-2-4
Designed to meet the needs of the technically oriented student. Basic atomic and molecular structure along with periodic relationships are considered. Emphasis is placed on properties, reactivities and reactions in relation to periodic properties. The approach is conceptual in nature with quantitative discussions of stoichiometry and equations. Laboratory exercises are practical applications of the lecture material.

CHM 107—INTRODUCTORY CONCEPTS IN CHEMISTRY I 3-2-4
A study of the basic concepts in chemistry is presented without the emphasis on the mathematical models that are found in the general chemistry courses. Basic atomic and molecular structure are explored with stress on periodic properties and chemical reactions. Stoichiometry, states of matter and solution chemistry are presented while applications of chemistry are emphasized.

CHM 108—INTRODUCTORY CONCEPTS IN CHEMISTRY II **3-2-4**
A study of the basic concepts in organic and biochemistry is presented without the emphasis on the theoretical models that are found in the organic chemistry courses. Basic organic chemistry is presented with organic family relationships stressed. Prerequisite(s): CHM 107

CHM 155—GENERAL CHEMISTRY I **3-2-4**
Studies the concepts of atomic structure, chemical periodicity, chemical bonding, molecular geometry, quantum chemistry and principles of chemical reactivity. Stiochiometry, thermodynamics and solution chemistry are presented using a quantitative approach. Gases and the structure of solids and liquids are also studied. High School Chemistry or CHM 010 is suggested.

CHM 156—GENERAL CHEMISTRY II **3-2-4**
Uses chemical kinetics, thermodynamics and equilibrium to study the behavior of chemical systems. Electrochemical principles are used throughout the course. Ionic equilibria with emphasis on acid-base and solubility equilibria are a major consideration. A brief introduction to organic chemistry and appropriate applications are presented. Prerequisite(s): CHM 155

CHM 199—CHEMISTRY INTERNSHIP I **1-12-3**
A supervised work experience which serves to link the student's academic experience with practical applications of chemistry at an individual site.

CHM 200—UNIT OPERATIONS **3-2-4**
Designed to acquaint students with basic processes used in the chemical industry. Laboratory work involves the operation of pilot plants. Course topics include: process operations, piping and instrument diagrams, process equipment, process control, plant safety and analytical procedures associated with each pilot plant.

CHM 250—ORGANIC CHEMISTRY I **3-4-4**
Presents organic chemistry by using concepts of chemical and physical properties, the reactions and reaction mechanisms to explore several classes of organic compounds. Kinetics studies are used where appropriate to verify the reaction mechanisms. Hydrocarbon families are used to introduce generalized organic reactions, with group reactions of other families presented as well. Prerequisite(s): CHM 156

CHM 251—ORGANIC CHEMISTRY II **3-4-4**
An extension of Organic Chemistry I. Concepts presented in this course include the relationship of spectroscopy to structure, and discussions of the reactions and properties of a variety of organic compounds. Additional material dealing with mechanisms of reactions is also presented. Prerequisite(s): CHM 250

CHM 264—CHEMISTRY FOR THE HEALTH SCIENCES **3-4-4**
Presents chemical concepts that enhance the student's study of the physiological consideration of the human. Topics from general, organic and biological chemistry are presented. Consideration of factors that influence physiological reactions are stressed. Prerequisite(s): One year of high school chemistry, CHM 107 or CHM 155

CHM 299—CHEMISTRY INTERNSHIP II **1-12-3**
Requires the student to apply advanced chemical background to practical applications at an industrial site. The student will work in cooperation with a chemistry specialist who will direct the activities of the student to provide experience in the use of the instruments and functioning found in industry.

CIS–COMPUTER INFORMATION SECURITY

CIS 168—PRINCIPLES OF INFORMATION SECURITY **3-0-3**
This course is designed to introduce the student to the dynamic discipline of information security. Information security covers a broad range of areas from keeping networks secure from hackers to protecting one's own personal information. Areas of study will include ethical, moral, and legal issues; industry-and vendor-specific certifications; encryption and decryption methods and protocols; and the security system design life cycle. Up-to-the-minute developments in information security and network security will also be covered. Prerequisite(s): Must obtain a current criminal record check

CIS 209—LAN SECURITY **3-0-3**
This course introduces students to user, hardware, and software security issues associated with local area networks. Topics presented will include user authentication, infrastructure security: devices, media, security topologies, intrusion detection; and software: file system, service packs, patches, directory services and databases. Prerequisite(s): Must obtain a current criminal record check

CIS 210—INTERNET SECURITY **3-0-3**
This course will focus on the theories, ethics, terminologies, and principles of information and protection within a wide area network environment. Specific topics will include shopping cart transactions, third-party transactions, Web-hosting security breaches and principles of data transfer. Students will gain an invaluable understanding of how data moves through the Internet and some measures to protect this data. Prerequisite(s): Must obtain a current criminal record check

CIS 212—COMPUTER FORENSICS **3-0-3**
This course will examine the technical aspects of digital computer evidence: collection, identification, authentication, classification and presentation. Specific methods for collecting computer related evidence will be covered. The dynamic process of conducting a successful forensics investigation using information as computer evidence is also addressed. Students will investigate software common to the forensics profession. Prerequisite(s): Must obtain a current criminal record check

CIS 250—NETWORK INTRUSION DETECTION **3-0-3**
This course will introduce the student to the vulnerabilities of specific types of network services that are the most hacked, including remote access services (RAS), e-mail, Web-hosting, wireless networking and file transfer protocol (FTP). Students will gain an appreciation of the major areas of vulnerabilities and the measures that can be taken to protect the system from outside intrusion. Prerequisite(s): CPT 183 and must obtain a current criminal record check

CIS 252—DIGITAL FORENSICS I **3-0-3**
This course will examine the advanced technical aspects of digital computer evidence detection, collection, identification and preservation. Emphasis will be placed on specific tools and methods for extracting deleted or destroyed computer related evidence. Methods and practices that should be applied by the digital forensic professional are presented. The dynamic process of conducting a successful forensics investigation will be covered from inception to fruition. Prerequisite(s): CPT 182 and must obtain a current criminal record check

CIS 253—COMMUNICATIONS SECURITY **3-0-3**
This capstone course will continue to examine security within a wide area network environment as well as reinforce competencies covered in lower level security courses. Students will find out how Websites and servers are vulnerable and they will explore the various ways network technologies can be subverted to allow abusers to steal data while in transit. Topics include: node and service authentication, address spoofing, hijacking, SYN floods, smurfing, sniffing, routing tricks, buffer overruns and other exploitation of software development errors. Prerequisite(s): CPT 238 and must obtain a current criminal record check

CIS 262—DIGITAL FORENSICS II **3-0-3**
This course is a continuation of CIS 252 Digital Forensics and builds upon the basics of computer forensics and data recovery. This course will utilize available forensic software to retrieve and examine files from a PC commonly found to contain important evidence. Additionally, the course will cover the examination of personal hand held devices such as cell phones, smart phones (Blackberry and iPhone), and iPods. Prerequisite(s): CIS 252 and CIS 212 and must obtain a current criminal record check

CNC–COMPUTER NUMERICAL CONTROL

CNC 100—INTRODUCTION TO COMPUTER NUMERICAL CONTROL **2-2-3**

Designed to extend the skills of a machinist into modern CNC production techniques. Students will be taught manual part programming in Word Address Format. Emphasis will be placed on writing actual part programs for milling and lathe operations.

CNC 199—COMPUTER NUMERICAL CONTROL INTERNSHIP **1-12-3**

Students will obtain experience in the computer numerical control field through a combination of occupational instruction and on-the-job training. This course integrates classroom occupational study with a planned supervised practical work experience. Prerequisite(s): Permission of instructor

CNC 200—COMPUTER NUMERICAL CONTROL I **3-3-4**

Designed to provide the machinist student with a thorough understanding of MasterCAM software (version 9.1) for CNC part programming. Students will be introduced to MasterCAM's unique features that allow graphic development of part programs, tool path verification, and post processing of G Coded programs for both lathe and milling operations. Prerequisite(s): CNC 100

CNC 201—COMPUTER NUMERICAL CONTROL II **3-3-4**

Designed to provide the student with training and experience in programming, setting-up and machining operations of CNC lathes and CNC milling machines. Both the theory and practice of turning, facing, boring, drilling, threading, grooving, tapping, contouring and pocketing are covered in the course. MasterCAM software will be used to program the machine tools. Prerequisite(s): CNC 200

CPT–COMPUTER TECHNOLOGY

CPT 050—TECHNOLOGY AT WCCC **1-0-1**

This course introduces students to the technology used in classrooms and online environments at Westmoreland County Community College. The goal of the course is to provide a foundation and develop skills needed to function and learn in a 21st Century educational environment.

CPT 110—EXPLORING WINDOWS **1-0-1**

This course focuses on the Windows stand-alone operating environment and will enable students to be productive when using the system software. Topics include Windows as a graphical user interface, menus, dialog boxes, file management, maintenance and updating. Students are provided with hands-on experience by using computers in the microcomputer laboratory.

CPT 120—INTRODUCTION TO THE INTERNET **1-0-1**

An introduction to the Internet, its tools, and resources. This one-credit course is designed to provide a brief history of the development of the Internet, current definitions and explanations of the format of the network today. The course provides expanded instruction of the tools used to navigate the network and presents an overview of how to reach network resources.

CPT 122—VISIO **1-0-1**

This course will focus on creating visual drawings of information flow using Microsoft Visio software. Visio is a tool used to create diagrams to understand concepts more quickly and to communicate information more effectively in the business/technical environment. Topics include block diagrams, business process diagrams, charts and graphs, database diagrams, flowcharts, network diagrams, organization charts and project schedules.

CPT 143—IP TELEPHONY **3-0-3**

This course focuses on the design, installation, configuration and management of IP Telephony systems in the corporate data network environment. Students will learn the underlying theories and protocols of IP Telephony in addition to learning how to set-up, configure and administer an IP Telephony system.

CPT 145—INTRODUCTION TO COMPUTER TECHNOLOGY **3-0-3**

This survey course provides students with an overview of computer technology topics-hardware, software, networking, Internet, data management, system design, ethical issues, mobile computing, programming and careers in computer technology. It is designed as a first course for students pursuing a degree in the computer field.

CPT 150—MICROCOMPUTER CONCEPTS **3-0-3**

This course introduces students to the microcomputer system and software applications. Students are provided with hands-on experience using Windows, email, the Internet and Office components—Word and Excel. Prerequisite(s): CPT 050 or satisfactory Placement Test score

CPT 151—ADVANCED OFFICE APPLICATIONS **3-0-3**

This course provides word processing, spreadsheet, database and presentation instruction on microcomputers. Students use the Microsoft Office components: Word, Excel, Access and PowerPoint to create, edit, format and store documents, worksheets, databases and presentations. Prerequisite(s): CPT 150

CPT 160—INTRODUCTION TO PROGRAMMING **3-0-3**

This course introduces students to programming logic, design, and development by applying programming logic to creating applications using the object-oriented system of programming-ALICE. Upon completion of this course, students will be able to: understand the structure of a computer program, plan and execute good program design, use sequence, selection, and iteration as required by a program, and create and use methods. No prior programming experience is required.

CPT 162—VISUAL BASIC I **3-0-3**

Students will create Windows applications using Visual Basic. Topics include: good program design, event-based programming, control structures, subroutines and function. Prerequisite(s): CPT 160

CPT 163—JAVA PROGRAMMING I **3-0-3**

An introduction to computer programming and the Java language. Topics presented include the logical flow of instructions, control structures and mathematical procedures. Emphasis is placed on the programming process, documentation and Java fundamentals. Prerequisite(s): CPT 160

CPT 171—TELECOMMUNICATIONS FUNDAMENTALS **5-0-5**

This course focuses on the prerequisite knowledge required for individuals desiring to work in the field of telecommunications. The major topics covered in this class are the OSI reference model and how it is utilized in data communications, IP addressing and subnetting, and TCP/IP and how it functions with the network-layer protocols. Additionally, the technologies associated with the various implementations of Ethernet (10/100/1000/ 10G versions) and network cabling (twisted pair, fiber-optics and wireless) will be covered. This course is the first course in a four-course sequence that is designed to prepare students for the Cisco Certified Network Administrator (CCNA) certification exam.

CPT 180—C++ PROGRAMMING **3-0-3**

This course introduces the student to programming using the C and C++ languages. Basic programming techniques, data types, flow of execution, functions and data structures are among the topics that will be covered. Adherence to the ANSI Standards of C and C++ will be emphasized.

CPT 181—INTRODUCTION TO TELECOMMUNICATIONS **3-0-3**

Covers telecommunications, its role in the firm and in informal systems and the planning and design of a communications system. Basic communication theory, components of data communication systems, error detection techniques, network protocols and line control procedures, communication carrier facilities and system planning considerations also covered. Prerequisite(s): CPT 145 or CPT 150

CPT 182—OPERATING SYSTEMS 3-0-3
This course is designed to introduce students to the concepts, components and technologies found in desktop based operating systems. Operating Systems explores the fundamentals with an overview of MS-DOS and provides hands-on experience with a Windows desktop client OS. Topics include but are not limited to: installation, configuration, operation and troubleshooting of commonly used operating systems. Prerequisite(s): CPT 110 or CPT 150

CPT 183—LOCAL AREA NETWORKS 3-0-3
Designed to provide the concepts, components, terminology and topologies of Local Area Networks (LANs). Training issues will include network concepts, network essentials, maintenance and network administration. Efficient and effective network methodologies are presented to enhance network management fundamentals.

CPT 185—POWERPOINT 1-0-1
This course focuses on Microsoft PowerPoint as a professional tool for the development of visual presentations. Topics include creating slide shows, visual elements, formats, printing, importing and delivering effective presentations. File management, editing and Web-based presentations are also covered. Students will be provided with extensive hands-on experience in a modern computing environment. Prerequisite(s): CPT 110 or CPT 150

CPT 190—WORD FOR WINDOWS 3-0-3
Focuses on the Word software, ranging from the most basic word processing tasks to more complicated procedures. Topics include document entry, editing, formatting, cutting and pasting, fonts, glossaries, tables, file merging, graphics and frames. Emphasis will be placed on the topics of document templates, macros, and overall document design to create a more productive use of the package and professional looking documents. Prerequisite(s): CPT 110 or CPT 150

CPT 195—EXCEL FOR WINDOWS 3-0-3
Covers how to build spreadsheets through typical business problems, generate sophisticated graphs and print professional looking reports. Students will learn how to use powerful statistical, mathematic and financial functions. The course will also introduce dynamic linking, macros and import/exporting with other microcomputer application software. Prerequisite(s): CPT 110 or CPT 150

CPT 196—ACCESS FOR WINDOWS 3-0-3
Included as part of the professional Microsoft Office Suite, Microsoft Access is a relational database management system that allows the user to store and retrieve information about related records. This course will focus on a wide range of activities from the fundamentals of good database design and the DBMS terminology to the creation of database applications. Material covered will include: creating tables, forms, queries, reports, macros and modules to handle common business applications. Prerequisite(s): CPT 110 or CPT 150

CPT 198—FIBER-OPTIC TECHNOLOGIES 3-0-3
This course is designed to provide the fundamentals of fiber optics and the light-generating process used to transport digital information as used in data communications and network environments. Topics covered will include single-mode fiber, multi-mode fiber, fiber-optic communications, fiber-optic terminations, polishing, testing, trouble-shooting and measuring signal quality.

CPT 199—INTERNSHIP 1-12-3
A coordinated period of supervised work experience in organizations that will offer students the opportunity to acquire competence in their chosen area of technical specialization. Prerequisite(s): Permission of instructor

CPT 201—WEB DESIGN WITH WEB STANDARDS 3-0-3
Use a World Wide Web development tool to create, view, edit and manage simple to complex Web sites. This course will focus on a range of activities from site design and navigation to publishing on the Internet. Topics covered include: creating a page and a site, formatting, links, tables, graphics, frames, forms, templates and components.

CPT 203—XHTML AND CSS 3-0-3
This course introduces the student to the tools and techniques used to develop documents for transmission to external (Internet) and internal (Intranet) clients. Topics include Hyper Text Markup Language (syntax, formatting, forms, tables and linkage) and JavaScript (syntax, object methods and properties, data types, data selection and repetition structures, and Window, Form, Frame and Document objects).

CPT 206—JAVASCRIPT 3-0-3
This course introduces students to Web application programming with scripting languages. Students create, test and debug scripts that include: object methods and properties, data types, data selection and repetition structures, as well as Window, Form, Frame, and Document objects.

CPT 208—ADVANCED ACCESS 3-0-3
A continuation of CPT 196, this course focuses on application development using Microsoft Access. Topics include event-driven programming, enhancing applications through macros, menus and toolbars, and using the Visual Basic for Access to customize application development. Prerequisite(s): CPT 196

CPT 211—ROUTING TECHNOLOGIES 5-0-5
This course is designed to develop the skills students will need to design, build and maintain a small to medium sized network. This course will build upon the course material presented in Telecommunications Fundamentals (CPT 171). The course provides students with knowledge of router operations, and will cover the configuration of CISCO routers to operate independently in an enterprise environment. This is the second in a four-course sequence designed to prepare students for the Cisco Certified Network Associate (CCNA) professional certification exam. Prerequisite(s): CPT 171

CPT 213—JAVA PROGRAMMING II 3-0-3
This course builds on concepts presented in CPT 163-Java Programming. Topics covered in this course include inheritance, polymorphism and application development for graphical user interfaces (GUI). Students will use an integrated development environment (IDE) to create applets. Prerequisite(s): CPT 163

CPT 214—WIRELESS COMMUNICATION 3-0-3
This course introduces the student to the principles of wireless communication, the line-of- sight microwave, line-of-sight laser, and line-of- sight propagation techniques. Specific topics will cover satellite uplink and downlink systems, non line-of-sight communications methods in addition to various line-of-sight technologies. The communications methods addressed in this course will focus on the direct interface with local and wide area networking technologies. Prerequisite(s): CPT 171 or CPT 183

CPT 219—FIBER OPTIC ANALYSIS AND DESIGN 3-0-3
This course is designed to provide training with the tools needed to understand the design installation and splicing specialization of Fiber Optic Networks. Training is focused on network overview, fiber properties, hanging and routing of hardware, the resolution of environment factors and planning to address optical network management issues. Fusion of: ribbon, discrete, pigtail and mid-span cables. Mechanical splicing, inner duct, splice trays and other hardware and devices will be used to insure a wide base of installation knowledge. Participants will work "hands-on" during labs with a variety of materials to advance their fiber manipulation skills. This course is designed as a preparation for the Fiber Optic Specialist/Testing certification. Prerequisite(s): CPT 198

CPT 222—FIBER OPTIC TESTING AND TROUBLESHOOTING 3-0-3
This course is designed to provide training in the testing and troubleshooting of fiber optic systems. Classroom lecture, demonstration and repetitive testing with emphasis on analysis with interpretation of actual instrument-derived test results are the methods of instruction. Topics covered will include repetitive testing of both single-mode fiber, multi-mode fiber, repetitive insertion loss tests on multiple links, repetitive testing with Optical Time Domain Reflectometry. Emphasis will be placed on testing and troubleshooting, measuring signal quality and reflectance testing. This course is designed to prepare for the fiber optic specialist/testing certification. Prerequisite(s): CPT 198

CPT 230—INTEGRATED OFFICE APPLICATIONS 3-0-3
This course demonstrates the integration of the Microsoft Office Professional suite components. Using a case study approach, students will implement advanced features for problem analysis and problem solution. Students entering the course are expected to have mastered basic skills in Word, Excel, PowerPoint and Access. Outlook is introduced. Prerequisite(s: CPT 151 or CPT 185, CPT 190, CPT 195 and CPT 196

CPT 235—DATABASE MANAGEMENT SYSTEMS 3-0-3
Explore the theory behind data management through the use of a database management system and stressing the importance of good database design. Topics include controlling redundancy, entity-relationship diagrams, normalization and an introduction to SQL. Prerequisite(s): CPT 151 or CPT 196

CPT 238—WIDE AREA NETWORKING 3-0-3
This course is designed to provide the student with an overview of the technology and practices in wide area networking. Included is instruction in the installation, configuration and troubleshooting of internetworking hardware and software. Prerequisite(s): CPT 171 or CPT 183

CPT 242—VISUAL BASIC II 3-0-3
Covers techniques currently needed to write advanced Windows programs using Visual Basic. Advanced programming projects will include error handling, graphics, procedures, multiple forms, processing with files, object linking and embedding (OLE), dynamic data exchange (DDE), and how to control and interact with most PC databases. Prerequisite(s): CPT 162

CPT 248—PC HARDWARE 3-0-3
This course focuses on the fundamentals of the components in a personal computer. Topics will include motherboards, processors, memory, drives, expansion boards and selected peripheral devices.

CPT 249—PC TROUBLESHOOTING 3-0-3
This course covers the installation, configuration, operation, and troubleshooting of personal computers using advanced hardware and software concepts and the utilization of information resources found on the Internet. Emphasis will be placed on advanced troubleshooting techniques for repair and maintenance of personal computers. Prerequisite(s): CPT 182 and CPT 248

CPT 256—LINUX DESKTOP 3-0-3
This course is designed as an introduction to the Linux operating system. Course content will include the installation, upgrading, configuration and troubleshooting of various commercial Linux distributions. Popular Linux utilities and applications will be used. Emphasis will be placed on the use of Linux as a networked application server and Web server. Prerequisite(s): CPT 182

CPT 257—SWITCHING TECHNOLOGIES 3-0-3
This course focuses on the basics of switching and switch configuration. The major topics covered in this class are switching technologies; configuring switches for Ethernet networks; configuring VLANs advanced LAN and LAN switched design as well as advanced coverage on router configuration. Students will also be introduced to Variable Length Subnet Masking (VLSM) and various intermediate routing protocols including Ripv2, single-area OSPF and EIGRP. This course is the third course in a four-course series offered in partnership with CISCO Systems Inc. Prerequisite(s): CPT 211

CPT 259—USER SUPPORT OPERATIONS 3-0-3
This is an introductory course that provides those seeking to become help desk professionals with skills ranging from customer service, troubleshooting computer problems, operation of the help desk itself, training computer users and facilities management. It is expected that students have a prior knowledge of basic computer concepts, word processing, spreadsheet and database applications and Internet experience. Prerequisites(s): CPT 151 or CPT 195 and CPT 196

CPT 262—WINDOWS CLIENT SERVER 3-0-3
This course is designed to provide the student with the knowledge to install, configure, operate, navigate and administer a Windows client and server computer. Students will learn to design, install, maintain and troubleshoot the services and protocols found in a network environment.

CPT 264—WINDOWS SERVER MANAGEMENT 3-0-3
This course covers the installation, configuration and troubleshooting of a Windows network infrastructure. Topics include: DNS, DHCP, remote access, network protocols, WINS and IP routing, active directory, sites, organizational units, domains and security groups. Prerequisite(s): CPT 262

CPT 271—ORACLE SQL I 3-0-3
This course will provide students with an introduction to the SQL query language as it is used in an Oracle database environment. The course content will include creating and modifying queries, the design of effective queries and query programming. Prerequisite(s): CPT 196 or CPT 235

CPT 274—A+ CERTIFICATION REVIEW 2-0-2
Review of testable computer hardware and software material needed to prepare for the Hardware and Software A+ Service Technician Certification exams. Corequisite(s): CPT 249

CPT 277—ELECTRONIC COMMERCE TECHNOLOGY 3-0-3
This course focuses on analyzing the impact of emerging trends and technologies in electronic commerce. Specific topics are selected by faculty to reflect the current state-of-the-art in the field.

CPT 286—SYSTEMS ANALYSIS AND DESIGN 3-0-3
System Analysis and Design introduces the student to the tasks performed by systems analysts and the process that is used to complete successful projects. This course presents the life cycle of a computer system, the tools used by the systems analyst in each phase, and the role of the systems analyst within that life cycle. Stressing the importance of functioning as a member of a team, the course presents techniques to successfully manage a project, as well as communication with other members of the team and the organization. It serves as a capstone course, applying all the knowledge the student has gained into a final cohesive project. Prerequisite(s): CPT 151 or CPT 196

CPT 291—WAN TECHNOLOGIES 5-0-5
This course focuses on the theory and design of wide area networks (WANs). The major topics covered in this course are WAN theory and design; WAN technologies such as PPP, Frame Relay and ISDN; and network troubleshooting as well as coverage in NAT/PAT, and DHCP router configuration. This is the final course offered in partnership with Cisco Systems Inc. Students successfully taking the four-course series offered through this partnership should be well prepared to pass the CCNA exam, which is a highly regarded certification in the telecommunications industry. Prerequisite(s): CPT 257

CPT 293—CCNA EXAM PREP 1-0-1
This course will highlight the material presented in the four CISCO Telecommunications courses. This course will review the CCNA Exam requirements and prepare students for the exam. Prerequisite(s): CPT 291

CRJ–CRIMINAL JUSTICE

CRJ 155—INTRODUCTION TO CRIMINAL JUSTICE 3-0-3
The history, development and philosophy of law enforcement in democratic society, as well as introduction to modern agencies of criminal justice will be discussed. An orientation to criminal justice as a career field will be examined and the criminal justice flow chart and processes will be illustrated.

CRJ 160—CRIMINAL LAW I 3-0-3
Elements of substantive criminal law relevant to attaining the preservation and protection of life and property; structure, definitions and most applicable pertinent sections of criminal statutes.

CRJ 162—POLICE ADMINISTRATION I 3-0-3
This course will examine the role of law enforcement in contemporary society relative to crime prevention, community policing, professional development and its effect on the community. Analysis of organizational structure, administration, management practices and operating procedures of law enforcement agencies with emphasis on line services activities. Recruitment, selection, training and career development of police will be discussed. Prerequisite(s): CRJ 155

CRJ 163—CRIMINAL EVIDENCE 3-0-3
Principles, duties and mechanics of criminal procedures as applied to important areas of arrest, force, search and seizure will be examined. An overview of the processes involved in the uses of criminal evidence and the court system will be studied. Significant criminal court decisions will be summarized and their effect on criminal justice system.

CRJ 172—SUBSTANCE ABUSE AND CRIME 3-0-3
Analysis of the role of criminal justice in controlling the use and abuse along with the manufacturing, trafficking and distribution of illicit and legal substances is the primary objective of this course. Students will explore the relationship between drugs, alcohol and criminality along with an overview of law enforcement strategies to combat the war on drugs and evaluating the effectiveness of those strategies. Theories and research regarding causes and consequences of illegal drug usage and trafficking and its effect on the criminal justice system will be evaluated. Students will analyze the current economic and social costs along with the implications of alcohol abuse correlating with such crimes as rape, domestic violence and homicide.

CRJ 180—CORRECTIONS 3-0-3
This course studies special problems and practices in the correctional system. Analysis will be conducted of current correctional ideologies as they apply to historic punishment philosophies and their use by the American criminal justice system in the contemporary correctional environment.

CRJ 195—INTRODUCTION TO PRIVATE SECURITY 3-0-3
This introduction to private security will familiarize the student with basic information that will serve as an overview of the private security field. This will include a historical and philosophical perspective of private security, its principles, its legal authority, and its effect on society in general.

CRJ 220—RESEARCH METHODS IN CRIMINAL JUSTICE 3-0-3
An introduction to basic criminal justice methods of research and analysis will be presented. Examination will be conducted of various research techniques, data collection strategies, and analytical tools. Research procedures and statistical techniques are identified. Problem solving by research and identification of contemporary criminal justice research sources will be investigated. Prerequisite(s): CPT 150

CRJ 225—CRIMINOLOGY OF TERRORISM 3-0-3
Students will discuss the criminology of terrorism including the typologies of terrorism, tactics employed by terrorist organizations, terrorist profiles and organizational structures of terrorist groups. Domestic and international terrorist groups will be evaluated. Students will analyze the modus operandi of terrorist organizations, exploring such factors as religion, politics and the social dynamics of the group. This course will examine historical as well as contemporary theories and issues of terrorism.

CRJ 255—JUVENILE DELINQUENCY 3-0-3
This course will explore the historical and contemporary theories of juvenile delinquency and justice in America. Students will analyze the causes of delinquency and discuss the various theories from various behavioral constructs about the treatment and prevention of delinquency. This course will examine various phenomena that exist today such as gangs, school violence, teenage sexuality and underage alcohol use and illegal drug use.

CRJ 261—CRIMINAL LAW II 3-0-3
This course will introduce students to a case law approach to criminal justice. The topics to be discussed will include homicides, sexual assaults, property and personal crimes along with various violent and non violent offenses. Students will examine contemporary issues of relating to such topics as child predatory offenses, domestic violence and hate crimes. Students will analyze the American court system and the functionality of both state and federal levels. Prerequisite(s): CRJ 160

CRJ 262—CRIME PREVENTION 3-0-3
Students will conduct analysis of the nature and extent of crime in the United States and examine problems and techniques in preventing crime. Emphasis is on the organization and function of crime prevention agencies and on community resources in preventing crime.

CRJ 263—INVESTIGATIVE CONCEPTS 3-0-3
Fundamentals of investigative theory; developing informational processes; principles of interviewing and question construction; instrumentation techniques; identification of persons and things; and investigative operations. Covers the history and psychology of criminal investigation, computer technology as a tool in investigation, and current issues involving invasion of privacy. Prerequisite(s): CRJ 155

CRJ 265—WHITE COLLAR CRIME 3-0-3
This course will examine the economic and sociological aspects to white collar crime as well as the criminological aspects to this growing problem in the American criminal justice system. Topics include dealing with administrative, environmental, labor and manufacturing violations, and unfair trade practices. Will also explore crimes dealing with embezzlement, extortion, fraud and conspiracy.

CRJ 276—COMMUNITY RELATIONS 3-0-3
History and background of community relations programs of police and other law enforcement agencies; public attitudes toward law enforcement agencies; the changing nature of societal controls and the concept of professionalism in law enforcement will be discussed. Case histories of community relations programs by law enforcement agencies will be examined. Various police situations and appropriate police responses in the context of community oriented policing will be studied.

CRJ 277—ETHICS AND THE CRIMINAL JUSTICE SYSTEM 3-0-3
This course is a comprehensive overview of ethical concepts, principles and theories and their relevance to crime and the criminal justice system. Students will examine practical issues and topics relevant to careers in criminal justice. The course will expose students to many moral dilemmas that they potentially may face as professionals in their chosen field.

CRJ 283—INSTITUTIONAL TREATMENT OF ADULTS AND JUVENILES 3-0-3
Correctional institutions relative to their role in the punishment and rehabilitation of individuals will be studied. The early history of imprisonment, classification and custody of incarcerates, security measures, and the development and organizational structure of jail and prison systems will be examined. Discussion will be conducted on contemporary dilemmas within institutionalization. Students will evaluate juvenile incarceration.

CRJ 290—PRINCIPLES OF CRIMINOLOGY 3-0-3
Introduces historical and current criminological theories with emphasis on the criminal justice system and its role in crime prevention.

CRJ 296—INTRODUCTION TO CRIMINALISTICS 3-0-3
The scientific aspects of criminal investigations including the application of knowledge from the forensic sciences will be examined. Included within this course will be the collection and the use of fingerprints; firearms and ballistics reports; hair, blood and paint samples; tools, poisons and other organic materials as evidence. Discussion of DNA and its relevance as scientific evidence will occur and basic crime scene investigation will be discussed. Prerequisite(s): CRJ 155

CUL–CULINARY ARTS

CUL 121—APPRENTICESHIP I 1-40-2
A supervised and evaluated on-the-job training experience designed to provide practical application of the skills and methodology of the skilled culinarian or restaurant/culinary manager. Job site must be approved by coordinator. Uniforms required. Prerequisite(s): Must be enrolled in the chef apprenticeship program.

CUL 122—APPRENTICESHIP II 1-40-2
A supervised and evaluated on-the-job training experience designed to provide practical application of the skills and methodology of the skilled culinarian or restaurant/culinary manager. Uniforms required. Prerequisite(s): CUL 121

CUL 123—APPRENTICESHIP III 1-40-2
A supervised and evaluated on-the-job training experience designed to provide practical application of the skills and methodology of the skilled culinarian or restaurant/culinary manager. Uniforms required. Prerequisite(s): CUL 122

CUL 130—BASIC CULINARY SKILLS 1-4-3
This course is designed to prepare the student for entry level cook positions. Equipment usage, care and safety will be demonstrated and practiced by the students. Basic preparation skills such as dicing, chopping, mincing, breading etc., will be demonstrated and practiced by the student. Uniforms, cutlery set and decorative tips required.

CUL 132—GARDE MANGER 1-4-3
Stresses basic garde manger principles as well as functions and duties of the department as it relates and integrates into the other kitchen operations. In addition, emphasis is placed on introduction to specialty work which includes ice carving, buffet decorations, and culinary competitions. Uniforms, cutlery set and decorative tips required. Prerequisite(s): FSM 105

CUL 135—SPEED SCRATCH COOKING 1-4-3
The student will study and prepare convenience foods used in commercial operations. Emphasis is placed on researching and analyzing the most up-to-date convenience products available. Menus will be evaluated for food and labor costs and as to where convenience products can be introduced without changing quality of product. Prerequisite(s): FSM 105

CUL 224—APPRENTICESHIP IV 1-40-2
A supervised and evaluated on-the-job training experience designed to provide practical application of the skills and methodology of the skilled culinarian or restaurant/culinary manager. Uniforms required. Prerequisite(s): CUL 123

CUL 232—FOOD SPECIALTIES 1-4-3
Advanced food preparation skills to include regional and ethnic cuisine and food trends. Uniforms, cutlery set and decorative tips required. Prerequisite(s): FSM 105

DAE–EXPANDED FUNCTIONS DENTAL ASSISTING

DAE 100—DENTAL ANATOMY 2-0-2
This course is designed to provide students with a comprehensive study of the morphology and function of the human permanent and primary dentitions and skeletal and dental classifications of occlusion. (Graduates of the WCCC Dental Assisting or Dental Hygiene programs are not required to take this course. DAS 101 or DAH 104 will be substituted for DAE 100)

DAE 101—EXPANDED FUNCTIONS DENTAL ASSISTING I 3-6-6
This course is designed to provide students with the knowledge and skills necessary to perform the EFDA functions as delegated by the PA State Board of Dentistry. Lecture and laboratory sessions will present each function in detail and provide students with the opportunity to become competent in the EFDA functions.

DAE 102—EXPANDED FUNCTIONS DENTAL ASSISTING II 1-8-3
This course is designed to provide students with the opportunity to perform EFDA functions and evaluate their performance through journal writing and class discussion. Clinical experience is arranged through approved dental practices. Liability insurance must be maintained by the student while enrolled in the program. Clinical sessions include a wide variety of restorative experiences on many patients. Two four-hour clinical sessions are required per week for 15 weeks. Students who are able to schedule more than eight hours per week may complete the clinical rotation in less than 15 weeks. Prerequisites(s): DAE 100, DAE 101

DAH–DENTAL HYGIENE

DAH 101—INTRODUCTION TO DENTISTRY 2-2-3
Designed to give the student an in-depth study of dental terminology, medical/dental histories, charting, dental instruments, infection control, sterilization, pain control and patient management. Lecture and laboratory sessions introduce the student to each of the dental specialties and provide the student with the knowledge and skills required for application in the clinical setting. Corequisite(s): DAH 102

DAH 102—DENTAL MATERIALS 1-2-2
Lecture and laboratory course designed to familiarize the dental hygiene student with commonly used materials in dentistry. The focus is on properties, proper technique of manipulation, and influence of manipulation upon these properties. Corequisite(s): DAH 101

DAH 103—MEDICAL EMERGENCIES 1-0-1
Prepares student to recognize and manage medical emergencies in a dental office. Emphasis is placed on prevention through the use of medical histories and the team approach to emergency situations.

DAH 104—HEAD, NECK AND DENTAL ANATOMY 4-0-4
Designed to reinforce the normal anatomical structures, musculature, blood and nerve supply to the head and neck. The administration of local anesthesia, tooth morphology and function are also discussed.

DAH 105—DENTAL RADIOLOGY 2-2-3
Provides an overview of dental radiology principles and techniques. Topics include X-ray production, radiation safety, exposure technique, film processing, landmark identification and client management. The student will apply didactic concepts in a supervised clinical laboratory setting. Prerequisite(s): DAH 104

DAH 106—NUTRITIONAL BIOCHEMISTRY 2-0-2
Introduces the science of nutrition. Sources and functions of nutrients, utilization of food in the body, nutritional requirements for various age groups and rudiments of diet counseling are discussed.

DAH 109—ORAL PATHOLOGY 2-0-2
Studies the process of diseases with emphasis on diseases and their manifestations in the oral cavity. Recognition and detection of such deviations from normal is stressed. The emphasis is on inflammation, regeneration, repair, immunity, allergy, oral manifestations of disease, tumors and developmental disturbances.

DAH 111—DENTAL HYGIENE LECTURE 3-0-3
Provides an introduction to the fundamental concepts of oral health care services, disease control and dental hygiene instrumentation skills. Corequisite(s): DAH 112

DAH 112—DENTAL HYGIENE LAB 0-8-4
Designed for students to observe, discuss and practice the clinical skills required to perform oral health care services. Students will apply didactic concepts in a supervised clinical laboratory setting. Prerequisite(s): BIO 171, CHM 264 Corequisite(s): DAH 111

DAH 113—ORAL HISTOLOGY/EMBRYOLOGY 2-0-2
Studies the embryonic development of the head, face and oral cavity. Histologic structure of the oral tissues with relation to their clinical form and function is discussed.

DAH 114—PERIODONTICS I 3-0-3
Designed to study the periodontium in healthy and diseased states. Emphasis is placed on the anatomy of the periodontium, disease classification and etiology, the assessment and documentation of clinical findings and the role of the dental hygienist in non-surgical periodontal therapy.

DAH 115—CLINICAL DENTAL HYGIENE I 2-12-5
Provides for development of the knowledge and clinical skills required to provide oral health care services. Didactic emphasis is placed on disease control and prevention. Students will provide oral health care services in a supervised clinical setting.

DAH 205—PERIODONTICS II 1-0-1
Designed to study the diagnosis and treatment of periodontal disease. Emphasis is placed on the differentiation of various periodontal surgical procedures, wound healing, implantology, pre- and post-operative patient education and preventive maintenance. Prerequisite(s): DAH 114, DAH 115

DAH 206—CLINICAL DENTAL HYGIENE II 2-16-6
Provides refinement of the knowledge and skills required to provide oral health care services. Didactic emphasis is placed on the provision of services for and the management of patients with special needs. Students will provide oral health care services in a supervised clinical setting. Prerequisite(s): DAH 115

DAH 207—PHARMACOLOGY 2-0-2
Designed for dental hygiene students to study the physiology, interactions and effects of drugs. Emphasis is placed on drugs commonly used and/or encountered in dental practice.

DAH 208—CLINICAL DENTAL HYGIENE III 2-16-6
Designed to expand the students' knowledge and clinical skills, enabling them to render comprehensive oral health care utilizing case based methodology, the reflection on ethical and legal obligations of the dental professional and successful role implementation upon employment. Students will provide oral health care services in a supervised clinical setting. Prerequisite(s): DAH 206

DAH 209—COMMUNITY DENTAL HEALTH 3-0-3
A basic orientation to the principles of community oral health planning and practice. The hygienist's role as an educator and resource person for the community will be emphasized. Students will expand their knowledge and skills necessary to promote oral health care in the community.

DAN–DANCE

DAN 155—BALLET I 3-0-3
An introduction to the art of ballet as practiced in Western Europe and the United States. Fundamental instruction will consist of barre and floor exercises, basic combination skills, and choreography. Ballet and dance terminology will be taught in conjunction with the class activities. Students will be expected to choreograph a short piece for a live performance in front of their peers at the end of the semester.

DAS–DENTAL ASSISTING

DAS 100—INTRODUCTION TO DENTAL ASSISTING 4-0-4
This course is designed to give the student an introduction to the scope and depth of dental assisting practice. An introduction to the dental specialties is provided with an emphasis on restorative dentistry procedures. Corequisite(s): DAS 101, DAS 103

DAS 101—ORAL ANATOMY 2-0-2
This course is designed to study the normal anatomy of the oral cavity and the oral facial structures as well as the nerve supply to these areas. Tooth morphology and function are also discussed. Corequisite(s): DAS 100, DAS 103

DAS 102—DENTAL MATERIALS FOR DENTAL ASSISTANTS 1-2-2
Lecture and laboratory course designed to familiarize the dental assisting student with commonly used materials in dentistry. The focus is on appropriate use of the materials and the correct manipulation of the materials.

DAS 103—DENTAL ASSISTANT LAB 0-8-4
This course is designed for students to observe, discuss, and practice the clinical skills required to perform dental assisting procedures. Students will apply didactic concepts in a supervised clinical laboratory setting. Corequisite(s): DAS 100, DAS 101

DAS 104—DENTAL SCIENCE 4-0-4
This course provides an overview of the dental sciences. Didactic emphasis is placed on pharmacology/pain control, oral histology and embryology, oral pathology and nutrition. Prerequisite(s): DAS 100

DAS 105—DENTAL RADIOLOGY FOR DENTAL ASSISTANTS 2-2-3
This course provides an overview of dental radiology principles and techniques. Topics include X-ray production, radiation safety, exposure technique, film processing, landmark identification and client management. The student will apply didactic concepts in a supervised clinical laboratory setting.

DAS 106—CLINICAL DENTAL ASSISTING I 2-12-5
This course provides didactic and clinical practice experience for the student dental assistant. The didactic portion of this course relates to preventive dentistry and the treatment of patients with special needs. Emphasis is also on the dental specialties of pediatric dentistry, endodontics, oral pathology, oral maxillofacial surgery, orthodontics, periodontics, prosthodontics and dental public health. Students will be supervised in all phases of dental assisting while rotating through selected departments at the University of Pittsburgh School of Dental Medicine and the WCCC Dental Hygiene Clinic. Prerequisite(s): DAS 100, DAS 101, DAS 103 Corequisite(s): DAS 104

DAS 108—CLINICAL DENTAL ASSISTING II 1-12-4
This course provides didactic and clinical practice experience for the student dental assistant to be competent to begin practice upon program completion. The didactic portion of this course relates to preparation for the Dental Assisting National Board Examinations and successful role implementation upon employment. Emphasis is also placed on the legal and ethical issues in dentistry. Clinical emphasis is on obtaining mastery of dental assisting skills. Students will complete a supervised preceptorship in private dental offices. Prerequisite(s): DAS 106

DAS 109—PRACTICE MANAGEMENT 2-0-2
This course presents an overview of the administration and a management of a dental office. The student will be introduced to the use of the microcomputers and their application in a dental office. Corequisite(s): DAS 108

DFT–DRAFTING

DFT 105—TECHNICAL DRAFTING I 2-4-4
A beginning course for students who have little or no previous experience in drafting. The principle objectives are: basic understanding of orthographic projection; size description, detail and assembly work drawings; understanding of principles and appropriate applications of descriptive geometry. A.S.A. standards are stressed. Interpretation of industrial sketches and prints is introduced to emphasize accepted drawing practices and to develop an early appreciation of engineering graphics.

DFT 106—TECHNICAL DRAFTING II 2-4-4
A continuation of DFT 105 Technical Drafting I. The instructional units will provide the students with more advanced drafting techniques and competencies. Handbooks and other material sources in adherence to the American National Standards Institute will be utilized. Prerequisite(s): DFT 105

DFT 110—BLUEPRINT READING 1-2-2
Introduces the basics of drafting principles and symbology used for interpreting prints for industry. Actual prints are provided for experience in proper interpretation. Topics include title blocks, material identification, revision systems, sketching, orthographic projection theory, dimensioning and tolerance, detail and assembly drawings, sections, thread representation and specifications and callouts for welding processes.

DFT 112—INTRODUCTION TO DESIGN, MATERIALS AND PROCESSING 3-0-3
Focues on the study of design, materials and the primary processing methods used in manufacturing. A practical course devoted to the many ways in which raw materials are economically converted into useful products. Discussions of primary processing methodsmaterials additions, removal, and change are grouped together, followed by coverage of applications. Properties of various materials will be covered. Students first build a thorough knowledge of similarities and differences in materials, then processing methods, and that foundation carefully sets the stage for an understanding of how to choose the optimal processes for a specific project.

DFT 199—DRAFTING AND DESIGN INTERNSHIP1-12-3
Students will obtain experience in the drafting and design field through a combination of occupational instruction and on-the-job training. This course integrates classroom occupational study with a planned supervised work experience. Prerequisite(s): Permission of instructor

DFT 207—TOOL DESIGN 2-2-3
Designing and detailing drawings, cutting tools, dies, jigs, fixtures and forming tools that enable a tool and die maker to make tools capable of producing duplicate parts on a production basis. Prerequisite(s): DFT 106

DFT 208—PRODUCT DESIGN 2-2-3
Introduces methods of designing a finished product or a simple machine. Student applies the basic design fundamentals and computations needed to produce a product. Prerequisite(s): EGR 105 or DFT 112, DFT 207

DFT 258—AUTOCAD 2-4-4
AutoCAD teaches students to draw, edit, dimension and plot 2-D machine drawings with AutoCAD software. Basic operating features and file management functions of Microsoft Windows will also be taught in the course.

DFT 259—ADVANCED AUTOCAD 2-4-4
Advanced AutoCAD covers advanced drawing and editing commands, drawing and plotting scales, symbol and block usage, Xreferences, paper space functions, ordinate dimensions, and customizing toolbars. Approximately one-third of the semester will be devoted to covering AutoCAD's 3D solid modeling capabilities. Prerequisite(s): DFT 258

DFT 262—PIPING, STRUCTURAL DETAILING AND ELECTROMECHANICAL DRAFTING 2-4-4
This course is an AutoCAD applications course that will include piping, structural detailing, electromechanical details, and working drawings. The student will experience more complicated problems in this course and will coordinate previous skills for a graphic solution. (Most current version of AutoCAD will be used.) Prerequisite(s): DFT 258

DFT 266—AUTODESK INVENTOR 2-4-4
Autodesk Inventors created and marketed by Autodesk for mechanical design. Inventor is a 3-D feature-based parametric solid modeling computer software. Inventor may be used to create 3-D solid model parts, engineering drawings of solid model parts and assemblies of solid parts. Inventor is also capable of creating sheet metal parts and sheet metal part drawings. The primary goal of this course is to teach students how to use Inventor software for solid part modeling. Creating and editing solid parts, creating engineering drawings from solid parts, assembly modeling and creating sheet metal parts will be covered in lectures and lab assignments.

DMS–DIAGNOSTIC MEDICAL SONOGRAPHY

DMS 103—CROSS SECTIONAL ANATOMY FOR ULTRASOUND 2-0-2
This course covers the human anatomy through the evaluation of transverse, sagittal, coronal and oblique planes. Organs and structures also in the head, neck, thorax, abdomen, pelvis and extremities are addressed. Student will be able to visualize any portion of the anatomy of the body as a three-dimensional whole and to ultrasound images.

DMS 105—ABDOMINAL I 3-3-4
This course presents normal anatomy and physiology and anatomical variations of the liver, gallbladder, pancreas, biliary system, spleen, urinary system, adrenal, peritoneal cavity, retroperioneum and abdominal vasculature. The laboratory component of this course presents abdominal Doppler principles and applications in the clinical setting.

DMS 106—OBSTETRICS I 3-0-3
This course presents the normal anatomy and physiology of the first, second and third trimesters of pregnancy. Also discussed are anatomical variation and baseliners. In addition normal fetal development and structure, placental development, amniotic fluid, fetal testing and other gestational issues are presented.

DMS 201—PATIENT CARE/LEGAL/ ETHICAL ISSUES 2-0-2
This course is designed to offer the student with common patient care issues, legal and ethical issues, and professional issues that specifically relate to ultrasound imaging. Medical and legal issues will be presented along with ethical challenges that may take place in the clinical setting. Also included will be information related to certification and governing bodies related to practice.

DMS 204—GYNECOLOGY 3-3-4
This course introduces the student to the anatomy and physiology of the pelvic organs which includes the cervix, vagina, uterus, ovaries, pelvic musculature and vasculature. The laboratory component of the course presents transabdominal and transvaginal techniques which correlate to classroom theory. Application to the clinical settings is discussed.

DMS 205—ABDOMINAL II 3-3-4
This course introduces students to the abnormal or pathologic principles of the liver, gallbladder, pancreas, biliary system, spleen, urinary system, adrenal, peritoneal cavity, retroperioneum and abdominal vasculature. There will be correlation between the Doppler findings and pathology. The laboratory component of this course presents abdominal Doppler principles and applications correlated with disease process. Pediatric abdominal pathology and Doppler use is included.

DMS 206—OBSTETRICS II 3-0-3
This course presents the pathological and morphologic process of the second and third trimesters. This includes both maternal diseases and complications and fetal abnormalities.

DMS 207—SMALL PARTS, BREAST & NEURO 2-0-2
This course presents the student with the anatomy and physiology of breast, thyroid, prostate, scrotum, neuro implications, and superficial structures. The laboratory component will correlate the normal and abnormal appearance of organs as presented in the classroom segment of the course.

DMS 208—INTRO TO VASCULAR 1.5-1.5-2
This course introduces the student to the normal and abnormal anatomical and physiological structure and processes of the vascular system. The laboratory component of the course presents ultrasound imaging and Doppler techniques utilized in the normal and disease related vascular structures.

DMS 210—CLINICAL I 0-8-3
This course serves as the first clinical component of the Diagnostic Medical Sonography program. The clinical will consist of three, eight-hour days per week for fifteen weeks at clinical site(s) approved by the WCCC Program Director. An interview process may be required by the clinical site as a part of the approval process.

DMS 211—CLINICAL II 0-8-3
This course serves as the second clinical component of the Diagnostic Medical Sonography program. The clinical will consist of three, eight-hour days per week for eleven weeks at clinical site(s) approved by the WCCC Program Director. An interview process may be required by the clinical site as a part of the approval process.

DMS 212—CLINICAL III 0-8-3
This course serves as the third clinical component of the Diagnostic Medical Sonography program. The clinical will consist of three, eight-hour days per week for fifteen weeks at clinical site(s) approved by the WCCC Program Director. An interview process may be required by the clinical site as a part of the approval process.

DMS 213—ACOUSTICAL PRINCIPLES & INSTRUMENTATION 3-3-4
This course combines theory and practice in acoustical principles, instrumentation and quality control. Topics included, but are not limited to, the application and uses of the ultrasound unit, modes of operation, propagation of ultrasound, transducers, scan converter displays, pulse echo imaging and instrumentation, storage, display, Doppler, artifacts, film and methods of permanent image recording, equipment calibration, resolution, gray scale, film critique, bioeffects quality assurance and safety.

DMS 214—ACCOUSTICAL PRINCIPLES/ INSTRUMENTATION 3-0-3
This course is a continuation of DMS 213 and the inclusion of advanced topics significant to medical ultrasound imaging, instrumentation and quality control.

DTT–DIETETIC TECHNICIAN

DTT 111—INTRODUCTION TO DIETETICS 3-0-3
Orientation to the field of dietetics, and dietary management, including related medical terminology. Explores the partnership between the dietetic professionals and other related professionals. Transportation to off-campus locations is the responsibility of the student. All new dietetic technician students are required to take this course in their first semester. Prerequisite(s) or corequisite(s): FSM 159

DTT 114—TOPICS IN NUTRITION AND HEALTH 3-0-3
Modification of the diet to meet the physiological, psychological, social and economic needs of individuals. The changes in physiological processes will be discussed along with the need for altering nutrient intakes that affect this change. Current diet related concerns are discussed. Prerequisite(s): FSM 159

DTT 199—NUTRITIONAL SERVICES MANAGEMENT PRACTICUM 1-12-3
This is the capstone practicum required for completion of the nutritional services management option of the dietetic technology program. Under the supervision of a qualified nutritional services manager, students will gain the practical experience needed to fulfill the minimum requirements for entry level clinical and supervisory positions as a nutritional services manager or dietetic assistant. The importance of professional behavior and working with the health care team are emphasized. Prerequisites(s): DTT 114, FSM 112, ACC 165, FSM 235 (or concurrent), and permission of instructor

ECE–EARLY CHILDHOOD EDUCATION

ECE 179—INFANT & TODDLER DEVELOPMENT 3-0-3
This course provides a developmental perspective on the earliest period of human life. It serves as an introduction to the study of the prenatal, perinatal, neonatal, infancy and toddler development. In addition, the course deals with specific issues related to infancy, including infant programs and curriculum, working parents and public policy. This course serves as a prerequisite to ECE 180.

ECE 180—CHILD GROWTH AND DEVELOPMENT 3-0-3
This course is designed to provide a comprehensive study of child developmental from ages three to eight. Theories of child development will be examined including: psychoanalytic, psychosocial, cognitive development, behavioral and social learning theory. The areas of development to be studied are: motor, cognitive, language literacy, social ecological, multiple intelligence, emotional, personality, and moral development. The child will be viewed within the context of her social world including family and school. This is a required course for all Early Childhood Education majors. Prerequisite(s): ECE 179

ECE 183—CREATIVE EXPERIENCES 3-0-3
This course focuses on the important role of creativity in Early Childhood Education. The content of the course addresses the importance and development of art, fine art, play, technology, music, creative dramatics, and early literacy curriculum in a developmentally appropriate early childhood classroom. The role of the adult in a developmentally appropriate classroom is examined with special attention given to observation of children's behavior. This is a required class for all Early Childhood Education Majors.

ECE 184—EARLY CHILDHOOD EDUCATION PRACTICUM I 3-0-3
This course explores cultural and social variables and their impact on developing children. Special examination of diversity within families and the impact of families on children is explored. Additional topics include child abuse, alcoholism, poverty, media, violence, child care and school, and stress. This is a required class for all Early Childhood Education majors.

ECE 185—INTRO TO EARLY CHILDHOOD EDUCATION 3-0-3
This course is designed to provide a comprehensive study of how to plan activities for all children ages 3 to 8 in the areas of gross motor, fine motor and cognitive development. Health, safety, nutrition, science, social studies, math and anti-bias, multicultural curriculum are also addressed. The history of the field and the role of professional early childhood practitioners are examined. This is a required class for all Early Childhood majors.

ECE 186—FAMILY AND SOCIETY 3-0-3
This course explores cultural and social variables and their impact on developing children. Special examination of diversity within families and the impact of families on children are explored. Additional topics include child abuse, alcoholism, poverty, media, violence, child care and school, and stress. This is a required class for all Early Childhood majors.

ECE 187—CHILD CARE MANAGEMENT 3-0-3
This course provides an orientation in the planning and administration of early childhood programs. The course examines interpersonal staff relationships, effective parent communication, program evaluations, regulations, standards and budgets. Professionalism and PA initiatives are emphasized.

ECE 188—INTRODUCTION TO EXCEPTIONAL DEVELOPMENT 3-0-3
This course examines the growth and development of exceptional persons, concentrating on the years from birth to early adulthood. Exceptionalities studied are: mental retardation, learning disabilities, ADHD, physical impairments, autism spectrum disorder, traumatic brain injury, and speech and language impairments. Attention is given to the etiology, prevalence, definitions, characteristics, and the education of individuals with exceptionalities. Special attention is given to the laws addressing special education as well as inclusion. Emphasis is placed on the important roles of families in special education. This is a required course for all Early Childhood Education majors.

ECE 190—CHILD HEALTH, SAFETY, AND NUTRITION 3-0-3
Designed for early childhood educators and parents. Describes the components of child health, safety and nutrition. Identifies risks to health and safety. Health promotion, disease prevention, and basic care of the child at each developmental stage are examined.

ECE 191—ASSESSMENT AND OBSERVATION-YOUNG CHILDREN 3-0-3
This course highlights principles and techniques of observing children ages 0 to 9 years to document their development and to link observation to program planning. Various assessment tools used by teachers will be explored. Observations of infants, toddlers, preschoolers, and school-age children will be required.

ECE 194—EDUCATION OF YOUNG CHILDREN WITH SPECIAL NEEDS **3-0-3**

This course provides an in-depth study of the education of young children with exceptionalities. The assessment, identification and appropriate education of young children with special needs are the focus. Attention is given to legal aspects and inclusion. Family-based practices and Division for Early Childhood recommended base practices for early intervention will be addressed. This course is a required class for all Early Childhood Education majors. Prerequisite(s): ECE 188

ECE 233—CHILDREN'S LITERATURE **3-0-3**

This course familiarizes students with a wide variety of literary genres ranging from traditional folk tales and nursery rhymes to modern fiction. Attention will be given to the history and critical study of children's literature and practical application of methodology in the classroom. This is a required class for all Early Childhood Education majors.

ECE 284—EARLY CHILDHOOD EDUCATION PRACTICUM II **2-8-4**

This course offers an in-depth examination of an early childhood classroom that builds upon ECE 184's basic principles and methods. Professional development is emphasized. Special attention is placed on authentic assessment, curriculum development and unit design. The course requires the completion of 120 hours of practicum experience. Prerequisite(s): ECE 184 with a grade of C or better and 2.0 GPA

ECN–ECONOMICS

ECN 155—MACROECONOMICS **3-0-3**

Introduces the challenging problems of macro or aggregate economics. Deals with the effects of the government, business and consumer spending on a nation's economy. Through the analysis of the decisions and actions regarding spending, investment, consumption and saving, one can come to an understanding of inflation, the distribution of wealth, the functions that determine employment and unemployment, and the problems of economic development.

ECN 156—MICROECONOMICS **3-0-3**

Concerned mainly with the economic activities of individual consumers and producers, or groups of consumers and producers which are known as markets. Microeconomics looks into the individual decisions to expand production, to hire or fire, to buy a product or not, and explores the efficiency and profitability of the business firm. Contemporary problems are examined in the light of economic analysis.

ECN 158—BASIC ECONOMICS **3-0-3**

Analyzes the relevancy of economics and the issues pertaining to the macro level such as total production, total income, interest and inflationary pressures. Some attention will also be given to the economic behavior of specific units within the economy such as individual businesses, household and the like (micro- economics). The entire course will be placed against the background of the existing social, political and legal environment. Economic issues will be discussed as projections of society's values and political inclination. Finally, the course will analyze international factors, specifically in the areas of trade and commerce.

EDU–EDUCATION

EDU 155—INTRODUCTION TO EDUCATION **3-0-3**

This course is an introductory overview course in which students are exposed to many topics that they will explore in depth in future specialization courses for education. Course objectives and performance assessments reflect the 10 standards for beginning teachers' licensing and development, written by the Interstate New Teacher Assessment and Support Consortium. Students will be given the opportunity to prepare for the Praxis exam and remediate deficiencies.

EDU 200—INTRODUCTION TO INSTRUCTIONAL TECHNOLOGY **3-0-3**

This course is designed for students in a broad range of teaching areas desiring to implement instructional technologies into the teaching/learning experience. Students who successfully complete the course will differentiate, evaluate, prepare and utilize a variety of instructional media in the classroom such as non-projected media, audio, film, video and computer-based instruction. The course combines a variety of learning environments such as lecture, discussion, group activities, and hands-on production

EGR–ENGINEERING

EGR 104—ENGINEERING MATERIALS **3-0-3**

Surveys the metallic, polymeric and ceramic materials used in industry. The course will familiarize the student with the components of modern construction materials from a standpoint of durability, serviceability and appearance. It focuses on material properties of alloys, iron and steel, nonferrous and ferrous alloys, nonmetallic materials, plastics, ceramics, glass, concrete and wood.

EGR 105—MANUFACTURING PROCEDURES **3-0-3**

Surveys the methods used to convert engineering materials into useful items. Methods surveyed include casting, powder metallurgy, hot and cold working, machining and surface finishing. Measurement, quality control and corrosion protection are additional topics. Prerequisite(s): EGR 104

EGR 110—DESCRIPTIVE GEOMETRY **2-2-3**

Basic introduction designed to illustrate the graphic solution of engineering problems that can be analyzed in the three-dimensional space relationships and delineated according to the principles of orthographic projection. Prerequisite(s): DFT 105

EGR 180—PRINCIPLES OF INDUSTRIAL HYDRAULICS **2-4-4**

Incorporates the theory and practical application of hydraulics in the nuclear, robotics and engineering fields. Includes the study of industrial/hydraulic principles; actuators, pumps, air compressors, hoists; servo control valves; timers; switches; relays; flow and pressure control valve; relief valves; spool valves and distribution systems. Troubleshooting, analysis and experiment exercises are conducted on a hydraulic trainer.

EGR 181—PRINCIPLES OF INDUSTRIAL PNEUMATICS **2-4-4**

Deals with the design and operation of advanced servo systems. It also is concerned with such topics as power generation and regulation, accumulators and pneumatic motors. Prerequisite(s): EGR 180

EGR 199—ENGINEERING TECHNOLOGY INTERNSHIP **1-12-3**

Students will obtain experience in the engineering field through a combination of occupational instruction and on-the-job training. This course integrates classroom occupational study with a planned supervised practical work experience. Prerequisite(s): Permission of instructor

EGR 210—QUALITY CONTROL **3-0-3**

Covers the fundamentals of industrial quality control including necessary probability and statistics basics, control charts, process capability, sampling, reliability and product liability considerations.

EGR 220—INTRODUCTION TO STATICS AND STRENGTH OF MATERIALS **3-0-3**

Study of principles and analysis of stresses which occur in structural elements subjected to statistic loads. Methods of calculation of reactions, stresses, resultants, shear and moment diagrams and their application in various structural problems. Includes study of force systems. Stresses calculated for tension compression and shear in welded, bolted and riveted joints and safety requirements pertaining to type. Prerequisite(s): MTH 108

EGR 227—KINEMATICS **2-2-3**

Includes the study of the principles of the kinematics of machines, graphical analysis of motion in terms of position, displacement, velocity and acceleration of machine parts. The understanding of transferring or altering motion through proper design of cams and linkages. Prerequisite(s): MTH 109, PHY 107

ELC–ELECTRONICS

ELC 100—PROGRAMMABLE LOGIC CONTROL I 3-2-4
Introduces students to the fundamental industrial processes and their control. This course will also include design, function and applications of various industrial controllers.

ELC 102—ELECTRONIC DEVICES 3-2-4
Includes study of semiconductor diodes, transistors and field effect transistors. The characteristics of these devices and their use in design are studied. Emphasis is given to the transistor as a linear amplifying device. Prerequisite(s): ELC 105, ELC 106

ELC 105—ELECTRONIC INSTRUMENTS AND MEASUREMENT 1-2-2
Deals with the basic electronic testing, circuit construction and soldering skills needed by a technician. Demonstrated proficiency in the operation of volt-ohm-milliammeters, oscillo- scopes, function generators and construction of electronic circuits from schematic diagrams will be required.

ELC 106—CIRCUIT ANALYSIS I 3-0-3
Considers the principle electrical quantities; current, voltage and resistance; electrical properties of materials, Ohms law, DC power calculations, series and parallel circuits and series- parallel networks; circuit analysis and conversions, network theorems, measurement instruments and techniques; AC sine wave characteristics, inductive and capacitive circuit and analysis. Corequisite: MTH 052

ELC 107—CIRCUIT ANALYSIS II 3-0-3
Mathematical techniques developed in Circuit Analysis I are extended to Advanced DC circuits including capacitive and inductive reactances. Exponential responses are investigated. Methods for determining circuit responses with varying frequency sinusoidal voltage and current sources driving them are investigated. Complex notation and complex algebra are used extensively in solving network problems. Prerequisite(s): ELC 106, MTH 108

ELC 114—DIGITAL TECHNIQUES 3-2-4
Concerned with electronic systems based on Boolean algebra using electronic devices in a switching mode. Logic gates are identified and their characteristics described in terms of Boolean algebra. Boolean theorems and manipulative techniques are used to design combinational logic circuits. Significant logic families and their characteristics are described. Number systems and their conversions are investigated with emphasis on those systems most used in the computer field. Logic devices are combined into the three classes of multi-vibrators. Sequential logic combinations of multivibrators, their uses and waveforms are studied. Binary arithmetic and the relevant circuits are investigated. Interfacing of the analog and digital worlds is considered. Prerequisite(s): ELC 106

ELC 199—ELECTRONICS ENGINEERING INTERNSHIP 1-12-3
Students will obtain experience in the electronics engineering field through a combination of occupational instruction and on-the-job training. This course integrates classroom occupational study with a planned supervised practical work experience. Prerequisite(s): Permission of instructor

ELC 200—PROGRAMMABLE LOGIC CONTROL II 3-2-4
Introduces students to the basic concept of automated manufacturing systems including drive mechanisms and sensing devices. This course will give students a background in today's flexible systems. Prerequisite(s): ELC 100

ELC 201—PROGRAMMABLE LOGIC CONTROL III 2-2-3
Introduces students to automated-manufacturing system troubleshooting. This course is designed to give students practical experience in problem- solving and applications. Prerequisite(s): ELC 200

ELC 202—LINEAR ELECTRONICS 3-2-4
A continuation of ELC 102 of the study of linear amplification of signals. In this course the frequency effects of reactive circuit components and device reactances are considered. Operational amplifiers are developed and studied as amplifying devices in negative feedback circuits. Applications of negative feedback amplifiers, both linear and nonlinear, are investigated. Voltage regulation in power supply circuits and the techniques involved are studied. Oscillators and the criteria for oscillation are established. Prerequisite(s): ELC 102, ELC 107, MTH 109 or MTH 158

ELC 206—MICROPROCESSORS 3-2-4
Students will become familiar with the microprocessor as a circuit device, with its architecture and its role in micro- processor-based systems. The organization of these systems will be investigated to specify the roles of buses and ancillary integrated circuits and input and output functions. Particular attention will be given to the interfacing of the microprocessor system with the outside world in both parallel and serial. The student will learn assembly language programming and the use of an assembler to generate object code. Prerequisite(s): ELC 114

ELC 208—INDUSTRIAL ROBOTICS 3-2-4
Investigates the field of industrial robotics with particular attention given to the role of electronics. Includes instruction in the principles of which the industrial robot operates. Because of the widespread use of hydraulics and pneumatics as power sources for industrial robots, these subjects are introduced with particular attention to interfacing with electrical and electronics systems used for control. Electricity as a power source will be covered with emphasis on control devices, systems and circuitry. The electronics technician can be expected to maintain and repair the command and control function of industrial robots, so much of the course will be devoted to this subject. Some specific industrial applications are investigated and future trends are explored. Prerequisite(s): ELC 114

ELC 209—INSTRUMENTATION AND PROCESS CONTROL 3-2-4
Investigates the electronic techniques that are used for measurement and control in process control systems. Closed-loop systems including transducers, signal conditioning and analog and digital controllers will be considered. The overall objective is to prepare graduates to install, adjust and maintain electronic and related parts of commercial and industrial systems. Prerequisite(s): ELC 105, ELC 106

ELC 210—ELECTRIC MACHINES 3-2-4
Covers the material needed by electronics technicians who wish to work on electronic machinery. Includes the principles of magnetic theory, transformer theory, energy conversion, various types of motors and dynamic transfer function. It also deals with the solid-state electronic control of AC and DC motors. Includes Stepper motors which are becoming increasingly important in robotics and computer peripheral devices. Prerequisite(s): ELC 107, MTH 109

ELC 211—FIBER OPTICS/LASER TECHNOLOGY 3-2-4
Developed to keep up with advancing technology. While lasers have been around for some time, fiber optics is still relatively new. This course combines the two areas to study communication networks as well as medical applicants, guidance systems and servo systems. Prerequisite(s): ELC 114

ELC 213—MICROPROCESSOR APPLICATIONS 3-2-4
A continuation of Microprocessors and includes a more in-depth study of peripherals and interfacing, microprocessors with peripheral devices. Students study later generation chips to include 16-bit microprocessors. Special purpose microprocessor-based systems are introduced and related to microcomputer and industrial applications. Prerequisite(s): ELC 206

ENG–ENGLISH

ENG 030—BASIC WRITING 3-0-3
This first-level composition course covers the fundamentals of grammar, punctuation, mechanics, and sentence and paragraph structure. It is the primary course in the developmental writing sequence, and it prepares students for the intermediate-level developmental writing course in short essay writing. Developmental courses may not be used to fulfill degree requirements. Prerequisite(s): Placement Test

ENG 070—INTERMEDIATE WRITING 3-0-3
A lecture course emphasizing individualized instruction and the development of writing skills needed in all college studies. Includes review and application of the basics of standard written English with an emphasis on practical application in weekly writing assignments. Developmental courses may not be used to fulfill degree requirements. Prerequisite(s): ENG 030 or Placement Test

ENG 159—INTRODUCTION TO THEATRE 3-0-3
Provides an introduction to theatre as an art form. Emphasis is placed on historical development, social context and formal analysis of drama as literature as well as popular entertainment. Students gain an understanding of and an appreciation for theatre as a logical development of the human need to dramatize perspective on the immediate world.

ENG 161—COLLEGE WRITING 3-0-3
This course covers the fundamentals of college writing including the paragraph, expository essay patterns, and the argumentative essay. Emphasis is placed on developing a coherent thesis, writing concisely and clearly, and adapting one's writing to a particular audience. In addition, it will foster an appreciation of cultural diversity, explain how experiences and attitudes shape an individual's reading, and demonstrate how language can shape thinking. This course also emphasizes self-editing, mechanics, grammar, and word choice. It provides the basis for students to produce a range of effective writing from technical and business communications to research papers and critical essays. Prerequisite(s): ENG 070, RDG 080 or satisfactory Placement Test score

ENG 162—TECHNICAL COMMUNICATION 3-0-3
Technical personnel are called upon to communicate in a variety of ways in their daily work. This course includes training in the writing of memos, business letters, instructions, resumes, summaries, proposals, and technical reports such as the progress report. The course also addressed the proofreading and editing on one's own writing, reading critically in a technical field, developing listening skills, and interacting in discussion and problem-solving groups. Prerequisite(s): ENG 161

ENG 163—BUSINESS COMMUNICATION 3-0-3
Stresses the application of skills central to all types of communications business personnel are called upon to use in their daily work in the office and the marketplace. Includes training in the writing of business correspondence, job related forms and formal reports; proofreading and editing; reading and understanding the vocabulary of the business world; methods of gathering and organizing information; preparing and presenting daily data orally before groups; using the concepts of advertising and public relations and participating in problem-solving discussion groups. Prerequisite(s): ENG 161

ENG 164—ADVANCED COMPOSITION 3-0-3
This course further develops and refines the student's abilities in expository and argumentative writing, introducing the student to the methods, techniques, and materials of research. The written work of the course includes the completion of an in-depth research paper done by the student under the instructor's supervision. The course continues to stress conciseness and clarity of expression; reviews mechanics implicit in correction and revision of written composition; and teaches English usage and grammar as needed. Prerequisite(s): ENG 161

ENG 165—CREATIVE WRITING 3-0-3
Acquaints students with the techniques of writing description, poetry and short fiction. Student writings will be viewed as statements of the individual's creative self as well as work to be considered for publication. It is advised that students complete a literature course before taking this course. Prerequisite(s): ENG 161 or permission of instructor

ENG 166—SPECIAL TOPICS IN TECHNICAL COMMUNICATION 3-0-3
Presents a systematic method for writing technical reports in a specific career field. Topics will vary according to student needs. Attention will be given to selection of details, organization of data, and perspective of writer, with emphasis placed upon accuracy, specificity, and clarity. Prerequisite(s): ENG 161

ENG 233—CHILDREN'S LITERATURE 3-0-3
This course familiarizes students with a wide variety of literary genres ranging from traditional folk tales and nursery rhymes to modern fiction. Attention will be given to the history and the critical study of children's literature and practical application of methodology in the classroom. This is a required class for all Early Childhood Education majors.

ENG 240—SCIENCE FICTION 3-0-3
Introduces the foundations, traditions and trends of the genre of science fiction. In examining classic and contemporary works, the course will explore themes such as time travel, social satire dehumanization, utopia, visions of technical innovations and encounters with aliens. Corequisite(s): ENG 161

ENG 245—CREATIVE WRITING II 3-0-3
This course is designed to give the student an additional opportunity to develop creative writing abilities. An array of exercises will help the student to traverse and harness creative power and to express the self by writing out loud. Using the techniques of description, poetry and short story writing learned in ENG 165, the student will explore longer creative projects: options may involve a chapbook of poetry, a collection of short stories, a novel (or chapters in a novel), an autobiography, a family or town history, or a multi-genre/multimedia work. Imagination, creativity, and discipline in writing will be stressed in all cases. Prerequisite(s): ENG 165 (ENG 256 is also recommended)

ENG 255—INTRODUCTION TO LITERATURE 3-0-3
Introducing students to literary analysis, the content of this course varies, but relies most heavily on short stories and emphasizes both critical analyses of the works presented as well as the social/historical contexts in which they were written. Students are encouraged to develop their own ideas as they become familiar with various critical approaches to the texts. Students are asked to identify that which constitutes literary value in a text and are encouraged to broaden their definitions of literary culture.

ENG 256—20TH CENTURY LITERARY THEMES 3-0-3
This introductory course is a multi-genre, multicultural approach to some of the major themes of 20th century literature. Social change is shown through texts that represent a broad spectrum of voices. Students are encouraged to question the effects of literary culture on a heterogeneous society as well as the effects of society on literary expression.

ENG 258—SURVEY OF WORLD LITERATURE 3-0-3
Covers western and non-western literary classics and their relevant modern counterparts. The types of literature covered include the epic, the tale, the novel, drama, the essay, and poetry. A comparative approach is used in dealing with such themes as war, adventure, love, social customs, and death and the afterlife.

ENG 260—AMERICAN VOICES 3-0-3
This is an introductory survey course. Students will examine American literature as an expression of the cultures which produced it. Students will be encouraged to use the literary experience as a means of understanding our individual and collective identity as Americans.

ENG 264—INTRODUCTION TO JOURNALISM 3-0-3
Introduces journalistic principles and practices with an emphasis on the tools and skills used by contemporary reporters in collecting information and writing news articles. The course also includes a study of the news media and their influence on society. Prerequisite(s): ENG 161

ENG 270—ENGLISH LITERATURE SURVEY I 3-0-3
This course examines the masterpieces of English literature from its earliest inception—with the epic poem "Beowulf" to the end of the Renaissance. Students will explore the history, psychology, and theology of the people and their literature from earliest Anglo-Saxon times, through the Middle Ages, with emphasis on Geoffrey Chaucer's "The Canterbury Tales." The course also includes the Renaissance, with an emphasis on the life and works of its greatest contributor, William Shakespeare. Through the use of multimedia techniques, students will read, see, and hear what many scholars consider the greatest of Shakespeare's history plays, "Henry V."

ENG 271—ENGLISH LITERATURE SURVEY II 3-0-3
This course begins with an examination of the 17th century poetry and prose of such classic writers as John Milton, and then progresses to the 18th century satire of Jonathan Swift and the poetry of William Blake, before immersing the students in the Romantic Age, with concentration on the poets Shelley, Keats, Coleridge, Wordsworth, and Byron. It may concentrate as well on the Gothic novel as represented by Mary Shelley's classic "Frankenstein" or a variety of other works. English Literature Survey I is not a prerequisite for this course.

ENG 275—WORLD MYTHOLOGIES 3-0-3
A survey course designed to introduce students to definitions of and theories about myth; to discuss and analyze myths of various cultures around the world and throughout time. The relevance of myth to everyday, modern life will also be stressed. Themes covered will be the creation of the cosmos, the natural environment and humans; ideas about divinity and heroism; concepts about death and the afterlife.

ENG 276—AFRICAN AMERICAN LITERATURE 3-0-3
This course will examine the literary contributions of African American writers beginning with works from the oral tradition, with an emphasis on writers' African roots, proceeding chronologically to the contemporary writers of the Neo-realistic (1970-present) movement. The course will also explore historical and cultural issues, as well as societal problems encountered by African American authors from the Colonial through the Antebellum period and into the Harlem Renaissance. The course will introduce students to traditional literary forms including poetry, narrative, and drama, but may also include speeches, letters, sermons, and/or nonfiction essays.

ENG 277—NATIVE AMERICAN LITERATURE 3-0-3
This course covers Native American literature beginning with the oral tradition of stories, legends, symbols, and songs from various tribes throughout the United States and Canada. The course encompasses fiction, poetry, and nonfiction of 20th and 21st century writers.

ENG 279—VOICES OF CHANGE: WOMEN AND LITERATURE 3-0-3
This course will familiarize students with the main issues surrounding the texts of women writers, their audiences, and the mythological representations that work for and against their literary activism. It will concentrate on the diversity of women's writing as it pertains to genre; to the cultural, economic and political identities of women; and to the transformative power of their voices within their cultures. Students will develop an understanding of women's creative writing through feminist critical theory and new historical criticism.

ENG 280—HISTORY OF THE ENGLISH LANGUAGE 3-0-3
The Story of English traces the English language from its origins as the language of a small, remote tribe to the most widely used language in the world today. The growth of English is traced geographically, culturally and politically as the powerful impact of this most diverse tongue is analyzed. Prerequisite(s): ENG 070, RDG 080

ENG 290—SHAKESPEARE 3-0-3
This course combines an in-depth study of Shakespeare's plays using traditional text, staging/directing techniques and the medium of film.

EPS–EARTH AND PLANETARY SCIENCE

EPS 150 – ASTRONOMY 3-2-4
An introduction to the solar system with an emphasis on the sun, major and minor planets, earth-moon system, etc., and the study of physical laws of motion and properties of light. Some night observation and lab work are an important part of this class.

EPS 160—EARTH SCIENCE 3-0-3
A physical science course with emphasis on topics from astronomy, meteorology, oceanography, and geology, focusing on the earth as the physical environment in which we live. This course also covers man's impact on the environment.

EPS 163—INTRODUCTION TO PHYSICAL GEOLOGY 3-2-4
Deals with materials, land forms and structural features of the earth and the biological, chemical and physical processes that produced them. Topics include water; wind and glaciers; the construction and composition of rocks and minerals; the formation and deformation of rockbeds; earthquakes and volcanoes; the interior processes and origins of the earth.

ESL–ENGLISH AS A SECOND LANGUAGE

ESL 100—ENGLISH AS A SECOND LANGUAGE 3-0-3
Utilizing an integrated skills approach, this course provides learners of English as a second/additional language with appropriate instruction and training to enable them to engage confidently in communication tasks required for academic success. All four language skills (speaking, listening, reading and writing) are employed to engage students in the comprehension and production of academic discourse as practiced in the United States. Pre-requisite: First language other than English

FRN–FRENCH

FRN 155—BEGINNING FRENCH I 4-0-4
A beginning language course with emphasis on elementary speaking, reading, writing and comprehension.

FRN 156—BEGINNING FRENCH II 4-0-4
Continuation of FRN 155; increased conversational ability and emphasis on reading and writing French. Prerequisite(s): FRN 155

FRN 255—INTERMEDIATE FRENCH I 3-0-3
A continuation of FRN 156. Although the approach will be a communicative one, writing and reading skills will be developed along with the speaking and listening skills. The course will be organized according to the guidelines for proficiency language learning. Prerequisite(s): FRN 156

FRN 256—INTERMEDIATE FRENCH II 3-0-3
A continuation of FRN 255. Students will continue to improve communication skills with four areas of speaking, listening, reading and writing being stressed. A proficiency oriented approach and materials will be used. Prerequisite(s): FRN 255

FSM–RESTAURANT/CULINARY MANAGEMENT

FSM 101—FOOD SAFETY CERTIFICATION 1-0-1
A study of food and the methods needed to control contamination and microbial growth. The principles of HACCP and food safety standards and regulations will be presented. Emphasis is given to developing a working environment which will provide the consumer with wholesome, safe food that conforms to the standards of the regulatory agencies. This course is offered in conjunction with the Educational Foundation of the National Restaurant Association. Upon successfully completing the final Servsafe exam, provided by the Educational Foundation of the National Restaurant Association, the participant is eligible to apply to the Pennsylvania Department of Agriculture for the Food Employee Certification.

FSM 102—FOOD SAFETY RE-CERTIFICATION 1-0-1
This course is required for continued certification with the Pennsylvania Department of Agriculture as a Certified Food Employee. Participants in the course must presently be or previously have been certified by the PDA. Participants must prepare for the course by reading the textbook prior to attending the class. Participants have the option of taking the Servsafe Examination upon successful completion of the class. The optional examination is not automatically offered with this class. This course is a study of food and the methods needed to control contamination and microbial growth. The principles of HACCP and food safety standards and regulations will be presented. Emphasis is given to developing a working environment which will provide the consumer with wholesome, safe food that conforms to the standards of the regulatory agencies.

FSM 103—INTRODUCTION TO THE HOSPITALITY INDUSTRY **3-0-3**

An overview of the careers and opportunities in food service, lodging and tourism with an emphasis on employability skills. Individual responsibilities, current industry issues, and future trends are explored. Transportation to off-campus locations is the responsibility of the student.

FSM 105—FOODS I **2-4-4**

Introduction to food preparation and theory will introduce the student to the application of principles of food cookery. Principles relating to various categories of food preparation will be investigated and then applied in a laboratory situation. Sanitation and safety procedures will be emphasized. Uniforms, cutlery set, and decorative tips required for all lab classes.

FSM 112—QUANTITY FOODS **1-6-4**

A continuation in food preparation, with some cooking in quantities. Teaches the reasons for preparing foods in various ways to satisfy the clientele; also what commercial equipment is available to produce the best quality end-product. Major emphasis is placed on menu planning, standardizing recipes and food production. The student is made aware of work simplification, cost control organization and administration. Types of meal service are studied. Student assumes various positions such as manager, cook, baker, etc. in lab periods and operating student-run cafe. Uniforms, cutlery set and decorative tips required. Prerequisite(s): FSM 105

FSM 113—CUSTOMER SERVICE **3-0-3**

Students will be taught to deliver high-quality service in various positions throughout the hospitality and tourism industry. Emphasis will be given to establishing a service strategy, selecting and training service employees, and delivering customer-friendly systems of operation.

FSM 117—WAIT STAFF/DINING ROOM TRAINING **1-0-1**

Emphasizes techniques and procedures of proper service. The responsibilities, qualifications and conduct of waitstaff personnel will also be presented. The course is designed for students and managers who are interested in the training of food servers. It is also designed for those individuals who are employed in the field or those who are seeking employment as a waitstaff person and have had no training. Dining room attire required.

FSM 118—SANITATION **2-0-2**

A study of food and environmental sanitation and safety in food service. Emphasis is given to the study of food related diseases and their origins as well as the precautionary measures that must be taken to prevent these diseases. Providing the consumer with wholesome, safe food that conforms to the standards of the regulatory agencies is stressed. ServSafe is an operations-centered certification course offered by the Educational Foundation of the National Restaurant Association. Upon completion of the course, a final certification exam furnished and corrected by the Educational Foundation of the National Restaurant Association will be administered. A certificate of completion will be forwarded to those obtaining a minimum score of 75% on the exam. This certificate can be used to apply to the Pennsylvania Department of Agriculture for the Food Employee Certification. Students must earn this certificate to successfully complete this class.

FSM 119—BEVERAGE MANAGEMENT **1-0-1**

A study of beverage and dining room services. Information will be given on cost and product controls, inventory control, industry standards and personnel training and staffing. Emphasis will be given to liquor liability responsibilities and government agencies. Basics of mixology will also be presented. Dining room attire required.

FSM 120—WINE APPRECIATION AND SERVICE **1-0-1**

An in-depth study of wine production and classifications. Emphasis is given to pairing of wine and food, formal wine service, and service needed to enhance customer appreciation. Dining room attire required.

FSM 127—SERVICE TECHNIQUES **1-0-1**

Designed to develop technical service skills for the student interested in front-of-the-house employment in the food service industry. Service skills and techniques which will be emphasized are adaptations of service styles and equipment for the various industry segments, tableside cooking, personal sales, and server responsibilities in relation to the customer. Dining room attire required.

FSM 157—CATERING **1-4-3**

Introduces the principles, operations and different organizational structures of service catering. Emphasis will be on menu planning, costing, business records, insurance, government regulatory information, garnishing for merchandising, equipment and personnel training for this type of operation. Lab experience will involve recipe testing and production for a selected number of class catering experiences. Transportation to off-campus locations is the responsibility of the student. Uniforms, cutlery set, and decorative tips required. Prerequisite(s): FSM 105 or permission of instructor

FSM 159—NUTRITION **3-0-3**

The student learns the nutrients, their sources and their relation to body functions. Each stage of the life cycle will be studied as it relates to changing nutritional requirements. General nutrition is discussed including the social, economic and psychological implications of food and eating.

FSM 170—FOOD CULTURE AND RELIGION—DEFINING CUISINE THROUGH RELIGION AND CULTURE **3-0-3**

This course identifies and investigates the relationship of food/cuisine to culture and religion. Emphasis will be given to religious dietary laws and practices, food symbolism and taboos, religious and cultural feasts, festivals and traditions.

FSM 213—A LA CARTE KITCHEN **1-6-4**

A combination of learning experiences, self-evaluation and operating systems that pertains to a la carte service. The student will manage and operate the student-run Cafe. The learning experience includes purchase requisitions, recipes, costing, production schedules and inventory. Uniforms, cutlery set and decorative tips required. Prerequisite(s): FSM 105 and FSM 112

FSM 215—FOOD PURCHASING AND MENU MANAGEMENT **3-0-3**

Includes factors to consider in selecting, purchasing, receiving and storing various foods. Emphasis is given to the development of purchasing policies, procedures, inventory control, storage and menu development and management. Computer application is included in the course.

FSM 218—HOSPITALITY MARKETING **3-0-3**

Study of the principles of hospitality cost controls. Students become aware of local, state and federal regulations as they apply to the hospitality industry. Promotion, advertising, merchandising, menu design and job description as they relate to the hospitality industry are studied.

FSM 219—HOSPITALITY INTERNSHIP **1-20-3**

A supervised and evaluated on-the-job training experience in a hospitality setting. On-campus seminars are conducted for the students to discuss their experience and career opportunities. Job-site must be approved by instructor. Uniforms, cutlery set and decorative tips may be required. Prerequisite(s): Permission of instructor

FSM 225—HOSPITALITY STUDY TOUR I **3-0-3**

Allows students to experience the cultural and economic aspects of the hospitality industry in this study location. Actual observation and the study of systems of operation unique to this area will occur and what you learn will be applied to the American industry. Travel expenses and fees are the responsibility of the student. Prerequisite(s): Permission of instructor

FSM 226—HOSPITALITY STUDY TOUR II **3-0-3**

Provides students with a second experience of the cultural and economic aspects of the hospitality industry in this study location. Actual observation and the study of systems of operation unique to this area will occur and what you learn will be applied to the American industry. Travel expenses and fees are the responsibility of the student. Prerequisite(s): Permission of instructor and FSM 225

FSM 235—SUPERVISION AND TRAINING 3-0-3
Involves supervision and training for personnel in the hospitality industry. The course plan of study includes history of management, functions of management, management challenges of the future and industry regulations and personal development to achieve goals within the hospitality industry.

FST–FIRE SCIENCE

FST 101—INTRODUCTION TO FIRE SCIENCE 3-0-3
A survey of various fields of study in the fire science curriculum, exploring the two major components: suppression and prevention. Topics include: the fire problem and fire protection organizations; codes and fire-safe building design; fire behavior and hazards of materials; extinguishing agents and systems; fire detection devices and municipal fire department organization and administration.

FST 103—FIRE SERVICE ADMINISTRATION 3-0-3
Trains the prospective officer in proper management techniques and methods by reviewing classical management theories, records, reports, and evaluations; personnel management; leadership and control; fireground management and the management cycle.

FST 104—FIRE SERVICE HYDRAULICS 3-0-3
Prepares the firefighter to effectively move and apply water in various fireground situations. The principles and rules of hydrostatices and hydrokinetics are taught by instruction in: flow-through orifices, water systems and testing; pump theory and operation; fire streams and delivery equipment; fireground hydraulics and calculations; and firefighting foams and equipment

FST 105—PUBLIC FIRE EDUCATION 3-0-3
Introduces the concepts of fire prevention, with emphasis on public fire education. Inspections, code violations, and record keeping are reviewed as part of the six functions of fire prevention.

FST 107—FIRE PROTECTION SUPPRESSION SYSTEMS AND ALARMS 3-0-3
Prepares the fire science student in the use, application and testing of suppression and detection systems. Water sprinkler systems; CO2, dry chemical, Halon, foam and explosion suppression systems and flame, heat and smoke detection devices are reviewed.

FST 109—BUILDING CODES AND STANDARDS 3-0-3
Emphasizes the usage of the BOCA Basic Building Code to attain firesafe building designs through the use of nationally recognized standards and regulations. Surveys code enforcement and administration responsibilities, use-group classifications and construction types, building limitations and special usages, egress design and materials and testing, structural loads and fire protection systems, construction terminology and architectural functions and plans. Prerequisite(s): FST 101

FST 110—FIRE APPARATUS AND EQUIPMENT 3-0-3
Acquaints fire service personnel with basic apparatus requirements, design, procurement and testing. Code requirements for portable equipment and apparatus are also discussed. Pump theory chassis design and large-diameter hose are reviewed.

FST 112—ARSON INVESTIGATION 3-0-3
Instructs fire, police, insurance and private sector personnel about the mushrooming arson and related problems confronting and impacting the entire nation today. Provides instruction in arson awareness and recognition to accomplish early detection of possible crimes and appropriate follow-up investigations. Prerequisite(s) FST 101, FST 222

FST 114—LIFE SAFETY AND REGULATORY REQUIREMENTS FOR SPECIAL OCCUPANCIES 3-0-3
Study of the current National Fire Protection Association Life Safety Code 101 and fire protection requirements in special occupancies such as health care, detention and corrections, educational, dormitories, hotels, apartments, board and care homes, mercantile, business, industrial and storage occupancies. The student learns specific requirements for fire alarms, sprinkler systems, fire drills, test and maintenance of equipment and emergency lighting for these occupancy types. A study of the fire protection regulatory requirements of the various Pennsylvania departments and bureaus are also covered.

FST 115—FIRE SERVICE OCCUPATIONAL SAFETY 3-0-3
Presents the requirements and procedures to effectively develop a fire department safety program. Qualifications, responsibilities, and roles of the department and incident safety officer will be reviewed. Physical fitness, training, apparatus, equipment, personal protective equipment, operations and special hazards are covered. Techniques for risk management and program auditing are presented.

FST 201—HAZARDOUS MATERIALS 3-0-3
Teaches principles for the control of hazardous material incidents in the manufacturing, shipping, storage, use and disposal cycle are taught. Topics include: the hazardous material incident; basic chemistry and health hazards; explosives, oxidizers and radioactive materials, cryogenics, compressed gases and flammables; the identification planning, command and decision-making processes and the various transportation modes and hazards. Prerequisite(s): FST 101 and knowledge of general chemistry and basic physics

FST 209—BUILDING CONSTRUCTION FOR THE FIRE SERVICE 3-0-3
Acquaints the fire science student with the various types of existing building construction and fire's effect upon each type of material used. This includes wooden construction, ordinary construction, mill construction, 19th century "fireproof" buildings, and steel and concrete construction.

FST 211—SURVEY OF FIRE INSURANCE RATING AND LOSS CONTROL 3-0-3
An overview is given of the insurance industry as it relates to fire insurance rating and loss control. Topics include: the insurance industry and how rates are developed; insurance company divisions; the insurance service office and municipal grading; public water supplies and suppression systems; the public fire department and loss control surveys.

FST 215—FIRE TRAINING OFFICER DEVELOPMENT 3-0-3
Instructs fire training officers in the standards and procedures for the training of firefighters and recognized by national standards and agencies with instruction in: the communications process and learning principles; instructional methods; training aids and recordkeeping. Prerequisite(s): FST 103

FST 216—INDUSTRIAL FIRE BRIGADES 3-0-3
A course designed to assist local industrial firms in initiating, developing and implementing the brigades which will be involved with the extinguishment or control of fires until the fire department arrives at the scene. Requirements of the OSHA regulations are reviewed as are recordkeeping, suppression systems and fire prevention activities.

FST 220—FIREFIGHTING TACTICS AND COMMAND 3-0-3
Trains command personnel in the priority of operations, fire spread and behavior and decision making during emergency operations. Topics discussed include the size-up process, rescue and protection of exposures; confining and extinguishing the fire, overhauling the fire, and the procedures of salvage and ventilation. Prerequisite(s): FST 104

FST 221—FIREFIGHTING TACTICS AND COMMAND II 3-0-3
Continuation of fire ground tactics and command with emphasis on large area structures, flammable liquid storage in bulk plants, high rise structures, windowless buildings and buildings under construction. Sectoring, resource management and command at large incidents are covered. Prerequisite(s): FST 220

FST 222—LEGAL ASPECTS OF THE PENNSYLVANIA FIRE SERVICE 3-0-3
Acquaints advanced fire science technology students with legal problems and situations encountered with the Pennsylvania fire service. Case studies on breaking and entering, criminal trespass, assault, negligence, contracts and product liability are covered.

FST 224—PLANS REVIEW FOR FIREFIGHTERS 3-0-3
Study of engineering drawing principles using blueprint symbols, projections, cross-section and assembly drawings, scaling and dimensioning and use of the BOCA plan review form. Prerequisite(s): FST 109

GCT–GRAPHIC DESIGN

GCT 100—MACINTOSH OS 1-0-1
Learn the essential concepts of the Mac OS operating system and workflow, file management and organization as well as new features. This class will focus on navigation, functionality and self sufficiency on the computer while exploring Adobe Bridge, Flash, Illustrator and Photoshop, Microsoft Office, TextEdit, and CampusConnections. Students provide their own backup media and are responsible for archiving their coursework and projects. Basic typing skills recommended.

GCT 115—DIGITAL DESIGN 2D 3-0-3
This course is designed to explore the concepts, elements, principles and techniques of two-dimensional and time-based design through vector and pixel-based exercises using the drawing, editing, animation, and media management tools of Adobe Bridge, Flash, Illustrator and Photoshop. Students develop a strong individual creative process and experiment with new ways to present concepts. Students provide their own backup media and are responsible for archiving their coursework and projects. MAC OS X or Windows XP/Vista hands-on experience recommended.

GCT 120—FLASH – BASIC 3-0-3
This course introduces students to the comprehensive authoring environment of Adobe Flash and integration with Adobe Creative Suite components for creating dynamic Web sites, digital animations, and engaging interactive projects. Students provide their own backup media and are responsible for archiving their coursework and projects. Prerequisite(s): MAC OS X or Windows XP/Vista hands-on experience.

GCT 125—FLASH – DESIGN 3-0-3
Adobe Flash Professional, Industry-leading authoring environment, allows students to express themselves in exciting ways and deliver rich creative object-based animations, interactive design, and video experiences across print, web, and mobile media. ActionScript's powerful coding environment for creating engaging interactive experiences is explored as well as integration among Adobe Creative Suite components. Students provide their own backup media and are responsible for archiving their coursework and projects. Prerequisite(s): Macintosh OS X or Windows XP/Vista hands-on experience.

GCT 130—INDESIGN – PAGE LAYOUT 3-0-3
Students develop essential skills of page layout and design, importing elements from Adobe Bridge, Illustrator and Photoshop in the production of ads, postcards, advertisements and brochures for print, Acrobat PDF and for use on the Internet. Students provide their own backup media and are responsible for archiving their coursework and projects. MAC OS X or Windows XP/Vista hands-on experience recommended

GCT 145—AUTO ART 3-0-3
Designed for beginners, this course provides detailed information covering sword and dagger pinstriping, lettering, gold leafing, simple graphic along with product knowledge, paints, brushes, solvents, tapes, and more. Hands-on instruction will guide students through the basic skills and techniques of surface preparation, practice strokes, masking techniques, and custom hand lettering, pinstriping, scrolling, gold leafing, and basic graphics created with and without patterns for rat rods or old school vehicles. The course is designed to clear the mystery for the beginner and eliminate the fear of learning and pinstriping and to explore an exciting creative career.

GCT 150—ILLUSTRATOR – BASIC 3-0-3
An introductory course using Adobe Bridge asset management system and Adobe Illustrator's powerful vector graphic tools in the creation of detailed and scalable logos, illustrations, business graphics, type, and symbols that will work efficiently and smoothly in Adobe Flash, InDesign, and Photoshop. Students provide their own backup media and are responsible for archiving their coursework and projects. MAC OS X or Windows XP/Vista hands-on experience recommended.

GCT 155—VECTOR-BASED GRAPHICS 3-0-3
This course provides an introduction to digitally printed, vector-based graphics as used in advertising, automotive graphics, illustration and murals, pinstriping and lettering, vinyl graphics and digital printing. Students explore many basic sign-related techniques incorporating Adobe Illustrator and Photoshop. An introduction to industry standard sign making software for both vinyl cutting and digital print graphics is introduced to assist students in developing a proficiency using relevant vector-based graphics workflow to increase the efficiency and accuracy of any project. Prerequisite(s): GCT 150

GCT 160—PHOTOSHOP – BASIC 3-0-3
A thorough introduction to Adobe Bridge's media management and Photoshop's interface and work environment. Students will learn how to select, enhance, distort, color, scale and manipulate scanned images and artwork, as well as create digital images from scratch for Adobe Acrobat, Flash, Illustrator, InDesign or for use on the Web. Students provide their own backup media and are responsible for archiving their coursework and projects. MAC OS X or Windows XP/Vista hands-on experience recommended

GCT 163—WEB GRAPHICS 3-0-3
This course is targeted toward beginning-to- intermediate level designers that need to create, edit and optimize web graphic content or design page layouts, and export them to Adobe Dreamweaver, HTML editors or as a complete Web sites. Students provide their own backup media and are responsible for archiving their coursework and projects. Photoshop hands-on experience recommended and Illustrator desired

GCT 170—MAYA – BASIC 3-0-3
An introductory course in 3D art and animation that explores the basics of modeling, lighting, texturing and animation using AutoDesk Maya. Students gain an understanding of the interface and capabilities of Maya, as well as basic principles of movement and models. Students provide their own backup media and are responsible for archiving their coursework.

GCT 173—MAYA-MODELING 3-0-3
This course builds upon the concepts and techniques introduced in Maya-Basic to help students further their skills and establish a solid foundation and understanding of modeling, character setup and animation, texturing, lighting and rendering within Maya. Students provide their own backup media and are responsible for archiving their coursework. Prerequisite(s): GCT 170

GCT 176—MAYA ANIMATION 3-0-3
Building upon the concepts, techniques and skills from GCT 170 and GCT 173, students are guided in focusing their skills on a variety of models from conception and modeling to rigging and animation displaying realistic movement. Students incorporate their rendering knowledge to output a wide range of animation techniques to disk. Students provide their own backup media and are responsible for archiving their coursework. Prerequisite(s): GCT 173

GCT 180—FLASH – ANIMATION 3-0-3
This course is an exploration of Adobe Flash's broadcast-quality web animation techniques and production processes-from concept to creation. Students explore the art and principles of animation, planning and production, incorporating Web media and integration with Adobe Creative Suite components. Students provide their own backup media and are responsible for archiving their coursework and projects. Prerequisite(s): GCT 125

GCT 199—GRAPHICS INTERNSHIP 0-12-3
Students gain exposure and insight into the selection of occupations within the fields of creative design/marketing and commercial printing/publishing through supervised and evaluated on-the-job experience. Students select locations for their internships from college-approved sites which primarily encompass southwestern Pennsylvania. Online seminars are conducted for the students to discuss their experiences. Transportation to off-campus locations is the responsibility of students. Prerequisite(s): Completion of 27 GCT credits

GCT 210—LOGO DESIGN 3-0-3
Students explore the essentials skills and principles of advertising design, from both a creative and a business perspective. Students research, plan, and create logos and advertising, marketing materials, and advertising programs to establish and promote a small business advertising strategies across various mediums: storefront, vehicle graphics, outdoor mediums, and printed materials. Students provide their own backup media and are responsible for archiving their coursework and projects. Prerequisite(s): GCT 115

GCT 215—DIGITAL PRODUCTION 3-0-3
This course explores advanced features of Adobe Photoshop, the Paint Engine, and utilizing Alpha channels to create images from scratch, and manipulate and combine vector graphics with raster-based images to form entirely new visuals for product design and advertising, backgrounds and set extensions, and animation and visual effects. Students provide their own backup media and are responsible for archiving their coursework and projects. Prerequisite(s): GCT 160 or MED 170

GCT 220—FLASH – WEB MEDIA 3-0-3
The course provides students with an overview of basic audio and video principles, and an introduction to motion graphic techniques incorporating Adobe Creative Suite components as well as various interframe codecs in the creation of Flash Video (FLV) and rich interactive content. Students provide their own backup media and are responsible for archiving their coursework and projects. Prerequisite(s): GCT 125

GCT 231—IN DESIGN – PUBLICATION DESIGN 3-0-3
Students expand their skills in the use of Adobe InDesign's advanced typesetting techniques, style sheets, master pages, libraries, color palettes, trapping, preflighting, and exporting EPS and PDF files for producing quality high-end output. Prerequisite: GCT 130

GCT 253—ILLUSTRATOR – ADVANCED 3-0-3
Students will create and edit vector-based artwork, with an emphasis on increasing productivity by mastering the pen and path tools to create realistic and professional vector artwork. 3D features, typographic effects, gradient meshing, library elements and the use of Web-related features are integrated with the Adobe Creative Suite components. Students provide their own backup media and are responsible for archiving their coursework and projects. Prerequisite(s): GCT 150

GCT 261—PHOTOSHOP – STUDIO 3-0-3
Advanced study using Adobe Photoshop to hone graphic skills in photomontage, illustrations, retouching and special effects for entertainment, advertising and marketing design projects as well as developing tighter integration with the Adobe Creative Suite components. Students provide their own backup media and are responsible for archiving their coursework and projects. Prerequisite(s): GCT 160 or MED 170

GCT 270—MAYA-SPECIAL EFFECTS 3-0-3
This class is a continuation of GCT 173 Maya-Animation and introduces rendering and dynamics using characters and effects techniques. Students explore the range of special effects topics, including lighting, camera rigging, effects, particles, and rigid bodies. Students provide their own backup media and are responsible for archiving their coursework. Prerequisite(s): GCT 176

GCT 280—FLASH – DESIGN AND PRODUCTION 3-0-3
Students focus on the integration of Adobe Creative Suite components to produce high-impact motion graphics, banner ads, animations and interface design for innovative, dynamic Web sites, and compelling content for mobile phones and electronics devices. This is a capstone course; satisfactory demonstration of outcomes for competency profile for the Flash Design option is required. Students provide their own backup media and are responsible for archiving their coursework and projects. Concurrent/ Prerequisite(s): GCT 220

GCT 285—PHOTOSHOP-PREPRESS 3-0-3
This course begins with an overview of the Adobe Creative Suite for design, print technologies and digital workflow. Students incorporate advanced masking and compositing, color correcting techniques and prepress essentials for preparing digital and commercial print-ready images. Students provide their own backup media and are responsible for archiving their coursework and projects. Prerequisite(s): GCT 261

GCT 287—DIGITAL WORKFLOW 3-0-3
Through lectures and hands-on exercises, students refine their artistic abilities and technical skills, and increase their efficiency and productivity with Adobe Creative Suite components to produce innovative and compelling cross-media publications for print, rich-media PDFs, the Web and mobile content. This is a capstone course; satisfactory demonstration of outcomes for competency profile for the Graphic Design program is required. Students provide their own backup media and are responsible for archiving their coursework and projects. Prerequisite(s): GCT 231, 253 and 285

GEO–GEOGRAPHY

GEO 155—INTRODUCTION TO HUMAN GEOGRAPHY: HUMAN SETTLEMENTS AND GLOBAL CHANGE 3-0-3
This is a geography course about the interacting relationships between earth and humans. The focus is on the physical and human geographical aspects of the global environment with emphasis on the environmental impact of human settlement.

GEO 160—PHYSICAL GEOGRAPHY AND THE GLOBAL ENVIRONMENT 3-2-4
This course covers elements of the physical environment, atmosphere, climate, vegetation, soil and land forms. Emphasis will be on the conservation of resources and the nature and distribution of geographic regions. Labs are designed to bring students into contact with the landscape, developing an understanding of their own as well as other parts of the world.

HAC–HEATING, VENTILATION, AIR-CONDITIONING AND REFRIGERATION

HAC 101—HEATING AND COOLING FUNDAMENTALS 2-4-4
Introduces and explores the mechanical refrigeration cycle as it applies to residential and light commercial refrigeration, heating and air-conditioning equipment. Individual components and controls as they relate to equipment and systems are covered in both the classroom and lab. Students will learn to use HVAC&R hand tools power tools, gauges and meters to troubleshoot and repair HVAC&R equipment.

HAC 150—PSYCHROMETRICS AND LOAD ESTIMATION 3-0-3
This course comprises a study of heat loss and heat gain factors. HVAC&R equipment sizing and selection are covered using ACCA manuals as well as computer sizing and selection software. The study of the properties of air, measurement of air and its effects upon human comfort are also studied.

HAC 170—HEATING, AIR CONDITIONING, AND REFRIGERATION CONTROL SYSTEMS 2-2-3
Provides a fundamental understanding of electrical, pneumatic and electrical control circuits as applied to refrigeration, heating and air-conditioning systems. Reading and understanding ladder and schematic diagrams are covered in detail. Troubleshooting circuits using electrical meters and pressure gauges are emphasized in labs. Installation and replacement of controls are also covered. Prerequisite(s): ECL 105, ELC 110, and HAC 101

HAC 199—HEATING, VENTILATION, AIR-CONDITIONING AND REFRIGERATION INTERNSHIP 1-12-3
Students will obtain experience in the heating, ventilation, air conditioning and refrigeration industry through a combination of occupational instruction and on-the-job training. This course integrates classroom occupational study with a planned supervised practical work experience. Prerequisite(s): Permission of instructor

HAC 230—AIR DISTRIBUTION AND CODES 2-2-3
Covers design and installation of air conditioning and heating duct systems for residential and commercial applications. Duct selection and sizing will be studied using ACCA Manual D and computer duct sizing software. Friction charts and duct calculators will be used to aid in the duct design process. Basics of mechanical code will also be examined. Prerequisite(s): HAC 101

HAC 240—SHEET METAL FOR HEATING, AIR CONDITIONING, AND REFRIGERATION 2-4-4
Designed to aid the installer in the skills and techniques necessary to layout, fabricate and install ductwork for residential and commercial HVAC systems. Sheet metal and fiberglass ductboard fitting, identification and fabrication are covered. Venting systems and combustion air inlet fabrication and installation are also examined. Prerequisite(s): HAC 101

HAC 250—AIR CONDITIONING I 2-4-4
Residential and commercial heating and air- conditioning equipment installation, operation, troubleshooting and repair are covered in detail. Classroom theory and hands-on labs offer students an understanding of the concepts needed to become HVAC&R technicians. Field site visits to HVAC wholesalers and construction projects are included in this class. Prerequisite(s): HAC 101

HAC 255—AIR CONDITIONING II (HEAT PUMPS) 2-4-4
Covers the reverse-cycle air-conditioning heat pump. Air source and ground source heat pump system design, installation, troubleshooting and repair are examined. Heat pump control operation, check-out and replacement are covered. Field and lab work on various heat pump systems are included. Prerequisite(s): HAC 250

HAC 260—HYDRONICS 2-4-4
Covers gas, oil and electrical hot water and steam boiler operation, maintenance troubleshooting and repair. Piping systems and fitting selection for boilers and chillers are examined. Residential and commercial system testing, adjusting and balancing are studied as well. Prerequisite(s): HAC 250

HAC 280—RESIDENTIAL WIRING 2-4-4
Provides the student with an understanding of residential wiring. Areas to be discussed include: electrical safety, design of residential electrical load requirements, National Electrical Code Standards, troubleshooting and repair, installation of wiring and devices such as entrances, breaker boxes, switches, receptacles and equipment.

HAC 290—REFRIGERATION RECOVERY 3-0-3
Designed for students who need training in the proper handling of refrigerants. This course covers proper refrigerant handling and recovery procedures necessary to work in the RHVAC industry. Refrigeration chemistry, containment, labeling, transportation and recovery are studied. Government regulations dealing with proper refrigeration practices as well as industry standards will be examined.

HIS–HISTORY

HIS 155—EARLY WESTERN CIVILIZATION 3-0-3
A survey and analysis of western civilization from its origin through the 17th century. Major political, social, economic and cultural trends and their influence on modern civilization are examined.

HIS 156—MODERN WESTERN CIVILIZATION 3-0-3
A survey and analysis of western civilization from the 18th century to the present. Nationalism, industrialism, imperialism and major intellectual and social developments are emphasized.

HIS 249—THE CIVIL WAR 3-0-3
A survey and analysis of the American Civil War and Reconstruction. This course is a study of the origins and causes of the war, the nature and direction of the war itself, and its results and consequences. Particular attention is given to economic, social, political, military and ideological aspects of the American Civil War.

HIS 255—EARLY U.S. AND PA HISTORY 3-0-3
A survey course in United States history from the discovery of the New World to the close of the Civil War. The story of our American heritage told against the backdrop of revolution, expansion, nationalism, industrial growth and sectional strife.

HIS 256—MODERN U.S. AND PA HISTORY 3-0-3
A survey course in United States history from the end of the Civil War to the present. Examination of political, social, economic, and cultural trends with emphasis on the impact of reconstruction, industrialism, progressivism, isolationism, imperialism, conservatism and liberalism.

HIS 257—THE WORLD IN THE 20TH CENTURY 3-0-3
An introduction to the history of the world in the 20th century. This course examines the forces which have produced significant changes in the modern world and integrates the experiences of Asia, Africa and Latin America with that of Europe and America. An assessment is made of the impact of war, peace, racism, nationalism, imperialism, ideology, religion and family upon the peoples and cultures of the 20th century.

HIS 262—MODERN LATIN AMERICAN HISTORY 3-0-3
A survey of Latin American history from the 16th century through the present, this course is a general but comprehensive study following a topical approach by focusing on social, cultural, political and military developments in the Caribbean, Central America and South America. Major topics include the colonial period, independence movements, nation building, Amerindians, Africans, and Mestizos, governance in the early 20th century, global challenges and the contemporary era.

HMS–HUMAN SERVICES

HMS 155—INTRODUCTION TO HUMAN SERVICES 3-0-3
Introduction to Human Service is intended as an introductory course for the student who plans to work with people in need. The course will provide the student with an overview of the information and skills needed to effectively work with a variety of populations in their community. The course will include information about the necessary personal qualities, service delivery systems and basic skills. Students will become familiar with the Services Providers in the local area. Additionally, students will examine their personal feelings and motivations related to becoming a helper.

HMS 156—COMMUNICATION FOR HUMAN SERVICE WORKERS 3-0-3
An introduction to the theories and practices of basic communication skills focusing on interpersonal communication in the helping services. The course is interactive, providing students the opportunity to practice skills.

HMS 157—INTERVIEWING AND RECORDKEEPING SKILLS 3-0-3
As the follow-up course to HMS 156 with an emphasis on individual interviewing skills in the helping services, this is a key course in the human services program as it teaches essential information gathering and recording skills for the human services worker. It is a very interactive course with much time devoted to practicing interviewing skills with classmates. Recordkeeping skills include learning to distinguish between objective and subjective information, how client files are organized and the methods used to compile a client history and assessment. Prerequisite(s): HMS 156

HMS 160—GROUP PROCESS 3-0-3
This course provides the basic knowledge needed to be an effective group leader and member. Emphasis is on practical application of group process skills. Prerequisite(s): HMS 156

HMS 162—PROBLEM SOLVING AND COUNSELING SKILLS 3-0-3
This course is a follow-up to Interviewing and Recordkeeping Skills course. Its purpose is for the student to learn basic counseling skills that help clients discover and use their strengths and past experiences to help them identify solutions to their problems. Prerequisite(s): HMS 155, HMS 157

HMS 170—RACIAL AND ETHNIC MINORITIES 3-0-3
This is an introductory course for the study of racial and ethnic minorities in the USA. This course will provide an overview of the history, immigration patterns and characteristics of the major ethnic minority groups in the USA. The course will also explore the origins and history of prejudice and discrimination experienced by members of these groups. Through readings and discussion, the course will focus on both current and past issues that are important to the understanding of the multi-cultural society in which we all must live and work. Prerequisite(s): SOC 155

HMS 171—INTRODUCTION TO GERONTOLOGY 3-0-3
This course provides an introduction to the biological, psychological and social issues experienced by those who are aging. Students will learn the various stages and cycles of aging and how society views and provides services to older adults. This course is interactive in nature and requires interviews with older adults and community service providers.

HMS 172—DRUG AND ALCOHOL DEPENDENCY 3-0-3
Drug and Alcohol Dependency is an introductory course for the student intending to work with people in a variety of settings, including the social services, health services, education and criminal justice. This course will provide the student with an overview of substance abuse and treatment issues. Focus will be on learning about the major categories of abused substances, the nature of addiction, treatment and recovery and the impact of substance abuse and addiction on specific populations.

HMS 258—HUMAN SERVICES PRACTICUM I 2-8-4
Under the supervision of a qualified human services provider, students will gain field experience in an area of interest. In this semester-long class, students will discuss ethical and current practice issues related to work in the human services field. The importance of professional behavior and the value of networking within the human services field are emphasized. Prerequisite(s): HMS 155, HMS 157 and permission of instructor

HMS 259—HUMAN SERVICES PRACTICUM II 2-8-4
Building on the experience acquired in HMS 258 (Practicum I), this course further develops the student's knowledge of the role of a human service provider. Included in the seminar activities related to fundraising and community activism. Prerequisite(s): HMS 258 with a grade of C or better, 2.0 QPA, permission of instructor.

HMT–HOTEL/MOTEL MANAGEMENT

HMT 160—EXECUTIVE HOUSEKEEPING AND FRONT OFFICE PROCEDURES 3-0-3
Covers interoperations of the front office desk and the executive housekeeping departments. Duties and responsibilities of each department and the correlation of these areas to assure management control are presented. Additional topics include such areas as booking reservations, room maintenance and costs, and training of personnel for these areas.

HMT 161—RECREATIONAL FACILITIES MANAGEMENT 3-0-3
Designed to serve as a study of the needs and management of recreational and entertainment facilities common to lodging operations. Maintenance, staffing, marketing and principles of cost controls as they apply to recreation will receive emphasis. Transportation to off-campus locations is the responsibility of the student.

HMT 170—CASINO/GAMING OPERATIONS 3-0-3
Identifies the current and future trends affecting the industry. This course also investigates regulations, social and economic impact, and actual operations of casino/gaming facilities. Transportation to off-campus locations is the responsibility of the student.

HMT 172—CASINO MARKETING 2-0-2
This course offers an introduction to the marketing practices utilized in casino/gaming operations. The student will review the basic principles of marketing and specific marketing strategies and programs aimed at attracting and retaining customers within the industry.

HMT 174—INTRODUCTION TO CASINO SURVEILLANCE AND SECURITY 1-0-1
This course is designed to introduce students to security and surveillance procedures necessary to operate a safe, crime-free casino environment. Emphasis will be given to laws and regulations specific to these areas.

HMT 176—INTRODUCTION TO CASINO FINANCIAL CONTROLS 2-0-2
This course covers how funds are distributed and tracked throughout the casino/gaming facility. Regulatory requirements are also reviewed. Computer applications, forms and documents which may be used in this setting will be reviewed.

HMT 262—LODGING AND PROPERTY MANAGEMENT 3-0-3
Presents management of hospitality property in the physical aspect, its incumbent problems and utilization of staff and methodology to maintain facilities operation at peak efficiency. Physical maintenance, staffing patterns, training, capital investments, cost analysis, building and equipment renovation and replacement, and job/task analysis are additional areas of concern.

HMT 264—CONVENTION AND MEETING MANAGEMENT 3-0-3
Designed to provide the students with the information essential for planning meetings, conventions and other such functions in today's hospitality industry. Discussions include meeting rationale, planning, directing, controlling and evaluating. Students are acquainted with major convention bureaus, cities, hotels and resorts.

HON–HONORS

HON 295, 296, 297, 298—HONORS SEMINAR 3-0-3
Honors Seminar is a unique type of college course. In this course you will design, implement, edit, produce, and report on a project that you have designed in consultation with your faculty mentor. The project, as described when you were recruited to participate, is a topic of your own choosing. This topic of interest and concentration is one that enlarges on an honors project then allows the student to enrich his or her knowledge in an area of concentration while also engaging in further development of the techniques of research and writing. The key to success in an Honors Seminar course is self-discipline and self- direction in performing the necessary level of work to complete your chosen project. The faculty mentor provides support and guidance as needed. Honor's Seminar enriches not only the student's academic experience, but their personal sense of accomplishment and autonomy as well.

HOR–HORTICULTURE

HOR 105—INTRODUCTION TO HORTICULTURE 3-0-3
Surveys the broad area of horticulture and gives general treatment to vegetable and fruit production while treating ornamental horticulture and plant growth and development in more depth.

HOR 107—LANDSCAPE DRAWING 2-2-3
Introduces the proper use of drafting equipment, printing techniques, and scale drawing. This course prepares students for designing landscapes and landscape structures.

HOR 110—INTRODUCTION TO TURFGRASS MANAGEMENT 2-2-3
This course is an introduction to basic turfgrass principles. It covers the basic theory of plant growth and development. It also covers the major factor in turfgrass needed to produce quality grass.

HOR 120—TURFGRASS EQUIPMENT MECHANICS 3-2-4
This courses deals with the mechanics, operation, maintenance, trouble shooting and repairing of turf care equipment including rotary mowers, real mowers, spray equipment, aerifiers, spreaders, etc.

HOR 125—ORNAMENTAL SHRUBS 2-2-3
Covers the characteristics, identification, utilization and care of commonly used ornamental shrubs. Prerequisite(s): HOR 105

HOR 126—ORNAMENTAL TREES 2-2-3
Covers the characteristics, identification, utilization and care of commonly used ornamental trees. Prerequisite(s): HOR 105

HOR 150—SPECIALIZED TURFGRASS MANAGEMENT 2-2-3
This course is designed to build on the basic principles of turfgrass science and apply those principles to golf course turfgrass management principles. This course also covers the proper management techniques used in turf areas on recreational and athletic fields. Prerequisite(s): HOR 110

HOR 155—SOILS AND SOIL FERTILITY 3-2-4
Stresses soil improvement and maintenance. Consideration is given to soil modification, improving and maintaining fertility, fertilizers and amendments.

HOR 157—INSECTS AND DISEASES OF PLANTS 3-2-4
Covers the identification, prevention, and control of significant diseases, insects, and other pests of landscape and turfgrass plants. Consideration is given to pest control through variety and type selection and their environmental adaptation.

HOR 170—FLORAL DESIGN AND ARRANGING 1-4-3
Students learn theories about flower arranging and practical skills for designing and making different types of flower arrangements including wedding bouquets, funeral flower baskets, etc.

HOR 199—HORTICULTURE INTERNSHIP 1-12-3
A supervised work experience in a horticulture enterprise where students apply their landscaping skills. Prerequisite(s): Permission of instructor

HOR 205—RESIDENTIAL LANDSCAPING 2-2-3
Designed to allow students to combine their landscape drawing and plant materials knowledge in developing small properties and residential plans. Prerequisite(s): HOR 107

HOR 207—ADVANCED LANDSCAPING 2-2-3
A continuation of HOR 205. Requires students to extend their skills in designing larger properties such as malls, parks, institutional grounds and courtyards. Corequisite(s): HOR 205

HOR 210—PLANT PROPAGATION 2-2-3
Discusses various plant propagation methods including seed propagation, grafting, budding, layering, cutting, division, topping, and tissue culture, etc. Class will focus on the propagation of plants widely used in landscaping.

HOR 212—PRUNING 2-2-3
Deals with the functions, principles and techniques of pruning. Emphasis will be given to pruning ornamental trees and shrubs as well as fruit trees and vines.

HOR 215—ANNUALS AND HERBACEOUS PERENNIALS 2-2-3
Introduces students to selection, identification, utilization, and care of significant annuals and herbaceous perennials used in the landscape.

HOR 235—VEGETABLE GARDENING 2-2-3
Includes coverage of popular vegetables grown in the home garden as well as garden site preparation and location in the landscape.

HOR 241—GREENHOUSE MANAGEMENT 2-2-3
Designed for students to learn about the different types of greenhouses, heating, cooling, environmental control, energy conservation and the use of plant growth regulators in green- house production.

HOR 250—INTERIOR PLANTS AND PLANTSCAPING 3-2-4
This course deals with the plants that are commonly used in interior plantscaping and the principles for interior plantscaping. Also covered in the class are cost estimating and maintenance procedures for interior plantscaping. Over 80 plants will be discussed in detail about their identification characteristic, cultural requirements and maintenance requirements.

HOR 270—FLORICULTURE 2-2-3
This course deals with the production of the most important greenhouse crops. Emphasis will be given to the productions of chrysanthemums, Easter lilies, poinsettias and bedding plants although many other plants will also be discussed. This course introduces students to the concept of interior plantscaping. The principles of design, installation and maintenance in interior plantscaping will be discussed. Prerequisite(s): HOR 105

HOR 275—LANDSCAPE EQUIPMENT, INSTALLATION AND MAINTENANCE 3-2-4
This course covers some common equipment used in landscaping, building of common landscape structures, process of installing a landscape based on a design and practices that are important in landscape maintenance. Students lean through hands-on operation of equipment, installation and maintenance.

HOR 289—TURFGRASS MANAGEMENT INTERNSHIP I 1-12-3
This course gives students an opportunity to use the knowledge and skills learned in other classes in a career setting. Students gain real-life work experiences and practical knowledge through working as an employee of a turf-related business such as a golf course, a lawn care company or a sports facility. Prerequisite(s): Permission of instructor

HOR 299—TURFGRASS INTERNSHIP II 1-12-3
This course gives a student the ability to apply advanced knowledge in a real-world working environment. Students will gain valuable knowledge working under the direction of turfgrass specialists. Prerequisite(s): HOR 199

HPE–HEALTH AND PHYSICAL EDUCATION

HPE 156—HEALTH AND PHYSICAL EDUCATION 2-2-3
Lectures deal with wellness, exercise, nutrition, tension control and mental health, sexually transmitted diseases and HIV prevention, cancer and heart disease prevention, date rape awareness, alcohol and drugs, and injury treatment as they relate to a preventative medicine lifestyle. Concepts stressed are flexibility, strength, aerobic exercise, heart and cancer disease and risk factors, proper nutrition, stress management techniques, STD and HIV prevention. In the lab, a pre- and post-fitness evaluation is performed. An individually prescribed exercise program is performed twice a week.

HPE 157—PERSPECTIVES IN HEALTH 3-0-3
Examines today's health issues and presents contemporary approaches to maintaining good health. Focuses on such topics as stress, hypertension, nutrition, depression, smoking and sexually transmitted diseases.

HPE 176—AEROBICS/WEIGHT TRAINING 0-2-1
Teaches the correct approach to physiological conditioning of the cardiovascular and muscular systems. Examines proper frequency, intensity and duration of these activities. Nutritional concepts are discussed while students improve cardiovascular, strength and flexibility fitness levels. Percentage of body fat should also respond to the course.

HUM–HUMANITIES

HUM 156—CRITICAL THINKING 3-0-3
Designed to show an order associated with the learning process. Observation and listening skills are developed as an introduction to critical thinking. Relationship between observation, interpretation, perception and generalization are considered. Critical thinking and analysis to reach reasonable end points are developed by applying necessary skills to a variety of written and oral topics.

ITA–ITALIAN

ITA 155—BEGINNING ITALIAN I **3-0-3**
Introduces the Italian language with an emphasis on communication. Students will build vocabulary through practical exercises that stress problem solving for travel and/or living in Italy. Students will also be exposed to the Italian culture in areas such as art, literature and social customs. Supplemental materials will be used to deepen the students' mastery of grammatical structures.

ITA 156—BEGINNING ITALIAN II **3-0-3**
The second semester of Beginning Italian will continue exploring the Italian language with an emphasis on speaking, comprehending and writing the Italian language. Students will further build vocabulary through practical exercises that stress problem solving for travel and/or living in Italy. Students will also be exposed to the Italian culture in areas such as art, literature and social customs. Supplemental materials will be used to deepen the students' understanding of the Italian language and life.

LAS–PARALEGAL

LAS 101—THE LEGAL ASSISTANT **3-0-3**
The legal environment, including duties, limitations and ethical constraints of legal assistants, professional responsibilities and expectations, sources and relationships of the various bodies of law along with the structure of national government and the court system will be studied. The course will examine substantive areas of the law, including torts, contracts, property law, domestic relations, estates and trust, and business law.

LAS 111—LEGAL ANALYSIS **3-0-3**
An introductory level course designed to equip the student with the basic skills of legal analysis and research. The student will be exposed to legal analysis in the form of reading, synthesizing, and abstracting judicial opinions; various methods of legal research, including use of the Uniform System of Citation, legal publications and reporters and Shepard's Citations will be explored.

LAS 115—TORTS **3-0-3**
A study of the concept of civil wrongs and their treatment in law, to include the intentional torts, negligence and strict liability as applied to persons, property and business. Specific topics to be considered include negligence, strict liability, products liability, intentional torts including assault, battery, defamation, nuisance, and defenses to tort actions. Prerequisite(s): LAS 101, LAS 111

LAS 120—ESTATES AND TRUSTS **3-0-3**
A study of the law pertinent to wills, estates and trusts including inestate succession, will drafting and execution, codicils, uses and effects of different types of trusts, the probate process and distribution. Relevant state statutes will be utilized as well as practical application of materials dealt with. Prerequisite(s): LAS 101, LAS 111

LAS 125—LITIGATION I **3-0-3**
A survey of the process of pursuing a civil action through the legal system. Topics include choice of courts, jurisdiction, venue, pleading and related motions, discovery, pretrial actions, preparation, and trial and appellate procedures. Emphasis will be on the legal assistant's role in gathering and organizing materials, interviewing and investigating; drafting, interrogatories and pleadings, the trial notebook and assisting during the trial. Prerequisite(s): LAS 101, LAS 111

LAS 140—DOMESTIC RELATIONS **3-0-3**
A study of laws affecting family-related matters such as marriage, divorce, separation, child custody/support and adoption. Prerequisite(s): LAS 101, LAS 111

LAS 150—CONTRACTS **3-0-3**
An introduction to the law of contracts, including offer, acceptance, consideration, performance, breach and damages. A general theoretical discussion is supplemented with specific concentrations in contract law proceedings. Prerequisite(s): LAS 101 or BUS 205 and LAS 111

LAS 175—PROPERTY LAW **3-0-3**
An introduction to the law of property, both real and personal. The historical concept of property ownership, transferring of ownership and rights of ownership will be examined. The course will include an in-depth examination of the real estate transaction and necessary documentation, a "hands-on" approach to the title examination, and examination of zoning and other restrictions on land use. Corequiste(s) LAS 101

LAS 200—AMERICAN CONSTITUTIONAL EXPERIENCE **3-0-3**
A study of the development of our system of government, from the theories and factors involved in creating our Constitution to the powers of government granted under it. The development of individual rights and liberties as guaranteed by the Constitution will be examined with reference to the interpretation of the Constitution and Bill of Rights by the U.S. Supreme Court.

LAS 210—LEGAL WRITING **3-0-3**
An introduction to the types of research sources, procedures and case documentation for which the legal assistant is typically responsible. Students will learn to prepare common legal documents and develop written briefs for attorneys based on their research. Prerequisite(s): ENG 161, LAS 111

LAS 215—LEGAL RESEARCH **3-0-3**
A continuation of LAS 210. The student will be required to complete several major research projects as part of the course, including interoffice memoranda and trial and appellate briefs. Prerequisite(s): LAS 210

LAS 293—INTERNSHIP **1-12-3**
Supervised experience in legal agencies that provide the student with the opportunity to apply legal assistant theory and skills while performing tasks in the legal assistant profession. Prerequisite(s): LAS 215 and QPA of 2.0 or better.

LIS–LIBRARY SCIENCE

LIS 100—INTRODUCTION TO LIBRARY SCIENCE **3-0-3**
Library science is a course designed for the profession of librarianship. It is a profession devoted to applying theory and technology to the creation, selection, organization, management, preservation, dissemination and utilization of collections of information in all formats.

LIS 110—INTRODUCTION TO LIBRARY CATALOGING AND CLASSIFICATION **3-0-3**
This course is an introduction course on library technical services, focusing in particular on library classification systems, with emphasis on LC and Dewey Decimal Classification systems. This will incorporate identifying and creating LC subject headings, creating MARC records, and deciding when to use copy cataloging or when to create original cataloging records.

LIS 120—INFORMATION SOURCES AND SERVICES **3-0-3**
This course provides an introduction to reference resources—both print and non-print, including selection criteria and the use of selection tools. Also included is the organization and delivery of references services, including the reference interview.

LIS 130—COLLECTION DEVELOPMENT AND MATRIALS SELECTION **3-0-3**
This course provides students with an understanding and working knowledge of the processes and procedures involved in developing and maintaining library collections. It addresses the topics of selection, evaluation, policy development, weeding, and censorship.

LIS 140—LIBRARY ADMINISTRATION **3-0-3**
This course addresses the organization and management of libraries. It includes the study of budget preparation, general management and supervision techniques and procedures, decision-making, planning, human resources issues, and facilities and equipment related to library use, ADA regulations, and managing technology.

MAS–MEDICAL ASSISTING

MAS 100—INTRODUCTION TO MEDICAL ASSISTING **3-2-4**

Introduces the student to the role of the medical assistant in a variety of patient care settings. Develops communication skills directed towards the role of the medical assistant in receiving, organizing, prioritizing and transmitting information. Develops interviewing skills for obtaining patient histories. Provides an ethical framework in which the medical assistant functions within the health care setting. Acquaints the student medical assistant with the process and requirements for certification.

MAS 105—ADMINISTRATIVE PROCEDURES **2-0-2**

Establishes a legal framework related to the duties of the medical assistant. Appropriate documentation of patient information is taught and guidelines are presented for the handling of patient record information. Confidentiality is stressed. Procedures for disposing of controlled substances in compliance with government regulations are addressed. Offers the student an opportunity to understand acceptable practices related to initiating and terminating medical treatment. Emergency office procedures are taught. Prerequisite(s): MAS 100

MAS 110—CLINICAL PROCEDURES **3-2-4**

Covers theory and practical applications of asepsis, medication administration, lab and specimen collection and processing, vital signs, venipuncture, EKG, and preparation of the patient for examination and treatment. The laboratory component of this course provides the student with the opportunity to practice selected skills related to the clinical procedures. Prerequisite(s): MAS 100

MAS 120—PRACTICUM **0-15-3**

This course provides a supervised clinical placement to practice the administrative and clinical skills necessary to function as a medical assistant in a physician's office and other designated medical settings. Administrative skills include receptionist duties and appointment scheduling, medical correspondence, record handling, medical transcription, maintaining patient accounts, billing and processing insurance claims. Clinical skills include patient preparation and assisting with diagnostic and surgical procedures, examination assisting, specimen collection and processing, performing basic office diagnostic procedures, medication administration, and aseptic technique. Prerequisite(s): MAS 110

MED–MULTIMEDIA TECHNOLOGY

MED 103—PODCASTING BASICS **1-0-1**

This introductory course covers the basics of Internet podcasting. Students will learn how to manage audio and video for iPods and download podcasts for use on devices capable of playing MP3s. How to setup a podcasting studio, utilize music and video inexpensively and legally will also be covered.

MED 105—MULTIMEDIA FOR WEB **3-0-3**

An introductory level course exploring Apple's iLife software package. Students will produce basic iVideo, iPhotos, audio, and iDVD for personal and WEB use. Students studying web design and multimedia will find this class of value.

MED 110—DIGITAL PRESENTATION **3-0-3**

Introduces the planning and production of visual presentation programs. Emphasis is placed on digital audio/video projected methods of presentation. Input/output devices such as DVD, audio recording and flatbed scanners are employed in the design and development of presentations.

MED 155—INTRODUCTION TO MULTIMEDIA **3-0-3**

An introductory course in the exploration of current and past media. Topics include television, radio, recordings, newspapers, magazines, books, movie industry and other current trends in multimedia technology.

MED 156—TELEVISION PRODUCTION I **2-2-3**

Course introduces multi-camera digital video production. Students will learn basic camera operation and principles of studio-based live- switched productions. Basic lighting procedures and fundamental editing, scripting and storyboarding will be presented. Media students with an interest in live television, like news and sports, will find this course useful.

MED 158—HISTORY OF CINEMA **3-0-3**

Surveys the development of cinema from its technological origins in the 19th century through its growth as an international medium and an analysis of various film genre.

MED 159—BASIC VIDEO PRODUCTION **2-2-3**

Introduces digital, single-camera video production. Students will learn basic camera operation and use of nonlinear editing. Basic lighting procedures and fundamental scripting/storyboarding will be presented. Students, such as education majors, wishing to incorporate video instruction as an additional means of communication within their classroom may find this class of interest.

MED 160—BASIC PHOTOGRAPHY **3-0-3**

A basic course in digital camera use and operation. This course also covers the history of photography, basic digital dark room, lighting and composition. Digitally oriented with selected projects and exercises to develop digital camera and darkroom skills. Students must have access to a digital camera.

MED 161—PORTRAIT PHOTOGRAPHY **3-0-3**

This course introduces students to basic portrait types. Fundamental lighting set-ups will be examined. Basic instruction in posing techniques will be used to create images in the studio and of an environmental nature.

MED 170—DIGITAL PHOTOGRAPHY **3-0-3**

This course covers the basic operation of digital camera systems, including computer-based image editing, retouching and enhancement. Adobe Photoshop software is used to produce state-of- the art images. Students will learn the use of peripheral devices to scan digital images. Basic studio lighting as it applies to digital photography is also explored.

MED 199—INTERNSHIP **1-12-3**

Obtain on-the-job experience in the media industry through working in an operating establishment under the supervision of management personnel. Seminars are conducted for the students to discuss their experiences. Students are responsible for transportation to their off-campus sites. Prerequisite(s): Permission of instructor and completion of 30 credits in major course requirements

MED 200—PORTFOLIO DEVELOPMENT **1-2-3**

Review of existing student work and development of additional pieces into a viable self-sales tool for seeking employment. Elements will include: digital prints, computer-based presentation and DVD. Assignments will update print and/or multimedia portfolios toward a specific career endeavor. Basic methods of job marketing and self-promotion will be examined. Students will utilize prior lab experience to work independently in the production of requirements. Prerequisite(s): MED 265, MED 170

MED 240—SOUNDBOOTH **3-0-3**

This introductory level course introduces students to Adobe Soundbooth software. It incorporates the fundamental use of basic digital sound creation for use in DVD's digital presentations and nonlinear video.

MED 250—PREMIERE PRO **3-0-3**

This is an introductory level course using the computer as an editing tool. Students utilize Adobe Premiere Pro nonlinear editing software to produce digital video for use in non-broadcast and DVD. Basic editing procedures encompassing video, audio, and still imagery will be employed. Students must have a miniDV digital video camera and external hard drive.

MED 255—PUBLIC RELATIONS **3-0-3**

Covers corporate and nonprofit public relations, its development, definitions, practice and tools. Utilization of the electronic and print media as a means of enhancing corporate image will be addressed through individual and collaborative assignments.

MED 256—ADVERTISING **3-0-3**

A fundamental overview of advertising with an emphasis on researching, developing and implementing advertising campaigns. Class projects use electronic and print media to explore the many different facets of advertising. This course is the same as COA-256 Advertising.

MED 257—TELEVISION PRODUCTION II 2-2-3
This course covers video field production techniques and production. Nonlinear editors and digital video cameras are used to digitally produce student projects and assignments. Prerequisite(s): MED 156

MED 260—ENCORE 3-0-3
Introductory course using Adobe Encore to author DVDs. Elements of audio, video and special effects are incorporated into DVD projects. This course incorporates screen design, interactive navigation, sound, text, graphics and video to produce interactive DVDs for training, weddings, education, kiosks and corporate use.

MED 263—PHOTOJOURNALISM 3-0-3
Photojournalism is an intermediate study in technique and production of images for newspapers magazines and the Internet. A continuation of MED 170 and MED 205, incorporating digital images used for publication. Prerequisite(s): MED 170 and MED 161 or MED 265

MED 265—COLOR PHOTOGRAPHY 3-0-3
Covers the technical aspects of camera RAW and digital darkroom procedures essential to working with color digital materials. Digital darkroom technique and inkjet processing of various color print materials is utilized extensively in the course. Prerequisite(s): MED 160

MED 266—STUDIO/LOCATION PHOTOGRAPHY 2-2-3
Instructs students in studio and location situations as they apply to commercial digital photography. Studies encompass elements of lighting techniques and examination of the medium and large format camera to create images while working from a layout. Portfolio assignments develop skills in illustrative, industrial, architectural and fashion areas of photography. Prerequisite(s): MED 161, MED 170, and MED 265

MED 270—PREMIERE PRO II 3-0-3
A continuation of MED 250, Premiere Pro II emphasis is on nonlinear Adobe Premiere Pro video editing software. Advanced effect techniques are used to animate, change speeds and apply color corrections and composite images. Prerequisite(s): MED 250

MED 271—ADVANCED DIGITAL PHOTOGRAPHY 3-0-3
This is a continued exploration of digital camera systems. Advanced computer-based image manipulation and retouching will be covered using Adobe Photoshop software to produce creative, state-of-the-art portfolio intended images. Studio set-up and lighting instruction will allow students to develop personal digital pieces. Prerequisite(s): MED 170

MED 290—AFTER EFFECTS 3-0-3
Students will learn the basic creation of animating shapes, motion and text effects utilized in video and DVD authoring for use in software such as Premiere Pro and Encore. They should have basic nonlinear editing experience prior to attempting this course. Prerequisite(s): MED 250

MED 299—INTERNSHIP 1-12-3
Obtain experience in the media industry through working in an operating establishment under the supervision of management personnel. Seminars are conducted for students to discuss their experiences. Students are responsible for transportation to their off-campus sites. Prerequisite: Permission of Instructor and completion of 30 credits in major course requirements.

MET–METALLURGY

MET 105—WELDING METALLURGY I 3-2-4
A study of the manufacturing of metals and alloys, emphasizing their properties as to weldability. Demonstrations in the use of tensile testor, impact testor, metallograph, metallurgical microscopes and polishing techniques. Also included is the advanced study of properties of metals and alloys with a particular emphasis on practical plant problems and processes. Includes a study of heat treatment, casting, plating and rolling. Laboratory studies will include emphasis on the above material.

MKT–MARKETING

MKT 199—MARKETING INTERNSHIP 1-12-3
Students will gain exposure and insight into the marketing/retail industry through supervised and evaluated on-the-job experience. Students will select locations for internships from instructor-approved business sites in southwestern Pennsylvania. Seminars will be conducted weekly for students to discuss their experiences. Prerequisite(S): 18 completed credits

MKT 242—RETAILING 3-0-3
Principles of retailing as applied to the retailing activities of location, organization, human resources, buying, inventory control, selling, services, expenses and profits.

MKT 251—CONSUMER BEHAVIOR 3-0-3
This course is a comprehensive attempt to understand why people buy things and to appreciate how products, services and consumption activities contribute to the broader social world we experience. Progressive ideas on e-commerce and globalization are presented. Cross-cultural examples are discussed within a framework of marketing theory and strategy.

MKT 252—PUBLIC RELATIONS 3-0-3
The purpose of this course is to introduce students to the concepts of effective public relations and prepare them to deal with the situations and arrive at the solutions that distinguish the practice of communication in a world experiencing the unbridled growth of the Internet. At the same time, the integration of the relationship among agencies, clients and the media is incorporated along with the practice and management of public relations.

MKT 253—GLOBAL MARKETING 3-0-3
This course introduces the student to the principles of global marketing. Emphasis will be placed on the strategic use of the Internet to successfully interact socially, culturally and environmentally in global markets. A strategic environmental approach is employed to outline the major dimensions of the social foundation and financial environment needed to apply basic marketing principles to global business practices.

MKT 254—ADVERTISING AND PROMOTION 3-0-3
Studies the basic facets of advertising including its planning, creation and implementation. Course emphasis is on the development of advertising strategies to meet the challenges of marketing situations. Students investigate the process of budget planning, the practical application of market research to the creation of advertising campaigns, media planning, and the coordination of media advertising and promotional techniques as part of the overall marketing strategy of a business enterprise.

MPT–MANUFACTURING PROCESS TECHNOLOGY

MPT 100—PROGRAMMABLE LOGIC CONTROL 3-2-4
Introduces students to the fundamental industrial processes and their control. This course will also include design, function and applications of various industrial controllers.

MPT 112—INTRODUCTION TO DESIGN MATERIALS, AND PROCESSES 3-0-3
Focuses on the study of design, materials and the primary processing methods used in manufacturing. A practical course devoted to the many ways in which raw materials are economically converted into useful products. Discussions of primary processing methods-materials additions, removal and change-are grouped together, followed by coverage of applications. Properties of various materials will be covered. Students first build a thorough knowledge of similarities and differences in materials, then processing methods, and that foundation carefully sets the stage for an understanding of how to choose the optimal processes for a specific project.

MPT 121—MANUFACTURING MAINTENANCE APPRENTICESHIP I 1-40-2
A supervised and evaluated on-the-job training experience designed to provide practical application of the skills and methodology of manufacturing maintenance.

MPT 122—MANUFACTURING MAINTENANCE APPRENTICESHIP II 1-40-2

A supervised and evaluated on-the-job training experience designed to provide practical application of the skills and methodology of manufacturing maintenance.

MPT 123—MANUFACTURING MAINTENANCE APPRENTICESHIP III 1-40-2

A supervised and evaluated on-the-job training experience designed to provide practical application of the skills and methodology of manufacturing maintenance.

MPT 199—MANUFACTURING PROCESS TECHNOLOGY INTERNSHIP 1-12-3

Students will obtain experience in the manufacturing process technology field through a combination of occupational instruction and on-the -job training. This course integrates classroom occupational study with a planned supervised practical work experience. Prerequisite(s): Permission of instructor

MPT 200—PROGRAMMABLE LOGIC CONTROL II 3-2-4

Introduces students to the basic concept of automated manufacturing systems including drive mechanisms and sensing devices. This course will give students a background in today's flexible systems. Prerequisite(s): MPT 100

MPT 201—PROGRAMMABLE LOGIC CONTROL III 2-2-3

Introduces students to automated-manufacturing system troubleshooting. This course is designed to give students practical experience in problem-solving and applications. Prerequisite(s): MPT 200

MPT 209—INSTRUMENTATION AND PROCESS CONTROL 3-2-4

Investigates the electronic techniques that are used for measurement and control in process control systems. Closed-loop systems including transducers, signal conditioning and analog and digital controllers will be considered. The overall objective is to prepare graduates to install, adjust and maintain electronic and related parts of commercial and industrial systems.

MPT 211—MATERIAL, SAFETY AND EQUIPMENT OVERVIEW FOR NANOFABRICATION 2-2-3

This course will provide an overview of basic nanofabrication processing equipment and materials handling procedures. The focus is on procedural, safety, environment and health issues in equipment operation and materials handling. Topics to be covered will include: cleanroom operation, safety and health issues; vacuum pump systems operation, environmental safety, and health issues (covering direct drive mechanical, roots blowers, turbonmolecular, and dry mechanical systems); furnace operation, safety, environmental and health issues (covering horizontal, vertical, rapid thermal annealing tools); chemical vapor deposition system operation, safety, environmental and health issues (covering gas delivery, corrosive and flammable gas storage and plumbing, regulators, and mass flow controls); and vacuum deposition/etching system operation, safety, environment and health issues covering microwave and RF power supplies and tuners, heating and cooling units, vacuum gauges, valves and process controllers. Specific materials handling issues will include DI water, solvents, cleansers, ion implantation sources, diffusion sources, photoresists, developers, metals, dielectrics, and toxic, flammable, corrosive, and high purity gases as well as packaging materials.

MPT 212—BASIC NANOFABRICATION PROCESSES 2-2-3

This course will provide an overview of basic processing steps in nanofabrication. The majority of the course details a step-by-step description of the equipment and processes needed to fabricate devices and structures. Processing flow will be examined for structures such as microelectromechanical (MEM) devices, biomedical "lab-on-a-chip" structures, display devices, and microelectronic devices including diode, transistor, and full CMOS structures. Students will learn the similarities and differences in both equipment and process flow for each configuration by undertaking "hands-on" processing.

MPT 213—THIN FILMS IN NANOFABRICATION 2-2-3

This course will cover thin film deposition and etching practices in nanofabrication. The deposition techniques to be included in the first part of the course will include atmospheric, low pressure, and plasma enhanced chemical vapor deposition and sputtering; thermal evaporation; and beam evaporation physical vapor deposition. Materials to be considered will include dielectics (nitride, oxide), polysilicon (doped and undoped) metals (aluminum, tungsten, copper), adhesion promoters and diffusion barriers. The second part of the course will focus on etching processes and will emphasize reactive ion etching (single wafer, batch), high-ion-density reactors, ion beam etching and wet chemical etching. Student will receive hands-on experience in depositing and etching dielectric, semiconductor and metal materials using state-of-the-art tools and practicing many of the steps critical to nanofabrication of semiconductor devices including microelectronic, MEMs devices, display structures and structures used in the biotechnology fields.

MPT 214—LITHOGRAPHY IN NANOFABRICATION 2-2-4

This specific course will cover all aspects of lithography from design and mask fabrication to pattern transfer and inspection. The course is divided into three major sections. The first section describes the lithographic process from substrate preparation to exposure. Most of the emphasis will be on understanding the nature and behavior of photoresist materials. The second section examines the process from development through inspection (both before and after pattern transfer). This section will introduce optical masks, aligners, steppers and scanners. In addition, critical dimension (CD) control and profile control of photoresists will be investigated. The last section will discuss advanced optical lithographic techniques such as phase shifting masks and illumination schemes as well as 3-beam, X-ray, EUV, and ion beam lithography.

MPT 215—MATERIALS MODIFICATION IN NANOFABRICATION 2-2-3

This course will cover in detail the processing steps used in modifying material properties in nanofabrication. Included will be growth and annealing processes utilizing horizontal and vertical furnaces as well as rapid thermal annealing. The impact of thermal processing and thermal processing on defects, gettering, impurities and overall electrical mechanical, optical, electrical and chemical properties will be studied. The student will grow and measure gate and field oxides, implant and activate source and drain regions, and evaluate thermal budget requirements using state-of-the-art tools. Included also will be other modification technologies such as ion implantation, diffusion and surface preparation and treatment. Substrate preparation processing such as slicing, etching, polishing and epitaxial growth will be covered.

MPT 216—CHARACTERIZATION, PACKAGING AND TESTING OF NANOFABRICATED STRUCTURES 2-2-3

This course will examine a variety of techniques and measurements essential for controlling device fabrication and final packaging. Monitoring techniques such as residual gas analysis (RGA), optical emission spectroscopy (OES) and end point detection will be discussed. Characterization techniques such as: SEM, XPS/Auger, surface profilometry, advanced optical microscopy, optical thin film measurements, ellipsometry, and resistivity/conductivity to yield analysis and process control will also be stressed. These will include breakdown measurements, junction testing, C-V and I-V tests and simple transistor characterization. In addition, we will examine mechanical as well as electrical characteristics of some simple MEMs devices and chemical and biological responses of nanofabricated biomedical structures. The student will also learn about the manufacturing issues involved in subjects such as interconnects, isolation and final device assembly. Aluminum, refractory metals and copper deposition techniques and characterization will be discussed in detail along with topics such as diffusion barriers, contact resistance, electromigration, corrosion, stress effects, and adhesion. The importance of planarization techniques such as deposition/etchback and chemical/mechanical polishing will be emphasized. Lastly, packaging procedures such as die separation, inspection bonding, sealing and final test for both conventional ICs and novel MEM and biomedical devices will be examined.

MPT 221—MANUFACTURING MAINTENANCE APPRENTICESHIP IV 1-40-2

A supervised and evaluated on-the-job training experience designed to provide practical application of the skills and methodology of manufacturing maintenance.

MPT 222—MANUFACTURING MAINTENANCE APPRENTICESHIP V 1-40-2

A supervised and evaluated on-the-job training experience designed to provide practical application of the skills and methodology of manufacturing maintenance.

MPT 223—MANUFACTURING MAINTENANCE APPRENTICESHIP VI 1-40-2

A supervised and evaluated on-the-job training experience designed to provide practical application of the skills and methodology of manufacturing maintenance.

MPT 240—INTRODUCTION TO AUTOMATED MANUFACTURING 2-2-3

Provides students with an overview of the hardware and functions of industrial robotics, and hands-on training with a state-of-the-art industrial robot. Lecture topics include robot configurations, tooling, application information, safety considerations and future trends. Laboratory work allows students to create, edit and execute programs on a 5-axis industrial robot.

MTH–MATHEMATICS

MTH 050—BASIC MATHEMATICS 3-0-3

Designed for students who need to develop the basic mathematic skills that are essential to success in more advanced college level work. Content material includes computational skills of whole numbers, fractions, decimals, percents, ratios, proportions and elementary algebra. Word problems are strategically placed throughout the course both to motivate and reinforce learning. Developmental courses may not be used to fulfill degree requirements. Prerequisite(s): Placement Test

MTH 052—FOUNDATIONS OF ALGEBRA 3-0-3

An introduction to elementary algebra that provides basic principles, concepts and techniques that are necessary for student success in higher level mathematics courses. Content material includes integers, operations with rational expressions, positive and negative exponents, the solution of first and second degree equations, and word problems. Designed for students with little or no algebra background. Developmental courses may not be used to fulfill degree requirements. Prerequisite(s): Placement Test

MTH 052A—BASIC MATHEMATICS/ FOUNDATIONS OF ALGEBRA 3-0-3

Basic mathematics and intro to elementary algebra provides basic principles, concepts and techniques that are necessary for student's success in higher level mathematics courses. Content material includes integers, operations with rational expressions, positive and negative exponents, solutions of first and second degree equations, and word problems. This course is designed for students with little or no algebra background. Developmental courses may not be used to fulfill graduation requirements.

MTH 100—INTERMEDIATE ALGEBRA 3-0-3

Designed for students with some previous algebra background. Further enhances these algebraic skills and develops others necessary for achievement in College Algebra. Content materials include solving first and second degree equations, polynomial functions, rational functions, exponents, radicals and topics related to them, scientific notation and word problems. Prerequisite(s): MTH 052 or satisfactory Placement Test score

MTH 100A—INTERMEDIATE ALGEBRA 3-0-3

Designed for students with some previous algebra background. Further enhances these algebraic skills and develops others necessary for achievement in College Algebra. Content materials include solving first and second degree equations, polynomial functions, rational functions, exponents, radicals and topics related to them, scientific notation and word problems. Prerequisite: MTH 052

MTH 108—MATHEMATICS FOR THE TECHNOLOGIES I 3-2-4

A course for technologies majors emphasizing application and problem solving. Topics include: review of fundamental algebra; formula transformation; dimensions and units; radicals; systems of linear equations, graphing of data, equations and functions; right triangle trigonometry; and quadratic equations and functions. Prerequisite(s): MTH 052 or satisfactory Placement Test score

MTH 109—MATHEMATICS FOR THE TECHNOLOGIES II 3-2-4

A course for technologies majors emphasizing application problem solving and proof. Topics include: graphs of trigonometric functions, operations with complex numbers, logarithmic and exponential functions, and equations, introduction to analytic geometry, algebraic radicals, trigonometric identities and equations. Prerequisite(s): MTH 108 or satisfactory Placement Test score

MTH 157—COLLEGE ALGEBRA 3-0-3

Topics include an overview of basic skills learned in intermediate algebra with additional emphasis on equation solving; inequalities; systems of equations; complex numbers; graphing techniques for linear, polynomial, and rational functions; circles; absolute value and piece-wise functions. Prerequisite(s): MTH 100 or satisfactory Placement Test score

MTH 158—PRECALCULUS MATHEMATICS 3-0-3

Designed to prepare students for calculus. Topics covered include: logarithms and their graphs, trigonometric functions and their graphs, identities, applications, calculator usage, logarithmic and trigonometric equation problem solving. Prerequisite(s): MTH 157 or satisfactory Placement Test score

MTH 160—INTRODUCTION TO STATISTICS 3-0-3

An introduction to statistics with an emphasis on application rather than theoretical development. Topics covered include: frequency distributions, measures of central tendency, measures of dispersion, statistical inference, testing of hypotheses, regression and correlations. Elementary research designs are included. It is advised that students have a background in algebra. Prerequisite(s): MTH 052 or satisfactory Placement Test score

MTH 161—MODERN COLLEGE MATHEMATICS 3-0-3

A course designed for non-science majors. Topics include limited coverage of algebra and geometry, a discussion of ratios and proportions, and some work with percentages, probabilities and statistics. Prerequisite(s): MTH 052 or satisfactory Placement Test score

MTH 172—ANALYTICAL GEOMETRY AND CALCULUS I 4-0-4

A first course in calculus and analytical geometry. Topics include limits and derivatives of algebraic and trigonometric functions; applications of derivatives, continuity and basic integration techniques. Prerequisite(s): MTH 109, MTH 158 or satisfactory Placement Test score

MTH 173—ANALYTICAL GEOMETRY AND CALCULUS II 4-0-4

Continuation of MTH 172. Differential and integral calculus of algebraic and transcendental functions; analytical geometry, techniques of integration and application of the integral, sequences and series, convergence and divergence theorems. Prerequisite(s): MTH 172

MTH 180—ELEMENTS OF MATHEMATICS I 3-0-3

A presentation of the mathematics central to a comprehensive elementary and middle-school mathematics curriculum. The four-step problem solving process is stressed throughout the course. Topics included are sets, numeration, operations and properties of real numbers, number theory, fractions, decimals, percent, ratio and proportion, and algebra basics. Prerequisite(s): MTH 050 or satisfactory Placement Test score

MTH 185—ELEMENTS OF MATHEMATICS II 3-0-3

Designed to follow Elements of Mathematics I and continue with more advanced topics in mathematics focusing on the problem solving process. Areas of emphasis include probability and statistics, geometry, computer topics, logic, and measurement. Prerequisite(s): MTH 180

MTH 271—ANALYTICAL GEOMETRY AND CALCULUS III **4-0-4**
This is a continuation of MTH 173. Topics include two and three dimensional vectors, areas and surfaces, multi-variable and partial derivatives, double and triple integrals and applications. Prerequisite(s): MTH 173

MTH 272—DIFFERENTIAL EQUATIONS **3-0-3**
First order ordinary differential equations. Linear differential equations with constant coefficients. Solutions of differential equations by use of series. Numerical solutions. Prerequisite(s): MTH 271

MTT–MACHINE TECHNOLOGY

MTT 100—INTRODUCTION TO METALWORKING **1-3-3**
This course is designed to introduce the student to the history of machining tools, machine trade opportunities and general shop safety. Classroom and laboratory activities include basic measurement, layout tools and processes, hand tool and bench work, metal cutting saws and drilling machines. The Machinery's Handbook will be used to introduce the student to metal cutting technology and operations.

MTT 102—GEOMETRIC DIMENSIONING AND TOLERANCING **2-2-3**
This course is structured to increase one's ability to accurately interpret machine drawings. Classroom activities include GD&T theory, fits and clearance, surface finishes, advanced technologies, datum relations, true positioning and complex drawings.

MTT 105—LATHE I **1-4-3**
This course is designed to provide the student with basic skills in the use of the metal lathe, its parts and applications. Classroom and laboratory activities will include straight turning facing, single point threading, turning with stock held in chucks and between centers. Students will turn parts to specification while observing appropriate safety procedures. Prerequisite(s): MTT 100

MTT 110—MILL I **1-4-3**
This course is designed to introduce the student to the milling machine, its parts, operation and application. Classroom and laboratory activities will include the basic setup and operation of the vertical milling machine, accessories and attachments, speeds and feeds, metal cutting techniques, drilling and reaming. Students will mill parts to specification using appropriate safety procedures. Prerequisite(s): MTT 100

MTT 112—INTRODUCTION TO DESIGN, MATERIALS AND PROCESSES **3-0-3**
Focuses on the study of design, materials and the primary processing methods used in manufacturing. A practical course devoted to the many ways in which raw materials are economically converted into useful products. Discussions of primary processing methods-materials additions, removal and change-are grouped together, followed by coverage of applications. Properties of various materials will be covered. Students first build a thorough knowledge of similarities and differences in materials, then processing methods, and that foundation carefully sets the stage for an understanding of how to choose the optimal processes for a specific project.

MTT 199—MACHINE TECHNOLOGY INTERNSHIP **1-12-3**
Students will obtain experience in the manufacturing process technology field through a combination of occupational instruct- ion and on-the-job training. This course integrates classroom occupational study with a planned supervised work experience.

MTT 206—LATHE II **1-5-3**
This course is designed to provide the student with the advanced skills in the use of the metal lathe, its parts and application. This hands-on course requires students to use a variety of advanced metal lathe operations, with stock held in chucks and between centers, using metal cutting techniques to make parts and objects to specifications. These parts will require the student to perform internal and external threading, knurling, boring, faceplate applications, eccentrics and the use of the study rest, follower rest and grinding attachments. The students will also learn taper turning between centers, production turning and taper turning with the taper attachment. Students will be prepared to take the National Institute of Metalworking Skills (NIMS) Level II certification in Turning. Prerequisite(s): MTT 105, MTT 102

MTT 211—MILL II **1-5-3**
This course is a continuation of Mill I. Through a combination of lectures and hands-on exercise, Mill II exposes the student to more advanced complex machining on the vertical mill. Topics will include precision hole location, key seats, rotary tables, dividing head operations, cutting deep slots and boring operations. Prerequisite(s): MTT 110 and MTT 102

MTT 215—GRINDING I **1-4-3**
This course is designed to introduce the student to precision grinding operations and their application. This hands-on course requires students to use a variety of surface and form grinders and techniques to make parts and objects to specification. These parts will require the student to learn and understand the following: grinding safety, wheel selection and preparation, surface finishes, the use of grinding fluids, and the proper procedure to grind flat, square parallel steps, slots and angles. Students will be prepared to take the National Institute of Metalworking Skills (NIMS) Level I certification in Grinding. Prerequisite(s): MTT 100 and MTT 102

MUS–MUSIC

MUS 131—CLASS VOICE I **2-0-2**
An introduction to proper vocal technique. Students develop skills in proper breathing, diction, and posture, performing for other students in the class. Subsequent to two semesters, students are encouraged to take applied voice lessons.

MUS 155—MUSIC LISTENING: A SURVEY **3-0-3**
Introduces the study of the elements of music, instruments of the orchestra, and the lives and works of composers from the Renaissance, Baroque, Classical, Romantic, and Contemporary eras. Corresponding listening selections are provided in class.

MUS 160—MUSIC HISTORY I **3-0-3**
Presents the historical unfolding of the major achievements of music in Western culture from Medieval music through the end of the Baroque period. Emphasis will be on the evolution of form, harmonic technique, and style from ancient times to 1750. The student will study and research composers, compositions and styles of the Medieval, Renaissance and Baroque periods. Prerequisite(s): MUS 155

MUS 175—COLLEGE CHOIR I **2-0-2**
This course is designed for all students. This ensemble provides students the opportunity to rehearse and perform choral music appropriate for all voices. The repertoire includes literature from all music periods and styles. There are no auditions to become a member. Students may audition for solos, duets, or when needed, instrumental selections. Prerequisite(s): Each level requires completion of previous level

MUS 176—COLLEGE CHOIR II **2-0-2**
This course is designed for all students. This ensemble provides students the opportunity to rehearse and perform choral music appropriate for all voices. The repertoire will include literature from all music periods and styles. There are no auditions to become a member. Students may audition for solos, duets, or when needed, instrumental selections.

MUS 177—COLLEGE ORCHESTRA I **2-0-2**
The WCCC Orchestra is a collaboration of the community and student musicians who rehearse together to perform two concerts a year. The repertoire ranges from the recognized orchestral monuments to the less explored. Rehearsals are once a week for two and one half hours. Prerequisite(s): Each level requires completion of previous level

MUS 178—COLLEGE ORCHESTRA II 2-0-2
The WCCC Orchestra is a collaboration of the community and student musicians who rehearse together to perform two concerts a year. The repertoire ranges from the recognized orchestral monuments to the less explored. Rehearsals are once a week for two and one half hours. The inclusion of semi professional musicians from the community greatly enhances the artistic and educational experiences of student participation in an orchestra. This course is designed for all students who play orchestral instruments. This ensemble provides students the opportunity to rehearse and perform orchestra music appropriate for all instrumentalists. The repertoire will include music literature from all music periods and styles. There are no auditions to become a member. Students will sit in their section on playing ability. There are no auditions except for solos or duets when needed.

MUS 255—AMERICAN POPULAR MUSIC 3-0-3
Open to all interested students, this course offers a panoramic view of the history of American popular music from the beginnings to the present. Upon completion of this course, the student will be able to identify and discuss each of the following aspects of American popular music: specific styles and style periods, pivotal compositions and composers, ethnic traditions which have been major contributors in the development and evolution of popular music, song forms and their contribution to style period development, influences on American history, and historical influences on popular music.

MUS 275—COLLEGE CHOIR III 2-0-2
This course is designed for the music and non-music major. A variety of choral literature from all periods of music history will be rehearsed and performed. The course is required of all music majors but is open to all qualified students.

MUS 276—COLLEGE CHOIR IV 2-0-2
This course is designed for the music and non-music major. A variety of choral literature from all periods of music history will be rehearsed and performed. The course is required of all music majors but is open to all qualified students.

MUS 277—COLLEGE ORCHESTRA III 2-0-2
The WCCC Orchestra is a collaboration of the community and student musicians who rehearse together to perform two concerts a year. The repertoire ranges from the recognized orchestral monuments to the less explored. Rehearsals are once a week for two and one half hours. The inclusion of semi professional musicians from the community greatly enhances the artistic and educational experiences of student participation in an orchestra. This course is designed for all students who play orchestral instruments. This ensemble provides students the opportunity to rehearse and perform orchestra music appropriate for all instrumentalists. The repertoire will include music literature from all music periods and styles. There are no auditions to become a member. Students will sit in their section on playing ability. There are no auditions except for solos or duets when needed.

MUS 278—COLLEGE ORCHESTRA IV 2-0-2
The WCCC Orchestra is a collaboration of the community and student musicians who rehearse together to perform two concerts a year. The repertoire ranges from the recognized orchestral monuments to the less explored. Rehearsals are once a week for two and one half hours. The inclusion of semi-professional musicians from the community greatly enhances the artistic and educational experiences of student participation in an orchestra. This course is designed for all students who play orchestral instruments. This ensemble provides students the opportunity to rehearse and perform orchestra music appropriate for all instrumentalists. The repertoire will include music literature from all music periods and styles. There are no auditions to become a member. Students will sit in their section on playing ability. There are no auditions except for solos or duets when needed.

MUS 285—COLLEGE STAGE BAND I .5-3-2
The Westmoreland County Community College Stage Band is a collaboration of the community and student musicians who rehearse together to perform two concerts a year. The repertoire ranges from the recognized stage band literature to the less explored. Rehearsals are twice a week for four hours. Prerequisite(s): Must pass audition

NSG–NURSING

NSG 100—TRANSITION TO THE PN PROGRAM .5-1.5-2
This course is designed to offer the WCCC associate degree nursing student the opportunity to complete the additional hours necessary to meet the required hours of enrollment in a PA State Board approved practical nursing program. Enrollment in this course is restricted to WCCC Nursing Students who have successfully completed all Level I ADN Nursing courses, but did not successfully complete a Level II Nursing course, thus requiring withdrawal from the ADN Program. Enrollment is this course requires faculty approval for transfer into the Practical Nursing Program.

NSG 110—INTRODUCTION TO NURSING AND HEALTH CARE .7-1.5-1 ADN .7-2-1 PN
This course presents an overview of the profession of nursing and health care. The five critical elements of the WCCC Nursing Program: caring, competency, communication, critical thinking and commitment serve as the framework for this course. Concepts and issues related to each element are presented. Opportunities to investigate these issues take place in the campus laboratory. Corequisite(s): BIO 171, PSY 160

NSG 111—FOUNDATIONS OF NURSING CARE 3-15-8 ADN 3-18-8 PN
Presents the basic concepts and practice skills that are fundamental to providing nursing care for individuals with basic human needs. An integration of principles from the biological, physical, and behavioral sciences with nursing theory, prepares the student to use the nursing process to promote, maintain, and restore health. The teaching of related practice skills takes place in the campus laboratory. The application of the basic care concepts and practice skills occurs in various health care settings. Corequisite(s): BIO 171, ENG 161, PSY 160, NSG 110

NSG 120—BASIC MEDICAL SURGICAL NURSING CARE IN ACUTE SETTINGS 3-9-6 ADN 3-11-6 PN
Emphasizes the role of the nurse as provider of care for adults with common well-defined health problems experiencing alterations in basic human needs. The focus is on caring for individuals with alterations in oxygenation, nutrition and elimination, safety and security, activity and rest, and psychosocial-sexual needs. The opportunity to practice related nursing skills, including intravenous therapy, is provided in the campus laboratory setting. Clinical laboratory experiences provide the opportunity for application in acute medical surgical settings. Prerequisite(s): NSG 110, NSG 111 Corequisite(s): BIO 172, PSY 161

NSG 121—BASIC MEDICAL SURGICAL NURSING CARE IN SELECTED SETTINGS 3-6-5 ADN 3-7.5-5 PN
Emphasizes the role of the nurse as provider of care for adults with common well-defined health problems experiencing alterations in basic human needs. The focus is on caring for individuals with alterations in oxygenation, nutrition and elimination, safety and security, activity and rest, and psychosocial-sexual needs. The opportunity to practice related nursing skills is provided in the campus laboratory setting. Clinical laboratory experiences provide the opportunity for application in subacute and extended care settings. Prerequisite(s): NSG 110, NSG 111 Corequisite(s): BIO 172, PSY 161, NSG 122

NSG 122—MENTAL HEALTH CONCEPTS .5-1.5-1
This course offers the student the opportunity to develop knowledge, skills and behaviors essential for providing care for individuals experiencing alterations in psychosocial needs and their families. The focus is on basic mental health theories, concepts and principles that provide the rationale for interventions to promote mental health. The opportunity to develop and practice selected therapeutic communication skills to promote mental health is provided in the campus laboratory setting. Prerequisite(s): NSG 110 Corequisite(s): BIO 172, PSY 161

NSG 130—PRACTICAL NURSING ROLE IN EXTENDED CARE SETTINGS 2-8-4

Facilitates the student's transition to practical nursing practice. Content related to the practical nursing role as manager of care in extended care settings under the supervision of the registered nurse is explored. Issues related to beginning and maintaining a career of a practical nurse are also examined. Clinical laboratory experiences in the area of the extended care settings provide the opportunity for the student to apply knowledge, skills and behaviors developed in previous nursing courses. This course also provides the student with the opportunity to develop behaviors to manage care of individuals in the extended care setting under the supervision of the registered nurse. The course is required of PN students only. Prerequisite(s): First and second semester nursing and support courses Corequisite(s): SOC 155

NSG 131—BASIC NURSING CARE OF THE CHILDBEARING FAMILY 1.5-6-3

Introduces the practical nursing student to the basic concepts, skills and behaviors necessary to provide care for childbearing individuals and families. The focus is on the care of childbearing individuals and their families with alterations in basic human needs. The campus laboratory provides the student with the opportunity to learn and practice skills necessary for providing basic care. Clinical laboratory experiences in area health care agencies offer opportunities for students to apply basic care concepts and skills. This course is required of PN students only. Prerequisite(s): First and second semester nursing and support courses Corequisite(s): SOC 155

NSG 132—BASIC NURSING CARE OF THE INFANT, CHILD AND FAMILY 1.5-6-3

Introduces the practical nursing student to the basic care of the infant, child and family. The focus is on anticipatory guidance and care of the infant, child and family with alterations in basic human needs. Common health problems of the infant and child are examined. The practice of related nursing skills takes place in the campus laboratory. Clinical laboratory experiences in area health care and child care settings provide the student with opportunities to apply concepts to the care of infants, children and their families. This course is required of PN students only. Prerequisite(s): First and second semester nursing and support courses Corequisite(s): SOC 155

NSG 200—LPN TRANSITION INTO ASSOCIATE DEGREE NURSING 2.5-.5-3

This course is designed specifically for the LPN who meets the criteria for advanced placement in the ADN program. It provides theoretical knowledge and practical experience which assists the student in making the transition from the practical to the professional nursing student role. The LPN will be familiarized with the nursing program at WCCC. The course emphasizes the major components of the conceptual framework of all nursing courses. These include caring, competency, communication, critical thinking, and commitment/conduct. The course includes critical thinking concepts and the nursing process, organization of assessment data using functional health patterns, communication and care across life spans with emphasis on beginning technical skills/math skills. Students will demonstrate application of these concepts and technical/math skills in the campus lab and clinical lab segment of the course. Prerequisite(s): Must be an LPN and accepted into the ADN program Corequisite(s): None

NSG 210—ROLE OF THE ASSOCIATE DEGREE NURSE 1-3-2

Introduces the student to the role of the professional nurse with an emphasis on provider of care. The roles of the nurse as a manager of care and member of a discipline are introduced. Focus is on the knowledge, skills and behaviors necessary to become a caring, competent and committed nurse who thinks critically and communicates effectively when caring for individuals and their families in a variety of settings. The campus laboratory provides the opportunity to practice activities to promote health, prevent disease and to develop skills related to the role of the professional nurse as provider of care. Prerequisite(s): Level I ADN nursing and support courses

NSG 220—NURSING CARE OF THE CHILDBEARING FAMILY 1.5-4.5-3

Introduces the student to the role of the associate degree nurse as provider of care and member of the discipline when working with childbearing individuals and families. Emphasis is placed on identifying alterations in basic human needs and applying the nursing process to the promotion, restoration or maintenance of health throughout the phases of the childbearing process. Common health problems of newborns and of women in each phase of childbearing are explored. Opportunities to practice related skills are provided in the campus laboratory. A variety of health care settings provide the student with clinical experience in the care of the childbearing family. Prerequisite(s): Level I ADN nursing and support courses Corequisite(s): Level II nursing and support courses

NSG 230—NURSING CARE OF THE INFANT, CHILD AND FAMILY 1.5-4.5-3

Introduces the student to care of the infant, child and family. The focus is on meeting and maintaining basic human needs and the care of the infant, child and family with alterations in basic human needs. Health promotion, disease prevention, and care of the infant and child with common health problems are studied. The practice of related nursing skills takes place in the campus laboratory. Clinical laboratory experience in area health care and child care settings provides the student with opportunities to apply concepts. The clinical experience in this course requires flexible scheduling. This course will be taught over five weeks. Prerequisite(s): Level I ADN nursing and support courses Corequisite(s): Level II nursing and support courses

NSG 240—PSYCHIATRIC/MENTAL HEALTH NURSING CARE 1.5-4.5-3

Emphasizes the utilization of the nursing process in the care of patients with alterations in their psychosocial needs. Focus is on the nurse as provider of care with emphasis on the development of caring communications and teaching/learning concepts in assisting individuals in meeting their basic needs. The campus laboratory is utilized as a forum to practice developing skills. Clinical laboratory experiences in area mental health settings provide the student with opportunities to apply knowledge and caring in the therapeutic nurse/patient relationship. This course will be taught over five weeks. Prerequisite(s): Level I ADN nursing and support courses and BIO 265 with a "C" grade or better Corequisite(s): Level II nursing and support courses

NSG 260—ADVANCED MEDICAL SURGICAL NURSING CARE OF THE CHRONICALLY ILL 1.5-4.5-3

Emphasizes the utilization of the nursing process in the care of individuals with alterations in basic human needs by focusing on the chronically ill adult with common health problems. Campus laboratory provides the student with the opportunity to practice physical and psychological assessment techniques and interventions to care for the chronically ill adult. Clinical laboratory experiences are primarily in acute care and home settings; with limited experiences with hospice, rehabilitation and outpatient settings to allow the student to apply care concepts and skills. Prerequisite(s): Level I ADN Nursing and Support courses Corequisite(S): Level II nursing and support courses

NSG 270—ADVANCED MEDICAL SURGICAL NURSING CARE OF THE ACUTELY ILL 1.5-4.5-3

Emphasizes the utilization of the nursing process in the care of individuals with alterations in basic human needs by focusing on the acutely ill adult with complex common health problems. The campus laboratory provides the student with the opportunity to develop an understanding of basic critical care assessment and interventional techniques and to practice basic critical care skills such as rhythm analysis, cardiac monitoring, electrical interventions, hemodynamic monitoring, mechanical ventilation, airway maintenance, and blood gas analysis. Clinical laboratory experience in area acute care facilities allows the student to apply critical care concepts and skills in critical care emergency department settings. Prerequisite(s): Level I ADN nursing and support courses Corequisite(s): Level II nursing and support courses

NSG 280—MANAGER OF NURSING CARE 1-9-4
Focuses on the role of the professional nurse as a manager of care. It emphasizes management and leadership principles and skills necessary to become competent in directing care for a group of individuals and their families in a variety of settings. The campus laboratory provides the opportunity to practice time management strategies, assertive communication skills, conflict management tactics and critical thinking skills. Clinical laboratory experiences in a variety of settings offer the opportunity to apply critical thinking, management and leadership principles and skills. Prerequisite(s): Level I ADN nursing and support courses, Level II ADN courses Corequisite(s) Level II support courses

OFT–OFFICE TECHNOLOGY

OFT 100—BASIC KEYBOARDING 1-0-1
This course instructs students on the basics of touch typing using a microcomputer. Emphasis is placed on correct posture and finger positions. The basic keyboard, including numbers and symbols, is the focus of this one-credit course.

OFT 110—DOCUMENT PROCESSING I 3-0-3
Students will create and edit office correspondence such as business letters, interoffice memorandums, business reports, and tabulated columnar material by using Microsoft Word. Emphasis is placed on keyboarding speed, accuracy, and document formatting using keyboarding software. Prerequisite(s): OFT 100 or Satisfactory Skills Test

OFT 120—DOCUMENT PROCESSING II 3-0-3
This course is a continuation of OFT 110 enabling the student to produce quality reports, correspondence, tables, publications, and legal and medical office documents through the use of handwritten and unarranged documents. Prerequisite(s): OFT 110 with a "C" grade or better

OFT 130—A&P FOR MEDICAL OFFICE 3-0-3
Designed for students enrolled in medical administration, acquaints students with basic information about all the body systems, common diseases and disorders of each body system. The course will first discuss the structure (anatomy) of the body system, how the individual parts work together when healthy (physiology), and then discuss the diseases the most often occur within the body system (pathophysiology). Prerequisite(s): ALH 122, BIO 107

OFT 140—OFFICE PROCEDURES 3-0-3
This course is designed to provide a foundation in the skills required by the office professional. The course explores the work environment, the use of technology in the modern office, and performing as part of the administrative team. Office communications and writing skills will be emphasized.

OFT 145—MEDICAL OFFICE PROCEDURES 3-0-3
Designed for prospective medical billers/coders who handle insurance claims for health care facilities and insurance companies. Patient's records and encounter forms are used to complete required insurance claim forms. The students will gain experience in identifying and correcting charge entry errors, as well using up-to-date medical coding. Prerequisite(s): OFT 110

OFT 150—MEDICAL BILLING MANAGEMENT 3-0-3
Familiarizes students with computerized account management and develops skills in using medical management software. Includes recordkeeping, controlling inventory, patient accounting, billing, insurance form preparation, appointment scheduling, payroll, word processing and database management. Prerequisite(s): OFT 110

OFT 151—ADVANCED OFFICE APPLICATIONS 3-0-3
This course provides word processing, spreadsheet, database and presentation instruction on microcomputers. Students use the Microsoft Office components: Word, Excel, Access and PowerPoint to create, edit, format and store documents, worksheets, databases and presentations. Prerequisite(s): CPT 150

OFT 185—POWERPOINT 1-0-1
This course focuses on Microsoft PowerPoint as a professional tool for the development of visual presentations. Topics include creating slide shows, visual elements, formats, printing, importing and delivering effective presentations. File management, editing, and Web-based presentations are also covered. Students will be provided with extensive hands-on experience in a modern computing environment.

OFT 190—WORD FOR WINDOWS 3-0-3
Focuses on the Word software, ranging from the most basic word processing tasks to more complicated procedures. Topics include document entry, editing, formatting, cutting and pasting, fonts, glossaries, tables, file merging, graphics and frames. Emphasis will be placed on the topic of document templates, macros and overall document design to create a more productive use of the package and professional looking documents. Prerequisite(s): CPT 150

OFT 195—EXCEL FOR WINDOWS 3-0-3
Covers how to build spreadsheets through typical business problems, generate sophisticated graphs and print professional looking reports. Students will learn how to use powerful statistical, mathematic and financial functions. The course will also introduce dynamic linking, macros, and import/exporting with other microcomputer application software. Prerequisite(s): CPT 150

OFT 196—ACCESS FOR WINDOWS 3-0-3
Included as part of the professional Microsoft Office Suite, Microsoft Access is a relational database management system that allows the user to store and retrieve information about related records. This course will focus on a wide range of activities from the fundamentals of good database design and the DBMS terminology to the creation of database applications. Material covered will include: creating tables, forms, queries, reports, macros and modules to handle common business applications. Prerequisite(s): CPT 150

OFT 199—INTERNSHIP I 1-12-3
A coordinated period of 130 hours of supervised experience in agencies that will offer students an opportunity to perform a variety of procedures and develop technical competence in their area of specialization. Prerequisite(s): OFT 110, OFT 140 or OFT 145; QPA of 2.0 overall in major

OFT 210—OFFICE TECHNOLOGIES 3-0-3
Provides the student with the skills to create and combine text and graphics to produce newsletters, reports, brochures and advertising copy using Microsoft Publisher. This course will also include instruction in the use of Microsoft Outlook as an e-mail, scheduling, and note-taking tool. Prerequisite(s): OFT 110

OFT 220—OFFICE TRANSCRIPTION 3-0-3
This course will introduce students to office transcription techniques for the translation of recorded correspondence, reports and records to properly formatted documents. The development of professional document editing and proofreading skills using typical administrative documents will be emphasized. Prerequisite(s): OFT 110 with a "C" grade or better

OFT 230—MEDICAL TRANSCRIPTION I 3-0-3
This course will develop medical transcription skills for speed and accuracy. The translation of recorded medical correspondence, reports and records to properly formatted documents will be covered. Emphasis will be place on the development of professional editing and proofreading skills using medical documents. Prerequisite(s): OFT 120

OFT 240—MEDICAL TRANSCRIPTION II 3-0-3
This course provides an extension of the transcription skills introduced in Medical Transcription I and focuses on the further development of transcription speed and accuracy in the translation of recorded medical correspondence, reports and records. Students will be exposed to more challenging materials to increase their skill levels to that of a professional medical transcriptionist. Prerequisite(s): OFT 230

OFT 250—DIAGNOSTIC MEDICAL CODING 3-0-3
This course prepares students for medical coding positions by helping them to understand how to find the correct diagnosis codes using the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM). Students will learn to convert widely accepted uniform descriptions of medical, surgical and diagnostic services rendered by health care providers with numeric codes. Prerequisite(s): ALH 122, BIO 107

OFT 260—PROCEDURAL MEDICAL CODING 3-0-3
This course prepares students for medical coding positions by helping them to understand how to find the correct procedural codes using CPT (Current Procedural Terminology) and HCPCS. Students will learn to convert widely accepted uniform descriptions of medical, surgical and diagnostic services rendered by health care providers with five-digit numeric codes. Prerequisite(s): ALH 122, BIO 107

OFT 280—OFFICE MANAGEMENT 3-0-3
This capstone course is designed to prepare the student for the workplace by integrating the various office and technical skills acquired in previous office technology courses. The course will provide the student with the opportunity to perfect their skills in a simulated office environment using teamwork, oral presentation, and critical thinking skills. Prerequisite(s): OFT 110, OFT 140, and 20 hours of office technology courses

OFT 285—ADVANCED MEDICAL CODING 3-0-3
This course provides extensive, hands-on abstract medical coding. The course will review methodologies for the abstracting of physician's notes in many different specialties. The student will also have the opportunity to take a mock exam which is developed from the CPC and CCS-P national exam. Prerequisite(s): OFT 145, OFT 250, OFT 260, and 20 hours of office technology courses

OFT 299—INTERNSHIP II 1-12-3
A coordinated period of 130 hours supervised experience in agencies that will offer students an opportunity to perform a variety of procedures and develop technical competence in their area of specialization. Internship II is only available to students who have completed OFT 199 and are in the final semester of classes. Prerequisite(s): OFT 199

PDV–PERSONAL DEVELOPMENT

PDV 155—COLLEGE SUCCESS 3-0-3
This course is intended to assist the student in assessing their current level of academic functioning and their readiness for college. The course will help the student identify areas of needed improvement and help the student begin the process of change. Concentration will be on the skills needed for success in and outside of the college classroom.

PDV 160—STRATEGIES FOR ACADEMIC SUCCESS 1-0-1
This course will assist students to develop and demonstrate an array of strategies that have proven to be helpful in regard to academic success in a collegiate environment. Students will be required to demonstrate through evidence the incorporation of these strategies in their approach to their academic success.

PDV 165—INTRODUCTION TO HIGHER EDUCATION 1-0-1
This course introduces the student to the American system of higher education, especially the community college system. Educational planning, strategies for academic success and skill development will be emphasized. Students will become familiar with the resources available to them at Westmoreland County Community College and will understand the policies and procedures of the college. Educational and transfer planning will be emphasized as students become familiar with the processes of obtaining fulfilling both general education and major requirements for a college degree. Time management, goal setting, making sound decisions and self-reliance will be emphasized.

PDV 170—CAREER EXPLORATION 1-0-1
This course introduces the theoretical and practical framework with which to explore careers compatible with interests, abilities, work values, academic skills and life goals. Students will examine the world of work; assess their interests, abilities and work values with this information and make realistic decisions regarding academic majors and careers.

PHB–PHLEBOTOMY

PHB 101—CLINICAL PHLEBOTOMY 3-3-4
This course introduces the students to a variety of blood collections methods, proper techniques, and standard precautions. Importance of infection prevention, patient identification, labeling of specimens, specimen collection, quality assurance, and specimen handling is stressed. Professionalism, ethics, confidentiality, protected health information, and safety are stressed. Prerequisite(s): ALH 122 Corequisite(s): PHB 105

PHB 105—SPECIMEN PROCESSING 3-3-4
This course covers the principles of specimen collection and handling. National standards are presented as well as clinical laboratory science, including quality control, laboratory math, safety, basic laboratory equipment, laboratory settings, accreditation, certification, professionalism, and ethics. Students perform such tasks as data entry and specimen accession. Students use centrifuge machines and aliquot samples as well as learning methods of sample collection. Patient confidentiality and protected health information are addressed. Prerequisite(s): ALH 122 Corequisite(s): PHB 101

PHB 110—PHLEBOTOMY AND/OR SPECIMEN PROCESSING PRACTICUM 0-15-5
This course provides close and directed supervision for the specimen processor to apply skills. Duties may include any or all of the following: receiving specimens, identification, labeling and distributing laboratory samples to appropriate areas, data entry, calculating test results using present procedures, routine instrument checks, and other duties as assigned. Prerequisite(s): PHB 101, PHB 105 Corequisite(s): CPT 150

PHB 111—PHLEBOTOMY PRACTICUM 0-15-5
This course provides close and directed supervision for the phlebotomist to apply skills. Duties may include any or all of the following: collection of blood specimens, proper techniques, and standard precautions. Importance of infection prevention, patient identification, labeling of specimens, specimen collection, quality assurance, confidentiality, and specimen handling is stressed along with other assigned duties. Prerequisite(s): PHB 101

PHL–PHILOSOPHY

PHL 155—INTRODUCTION TO LOGIC 3-0-3
Principles of correct thinking, deductive and indictive inference; use and misuse of language in reasoning. It is recommended that students complete ENG 161 before enrolling in this course.

PHL 160—INTRODUCTION TO PHILOSOPHY 3-0-3
Examines the major philosophical problems of philosophy as discussed by classical, medieval and modern philosophers.

PHL 161—INTRODUCTION TO ETHICS 3-0-3
A study of philosophical, ethical concepts concentrating on one or two philosophers or positions. The course is designed to provide an understanding of the "good life" both in terms of society and the individual as seen by one or more philosophers. The basis of the curse is built upon Aristotelian and Platonic concepts with supplemental study of additional ethical works including contemporary philosophies.

PHL 165—SOCIAL ETHICS 3-0-3
This interdisciplinary course examines contemporary ethical conflicts and provides a founding in the language, concepts, and tradition of ethics. Each unit illuminates a key ethical concept and provides students with the intellectual tools to analyze behavioral responses to moral dilemmas in the fields they choose to pursue, and in the society in which all of us must live.

PHY–PHYSICS

PHY 050—FOUNDATIONS OF PHYSICS 0-2-1
Designed to prepare students for Applied Physics or College Physics. Topics covered include concepts in algebra and trigonometry essential for physics, principles and units of measurement, graphing, and an overview of the physical quantities and concepts studied in introductory physics. Prerequisite(s): MTH 052

PHY 107—APPLIED PHYSICS 3-2-4
An introduction to physics emphasizing application and problem solving. Topics include data analysis, mechanics, thermodynamics, properties of matter, electricity and optics. Laboratory exercises provide reinforcement of concepts as well as experience in experimental techniques. Prerequisite(s): MTH 108 or MTH 100

PHY 125—PHYSICS FOR RADIOLOGY 3-0-3
A study of the fundamental physical laws of nature as they pertain to the production and diagnostic uses of X-Rays. Topics covered include energy, atomic structure, electricity and magnetism, electric generators and motors, X-Rays and radiography. Prerequisite(s): High school physics, PHY 107 or PHY 153

PHY 150—ENERGY AND SOCIETY 3-0-3
An introduction to the concept of energy, its resources, and consumption patterns in our society. The purpose of this course is to provide a basic understanding of the fundamental physical principles of energy and to analyze the various energy conversion processes currently available. Also explores interrelationships between energy use, industrial progress, and environmental consequences, and will present some future energy alternatives.

PHY 153—INTRODUCTION TO PHYSICS 3-0-3
A one-semester course that introduces the basic principles of physics with an emphasis on concepts and minimal use of mathematics. Topics include classical mechanics, heat, thermodynamics, wave motion and sound. Especially suited for students in elementary education and may serve as a preparatory course for College Physics or Engineering Physics. Prerequisite(s): Basic algebra skills

PHY 155—COLLEGE PHYSICS I 3-2-4
An introduction to the fundamental physical laws of classical mechanics and thermodynamics. Laboratory exercises are provided to reinforce the material presented in lecture and to provide experience in preparing technical reports. Prerequisite(s): MTH 108 or MTH 100 and high school physics

PHY 156—COLLEGE PHYSICS II 3-2-4
A continuation of College Physics I including a study of wave motion, optics, electricity and magnetism, atomic and nuclear physics. Laboratory exercises are provided to reinforce the material presented in lecture and to provide experience in preparing technical reports. Prerequisite(s): PHY 155

PHY 255—ENGINEERING PHYSICS I 4-2-5
The first in a two-semester sequence of calculus-based introductory physics courses presenting the principles of classical mechanics and thermal physics. Topics include kinematics, vectors, Newton's laws, energy and momentum, rotational motion, thermodynamics and kinetic theory. Laboratory exercises emphasize proper measurement techniques, error analysis and preparation of laboratory reports. Prerequisite(s): High school physics or equivalent Corequisite(s): MTH 172

PHY 256—ENGINEERING PHYSICS II 4-2-5
The second in a two-semester sequence of calculus-based introductory physics courses covering the principles of classical electricity and magnetism and quantum physics. Topics include electrostatics, Gauss's law, capacitance, electric and magnetic fields, inductance, simple AC and DC circuits, electromagnetic waves, Maxwell's equations, optics, introduction to quantum physics, the Bohr atom, and nuclear physics. Laboratory exercises emphasize proper measurement techniques, error analysis and preparation of laboratory reports. Prerequisite(s): PHY 255

PHY 258—MODERN PHYSICS 3-0-3
A first course in modern physics. Topics include relativity, quantum effects, radiation, nuclear structure and solid-state physics. Prerequisite(s): PHY 256

POL–POLITICAL SCIENCE

POL 155—AMERICAN NATIONAL GOVERNMENT 3-0-3
The evolution and current practice of the principles, form and operation of our national political system. Emphasis is placed on contemporary issues to illustrate the interaction of the components of the political system.

POL 156—MODERN POLITICAL SYSTEMS 3-0-3
An introduction to how different governments throughout the world operate. Democratic and authoritarian systems are examined to observe how they respond to the demands of their citizens and how decisions are made. Emphasis on Great Britain, the former USSR, China and Japan with additional examples from the "developing world."

POL 200—AMERICAN CONSTITUTIONAL EXPERIENCE 3-0-3
A study of the development of our system of government, from the theories and factors involved in creating our Constitution, to the powers of government granted under it. The development of individual rights and liberties as guaranteed by the Constitution will be examined with reference to the interpretation of the Constitution and Bill of Rights by the U.S. Supreme Court.

POL 255—AMERICAN STATE AND LOCAL GOVERNMENT 3-0-3
Examines the principles and practice of government and politics in our state and communities in the light of federalism. Particular emphasis is placed on state practice and local government in Pennsylvania.

POL 256—INTERNATIONAL RELATIONS 3-0-3
Examines contemporary international controversies and problems in relation to the major forces that shape the policies of nations. Attention is given to the state system, instruments of policy, regionalism, the factors of power and international organizations

PSY–PSYCHOLOGY

PSY 160—GENERAL PSYCHOLOGY 3-0-3
General Psychology is an introduction to the study of human behavior. Psychology is presented as both a biological and a social science. Facts, principles, processes, theories and research are explored in the course of study. The course will include the application of the scientific method, analysis of human behavior and synthesis of the components and causation of human behavior.

PSY 161—HUMAN GROWTH AND DEVELOPMENT 3-0-3
Using a developmental lifespan approach to human development, this course focuses on biological, cognitive and social domains of development and their interplay. Emphasis is on the importance of maintaining an ecological perspective. Major theories of human development at all stages of the lifespan are discussed. Prerequisite(s): PSY 160

PSY 163—PHYSIOLOGIC PSYCHOLOGY 3-0-3
This course explores the relationship between neuroscience and psychology, offering a comprehensive look at the brain and its corollary behavior. Also included in the course are brain anatomy, normal functions, and examples of representative pathology in the various spheres of brain functioning. Prerequisite(s) PSY 160

PSY 165—EDUCATIONAL PSYCHOLOGY 3-0-3
This course presents cognitive, behavioral, and affective theories of development and their relevance in academic settings. Emphasis is on the importance of understanding multicultural and humanistic issues to maximize academic development. Exceptional populations and non-traditional testing techniques and alternate methods of student and teacher evaluation will be discussed, including their strengths and weaknesses in academic settings. Prerequisite(s): PSY 160

PSY 167—DEATH AND DYING 3-0-3
This reading/writing course on death and dying covers four major perspectives: changing meanings of death and dying, the experience of death, survivors of death and dilemmas of death. Death and dying cannot be separated from life and living. We should learn the facts of death to better understand and improve our lives. We must study death as scientifically trained, self-aware, compassionate human beings.

PSY 260—SOCIAL PSYCHOLOGY 3-0-3
Social Psychology is the study of the individual in his society. Theories of social psychology, methods of human research and philosophical assumptions of the nature of man are stressed. Modern problems of aggression and other social factors in the development of personality, social attitudes and attitude change, interpersonal and group processes are studied and researched in the classroom. Prerequisite(s): PSY 160

PSY 265—CHILD PSYCHOLOGY 3-0-3
This course explores child development from the prenatal stage though adolescence. Topics include physical, cognitive, social and emotional development along with current research methodology. Emphasis is placed on understanding the relationship of heredity to environment, cross cultural comparison of children, and the ecological system in which development occurs. Prerequisite(s): PSY 160

PSY 267—PSYCHOLOGY OF WOMEN 3-0-3
This course examines the diverse experiences, contributions and perspectives of women and how the concept of gender shapes human lives. Students explore how gender roles develop and how gender plays an important role—including sexuality, education, occupations, physical and mental health, politics and the media. Multicultural and cross-cultural perspectives such as social, cultural and economic variables are integrated throughout the course.

PSY 268—ADOLESCENT PSYCHOLOGY 3-0-3
This course investigates the process of human development during adolescence by examining identity formation within the context of biological, cognitive and psychosocial changes during this period. Family, peer, educational and social influences are emphasized in exploring normal as well as atypical development. Prerequisite(s): PSY 160

PSY 270—ABNORMAL PSYCHOLOGY 3-0-3
Abnormal Psychology is the study of mental disorders that are listed in the current diagnostic system. A historical perspective, assessment and treatment are presented. The individual mental disorders are explained from a descriptive, causative and treatment perspective. Diagnostic statistical criteria are presented with each of the mental disorders. Prerequisite(s): PSY 160

RAD–RADIOLOGY TECHNOLOGY

RAD 111—INTRODUCTION TO RADIOLOGY TECHNOLOGY, PATIENT CARE, PHARMACOLOGY, AND POSITIONING I 3-2-4
This course will provide the student with an introduction to radiologic imaging. Topics will include the role of the radiographer in the health-care setting, the history of radiography, basic radiation safety, and ethical and legal issues for radiographers. Appropriate radiographer conduct and communication skills in the clinic setting will be discussed along with patient care, pharmacology, safety, and emergency procedures. In the lab, students will learn positioning terminology, equipment manipulation, the proper positioning of the appendicular skeleton, lungs and abdomen. In addition, students will learn to evaluate images for proper exposure factors and demonstration of anatomy. Prerequisite(s): BIO 171 Corequisite(s): ALH 122, BIO 172, RAD 121

RAD 121—PRINCIPLES OF RADIOGRAPHIC IMAGE CAPTURE AND DISPLAY 3-0-3
This course will provide students with an introduction to the production and characteristics of radiation, image capture, image processing, manipulation of exposure variables, and the effect of manipulating exposures variables on image quality. Film, imaging and related accessories are discussed. Student experimentation and demonstrations are included in the application of theory. Prerequisite(s): BIO 171 Corequisite(s): ALH 122, BIO 172, RAD 111

RAD 131—PRINCIPLES OF RADIOGRAPHIC IMAGE CAPTURE AND DISPLAY II 3-0-3
This course will provide students with an introduction to the production and characteristics of radiation, image capture, image processing, manipulation of exposure variables, and the effect of manipulating exposures variables on image quality. Film and related accessories are discussed. Student experimentation and demonstrations are included in the application of theory. Prerequisite(s): RAD 111, RAD 121 Corequisite(s): MTH 157, PHY 125, RAD 141, RAD 146

RAD 141—PRINCIPLES OF DIGITAL IMAGING AND POSITIONING II 3-2-4
This course will provide students with a comprehensive examination of digital image capture, digital image processing and the effect of manipulating exposures variables on digital image quality. In the lab students will learn positioning terminology, equipment manipulation and the proper positioning of the axial skeleton. In addition, students will learn to evaluate images for proper exposure factor and demonstration of anatomy. Prerequisite(s): RAD 111, RAD 121 Corequisite(s): MTH 157, PHY 125, RAD 131, RAD 146

RAD 146—CLINICAL EDUCATION I 0-16-4
This clinical course provides students with the opportunity to observe, practice, and perform radiologic procedures learned in Introduction to Radiologic Procedures. Students will complete competency examinations where image quality and patient care are evaluated. Prerequisite(s): RAD 111, RAD 121 Corequisite(s): MTH 157, PHY 125, RAD 131, RAD 141

RAD 211—RADIOLOGIC IMAGING EQUIPMENT, IMAGE ANALYSIS, RADIOGRAPHIC PATHOLOGY AND POSITIONING III 3-2-4
This three-part course begins with a short review of the production and characteristics of X-rays. The course progresses to an overview of the design and operation of imaging equipment and film processors. In addition, radiographic image analysis and quality control procedures are reviewed. The course concludes with a discussion of the etiology of disease and the pathophysiologic disorders that compromise healthy systems. Emphasis will be placed upon the radiographic appearance of disease processes. In the lab, students will learn positioning terminology, equipment manipulation, the proper positioning of the non-skeletal areas, organ systems, studies that use contrast media, myelography, venography and mammography. In addition, students will learn to evaluate images for proper exposure factors and demonstration of anatomy. Prerequisite(s): RAD 215 Corequisite(s): RAD 216

RAD 215—CLINICAL EDUCATION II 0-12-3
This clinical course is a continuation of Clinical Education I, and will provide students the opportunity to observe, practice and perform radiologic procedures. Students will target exams from Radiographic Procedures II while maintaining proficiency in previously learned examinations. Students will complete competency examinations where image quality and patient care are evaluated. Prerequisite(s): MTH 157, PHY 125, RAD 131, RAD 141, RAD 146

RAD 216—CLINICAL EDUCATION IV 0-16-14
This clinical course is a continuation of the Clinical Education series, and will provide students the opportunity to observe, practice and perform radiologic procedures. Students will target exams from Radiographic Positioning III while maintaining proficiency in previously learned examinations. Students will complete competency examinations where image quality and patient care are evaluated. Prerequisite(s): RAD 215 Corequisite(s): RAD 211

RAD 220—RADIATION PROTECTION, BIOLOGY AND COMPUTED TOMOGRAPHY **3-0-3**

This two-part course introduces students to the biological effects of exposure to ionizing radiation on living organisms. Topics include somatic and genetic responses and the effect on cells and tissues. In addition, the acute and chronic effects of exposure to radiation are covered. The second part of this course covers principles of radiation protection, ALARA, radiation monitoring devices, and methods to reduce unnecessary exposure to the radiographer, and patient. Prerequisite(s): RAD 210 Corequisite(s): RAD 230, RAD 235

RAD 221—RADIATION PROTECTION, BIOLOGY AND COMPUTED TOMOGRAPHY **3-0-3**

This three-part course introduces students to the biological effects of exposure to ionizing radiation on living organisms. Topics include somatic and genetic responses and the effect on cells and tissues. In addition, the acute and chronic effects of exposure to radiation are covered. The second part of this course covers principles of radiation protection, ALARA, radiation monitoring devices, and methods to reduce unnecessary exposure to the radiographer and patient. In the third part of this course, the basics of computed tomography will be discussed.

RAD 226—CLINICAL EDUCATION V **0-8-3**

This clinical course is a continuation of the Clinical Education series, and will provide students the opportunity to observe, practice and perform radiologic procedures. Students will continue to practice and maintain proficiency in previously learned examinations. Students will complete competency examinations where image quality and patient care are evaluated. Prerequisite(s): RAD 235 Corequisite(s): RAD 240

RAD 231—RADIOLOGY TECHNOLOGY CAPSTONE **3-0-3**

This course is a review of all material from Radiology Technology with emphasis on the ARRT examination preparation and career planning. Prerequisite(s): RAD 245 Corequisite(s): RAD 255

RAD 255—CLINICAL EDUCATION III **0-12-3**

This course is a continuation of the Clinical Education series, and will provide students the opportunity to observe, practice, and perform radiologic procedures. Students will continue to practice and maintain proficiency in previously learned examinations. Students will be permitted to rotate into specialty imaging areas and students will complete their competency examinations where image quality and patient care are evaluated. Prerequisite(s): RAD 221, RAD 226, RAD 231

RBT–ROBOTICS

RBT 110—AGILE ROBOTICS I **3-2-4**

In this course the student is provided with a basic introduction to the multidisciplinary field of robotics technology including concepts from computer, electrical, and mechanical disciplines with a focus on engineering processes. There is a particular emphasis on first-generation agile robotics characterized by remotely piloted mobile robots. The laboratory component presents activities based on lecture concepts and team-oriented, hands-on projects to solve basic robotic problems.

RBT 120—AGILE ROBOTICS II **3-2-4**

Agile Robotics is continued by exploring the details of second-generation agile robotics technology as characterized by mobile robots with autonomous behaviors. Software tools, additional details robotic systems, application of robot control programming, motion planning, application domains and additional applied technician skills are emphasized. Team-oriented activities, hands-on projects, solving autonomous robotics problems and sensory feedback are utilized in the laboratory component to provide applications of lecture concepts.

RBT 210—ROBOTIC TEAMING **3-2-4**

Robotic communication is an important addition to autonomous robotic platforms. Swarming capability and the varied aspects of swarming behavior is often required in both industrial and personal robotic systems in order to enable robots to perform collaborative tasks using a team approach. Students will learn the basics of a computer programming language and the basics of an embedded robotics platform in order to apply inter-robot communications techniques to enable robotic teaming.

RBT 280—ROBOTICS SYSTEMS PROJECT **2-2-3**

This Agile Robotics capstone course is project-based. Students will complete an instructor approved project, often working in a team. The semester long project must be based on mobile robotic technology and the project will include a literature research, project specification, project design, implementation, documentation and presentation aligned with established engineering technology methodologies. Project planning and management as well as team work strategies must be demonstrated. Software and hardware convergence techniques will be utilized.

RDG–READING

RDG 050—READING & STUDY SKILLS **3-0-3**

This course will focus on but not be limited to the basic readiness skills for college-level reading and studying. Skills such as time management, textbook previewing, concentration, vocabulary development, memory development, and study strategies will be stressed. Along with the study skills students will develop skills in identifying topics and main ideas, selection and isolation, major supporting details and minor supporting details, and reading test and exam questions. Students will use content-specific information to develop skills in reading and studying. Prerequisite(s): Placement Test

RDG 080—INTERMEDIATE READING **3-0-3**

This course is designed to refine study skills and comprehension ability. Topics include but, are not limited to, critical reading skills and study skills: distinguishing fact from opinion, identifying cause and effect, and effectively using figurative language. Content reading will be emphasized. This course is open to students who test between 61 and 85 on the Accuplacer test, and those students who have successfully completed RDG 050. The systematic use of study strategies such as SQ3R will be included in this course. Prerequisite(s): RDG 050 and /or Placement Test

REL–RELIGION

REL 171—WORLD RELIGIONS SURVEY **3-0-3**

This course introduces students to the concept of the structure of religion and discusses primal and ancient religions. It surveys the major religions of India, the Far East, and the Middle East. It emphasizes religions as living, changing systems of thought and practice which affect each other and influence events worldwide.

REL 181—RELIGION IN AMERICA **3-0-3**

Emphasizing the United States' unique history and diverse population, this course focuses on native and world religions as practiced in North America. The course discusses what religion is, how it works, and why it is important to people. The ways in which religion shapes American life and affects the politics, culture and social mores of this country will be investigated.

RLS–REAL ESTATE

RLS 101—FUNDAMENTALS OF REAL ESTATE **2-0-2**

A basic course designed to comply with the standardized courses required to satisfy the Pennsylvania State Real Estate Commission's salesperson educational requirement. Topics include basic concepts in the field of real estate, property descriptions, property development, license law, contracts, deeds, titles, conveyancing and recording. Extensive review and practice listing is included.

RLS 102—REAL ESTATE PRACTICES 2-0-2
A continuation of the real estate fundamentals course designed to complete the specific requirements of the standardized educational curriculum for licensing real estate salespersons. Topics covered are brokerage, listing, selling, single family financing, settlement and real estate math.

RLS 107—REAL ESTATE BROKERAGE 3-0-3
Outlines the organization of a brokerage office and details the work of a real estate broker including procedures, practices and ethics. Topics include obtaining prospects, filing listings, preparing mortgage applications and sales or rental offerings, methods of advertising and business promotion, problems and techniques of negotiations and closing sales, leases, and other real estate transactions.

RLS 205—PROPERTY MANAGEMENT 3-0-3
Considers property management and maintenance. Property management topics include agency versus owner management, tenant and labor relations, recordkeeping and government regulations and how they affect management practices. Property maintenance topics include selection and supervision of personnel, general servicing and maintenance of buildings, maintenance and replacement of equipment, handling contracts, contractors and suppliers.

RLS 209—REAL ESTATE FINANCE 3-0-3
Involves the principles of real estate valuation including tools/techniques and methods of determining value. The course also covers mortgage financing, including mortgage sources, primary and secondary mortgages brokerage, mortgage applications and lenders' requirements.

RLS 210—LAW OF REAL ESTATE 3-0-3
Views the legal questions that arise in leasing, selling and mortgaging real estate in Pennsylvania. Topics include the legal rights, duties and responsibilities of real estate brokers, relationship of landlord to tenant, various steps required in connection with a contract to sell or mortgage real estate, examination and transfer of title and the frequently used estate instruments.

RLS 211—REAL ESTATE APPRAISAL 3-0-3
Presents a coordinated, practical study of real estate appraisal and property, including theories underlying valuation of various and specific types of property, as special use, service and single purpose property. A study of mortgage laws, condemnation, insurance, tax assessment and how to develop and operate an appraisal business.

SOC–SOCIOLOGY

SOC 155—PRINCIPLES OF SOCIOLOGY 3-0-3
This course is designed to be a student's first college-level sociology class. The topics to be covered include: the history of sociology, the methods, fields, and vocabulary of sociology; the social interaction of persons and groups; the process of socialization and social structures; social institutions such as family, religion and education. Through this course students should learn "what is sociology?" as well as how sociology fits with other academic disciplines and how sociology can be used outside of the classroom.

SOC 160—APPLIED HUMAN RELATIONS 3-0-3
Designed as an introduction to the basic principles of sociology, general psychology and industrial psychology. Major emphasis is on such topics as the origin and development of the social body, group behavior and other problems attendant to leadership and cooperation. Designed to develop a thorough understanding of human relationships in the industrial and business complex. The course also proposes to aid in the formation of sound citizenship.

SOC 161—MARRIAGE AND FAMILY 3-0-3
A functional course in the psychological and sociological factors involved in courtship, marriage and the family cycle; this course will provide a comparative study of the family structure across time and across cultures. Emphasis will be placed on the changing nature and role of family functions as well as changing life-styles.

SOC 162—CONTEMPORARY SOCIAL PROBLEMS 3-0-3
This course will permit student to apply sociological principles and methods to selected major problems of contemporary American society. In addition to studying these problems, this course will also present a selection of proposed "solutions" to these problems and encourage students to understand, analyze, and debate the merits of the proposed solutions. Prerequisite(s): SOC 155

SOC 165—CULTURAL DIVERSITY 3-0-3
This class will introduce students to the concept of culture and cultural diversity. While learning the different components of culture, students will be presented with data and examples explaining different cultural practices and beliefs. This course will focus on the experiences humans in every culture share in order to demonstrate the value and importance of understanding diverse cultures. This course will explore the sociological importance of understanding the concepts of culture and diversity as well as the relationship between these two concepts.

SOC 170—RACIAL AND ETHNIC MINORITIES 3-0-3
This is an introductory course for the study of racial and ethnic minorities in the USA. This course will provide an overview of the history, immigration patterns and characteristics of the major ethnic minority groups in the USA. The course will also explore the origins and history of prejudice and discrimination experienced by members of these groups. Through readings and discussion, the course will focus on both current and past issues that are important to the understanding of the multi-cultural society in which we all must live and work. Prerequisite(s): SOC 155

SOC 255—CULTURAL ANTHROPOLOGY 3-0-3
Examines the concept of culture and its significance in the study of the behavior of man. Places special emphasis on social organization.

SPA–SPANISH

SPA 155—BEGINNING SPANISH I 4-0-4
A beginning language course with emphasis on elementary speaking, reading, writing and comprehension.

SPA 156—BEGINNING SPANISH II 4-0-4
Continuation of Spanish 155. Emphasis on the development of increased oral ability, reading and writing. Prerequisite(s): SPA 155

SPA 255—INTERMEDIATE SPANISH I 3-0-3
Continuation of Beginning Spanish II. Although the approach will be a communicative one, writing and reading skills will be developed along with the speaking and listening skills. The course will be organized according to the guidelines for proficiency oriented language learning. Prerequisite(s): SPA 156

SPA 256—INTERMEDIATE SPANISH II 3-0-3
Continuation of Intermediate Spanish I. Students will continue to improve communicative skills with the four areas of speaking, listening, reading and writing being stressed. A proficiency oriented approach and materials will be used. Prerequisite(s): SPA 255

SPC–SPEECH COMMUNICATION

SPC 155—EFFECTIVE SPEECH 3-0-3
Helps students to acquire skills in presenting clear, concise, well-organized, interesting ideas to an audience and to acquire skill in listening actively to the ideas of others.

SPC 156—INTERPERSONAL COMMUNICATION 3-0-3
Focuses on the theoretical aspects of communication and on the development of skills necessary for effective interpersonal interactions.

SPC 157—FUNDAMENTALS OF SMALL GROUP COMMUNICATION 3-0-3
Designed to study the group process and to teach methods of group discussion as a problem solving technique. It emphasizes dynamics of "brainstorming" and management of differences in group activity.

SPC 158—ORAL INTERPRETATION 3-0-3
Helps students to acquire skills in voice and gesture that will enable them to communicate literature to an audience. Also helps students prepare programs for individual events in forensics competition.

SPC 255—PERSUASION AND PROPAGANDA 3-0-3
Provides students with the opportunity to understand what persuasion is and how it works, both in theory and in practice. Areas of focus include the acquisition of belief pattern and the use of persuasive appeals and logical fallacies in the rhetoric of advertising and politics. Various definitions of propaganda and its ethical bases will also be considered.

THR–THEATER

THR 159—INTRODUCTION TO THEATRE 3-0-3
Provides an introduction to theatre as an art form. Emphasis is placed on historical development, social context and formal analysis of drama as literature as well as popular entertainment. Students gain an understanding of and an appreciation for theatre as a logical development of the human need to dramatize perspective on the immediate world.

THR 160—INTRODUCTION TO ACTING 3-0-3
Introduces the beginning actor to a variety of physical and vocal exercises and methods for creatively freeing spontaneous personal feelings. Scene study and the process of merging these elements through detailed work on texts. Emphasizes sustained focus of attention and highly concentrated energy. It is strongly recommended that students satisfactorily complete SPC 158 prior to taking this course.

THR 161—ACTING II 3-0-3
Extends and intensifies several of the concepts addressed in the Introduction to Acting course. In addition to incorporating improvisation exercises and text analysis as one measure of an actor's art, this course emphasizes character analysis and motivation as another indispensible dimension. Prerequisite(s): THR 160

THR 170—VOICE AND DELIVERY 3-0-3
Voice and Delivery addresses the development, training, strengthening, and improvement of stage speech. Besides exploring ways the body produces hearing and speech and building better listening skills, this course examines relaxation, phonetics, articulation, resonance, projection, pitch, rate of speech, and stress as components of successful stage delivery.

THR 180—INTRODUCTION TO THEATER DESIGN 3-0-3
This course is an introduction to the design process and creation of scenery, lighting, and costumes. Class work consists of projects to improve design conceptualization and execution, model making, drawing and rendering, and drafting. Students will also develop their script analysis skills with regard to design issues and develop an awareness of the role of the designers within a collaborative production team.

TRV–TRAVEL, TOURISM AND LODGING MANAGEMENT

TRV 171—TRAVEL AND TOURISM PRINCIPLES 3-0-3
Investigates the economic and social impact of tourism and travel. The role that management plays in catering to tourists and in the development and operations of guided tours is studied. Transportation to off-campus locations is the responsibility of the student.

TRV 273—TRAVEL DESTINATIONS 3-0-3
Provides students with intensive familiarization of the major tourist areas frequented by leisure and business travelers. Emphasis is on tourist attractions, points of interest, airport locations and transportation. Transportation to off-campus locations is the responsibility of the student.

TRV 274—TOUR PLANNING AND SALES 3-0-3
Focuses on tour development, group travel and corporate travel. Creative itineraries and fundamentals of tour escorting will be covered. Students will explore options for corporate functions and scheduling. Group touring will be investigated for both the leisure and corporate traveler. Transportation to off-campus locations is the responsibility of the student.

WEB–WEB TECHNOLOGY

WEB 102—ACROBAT ESSENTIALS 1-0-1
An introduction to converting documents to PDF format, setting navigation for PDFs, setting security options, creating bookmarks, and adding hyperlinks and interactivity to documents using the standard for cross-platform file sharing without sacrificing the original design. Macintosh/Windows and Word skills recommended.

WEB 120—FLASH 3-0-3
This course introduces students to the comprehensive environment of Adobe Flash and integration with Adobe Create Suite components needed to create interactive elements. Students will learn how to use the drawing and color tools, animation basics, symbols and instances, motion, bitmaps and buttons.

WEB 140—DREAMWEAVER – BASIC 3-0-3
This course introduces students to Adobe Dreamweaver's powerful, visual environment to construct Web pages and sites. Students will explore the live design environment in the design and creation of basic Web pages and sites.

WEB 150—WEB DESIGN 3-0-3
An exploration of Web design that focuses on the basic design concepts used in creating Web-based publications-layout, typography and color usage. Rapid prototyping and the issues of accessibility, usability and versatility are explored.

WEB 162—FIREWORKS 3-0-3
This course introduces Web graphic design and creation using Adobe Fireworks. Students will address the special challenges of creating and editing bitmap and vector images, animating graphics, adding interactivity, and optimizing images to export with HTML and JavaScript code for Adobe Dreamweaver and various HTML editors.

WEB 199—WEB INTERNSHIP 0-12-3
Students gain exposure and insight into selection of occupations within the fields of Web design/development through supervised and evaluated on-the-job experience. Students select locations for their internships from college approved sites which primarily encompass southwestern Pennsylvania. Online seminars are conducted for the students to discuss their experiences. Transportation to off-campus locations is the responsibility of the students. Prerequisite(s): Completion of 27 credits in major courses

WEB 200—WEB TECHNOLOGIES 3-0-3
This course introduces the technologies necessary to create an interface for Web access to a database. An e-commerce Web site will be designed and developed using a database that will be created to store product data. The database will be accessed to extract pertinent data for display on the Web page, resulting in the development of a database-driven Website. Prerequisite(s): WEB 140, CPT 196

WEB 235—INTERACTIVE DESIGN 3-0-3
This course explores the structure and aesthetics of interactive projects, with attention to the end-user needs and visual design. Students focus on project development from initial concept and research through design, prototype, testing and production Prerequisite(s): WEB 140 and WEB 150

WEB 239—DREAMWEAVER – ADVANCED 3-0-3
Using Cascading Style Sheets (CSS) simplifies site design, layout and styling of Web page content for screen, handheld devices or print, and maintenance. Students will learn how to plan large scale Web sites and create templates to pull information from a database and create Web pages dynamically while addressing accessibility compliance issues. Prerequisite(s): WEB 140

WEB 295—INFORMATION ARCHITECTURE 3-0-3
This course focuses on the integration of the interdisciplinary process that makes large amounts of information easily accessible to end-users. Students, using a team-based approach plan, design and create an innovative multi-user experience for the Web that addresses the issues of accessibility, usability and versatility. This is a capstone course; satisfactory demonstration of outcomes for competency profiles for the Web Site Design/Production options are required. Prerequisite(s): Completion of 27 credits in major courses

WEL–WELDING

WEL 125—WELDING I 2-6-4
Demonstrations by instructor and practice by students in basic oxyacetylene and arc welding. Safe and correct methods of assembly and operation of welding equipment. Use of pedestal and hand grinders. Practice in flame cutting, gas and arc welding in flat, horizontal and vertical positions. Demonstrations and practice in basic TIG welding. Emphasis on lab techniques and safety.

WEL 135—WELDING II 2-6-4
Includes demonstrations and practice of vertical and overhead welding techniques; the use of tungsten-arc inert gas (TIG) welding, demonstrations and practice of SMAW vertical and overhead. Basic welding techniques with MIG welding. Prerequisite(s): WEL 125

WEL 199—WELDING ENGINEERING TECHNOLOGY INTERNSHIP 1-12-3
Students will obtain experience in the welding industry through a combination of occupational instruction and on-the-job training. This course integrates classroom occupational study with a planned supervised practical work experience. Prerequisite(s): Permission of instructor

WEL 207—ADVANCED WELDING I 2-6-4
Includes the theory, application and skill development of advanced SMAW, GTAW, GMAW, FCAW, PAC and AAC processes. Skill development for the ARC welding processes will emphasize vertical and overhead "vee" groove joints and root/face bend tests of all test welds. All skill tests will follow either ASME or AWS welding code criteria. Prerequisite(s): WEL 135

WEL 208—ADVANCED WELDING II 2-6-4
Covers the theory and practical use of plasma arc, automatic and semiautomatic submerged arc; flux core, MIG, TIG welding processes, carbon arc gouging and cutting. Includes demonstrations and student use of automatic welding equipment and weld positioners. Pipe welding employing MIG, TIG and SMAW processes will be employed. Demonstration and practice in resistance welding (spot welding) Root-face and side-bend tests will be passed by the student in the vertical and overhead positions and in the 6G pipe position. ASME, AWS and API code procedures are followed. Prerequisite(s): WEL 207

WEL 209—WELDING EQUIPMENT REPAIR AND TROUBLESHOOTING 2-2-3
Covers the operation and maintenance of welding equipment. Also includes troubleshooting welding equipment problems and use of Volt-Ohm-Meters. Prerequisite(s): WEL 125

WEL 220—INSPECTION OF CODE WELDING SPECIFICATIONS 3-0-3
Includes how to read, write and interpret ASME and AWS specifications and codes for structural steel and pressure vessel welding.

WEL 221—METAL FABRICATION 2-4-4
Provides students with an understanding of metal fabrication. Emphasis is placed on the proper joint selection and design, stresses in welds, material selection and estimating welding costs. Students construct projects using common metal fabrication equipment. Laboratory work includes use of welding power supplies, shears, ironworker and metal rollers. Prerequisite(s): DFT 110, WEL 135

WEL 222—FUNDAMENTALS OF ALUMINUM 2-2-3
Aluminum is gaining popularity in modern manufacturing processes due to its light weight, strength, and advancements in grades and alloys for a variety of applications. This course is designed to introduce the student to the fundamentals of aluminum welding, grades of aluminum and their properties. Classroom and laboratory activities include proper aluminum preparation, demonstrations and practice of aluminum welding using gas Tungsten Arc Welding (GTAW) and Gas Metal Arc Welding (GMAW) and the inspection of aluminum welds.

WEL 223—COMPUTER AIDED WELDING DESIGN AND APPLICATIONS 2-2-3
Provides students with an understanding of quality weldment design. Emphasis is placed on proper joint selection and design, stresses in welds, material selection and estimating welding costs. Students develop computer programs and utilize computers to calculate weld sizes, strength of welds and estimating welding costs. Laboratory work includes designing and fabricating a welded project to be entered in the James F. Lincoln ARC Welding Foundation's Annual Awards Program. Prerequisite(s): CPT 239

WEL 224—MATERIALS EVALUATION 2-2-3
Includes visual, dye penetrant, x-ray, ultrasonic, magnetic particle and destructive testing techniques. Lab practice is included. Prerequisite(s): MET 105, MTH 108

WEL 240—INTRODUCTION TO AUTOMATED MANUFACTURING 2-2-3
Provides students with an overview of the hardware and functions of industrial robotics, and hands-on training with a state-of-the art industrial robot. Lecture topics include robot configuration, tooling, application information, safety considerations and future trends. Laboratory work allows students to create, edit and execute programs on a 5-axis, industrial robot.

Notes

Notes

Student Handbook
2009-2010

Student Services and Resources

WCCC offers a variety of services and activities designed to enrich the learning experiences of all students. These services are available without charge to students enrolled in credit classes.

Student Development Center

Assessment and Testing

Assessment and testing services are available in the Student Development Center for students and community residents who want to learn more about themselves and what college programs might be suitable for them.

A placement test assessing reading, writing and mathematics skills is given in the College Learning Center. Vocational interest and ability testing and interpretation are also provided as a service to enrolled students. Test results are confidential.

Career Planning

A staff of professional counselors is available to assist students in career planning and decision-making. A complete career library which includes printed material and computerized career exploration is maintained in the Student Development Center for use by students and classroom instructors.

Academic Advising

Counselors assist students in choosing an appropriate program of study and develop a schedule of classes for their first semester based upon placement test scores and personal interests. Students receive information about these advising sessions after they submit their Application for Admission to the college.

After the first semester, students are assigned a faculty member to serve as their academic advisor. The faculty academic advisor will assist them with scheduling classes in subsequent semesters.

Counseling

The counseling staff in the Student Development Office helps students adjust to college life. Counselors are available to provide assistance with academic or personal difficulties which may hinder students' educational progress. Among the most common reasons students seek counseling are:

- academic advising and planning
- assistance in transferring to a four-year college or university
- career information and planning
- services for the disabled
- personal concerns
- testing for interests and abilities

Counseling at WCCC is confidential and free.

Transfer Services

Those who plan to continue their education after completing course work at WCCC should contact a counselor in the Student Development Center. Colleges and universities have varied regulations on accepting courses and credits for transfer, and students can save a considerable amount of time and money if they know the regulations in advance and plan their schedules accordingly.

The transfer library contains a large selection of college catalogs and other information relevant to the transfer process.

Special Services

The Act 101 and Student Support Services programs help students make a successful transition to college life.

Act 101

The Pennsylvania Higher Education Equal Opportunity Program (Act 101) provides an academic support system for highly motivated students who desire a college education. To be eligible for the program, students must be Pennsylvania residents who are enrolled full-time and meet certain economic and academic criteria.

TRIO (Student Support Services)

The federal government provides academic support and counseling through the TRIO (Student Support Services) Program for students who meet eligibility guidelines. To be considered eligible for program services a student must be a first generation college student, low income or have a disability.

The goals of the program are to retain and graduate students and to provide them with an institutional climate of support.

Services for Students with Disabilities

Students with disabilities are encouraged to schedule an appointment with the student support services counselor to discuss their individual needs.

Students with disabilities may be asked to submit documentation of the disability if they are requesting academic accommodations. This documentation should be current and include an evaluation completed by a recognized authority.

The student support services counselor and the student will discuss how the disability will impact their learning and what services/academic accommodations are appropriate on an individual basis.

All information shall remain confidential unless the student completes a written authorization by completing the Academic Accommodations Request Form.

Students with disabilities who need classroom accommodations should call and make the request well in advance of the start of the classes. For assistance call 724-925-4189 or TDD 724-925-4297.

Student Services and Resources

TDD & PA Relay System

The Student Development Office has a TDD (telephone device for the deaf) communicator which can be reached by calling 724-925-4297. To use the PA Relay System, call 1-800-654-5988. The TDD is located in Student Development, Room 130, at the Youngwood campus and is available for student and faculty use. The PA Relay System can be used for TDD access to other educational campuses.

Tutoring

The College Learning Center provides individual and small-group tutoring in most courses, academic-based workshops, computer-assisted instruction and a variety of print resources. These services are free and available to students enrolled in credit courses.

New Student Orientation Programs

The Precollege and Freshman Fair orientation programs are designed to help new students make a positive adjustment to the college. The programs increase student awareness of campus services, help students develop a more positive identification with the institution, and increase students' involvement in campus life. The new student orientation programs are provided to support students in achieving their educational goals.

Financial Aid

WCCC participates in several state and federal financial aid programs including grants, loans and college work study. More detailed information on these programs can be found on pages 13-20 of the college catalog.

Veterans Benefits

Veterans who served on active duty for more than 180 continuous days and were released under conditions other than dishonorable may be eligible for an educational allowance under the GI Bill. The amount and duration of the educational allowance will depend on the program in effect during the veteran's enlistment. In addition, 18 through 26 year-old children of deceased or totally disabled veterans may be eligible to receive VA assistance. Applications and help in completing forms are available through WCCC's Financial Aid Office.

The new GI Bill provides educational benefits for students participating in the Selected Reserves. Students should check with their units to determine if they are eligible.

Suspension of VA educational assistance will result for the following reasons: not maintaining the college's minimum standards of academic progress, failure to attend regularly scheduled classes, and failure to comply with the regulations of VA Educational Assistance Program.

The veterans coordinator is available for help in securing educational benefits. Questions about compensation, pension, home loans and vocational rehabilitation may be directed to the Pittsburgh Regional Office.

Pennsylvania Office of Vocational Rehabilitation (OVR)

The OVR provides financial assistance to students who have disabilities that would normally impair their chances of obtaining occupational training and employment. To apply, students must complete the Free Application for Federal Student Aid. Additional information is available from the OVR offices in Pittsburgh and Johnstown and from the WCCC Student Development Office.

Student Placement

The Student Placement Services Office assists students in planning efficient and effective job searches, identifying current job openings, writing resumes and application letters and preparing for job interviews. This assistance is available to students seeking part-time, full-time, or summer employment and to graduates seeking full-time career-related positions.

The Placement Office maintains students' credential files and information about employers, and arranges for interviews between employers and students. For assistance call 724-925-4054.

Child Care/Preschool

The Campus Children's Center is located at the Youngwood campus. The center operates a childcare program for children ages 3-6 years, Monday-Friday, 7:30 a.m.-5 p.m., following the class schedule of the college. The center also operates a preschool program. All Campus Children's Center programs are licensed by the Pennsylvania State Department of Public Welfare and serve WCCC students, faculty and staff, as well as general community members. Childcare and preschool fees are based on an hourly rate each semester.

The center offers parents a safe, nurturing and creative educational environment for their children. The Campus Children's Center was awarded the Star 4 rating by the Pennsylvania Keystone Stars Child Care Program. Star 4 status is the highest rating possible for child care centers. For more information or to register your child, call 724-925-4156.

Student Services and Resources

Bookstore

The college bookstore is operated for the convenience of students, faculty and staff. In addition to textbooks and supplies for classes, the bookstore stocks stationery, clothing and gift items.

Prior to the start of each semester, the bookstore publishes a list of required books and their prices for each course, and monthly hours of operation. Students may obtain this information by accessing our website at wccc.edu/bookstore, calling or visiting the bookstore and providing the course code. Students who have misplaced their schedules may request a duplicate copy at the bookstore. The bookstore accepts payment by cash, check, MasterCard, or Visa.

Under certain circumstances, students approved for financial aid are permitted to defer payment for their book purchases. Students must have prior written approval from the Financial Aid Office in the form of a Bookstore Charge Authorization before books can be issued.

Students attending classes at the education centers may purchase their textbooks by using the main campus bookstore in Youngwood. If unable to do so, students should contact the bookstore, their education center or visit wccc.edu/bookstore for alternative options.

Refunds on textbooks are allowed only under certain circumstances; requests for refunds must be accompanied by receipts and, if appropriate, a copy of the student's drop form. Copies of the complete bookstore return policy are printed on the back of each bookstore receipt.

Information regarding the bookstore is available online at wccc.edu/bookstore.

Used Book Sale

A used book sale is conducted by the Student Life Department at the Youngwood campus during the first two weeks of classes in the fall, spring and summer semesters. For more information call the Student Activities Office at 724-925-4055 or the Gymnasium Office at 724-925-4132.

Student Identification Cards

Student photo ID cards are provided free of charge to all currently registered credit students. ID cards are issued at the Student Information Center during normal business hours. Call 724-925-4196. Returning students should keep their ID cards and must have them validated at the Student Information Center each semester. Lost cards are replaced for $5.

Lock/Locker Rental

The Student Activities and Student Government Offices, located in Founders Hall, rent a limited number of locks/lockers to students, staff and faculty on a semester basis. Only school-issued locks are permitted on lockers and all others will be removed. A $10 deposit is required; $7 of that deposit will be refunded at the end of the semester when the lock is returned. Lockers are located in Founders, Commissioners and Science halls.

Information Sources

Bulletin Boards

The campus and education center bulletin boards are one of the main sources of information for students. Students may post signs and notices on the activities boards following the stamped approval by the Student Activities Office. There are restrictions regarding sign size and content and posting is permitted only on the bulletin boards. To obtain posting approval or more information, contact the Student Activities Office.

The Grapevine

This newsletter is distributed once a week during the fall and spring semesters to inform students, faculty and staff of current issues, programs and activities that affect the college. The Grapevine is also available on CampusConnections. To have an announcement concerning a club or organization published in The Grapevine, contact the Gymnasium Office, 724-925-4132. Items are accepted by e-mail.

Food Service for Students

A cafeteria, located in Founders Hall, features both a snack bar and hot food line. The menu includes deli sandwiches, hot entrees, salads, pizza, pretzels, nachos and popcorn. Hours of operation are: for the fall and spring semesters, Monday through Thursday, 7:30 a.m. to 6 p.m. and Friday, 7:30 a.m. to 2 p.m.; and for the summer semester, Monday through Thursday, 7:30 a.m. to 1:15 p.m. In addition, there are vending machines located in each building at the Youngwood campus and the education centers.

Café at 145, a mini-restaurant operated by WCCC hospitality students and faculty, is also available to students. Café at 145 serves lunch and/or dinner in the Commissioners Hall dining room on designated weekdays during the fall and spring semesters. Seating is limited and reservations are required.

Wireless Internet

WCCC has free wireless Internet service available at several locations on the Youngwood campus including the library, cafeteria, Wolf's Den, Student Center and Student Activities Office area, Founders Hall lobby and South Entrance, Commissioners Hall lobby and dining rooms, and Science Hall lobby. Students must register their laptops with the Information Technology Department in Founders Hall Room 148 in order to use the wireless Internet service.

Transportation

Students are responsible for their own transportation to and from the college. Bus transportation is available via the Westmoreland County Transit Authority and schedules can be obtained by calling 1-800-834-WCTA.

Ride sharing is encouraged. Students needing rides and those willing to provide rides may post notices during the first three weeks of the semester on the Share-a-Ride bulletin board located in the 400 hallway of Founders Hall.

Student Parking

Free and ample parking is available for students at the Youngwood campus and the education centers. Students may park only in designated areas. Illegally parked cars will be ticketed and fined. Consistent violators may have grades withheld and be unable to register for additional classes until fines are paid.

Disabled Student Parking

Students who wish to use the disabled student parking areas must have either a valid wheelchair license plate from the state or a state-issued plaque indicating the individual has a disability. Students also are required to obtain a WCCC parking tag from the Student Development Office. A temporary WCCC permit may be issued for short-term use only. Call the Student Development Office at 724-925-4057.

Student Use of Buildings

The Youngwood campus buildings are generally open for student use from 7 a.m. to 10 p.m. Monday through Thursday, from 7 a.m. to 5 p.m. Friday, and from 8 a.m. to 4:30 p.m. Saturday. Student use of the buildings at other times is permitted only with administrative permission. Hours for the education centers are determined by class schedules and vary each semester.

Emergency Message Procedure

Emergency telephone calls to students should be directed to the Student Development Office, 724-925-4051. The office will try to contact students in their scheduled classes, or if possible, elsewhere on campus. The emergency message will be given to students for their decision on any further action. Nonemergency calls are discouraged and may be refused by Student Development.

College Closing Information

Information on class cancellations and college closing due to inclement weather or other emergency situations is made available by: text and/or e-mail CruiserAlert messages sent to students who sign-up for the service, television and radio stations announcements, the WCCC web site (wccc.edu), CampusConnections (my.wccc.edu) and TV-station affiliated web sites. Information on specific TV and radio stations and web sites will be published on the WCCC web site and in The Grapevine.

Students are encouraged to sign-up for the CruiserAlert text/e-mail messages by logging in to CampusConnections at my.wccc.edu. Standard carrier text messaging rates apply.

As road conditions vary widely during inclement weather, students are advised to use their own judgment in deciding whether to attend classes.

Student Rights and Responsibilities

Student Regulations

Students enrolling at the college assume obligations to conduct themselves in a manner compatible with the college's function as an education institution.

Code of Student Conduct

Academic Community

The central functions of an academic community are learning, teaching, research and scholarship. By accepting membership in the college, an individual joins a community ideally characterized by free expression, free inquiry, intellectual honesty, respect for the dignity of others and openness to constructive change. The rights and responsibilities exercised within the college community must be compatible with these qualities.

The rights of members of the college are not fundamentally different from those of other members of society. The college, however, has a special autonomy and reasoned dissent plays a part in its existence. All members of the college have the right to press for action on matters of concern by appropriate means.

At the same time, the college places emphasis on certain values which are essential to its nature as an academic community. Among these are freedom of speech, academic freedom, freedom from personal force and violence, and freedom of movement. Interference with any of these freedoms must be regarded as a serious violation of the personal rights upon which the community is based.

Furthermore, although the administrative processes and activities of the college cannot be ends in themselves, such functions are vital to the orderly pursuit of the work of all members of the college.

Therefore, interference with members of the college in performance of their normal duties and activities must be regarded as an unacceptable obstruction of the essential processes of the college.

Moreover, it is the responsibility of all members of the academic community to maintain as atmosphere in which violation of rights is unlikely to occur.

The Student

Any and all laws of the Commonwealth of Pennsylvania, County of Westmoreland, and the Township of Hempfield, which provides for the protection of persons and for the protection of personal or public property, shall be in effect on college property.

Violations of the Code of Student Conduct

The following activities are prohibited and the student may face disciplinary action for engaging in such activities:

1. Entering or remaining in any lab, classroom, office, building or campus facility after closing time without proper authorization
2. Use, possession, distribution, sale or purchase of illegal substance on college property or at college sponsored events
3. Use, possession, sale or purchase of alcoholic beverages
4. Use, possession, sale or purchase of illegal drugs
5. Illegal or unauthorized gambling on college property
6. Use, possession, sale, purchase or concealment of any firearms, licensed or unlicensed knives not required for classroom or laboratory use, weapons, explosives or dangerous chemicals
7. Theft, willful defacement or willful destruction of college property or personal property of others
8. Theft, including, but not limited to intellectual property such as work products and computer software, either physically or through unauthorized invasion of computer files
9. Verbally or physically intimidating, coercing or using physical force in a manner which causes another member of the campus community to be injured or fearful of physical harm
10. Using e-mail or other means of electronic communication to intimidate, threaten or harass any member of the college community
11. Using another person's ID to gain access to the data communications network or the Internet
12. Using the data communications network for private or personal business or for any other purpose which is inconsistent with the research or instructional needs of the college
13. Operating a motor vehicle in a reckless manner
14. Smoking in areas of the campus not designated as smoking areas
15. Failure to identify oneself when requested to do so by a college administrative official, security officer, faculty or staff member in performance of administrative duty
16. Intentionally furnishing false information to the college
17. Interfering with normal operations of the college
18. Interfering with classroom instruction
19. Any other actions incompatible with the operation of a public educational facility

Disciplinary Action

The college reserves the right to deny admission to any applicant or discontinue the enrollment of any student if, in the opinion of the college authorities, the association is not in the best interest of the student or the college.

The director of Student Development, upon receiving information that a student has committed a violation of the code of conduct, shall investigate the alleged violation. The investigation will normally include an interview with the concerned student. As a result of the investigation, the director may:

1. Dismiss the allegations as unfounded or
2. Administer disciplinary action as appropriate, based upon the severity of the violation. Possible disciplinary actions could include: warning, suspension or expulsion.

Right of Appeal

A student who wishes to appeal the decision of the director of Student Development concerning a violation of the Code of Student Conduct must appeal the decision by filing a written appeal with the Judicial Board within ten business days of the decision.

Judicial Board

The Judicial Board has been designed to treat adjudicated incidents of violation of the college rules and regulations by students. Such incidents exclude behavior that can be defined as academic in nature.

The Judicial Board shall consist of seven members, which will include three student representatives selected by any means approved by Student Government Association and four faculty and/or staff appointed by the WCCC vice president of Academic Affairs/Student Services.

PROCEDURES

1. The director of Student Development shall promptly forward to the chairperson of the Judicial Board any and all appeals made in connection with nonacademic matters.
2. The appeal must be presented in written form and should include particulars, including the people involved, dates, times and any other pertinent information.
3. All parties asked to appear at the hearing will be given ten business days notice of the hearing. They will also be given a written statement of charges and the procedure which will be followed in the hearing. In order for a hearing to take place, a quorum of five members must be present with at least three of whom must be faculty and/or staff. The Judicial Board will assume responsibility for its procedural operation which will include electing a chairperson and conducting hearings according to the following guidelines:
   a. Hearings shall be conducted in private.
   b. Admission of any person, not a party to the hearing, shall be at the discretion of the chairperson.
   c. The complainant and/or the accused student are responsible for presenting his or her own case.
   d. The complainant, the accused and the Judicial Board shall have the privilege of representation by an attorney. Both the student and complainant shall have the right to present witnesses and shall have the opportunity to cross examine the other's witness.
   e. Relevant records, exhibits and written statements may be admitted as evidence for consideration by the Judicial Board, at the discretion of the chairperson.
   f. Formal rules of civil and criminal procedures, and/or technical rules of evidence, will not be strictly applied in Judicial Board proceedings.
   g. There shall be a transcript of the hearing, provided by the college, which may be by a court reporter or by electronic recording. No unauthorized recording devices will be permitted in the room. The record shall become the property of the college.
   h. Failure to respond to any communication from the Judicial Board when behavior is under review may result in automatic dismissal of the student from the college.
   i. After the hearing, the Judicial Board shall meet in closed session to determine, by majority vote, whether the student has violated a section of the Code of Student Conduct.
   j. All proceedings presented to the Judicial Board should be kept confidential.
   k. The Judicial Board's decisions and recommended sanctions shall be prepared in writing in five business days and directed to the WCCC president. The decision of the president is final.

Interim Suspension

The director of Student Development, or a designee, may impose an interim suspension prior to the hearing before the Judicial Board. Interim suspension may be imposed to ensure the safety and well-being of members of the college community or preservation of college property, to ensure the student's own physical or emotional safety and well-being, or if the student poses a definite threat of disruption or interference with the normal operation of the college.

During the interim suspension, student will be denied all access to the college and education centers, including, but not limited to, classes and all other activities or privileges for which the student might otherwise be eligible and all college activities on every campus. Student must surrender all college-issued identification and will be denied access to college technology.

On the last day of interim suspension, the student must meet with the director of Student Development or designee in order to be re-instated. All questions should be directed to the director of Student Development or designee.

Disruptive Student Behavior

Due process must be afforded all students enrolled at WCCC. Such due process does not permit a student to interfere with the educational process provided all students in a course of study. Behavior that distracts or negatively influences the quality of the learning experience of all students is an infringement upon students' rights. Specifically, behavior which is verbally abusive or physically threatening is considered disruptive and cannot be condoned.

The college has a responsibility to ensure the quality of the learning experience and, as a result, will require that:

1. Any student who exhibits behavior contrary to the operation of a positive learning situation in a course of study shall be alerted by the instructor about the effects of his/her behavior and the need for immediate change.
2. If the behavior persists, the circumstances will be reported by the faculty member to the division dean.
3. Consultations with the student, the instructor and the director of Student Development may be requested. The designated chair (as indicated above) will determine whether the disruptive student will be permitted to continue in the course of study.
4. Within two working days (Monday through Friday, 8 a.m. to 5 p.m.), notice of results from the consultation will be presented to the student in writing regarding the conditions that must be met and

whether or not the student will be permitted to continue class attendance.

5. A student may appeal this decision by contacting the vice president for Academic Affairs and Student Services within two working days requesting reconsideration. The decision of the vice president for Academic Affairs and Student Services will be final.
6. A copy of the decision will be retained in the office of the vice president for Academic Affairs and Student Services.

If a student's conduct is considered physically threatening to the class or the instructor, the student can be removed immediately. The division dean and the vice president for Academic Affairs and Student Services will determine if the student can return to class.

Because there is potential for disruption of the education process, children are not permitted in classrooms during scheduled classes. Children are permitted on college property only when supervised by a parent or parent designated adult.

Ethical Statement for Student Computer and Data Communications Network Use

Westmoreland County Community College's data communications network and the systems by which it is interconnected and accessed exists to support the research and instructional needs of the college. Access to this system is a privilege granted to students and this privilege can be revoked for inappropriate conduct. While the right of free speech applies to communication in all forms, the college encourages civil and respectful discourse.

Some prohibited forms of communication include:

- Obscenity
- Defamation
- Threats
- Disruption of the academic environment
- Harassment based on sex, race, disability or other protected status
- Anonymous or repeated messages designed to annoy, abuse or torment

Some prohibited forms of behavior include:

- Creating excessive noise or other actions that interfere with the work of others in the computer lab
- Using the computer system's capabilities to represent another person's work as your own; this action is considered a form of plagiarism
- Using another student's ID to gain access to the data communications network or allowing others to use your network ID
- Malicious attempts to harm or destroy another person's data, including uploading or creating computer viruses
- Attempting to gain unauthorized access to data, software or systems
- Using the data communications network for personal or private business

All ethical principles that apply to everyday college life also apply to using the data communication network. The use of this network is encouraged for scholarly communications within the constraints of the Westmoreland County Community College Student Code of Conduct and this ethical statement.

Vehicle Regulations

To ensure the safety of students, staff and visitors, the college has established parking rules and enforces all provisions of the vehicle code of the Commonwealth of Pennsylvania and Hempfield Township. A 15-mile-per-hour speed limit is in effect at all parking lots and college roadways.

Fines will be levied according to the following schedule: *(The timeframe for the offenses is one semester.)*

FINES

Fines will be levied for the following violations:

	1st Offense	2nd Offense	3rd Offense
Trespass	$10	$25	$50
Blocking Traffic/Walkways	$10	$25	$50
Parking in the Fire Lane	$10	$25	$50
Not Parked between Lines	$10	$25	$25
Use of Restricted Parking without a permit	$10	$25	$25
Use of Disabled Parking without a permit	$50	$50	$50

Recurring offenses may carry higher fines.

Fines may be paid at the Student Information Center. All fines are financial obligations to the college. WCCC reserves the right to withhold grades, transcripts or diplomas until all fines have been paid in full.

Parking and Other Vehicle Violation Appeals Process

Purpose

This regulation establishes procedures for an appeal process for parking citations or other vehicle violations.

1. Failure to pay parking citations or other vehicle violations.
   a. Student grades, transcripts and diplomas will be held and the ability to schedule classes will be denied for any individual who fails to clear their account prior to the end of each semester.
2. The Appeals Board was created to hear appeals from students who receive parking or other vehicle citations. The board will render decisions based on the written facts submitted and testimony presented.
3 Organization - The board will consist of three members. The chief of Security will serve as chairperson, others will include one staff member chosen by the vice president of Academic Affairs/Student Services and one student selected by the Student Government Association. Each member will serve a one-year term.

Payment Procedure

Payment for all citations is to be mailed to the Accounting Department, Room 240 in Founders Hall.

Payment for all citations can be mailed to the following address:

Westmoreland County Community College
Attn: Accounting Department
145 Pavilion Lane
Youngwood, PA 15697

Appeal Procedure

1. Payment for the citation is not required to file an appeal
2. Only the student cited can file an appeal
3. All appeals must include the student's college ID number
4. The appeal form must be submitted to Security within seven business days of the citation in question or the appeal will not be heard
5. Appeal forms are available at the Campus Security Office in Founders Hall, and upon return must include a copy of the citation in question
6. A drop box is available at the Security Office for after hours processing
7. Students have the right to present their appeal in person.

The Appeals Board will meet every two weeks at a prescribed time to be determined by the Appeals Board semesterly.

The board may consider but is not limited to the following action:

- Let the citation stand as written with fines and penalties
- Modify the citation or issue a warning
- Nullify the citation

The student will be notified in writing of the decision of the board within 10 business days. All decisions are final.

All denied appeals must be paid within seven business days of notification.

Drug and Alcohol Policy

The college recognizes that its own health and future are dependent on the physical and psychological health of its students, faculty and staff. Accordingly, it is the intent of the college to maintain a safe, healthful, and efficient work and learning environment for all. Being under the influence of alcohol or any other mind-altering drug while on campus may pose serious safety and health risks to both the user and other members of the WCCC community.

Therefore, the college maintains the following guidelines pertaining to alcoholic beverages:

1. The college will not sponsor student events which focus primarily on the consumption of alcohol.
2. Alcoholic beverages are not permitted at any student event held on the college campus.
3. When a student social event is held at any establishment with a license to sell alcoholic beverages, students 21 years old and older may exercise their legal right to purchase alcoholic beverages. Ascertaining the legality of service is the responsibility of the proprietor of the licensed institution.
4. The student club or organization sponsoring a social event shall be held accountable for compliance with the alcoholic beverage regulations.
5. Infractions of these regulations by student organizations may result in the impoundment of the organization's treasury and/or the placing of the organization on probation.
6. Infractions of these regulations by individual students may result in probation, suspension or dismissal from the college.

Students concerned about their own or another's drug/alcohol use are encouraged to contact a member of the college counseling staff in Student Development located in Founders Hall.

Legal Sanctions

Students & Employee:

Possession and/or distribution of illicit controlled substances constitute(s) a crime in the Commonwealth of Pennsylvania. Conviction may result in the imposition of a fine and/or imprisonment.

Students:

Possession and/or consumption of alcohol by persons under age constitute(s) a crime in the Commonwealth of Pennsylvania. Conviction may result in the imposition of a fine and/or imprisonment.

Smoking Policy

To protect the health and welfare of the students, employees and general public, the college prohibits smoking throughout all interior spaces of all Westmoreland County Community College buildings and vehicles. Smoking is permitted only at designated exterior entrances. Violations of this policy are subject to disciplinary action.

Student Rights and Responsibilities

AIDS Policy

Individuals who have AIDS, ARC or a positive HIV antibody test shall not be denied employment/admission or continued employment/enrollment at Westmoreland County Community College based solely on the condition. This policy and implementation thereof is based upon current guidelines of the Center for Disease Control and the American College Health Association.

An HIV antibody testing site can be reached by calling any of the following: Greensburg, 724-832-5315; Monessen, 724-684-2945; Washington, 724-223-4540; Uniontown, 724-439-7400; Pittsburgh, 412-578-8332; Johnstown, 814-533-2205; or 1-877-PA HEALTH.

For those who feel they may be at risk, be assured that testing is free, confidential and by appointment only.

Sexual Harassment

WCCC will not tolerate sexual harassment of any kind. All employees and students must avoid offensive and inappropriate sexual behavior and are responsible for assuring that the college environment is free from sexual harassment at all times.

Harassment on the basis of sex is a violation of Pennsylvania and federal laws. The purpose of the sexual harassment policy and grievance procedure of Westmoreland County Community College is to ensure that all employees and students of WCCC can work and learn in an environment free of harassment and hostility. Violations of this policy will result in appropriate disciplinary action.

Definition

Sexual harassment is a violation of Section 703 of Title VII of the Civil Rights Act of 1964 and is defined as "unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when: (1) Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment; (2) Submission to or rejection of such conduct by an individual is used as the basis for employment decision or grades affecting such individual; or (3) Such conduct has the purpose or effect of substantially interfering with an individual's work or classroom performance or creating an intimidating, hostile, or offensive working or study environment."

Policy

The college will not tolerate sexual harassment. Any behavior that represents repeated or unwanted sexual attention or sexual advances, including behavior between students is prohibited. A student who feels he/she has been sexually harassed is encouraged to report such incidents to the director of Student Development in the Student Development Center. The student will be advised of the appropriate complaint procedures.

Equal Opportunity Laws

WCCC abides by all federal affirmative action regulations. Inquiries should be directed to the Affirmative Action Office, Room 4100D, Business & Industry Center.

Federal Regulation Title VI

Title VI of the Civil Rights Act of 1964 requires that discrimination based on race, color or national origin be eliminated from programs receiving federal financial assistance.

Federal Regulation Title VII

Title VII prohibits discrimination because of race, color, religion, sex or national origin in all conditions of employment at WCCC, such as the student work-study program.

Americans With Disabilities Act

The ADA is civil rights legislation designed to ensure that people with disabilities will not be discriminated against and to bring them into the mainstream of public life. It requires employers to make "reasonable accommodations" to enable employees with disabilities to do their jobs. It prohibits employers from denying employment to a person with a disability who is able to perform the "essential functions" of a particular job. Contact the director of Student Development at 724-925-4050 for additional information.

Federal Regulation Section 504

"No otherwise qualified disabled individual...shall solely by the reason of his/her disability, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving federal financial assistance." Contact the Student Development Office at 724-925-4189 for more information.

Federal Regulation Title IX

Title IX was passed by both houses of Congress after Congressional hearings, held in 1970, documented the pervasiveness, perniciousness, and long-range consequences of sex discrimination in educational policy, practice and attitude.

Student Grievance Procedures/Affirmative Action

The following are suggested procedures for students who have a grievance relating to discrimination as prohibited by Title VI, Title VII, Title IX or Section 504. The grievance procedures will be handled as confidential to the content as the aggrieved person desires, and assurances will be given that all information will be kept confidential by the Affirmative Action Officer (AAO).

1. The student is encouraged, if possible, to clarify the issue with the faculty or staff member involved in the grievance.
2. Contact Sylvia Detar, Affirmative Action Officer, 724-925-4190.
3. The AAO will take informal steps to clarify and resolve the matter, e.g., discussion with student, meeting with the staff or faculty member involved and/or that person's supervisor.

4. If the complaint is not resolved through informal means, the AAO should request the involvement of the appropriate division dean who will attempt informal resolution. If informal resolution is not possible, a formal hearing board should be appointed, giving both the student and the defendant equal representation. The AAO shall chair this board, voting in the case of a tie; one member selected by the defendant; one member selected by the griever; and two members selected by the president. The committee shall then meet to resolve the issue and make its recommendation to the president, based upon its hearing.
5. When the president has reviewed the committee's findings and recommendations, the griever will be notified by the AAO of the president's decision. If the griever does not accept this, he/she can request of the president that a conference be held to discuss the issues involved. The president, within 10 college days after receiving the appeal, shall meet the griever and the AAO in an attempt to resolve the grievance.
6. The griever, if not satisfied with the decision made in the preceding steps, may submit a written appeal to the board of trustees within 10 college days. The board of trustees, within 45 college days after receiving the appeal, shall hold a hearing at which those involved may present their sides of the issue.

Family Educational Rights and Privacy Act

Federal law requires that the college provide students access to their academic files. Information contained in the academic file relates only to the student's academic history and performance, including: WCCC Application for Admission, permanent transcript, placement test scores, course registration information, course approval forms (i.e., Course Substitution Form, Course Waiver Form, Advance Standing Form, etc.), and graduation information (when applicable).

Students wishing to inspect the content of their files may do so by completing a Request for Academic File Review form and submitting it to the Records Office. Students may inspect their academic files during normal working hours (Monday through Friday, 8 a.m. to 5 p.m.) provided that they have submitted a written request at least two working days in advance.

Students have the right, by law, to keep all information in their files confidential. However, the college has established a category known as Directory Information. Directory Information may include: student name and address, major field of study, dates of attendance, and degrees and awards received. Directory Information is normally released without a signed consent by the student.

Since Directory Information does not include grades, financial data or any other strictly personal data, the college expects very few students will wish this information withheld. If, however, a student does not wish Directory Information released without a signed consent, a Request to Prevent Disclosure of Directory Information form must be submitted to the Records Office immediately upon enrollment. This written notice to keep Directory Information confidential will be placed in the student's file and no information will be released unless a signed release form is received. Any further questions should be directed to the Records Office.

Student Right-to-Know

Student Right-to-Know is a public law that requires institutions of higher education receiving federal financial assistance to provide certain information regarding the graduation/persistence rates of students. However, at the time of publication, the method by which this information is to be distributed has not been decided by the federal government. Therefore, students who wish to review information on graduation/persistence rates may do so in the Admissions Office.

Personal Data Record

The Personal Data Change form is to be used to change name, address or telephone number. This form is available at the Student Information Center. It is the responsibility of each student to keep his/her personal data record updated.

Procedure for Resolution of Student Concerns Involving Faculty

The following procedure is recommended for those instances in which a student has an academic concern about a faculty member:

1. The student should make an appointment with the faculty member and discuss the problem.
2. If the student feels that he/she cannot meet with the faculty member, he/she should seek the advice of his/her faculty advisor and/or counselor.
3. If he/she has seen the faculty member and is still not satisfied, the student should make an appointment with the division dean to whom the faculty member reports.
4. If the concern is not resolved at the division level, the student should make an appointment to see the vice president for Academic Affairs and Student Services.
5. If the concern is still not resolved after meeting with the vice president for Academic Affairs and Student Services, the student may request an appointment with the president. The decision of the president in these matters is final.

The college expects students to maintain high standards of academic integrity in all college courses.

Academic Dishonesty

Academic dishonesty in any form will not be tolerated. The following procedure has been developed to prevent occurrences of academic dishonesty and to guide faculty and students should they become involved in such incidents.

Academic dishonesty includes, but is not limited to, the following:

1. **Cheating:** the intentional use or attempted use of unauthorized materials, information or other aids in an academic exercise
2. **Fabrication:** the intentional or unauthorized falsification or creation of any information or citation in an academic environment

3. **Facilitating academic dishonesty:** helping or attempting to help another to commit a dishonest academic act
4. **Plagiarism:** the use of the works of another as one's own in any academic environment

Faculty Responsibilities

The student will be notified no later than five working days after observation or discovery of a specific dishonest incident. Notification will include a description of the infraction, the potential penalty and the student's right to appeal. A copy of the written notification will be forwarded to the appropriate division dean and the vice president for Academic Affairs and Student Services.

Vice President for Academic Affairs and Student Services Responsibilities

The vice president for Academic Affairs and Student Services shall retain a master file of all documented cases of academic dishonesty. The faculty-assigned penalty may be revised if the master list shows multiple infractions. If the penalty is revised, the student will be notified immediately in writing.

Student Appeal Process

A student may appeal the charge of academic dishonesty by contacting the division dean within five days of the date of the notification letter. At this time, the student must submit a written request for appeal with appropriate justification to support the appeal. The appeal process is limited to challenging the charge of academic dishonesty; once the charge of academic dishonesty has been established, the penalty is not subject to appeal.

The student's appeal, including review of the merits of the charge, will be heard by the division dean and two division faculty selected on a rotating basis. The faculty member making the charge will be present. If the student's concern is not resolved, he/she may appeal to the vice president for Academic Affairs and Student Services, whose determination will be final.

Penalities

Any infraction could result in one of the following: grade of F on the assignment/examination in question, completion of an alternate assignment, or a grade of F for the course. Multiple infractions, whether within the same course or in a combination of courses, will be grounds for suspension and/or dismissal from the college.

Campus Security

Crime Awareness and Campus Security is a public law that requires colleges to report incidences of crime statistics on their campuses.

The following is the official report of the campus statistics as documented through the Pennsylvania State Police.

Uniform Crime Report Part II Offenses	2008 Offenses Known
Forgery and Counterfeiting	0
Fraud	0
Embezzlement	0
Stolen Property - Rec.Burg./Poss.	13
Vandalism	6
Weapons Carrying/Poss.	1
Prostitution/Comm. Vice	0
Sex Offenses except ap & Prost.	0
Drug Abuse Sales & Manufacturing	1
Gambling	0
Offenses Against Family/Child	0
Driving Under the Influence	0
Liquor Laws	0
Drunkenness	1
Disorderly Conduct	1
Vagrancy	0
All Other, Except Traffic	6
Total Part-II Offenses	**29**

This report is in compliance with the Pennsylvania College and University Security and Information Act, as documented through the Pennsylvania State Police to inform students of WCCC Crime Statistics.

For additional information concerning Section 201—Crime Awareness and Campus Security, contact the WCCC Library.

Intercollegiate Athletics, Intramurals and Leisure Programs

Intercollegiate sports competitions include coeducational golf, coeducational bowling, men's baseball, men's and women's basketball, and women's volleyball in the fall and women's softball, men's baseball and coeducational golf in the spring. The teams compete for local and state honors in the Western Pennsylvania Collegiate Conference and the Pennsylvania Collegiate Athletic Association and also for regional and national honors that are sponsored by the National Junior College Athletic Association. All student athletes must satisfy the eligibility provisions of the National Junior College Athletic Association and the academic probation policy of the college.

An intramural program, incorporating a variety of activities, is offered for full- and part-time students who wish to enter team or individual tournaments regardless of their ability levels. Offerings are available for women and men as well as in a coeducational format. The key ingredient to participation is interest, not skill level.

The indoor physical education facilities at the college include a gymnasium, auxiliary gym, an indoor jogging track, locker rooms and a fitness center that features a variety of strengthening machines and aerobic equipment. Hours are posted at the gym entrance. Students should check the weekly schedule of events that may close portions of the gymnasium facilities.

The outdoor facilities include softball, baseball and a multipurpose field.

Students are encouraged to utilize the facilities for their leisure use so a pattern of lifelong physical fitness is developed. A variety of credit and noncredit physical education courses are scheduled to assist in this endeavor.

Children are not permitted in the gymnasium.

Student Activities

The Student Activities Office provides the foundation for student involvement, promoting personal, social, and intellectual growth through student engagement, leadership development and student focused programming.

To achieve this mission, the department will work to:

- Encourage student involvement/engagement
- Provide learning through experience
- Create a challenging environment that fosters time management and personal accountability
- Strengthen respect for all persons
- Help students work collaboratively with others
- Promote all aspects of community/campus life
- Support programming, leadership development and student organization formation
- Support students in their self-directed activities and events
- Provide social, educational and cultural opportunities for all students

Student Government Association

The Student Government Association (SGA) is the representative voice of the student body. Executive board officers and voting members promote and represent the rights and interests of students. Every student of Westmoreland County Community College becomes a non-voting member of the Student Government Association upon payment of their student services fee. There are five officers on the SGA Executive Board and a maximum number of voting members that match a 1:200 member to student body ratio. The executive board consists of a student president, vice-president, secretary I, secretary II, and treasurer. The executive board officers are appointed following an application and selection process of the WCCC SGA appointment committee. Any student enrolled in a credit program at Westmoreland County Community College may be eligible to become a SGA voting member provided he or she follows attendance guidelines as stated in the Student Government Association Constitution.

The purpose of the Student Government Association is to:

- To encourage superior standards in academics, leadership, loyalty, honesty and mutual respect.
- To provide an effective means for students to express their wishes on matters directly concerning them and the college
- To encourage student participation and generate student spirit through supporting college, student organization, and extra-curricular activities
- To act in the best interest of the study body at all times and to encourage activities of a social, educational, community service and cultural nature
- To provide a means of communication and representation among the student body, the Student Government Association, student organizations, faculty and the administration of the college
- To provide a basis through which the students of Westmoreland County Community College may communicate with the students of other institutions of higher learning
- To recognize and encourage all officially approved student organizations on campus
- To oversee expenditures of funds allocated to the SGA to benefit the student body
- To carry out the provisions of the SGA Constitution

Regular meetings of the SGA are held twice a month to discuss issues and concerns that arise within the college community, especially those which directly affect students, and seek solutions to these problems. Each recognized student organization is required to send representation to these meetings, where they are given the opportunity to report on organization issues, activities and seek support for their endeavors. The SGA also adopts practices and procedures that integrate the activities of other student organizations with the total college program and serve as a liaison among students, faculty and administration.

The SGA sponsors and conducts a variety of college-wide educational and service-based activities each semester. Such events include a Red Cross Blood Drive, Safety Awareness Days, Health and Wellness Fair, and Better World Books used textbook drive. Advisor: Kelly Carpenter

Cultural Programs

Through the Cultural Programming Committee, the college offers the community a performing arts series of theatre, lecture, dance, and music by regional and national touring artists. Each year, the college holds exhibits of WCCC student work, the Juried Photography Exhibit, Juried High School Art Exhibit, and the Westmoreland Art Nationals sponsored by WCCC and the Westmoreland County Arts and Heritage Festival.

Clubs and Organizations

College clubs provide opportunities for growth in areas of special interest and leadership. Many organizations are centered on areas of study while others are open to all students. All student clubs and organizations must be officially recognized by the Student Government Association and the college. Coordinated through the Student Activities Office, the following clubs are officially recognized WCCC student organizations:

American Welding Society, WCCC Wolfpack Student Chapter

The purpose of the Welding Society is to provide students with technical meetings, tours and possible job placement/knowledge presented at various functions of the American Welding Society along with networking with industry representatives. All members of the American Welding Society attending WCCC as students will be considered members of the chapter. Advisor: Don Howard

Art Club

The Art Club provides a forum for students to exchange ideas, learn about their field and showcase artwork. Activities are organized that expand awareness of the art profession and take advantage of cultural events in the area. Numerous field trips are arranged. Every spring students will have the opportunity to showcase, curate and stage an exhibition in the Gallery in Science Hall. Advisor: Kathleen Mendus-Dlugos

Campus Activities Board

The purpose of the Campus Activities Board (CAB) is to organize, promote and participate in WCCC campus activities and social events for all WCCC students. Events of a recreational, social, educational, cultural and community service nature will be supported, sponsored, planned and coordinated by the Campus Activities Board. Funding for the activities and events planned by the CAB will be provided via allocation of Student Service Fee funds. Membership in this organization is open to all credit students of WCCC who have interest in activities and social planning. Advisor: Kelly Carpenter

Criminal Justice Fraternity

The Criminal Justice Fraternity is an outlook organization on legal procedures in the community. It is designed for students interested in law enforcement as a career. The purpose is to familiarize criminal justice students with situations within the environment that they may encounter in the future. Some group projects include: visits to a prison, a court trial and a correctional institute. Advisor: Randy Slagle

Cultural Awareness Coalition

The Cultural Awareness Coalition is a social organization open to all students. The purpose of the organization is to bring cultural events to the college that will assist in developing black awareness. This organization will also act as a liaison between the college and community and aid in the recruitment of minority students. Advisor: Carlene Williams

Drama Club

The Drama Club enables student members to stage at least one formal theatrical production each academic year and promotes appreciation of the theater. All students are involved in the total production from role participation through performing behind the scenes technical tasks. Advisor: Julie Jones

Early Childhood Education Club

The Early Childhood Education Club is designed to promote community interest and involvement in the field of child care and to give a broader range of knowledge in this career area. The club also helps with community activities involving children. Advisor: Beth Hoden

Horticulture Club

The Horticulture Club strives to help its members learn more about horticulture through field trips, guest speakers and campus projects. It also promotes fellowship among the members through various events. It is open to all WCCC students. Advisor: Dr. Xuri Zhang

Hospitality Club

Hospitality Club comprises students in culinary arts, baking and pastry, dietetic technician, hotel/motel management, restaurant/culinary management and travel and tourism majors. The club promotes hospitality awareness in the community and on campus through fund-raisers, social events, field trips and guest speakers. Advisor: Cindy Komarinski

Human Services Inc.

Human Services Inc. is designed to promote community interest and involvement in the field of human services and to give a broader range of knowledge and practical experience in this career area. The club promotes human service awareness on campus. Advisor: Joyce Clohessy

Math/Science Club

The purpose of the club is to provide learning opportunities and interactions for members with science and math faculty and industry leaders. Membership is open to all and meetings take place bi-monthly. Advisor: Dr. John Scassellati

NSNA/SNAP - WCCC Chapter

NSNA (National Student Nurse Association) is a national professional organization open to all student nurses. SNAP (Student Nurse Association of Pennsylvania) is a state professional organization for student nurses. Students on both levels are invited to join the professional groups. Students participate in health education activities and work toward promotion of nursing as a profession. They participate at the regional, state and national level by attending workshops and conventions that focus on current professional interests and concerns. Advisor: Carol Coles

Phi Theta Kappa

Phi Theta Kappa is the only nationally acclaimed honor society serving America's two-year colleges and associate degree granting institutions. Election to the honor society is open to any student who has completed at least 15 credit hours (either full- or part-time) at WCCC. Candidates must possess a cumulative grade point average of 3.5 or better in order to be considered for selection.

The purpose of the society is to recognize academic excellence among students in two-year colleges, provide opportunities for intellectual interchange and assist those seeking to transfer to four-year institutions. Phi Theta Kappa also offers scholarship opportunities, student directed honors projects and the chance to attend regional and national meetings of the society. Advisors: Dr. Patricia Guth, Darlene Pabis

Radiology Technology Organization

The purpose of this organization is to provide further educational support for WCCC Radiology Technology students via study groups, conferences and seminars. Student members will raise funds to attend these conferences where they will promote WCCC, the Radiology Technology Program and recruit new students. Membership will be open to all current and future WCCC radiology technology students. Advisor: David McBride

Reach Out Christian Club

The Reach Out Christian Club meets for a time of Christian fellowship and sharing of God's Word. Guest speakers and musicians are often invited to the weekly meetings. Advisor: Jackie Greenawalt

Republican Club

The Republican Club offers students the opportunity to participate in the U.S. political process through student-led and organized political discussions and activities. Advisor: Patricia Minton Kennedy

Sigma Alpha Pi

The National Society of Leadership and Success, Sigma Alpha Pi, is a nationwide community that dramatically improves one's ability to successfully attain desired outcomes. The society guides individuals through the process of identifying and committing to focused and dedicated actions that lead to their personal success.

Core Philosophy:

Individuals can achieve their desired life's work and goals with proper support and dedicated action.

Members are exposed to monthly national speaker presentations, participation in Success Networking Teams and a Leadership Training Program. Membership in the WCCC chapter of Sigma Alpha Pi is open to any student of Westmoreland County Community College.

In addition to the leadership development program, members have access to these privileges:

- Mentoring and advisement opportunities with online success coaches
- Use of the success resources library
- Access to a job bank of employers looking to hire students from The National Society of Leadership and Success
- Access to the nationwide network of other society members
- A comprehensive list of leadership and success articles and resources
- Personalized letters of recommendation to help members secure the job of their choice
- Lifetime membership upon completion of society requirements

Advisor: Kelly Carpenter

Ski Club

The Ski Club is open to all students and faculty members interested in downhill skiing. The club's purpose is to take weekly ski trips to local ski areas at discount prices. Advisor: George Lewark

Student American Dental Assistants Association

The Student American Dental Assistants Association is an organization composed of dental assisting students. The association helps to promote the profession of dental assisting and educational gain outside of the classroom. It also promotes awareness of the WCCC Dental Assisting program. Advisor: Mary Kay Huesdash

Student American Dental Hygienists Association

The Student American Dental Hygienists Association is an organization comprised of dental hygiene students. The association helps to promote educational gain in the profession outside of the classroom. Advisor: Angela Rinchuse

Student Veterans of WCCC

The Student Veterans of WCCC offers a friendly environment of diverse and dynamic individuals who share many of the same struggles, excitement and pride of returning to formal education for professional and personal development after completing our country's call to service. The transition from the everyday structure of military service to the new rigors of college life requires determination, dedication, perseverance and friendly familiar support from those with similar interests and background experience. Active membership is open to credit students who are veterans, active duty personnel, Reservist, National Guard or retired military and show genuine interest in the organization. Membership application required. Advisor: Tom Steiner

Table Tennis Club

The table tennis club is a special interest student organization formed to spread awareness of the sport and offer opportunities for organized play. The club sponsors tournaments and lessons as well as the opportunity to compete and train for sanctioned tournaments against professional and collegiate teams. The Table Tennis Team meets regularly in the Student Center Game Room. Advisor: George Lewark

Wolfpack Howlers Mascot Club

The club supports and promotes the involvement of WCCC students in campus and community service activities through scheduled appearances of the WCCC mascot, Westly Wolf. Club members consist of the mascot students, as well as mascot handlers and helpers. The club also takes on fundraising and community service activities and participates in most major campus events. Advisors: Dr. Candace Henry and Tammy Catalano

Wolfpack Striders

The running and walking club for WCCC students, the Wolfpack striders increase fitness in an un-intimidating way at all levels, from beginner walkers to advance runners, and create a social bond in the process. Membership in the club is open to all members of the WCCC community who would enjoy walking or running. The officers of this club must be WCCC students holding a cumulative grade point average of at least 2.0. Meetings take place weekly. Advisor: Colleen Babilya

Scheduling of Events and Activities

Proposed events, fundraisers, and activities must be discussed with and approved by the Student Activities Office. This must be completed at least three weeks in advance of the proposed event or activity.

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ANDREW T. BARNETTE — 724-925-4047
Dean/Public Services/Humanities/Social Sciences
B.A., Grove City College; M.A., Kent State; Ph.D., The University of Mississippi

ROBERT J. CONNELLY — 724-925-5974
Dean/Workforce Development
B.S., Saint Vincent College; M.S., Geneva College

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Director/Continuing Education
B.A., Seton Hill College

JOHN C. DETISCH — 724-925-4093
Director/Facilities
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Director/Human Resources & Assistant to the President
B.A., Washington & Jefferson College; M.A., Indiana University of Pennsylvania

RANDAL M. FINFROCK — 724-925-4060
Director/Institutional Research & Data Services
B.S., University of Indiana, M.S., California University of Pennsylvania

JAMES H. HAYES — 724-925-4090
Director/Workforce & Economic Development
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JANICE T. GRABOWSKI — 724-925-4123
Director/Admissions
A.A.S., Westmoreland County Community College

RUTH E. IRWIN — 724-925-5987
Director/Nursing
R.N., The Washington Hospital School of Nursing; B.S.N., Slippery Rock University; M.S.N., Indiana University of Pennsylvania

PERSONNEL DIRECTORY

KATHLEEN A. KEEFE — 724-925-4101
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B.A., M.L.S., University of Pittsburgh

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Director/College Services
B.S., M.S., California University of Pennsylvania

LAURA L. LOCKE — 724-925-6982
Diagnostic Medical Sonography Program Director
M.S., Carlow College; B.A., LaRoche College; A.S., Community College of Allegheny County; A.S., Robert Morris University

WILLIAM P. MAGDA — 724-925-4027
Director/Community Development
B.A., Saint Vincent College

KATHLEEN A. MALLOY — 724-925-4028
Dean/Health Professions
R.N., McKeesport Hospital School of Nursing; B.S.N., M.N.Ed., Ph.D., University of Pittsburgh

DAVID J. McBRIDE — 724-925-5977
Radiology Technology Program Director
B.A., LaRoche College; M.A., University of Phoenix

PATRICK R. McKULA — 724-925-4085
Director/Information Technology
B.S., Allegheny College; M.S., University of Pittsburgh

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Director/Financial Aid
B.A., M.B.A., Indiana University of Pennsylvania

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B.S., California University of Pennsylvania

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Controller
B.S., Saint Vincent College

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Director/Grants
B.A., Temple University

DEBRA D. WOODS — 724-925-4083
Executive Director/Education Foundation
B.A., Seton Hill Uiversity; M.S., Geneva College

SANDRA L. ZELENAK— 724-925-4050
Director/Student Development
B.S., Concord College; M.A., Indiana University of Pennsylvania

ADMINISTRATIVE STAFF

BETH A. ALESI — 724-925-4201
Assistant Controller/Accounts Receivable & General Accounting
A.A.S., Westmoreland County Community College

ANNETTE H. BOYER — 724-925-4138
Coordinator/Instructional Technology & Distance Learning
B.S., California University of Pennsylvania; M.Ed., University of Pittsburgh

SUSAN L. BROWN — 724-925-4174
Assistant Bookstore Manager
A.A.S., Westmoreland County Community College

CASEY S. CAVANAUGH — 724-755-2330, ext. 136
Keys Student Facilitator
B.A., Seton Hill College

MARION GAYDOS CHAMBERS — 724-437-3512
Coordinator/Fayette County Education Center
A.B., M.P.A., West Virginia University

VALERIE L. COMPTON — 724-925-5975
Assistant Controller/Accounts Receivable & Registration Billing
A.A.S., Delaware County Community Colelge; B.S., Saint Joseph's University

LAURIE L. CONNORS — 724-925-4252
Coordinator/Human Resources
B.A., Carlow College

NANCY I. DAVIS — 724-627-3464
Coordinator/Workforce Development (Greene)
B.S., California University of Pennsylvania;
M.A., Ed.D., West Virginia University

ARLENE M. DOMENCIC — 724-327-8090
Coordinator/Bushy Run Education Center
A.S., Point Park College

VICKIE A. FRY — 724-925-5801
Coordinator/Institutional Research
A.A.S., Westmoreland County Community College;
B.S., Geneva College

ELIZABETH N. GWYNN — 724-925-4193
Programmer/Analyst
A.A.S., Westmoreland County Community College

AMY C. HALULA — 724-925-4213
Coordinator/Retired & Senior Volunteer Program
B.A., Thiel College; M.A., Duquesne University

PETER A. HANCHAR — 724-925-6955
Coordinator/Facilities
A.A.S., Pennsylvania State University; B.A., Belford University

JOHN W. HARVEY — 724-379-4119
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B.S., M.B.A., California University of Pennsylvania

DAVID R. HAUGER — 724-872-2447
Coordinator/Public Safety Training Center
A.A.S., Westmoreland County Community College;
B.S., University of Pittsburgh

BRIAN D. HAYS — 724-335-8110
Coordinator/New Kensington Education Center
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JOLEEN R. HENRY — 724-925-4086
Program Coordinator/Workforce Development
B.S., University of Phoenix

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LEYLA OLECKI-EDDY — 724-627-3464
Coordinator/Greene County Education Center
B.A., Saint Vincent College

TERI PESCKO — 724-925-4074
Assistant Controller/Payroll & Accounts Payable
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JAMES H. PIRLO — 724-925-6953
Coordinator/Admissions-Recruitment
B.A., Seton Hill University

REBECCA J. PRICE — 724-925-4186
Coordinator/College Learning Center-Developmental Education
B.S., Slippery Rock University

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Coordinator/Culinary Arts & Hospitality Programs
A.A.S., Westmoreland County Community College

NANCY E. RUSTIC — 724-925-4156
Coordinator/Campus Children's Center
B.S., Indiana University of Pennsylvania; M.Ed., Carlow College

GRACE E. SANDY — 724-925-4144
Coordinator/Instructional Technology & Distance Learning
A.A.S., Westmoreland County Community College; B.S., Geneva College

CHAD R. SEIBEL — 724-925-4174
Bookstore Manager
A.A., Westmoreland County Community College

NICOLE SHERANEK
Coordinator/Workforce Development (Fayette)
B.A., California University of Pennsylvania; M.B.A., Waynesburg College

RICHARD W. SMITH — 724-925-4320
Coordinator/Desktop/Media Services
A.A.S., Westmoreland County Community College

LEROY G. STANTS, JR. — 724-925-4248
Assistant to Coordinator/Facilities (Evening)
A.A.S., Penn Technical Institute; A.A.S., Westmoreland County Community College

MICHAEL R. STAS — 724-925-4124
Coordinator/Systems Administrator
B.S., Kings College

PATRICIA A. STEIMER — 724-925-4015
Coordinator/Catering Services
A.A.S., Westmoreland County Community College

JUSTIN A. TATAR — 724-925-4064
Coordinator/Admissions-Special Programs
B.S., M.S., California University of Pennsylvania

DEBORAH L. TERLIZZI — 724-925-4062
Coordinator/Admissions-Allied Health Programs
B.A., West Liberty State College

GRACE THACHIK — 724-925-5939
Coordinator/ICCCC of WCCC
B.A., M.A., Indiana University of Pennsylvania

CHARLES E. THOMPSON — 724-925-4094
Coordinator/Facilities (Evening)
A.A.S., Westmoreland County Community College

JANET E. UNGER — 724-925-4090
Coordinator/Workforce Development (Mon Valley)
B.S., Indiana University of Pennsylvania

ANDREW T. VARGO — 724-925-422
Data Analyst
A.A.S., Westmoreland County Community College; B.S., Seton Hill University

ADMINISTRATIVE SUPPORT STAFF

SUZANNE C. BARRON — 724-925-4216
Administrative Assistant/Secretary
A.A.S., Westmoreland County Community College

TIFFANY E. BREWER — 724-925-4080
Administrative Assistant/Secretary
A.A.S., Westmoreland County Community College

ROXANNA D. FOX — 724-925-4092
Administrative Assistant/Secretary
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Administrative Secretary

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Administrative Assistant/Secretary

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GARY A. ALTEMARA — 724-925-4146
Associate Professor (Graphic Communications)
B.S., B.A., M.Ed., California University of Pennsylvania

COLLEEN M. BABILYA — 724-925-4014
Assistant Professor (Mathematics)
B.S., Pennsylvania State University; M.Ed., California University of Pennsylvania

PERSONNEL DIRECTORY

DAVID R. BALLENTINE — 724-925-4253
Assistant Professor (Computer Technology)
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PAUL A. BAZZANO — 724-925-4006
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Counselor/Special Populations/Professor
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Assistant Professor (Biology)
B.S., M.S., California University of Pennsylvania

DENNIS BERZANSKY — 724-925-4032
Professor (Chemistry)
B.S., M.S., Indiana University of Pennsylvania

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Instructor (Music)
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Professor (Accounting)
B.S., M.Ed., Duquesne University

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Assistant Professor (Computer Technology)
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Associate Professor (Human Services)
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Professor (Nursing)
R.N., St. Francis School of Nursing; B.S.N., Pennsylvania State University; M.S.N., Indiana University of Pennsylvania

LOUIS T. CONGELIO — 724-925-4011
Professor (Mathematics)
B.A., Saint Vincent College; M.Ed., University of Pittsburgh; J.D., Duquesne University

JAMES M. CORDLE — 724-925-4273
Assistant Professor (Physics/Mathematics)
B.S., Carnegie Mellon University; M.S., University of Pittsburgh

SHARON COULTER — 724-925-4102
Librarian/Instructor
A.A., Westmoreland County Community College; B.A., Seton Hill College; M.L.I.S., University of Pittsburgh

JOHN D. CULYBA — 724-925-4033
Instructor (English)
B.A., M.A., University of Pittsburgh

ROBERT P. DENITTI — 724-925-4255
Assistant Professor (Mathematics)
B.S., M.A., California University of Pennsylvania

FRANCES T. DEPAUL — 724-925-4067
Professor (Business Management)
B.S., Seton Hill College; M.R., Ph.D., University of Pittsburgh

DAVID J. DILLMAN — 724-925-4041
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KATHLEEN MENDUS DLUGOS — 724-925-4165
Associate Professor (Art)
B.A., B.F.A., Seton Hill College; M.F.A., Pennsylvania State University

JOAN G. DONOFRIO — 724-925-5972
Assistant Professor (Dental Hygiene & Dental Assisting)
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B.A., M.A., Ph.D., University of Pittsburgh

DONNA L. STEELE — 724-925-5989
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B.S.N., M.A., Indiana University of Pennsylvania; M.S.N., Waynesburg University

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B.S., M.Ed., Pennsylvania State University; M.A., Indiana University of Pennsylvania

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Instructor (Office Technology & Web Design)
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Instructor (Nursing/Greene)*
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MARTIN S. ST. JOHN — 724-925-4203
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LINDSAY A. SWISS — 724-925-4059
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M.Ed., Indiana University of Pennsylvania; B.S., University of Pittsburgh

CHARLES SZTROIN, JR. — 724-925-4258
Assistant Professor (Multimedia Technology)
B.S., California University of Pennsylvania

MICHELLE CAMPBELL TOOHEY — 724-925-4233
Professor (English)
B.A., Seton Hill College; M.A., Ph.D., Indiana University of Pennsylvania; M.Ed., Temple University

GARY W. UHRIN — 724-925-4038
Assistant Professor (Criminal Justice)
B.A., M.A., Indiana University of Pennsylvania

KATHLEEN WALLER — 724-925-4009
Professor (Nursing)
B.S., San Diego State University; M.S., Arizona State University; Family Nurse Practitioner

BARBARA A. WALTERS — 724-925-6711
Instructor (Nursing)
B.S.N., M.S.N., Waynesburg College

CARLENE B. WILLIAMS — 724-925-4139
Counselor/Act 101/Professor
B.A., William Patterson College; M.Ed., Columbia University Teachers College

KATHY J. WRIGHT — 724-925-4259
Assistant Professor (English)
B.A., California University of Pennsylvania; M.A., Pennsylvania State University

ROBERT C. WRIGHT — 724-925-4282
Counselor/Associate Professor
B.S., M.Ed., California University of Pennsylvania

MARY ZAPPONE, C.C.E., A.A.C. — 724-925-4016
Professor (Culinary Arts/Hospitality Programs)
B.S., Seton Hill College; M.S., Indiana University of Pennsylvania

CAROLE A. ZEGLIN — 724-925-4140
Assistant Professor (Medical Assisting)
A.S., Franklin School of Science and Arts; B.S., Point Park College; M.S., Saint Vincent College

XURI ZHANG — 724-925-4257
Professor (Horticulture)
B.S., Zhejiang Agricultural University; M.S., Ph.D., Pennsylvania State University

REBECCA A. ZUZIK — 724-925-4166
Assistant Professor (Nursing)
A.A.S., Richland Community College; B.S.N., Millikin University; M.S.N., University of Illinois at Chicago

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PROFESSIONAL STAFF

SUZANNE L. BREWER — 724-925-5848
Student Support Services Assistant
A.S., Community College of Allegheny County

KELLY R. CARPENTER — 724-925-4055
Student Life Professional II
B.F.A., Shepherd College

ANDREW J. DOHERTY — 724-925-4133
Developmental Education Assistant-Chief Examiner
A.A.S., Westmoreland County Community College

FRANK J. GAUL — 724-925-4285
Science/Technology Assistant
B.S., California University of Pennsylvania

JACKIE A. GREENAWALT — 724-925-6595
Student Services Assistant-Developmental Education
B.A., M.S., California University of Pennsylvania

GAIL L. HAMROCK — 724-925-4078
Student Services Assistant
A.A.S., Westmoreland County Community College

KRISTIN HOELZLE — 724-925-3318
Financial Aid Assistant
A.A.S., ICM School of Business

HELEN L. HUSTEAD — 724-925-4188
Computer Center Assistant
A.A.S., Westmoreland County Community College; B.S., Seton Hill College; M.Ed., California University of Pennsylvania

MELISSA M. KOCHUGA — 724-925-6895
Student Support Services Assistant-Developmental Education
B.A., B.S., Duquesne University

GEORGE LEWARK — 724-925-4172
Professional II/Intramural & Recreational Fitness
B.S., University of Maryland

KAREN L. MORGAN — 724-925-6894
Student Support Services Assistant-Developmental Education
A.A.S., Westmoreland County Community College

SANDRA J. NEWMEYER — 724-925-4065
Financial Aid Assistant
A.A.S., Westmoreland County Community College

LORI A. NICHOLS — 724-925-5926
Biological Science Lab Assistant
B.S., University of Connecticut

WENDY A. SEMAN — 724-925-4056
Financial Aid Assistant
A.S., Gannon College

AUTUMN A. TOPLAK — 724-925-6890
Student Services Support Assistant-Developmental Education
B.A., Saint Vincent College; M.A., Geneva College

ANNE MARIE ZEMBA — 724-925-6956
Library Assistant (Technical Services)
A.A.S., Westmoreland County Comunity College

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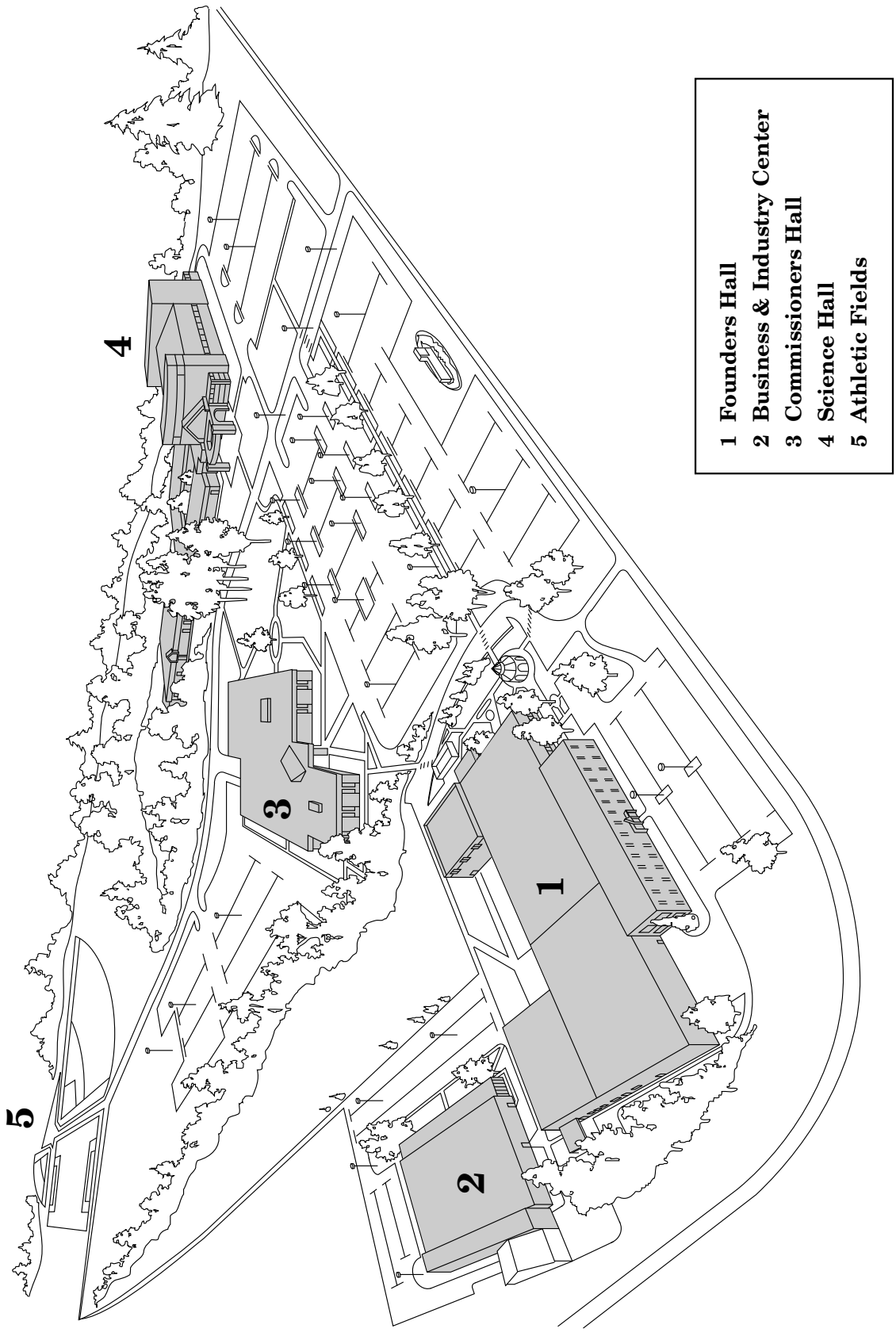

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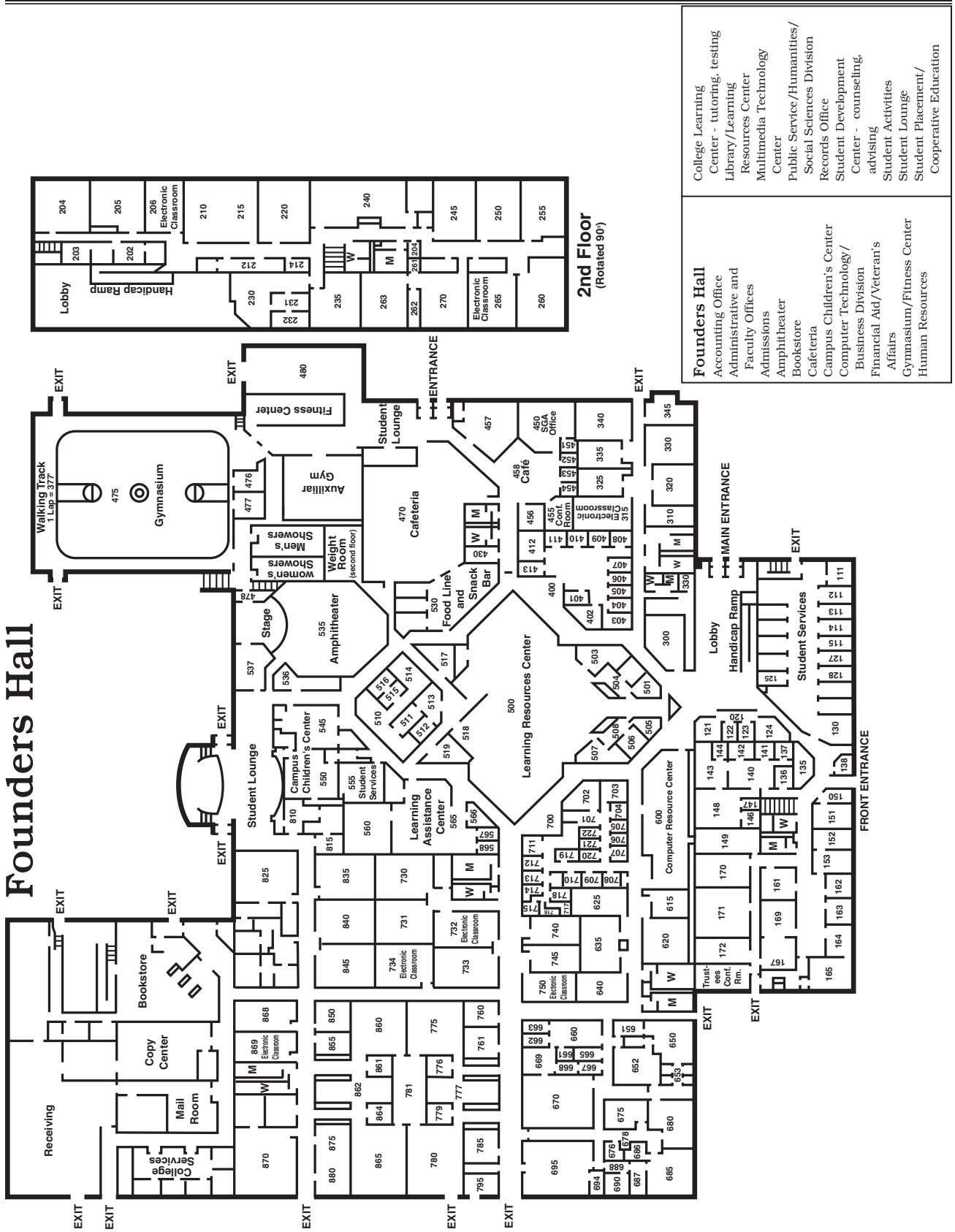

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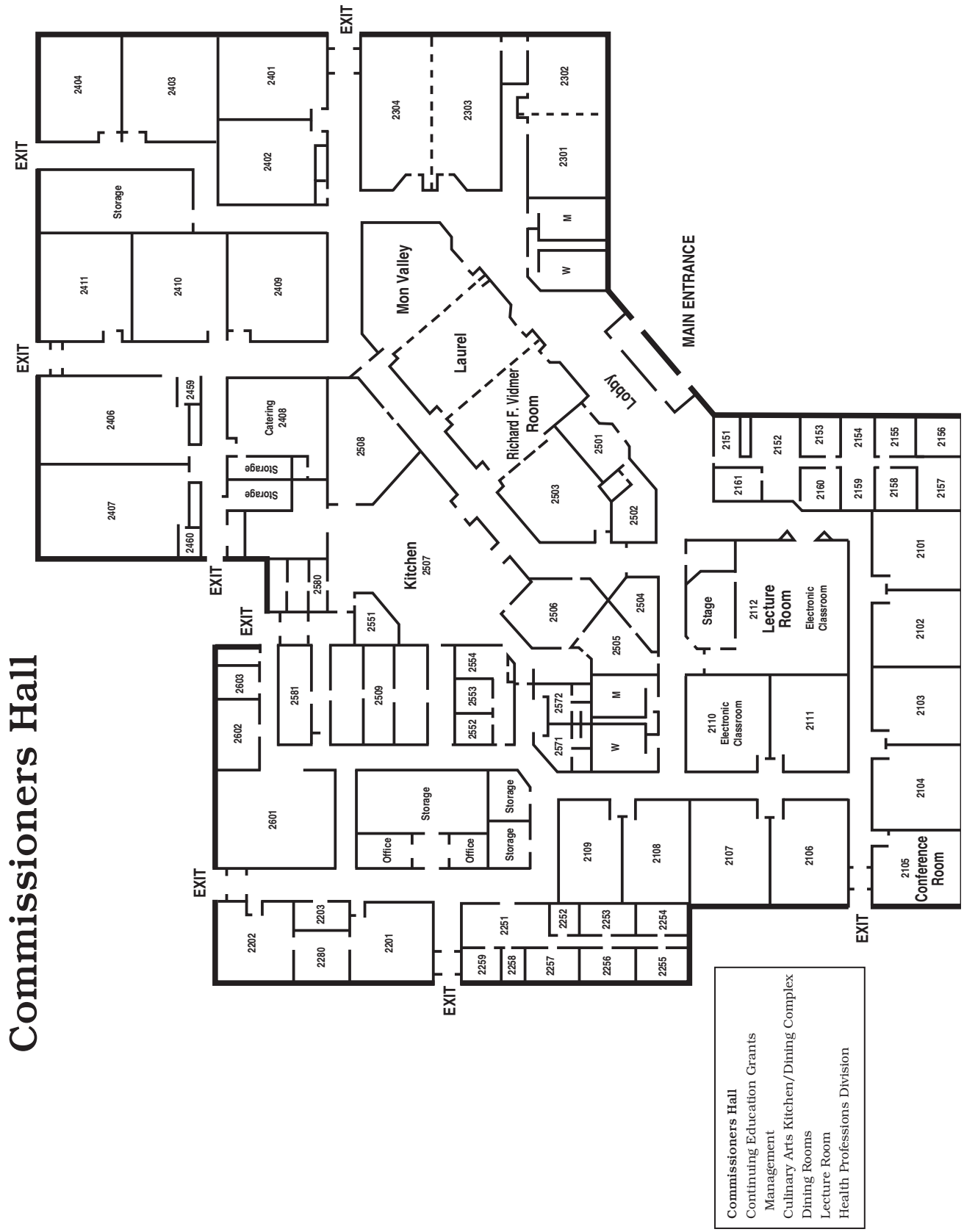

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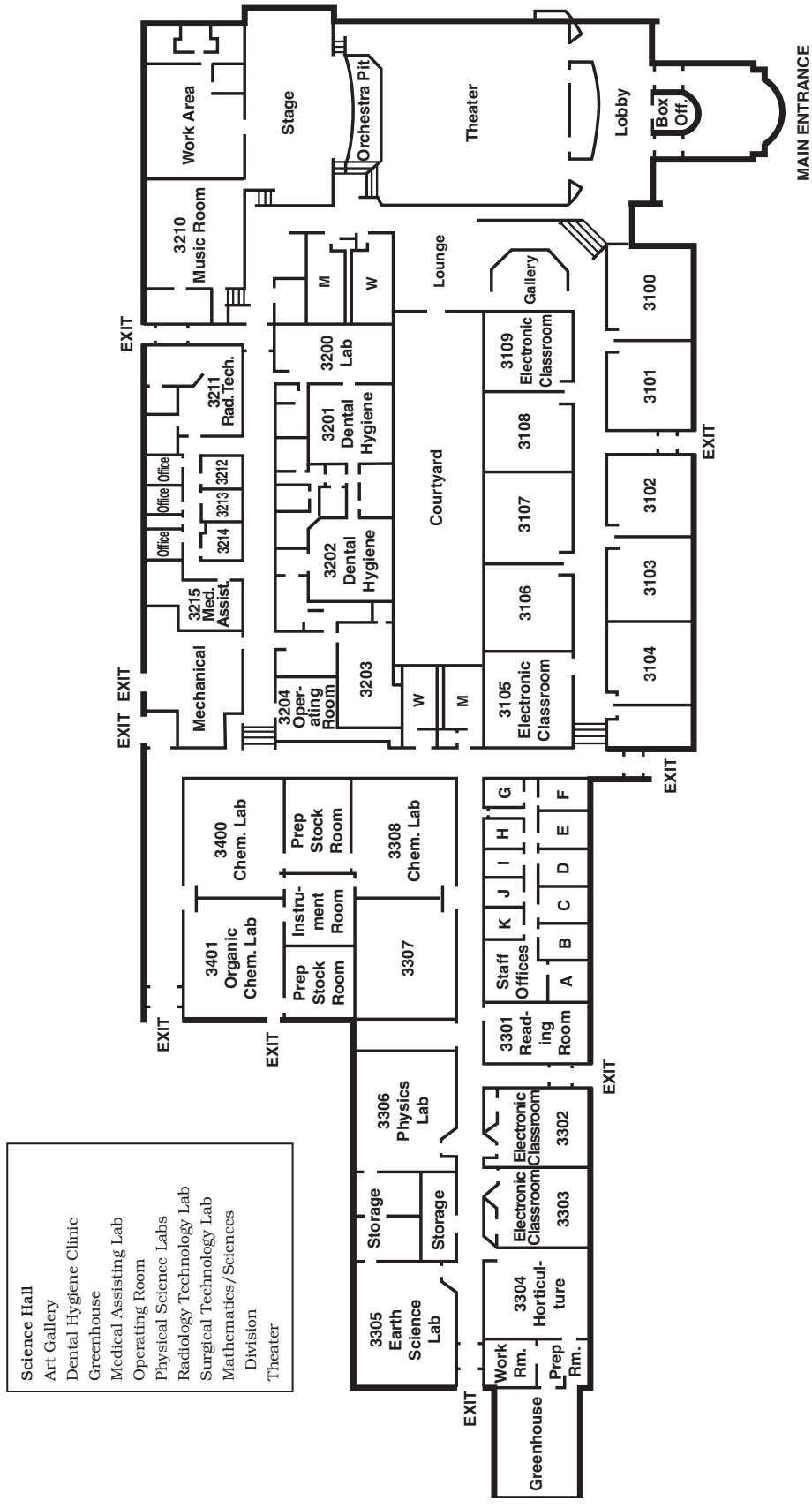

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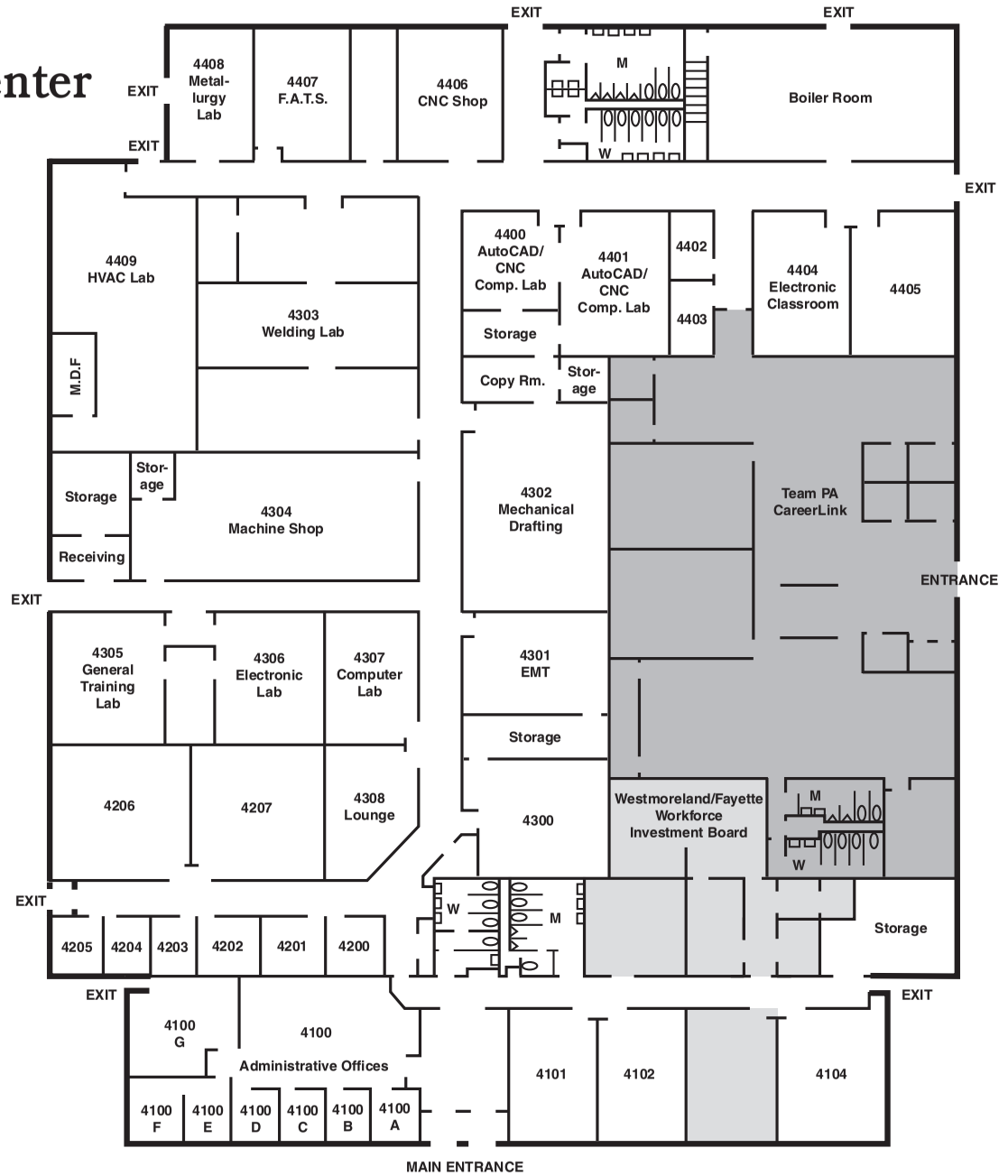

INDEX

A

Academic Advising 216
Academic Calendar 3
Academic Dishonesty 225
Academic Forgiveness 21
Academic Guarantee 26
Academic Honors 23
Academic Information 21
Academic Passport 11
Academic Programs 29
Accounting Courses 171
Accounting Program
  Degree 42
  Computer Accounting and Tax Specialist Certificate 43
Accreditation 4
Act 101 216
Act 48 25
Additional Degrees 24
Administrative Staff Listing 232
Administrative Support Staff Listing 233
Administrators' Listing 231
Admissions 8
  Early Enrollment 8
  Admission to Specific Programs 8
Affirmative Action Statement 4
AIDS Policy 224
Allied Health Courses 172
American Sign Language Courses 174
Architectural Drafting and Design Program 44
Architecture Courses 172
Armstrong County Education Center 7
  Directions 7
Art Courses 172
Appeal Process, Academic Dishonesty 226
Assessment and Testing 216
Associate in Arts Degree 29
  Degree Requirements 30
  Elective Courses for Transfer 31
  Guide to Courses for Bachelor's Degree Programs .32
    Art 32
    Biology 32
    Business 32
    Chemistry 33
    Chiropractic 33
    Communication 33
    Computer Science/Information Systems 34
    Criminal Justice 34
    Engineering 34
    English/Writing/Literature 35
    Health and Physical Education 35
    Health Professions 35
    History 36
    Humanities 36
    Library Science 36
    Mathematics 37
    Physics 37
    Political Science 37
    Psychology 37
    Sociology 38
    Teacher Education 38, 39
    Undecided Major 38
Associate in Applied Science Degree 29
  Degree Requirements 30
Associate in Fine Arts Degree 29
  Studio Arts Option Degree 40
Attendance 21
Auditing Courses 10

B

Baking and Pastry Courses 175
Baking and Pastry Program
  Apprenticeship Option Degree 45
  Apprenticeship Option Diploma 47
  Non-Apprenticeship Degree 48
  Non-Apprenticeship Diploma 49
  Non-Apprenticeship Certificate 50
Biology Courses 174
Bionanotechnology Program 51
Board of Trustees' Listing 231
Bookstore 218
  Used Book Sale 218
Buildings, Student Use 219
Bulletin Boards 218
Bushy Run Education Center 6
  Directions 6
Business & Industry Center Map 243
Business Courses 175
Business Program 52
  Financial Management Degree 53
  General Management Degree 54
  Human Resources Management Degree 55
  Marketing Management Degree 56
  Real Estate Management Degree 57
  Small Business Management Degree 58
  Business Diploma 59
  Financial Management Certificate 60
  General Management Certificate 60
  Human Resources Management Certificate 61
  Marketing Management Certificate 61
  Real Estate Management Certificate 62
  Small Business Management Certificate 62

C

Calendar, Academic 3
Campus Map 239
Campus Security 226
Career Planning 216
Casino/Gaming Certificate 63
Certificate 29
Change of Major 10
Change of Schedule 10
Chemistry Courses 176
Child Care 217
Clubs and Organizations 228
Code of Student Conduct 220
College Closing Information 219
College Learning Center 22
Commissioners Hall Map 241
Computer & Data Communications
  Network Use, Students 222
Computer Information Security Courses 177
Computer Information Security Program
  Degree 64
  Certificate 65
Computer Numerical Control Courses 178
Computer Numerical Control Program
  Degree 66

INDEX

Certificate 67
Computer Systems Electronics Technology Program
Electro-Optics Degree 68
Networking Degree 69
Computer Technology Courses 178
Computer Technology Program 70
Networking Degree 71
Programming for the Enterprise Degree 72
Technical Support Degree 73
Telecommunications Degree 74
Telecommunications Diploma 76
Diploma 75
Database Application Development Certificate 77
Fiber Optic Technologies Certificate 78
Microcomputer Applications Certificate 77
Networking Certificate 79
PC Repair/A+ Certificate 79
Programming Certificate 80
Web Development Certificate 80
Cooperative Education 23
Cooperative Education Courses 176
Counseling 216
Course Descriptions 170
Credit 21
Credit for Prior Learning 9
Transfer of Credit 9
College Level Examination Program 9
Credit by Examination 9
Credit for Area Career & Technology Center Courses . . .9
Advanced Placement Examinations 9
Credit for Military Training 9
Credit for Experiential Learning 9
Criminal Justice Courses 180
Criminal Justice Program
Degree 81
Information Security Degree 82
Corrections Officer Certificate 83
Cross Registration 10
Culinary Arts Courses 182
Culinary Arts Program
Apprenticeship Option Degree 84
Apprenticeship Option Diploma 86
Non-Apprenticeship Option Degree 88
Non-Apprenticeship Diploma 90
Cultural Programs 228

D

Dance Courses 183
Dean's List 23
Delivery of Academic Programs 26
Dental Assisting Courses 183
Dental Assisting Program 91
Dental Hygiene Courses 182
Dental Hygiene Program 93
Developmental Courses 10
Diagnostic Medical Sonography Courses 184
Diagnostic Medical Sonography Program 95
Dietetic Technology Courses 185
Dietetic Technician/Nutritional Services
Management Program 99
Dining Room Management Program 101
Diploma 29
Directions
Youngwood Campus 5
Armstrong County Education Center 7
Bushy Run Education Center 6
Fayette County Education Center 7
Greene County Education Center 7
Indiana County Community College Center 7
Laurel Education Center 6
Mon Valley Education Center 6
New Kensington Education Center 6
Public Safety Training Center 6
Disabilities, Student Services 216
Dishonesty, Academic 225
Drafting Courses 183
Drafting Program
Computer Aided Drafting & Design (CADD/
Computer Aided Manufacturing (CAM) Degree 102
Mechanical Drafting & Design Degree 103
Drug and Alcohol Policy 223

E

Early Childhood Education Courses 185
Early Childhood Education Program
Degree 104
Diploma 105
Director Certificate 106
Certificate 106
Early Intervention 22
Earth and Planetary Science Courses 189
Economics Courses 186
Education Courses 186
Education Foundation, Inc.
Board of Directors 238
Electronics Courses 187
Electronics Engineering Technology Program 107
Emergency Message Procedure 219
Engineering Courses 186
Engineering Technology Program 108
English Courses 187
Equal Opportunity Laws 224
Events, Scheduling 230
Expanded Functions Dental Assisting Courses 182
Expanded Functions Dental Assisting Program 109

F

Faculty Listing 233
Family Educational Rights & Privacy Act 225
Fayette County Education Center 7
Directions 7
Fees 12
Financial Aid 13
Fire Science Courses 191
Fire Science Program
Municipal Fire Service Degree 111
Diploma 112
Certificate 113
Food Service for Students 218
Founders Hall Map 240
French Courses 189
Full-time Students 8

INDEX

G

GED Testing & Scholarship Program 23
General Education 29
Geography Courses 193
Goals 4
Grade Report Abbreviations 25
Grades and Grade Points 21
Graduate Transfers 11
Graduation Honors 23
Graduation Requirements 24
Grapevine 218
Graphic Design Courses 192
Graphic Design & Animation Programs 114
  Flash Design Degree 115
  Graphic Design Degree 116
  Graphic Design Certificate 117
  2D Animation Certificate 118
  3D Animation Certificate 119
Greene County Education Center 7
  Directions 7
Grievance Procedures, Affirmative Action 224

H

Health and Physical Education Courses 196
Heating, Ventilation, Air-Conditioning and Refrigeration Courses 193
Heating, Ventilation, Air-Conditioning and Refrigeration Program
  Degree 120
  Certificate 122
History Courses 194
Honors Courses 195
Honors Seminar 26
Horticulture Courses 195
Horticulture Program
  Floriculture Degree 122
  Landscape Design, Installation & Maintenance Degree 123
  Turfgrass Management Degree 124
  Floriculture Certificate 125
  Horticulture Certificate 125
  Landscape Design Certificate 126
  Landscape Installation & Maintenance Certificate 126
  Turfgrass Management Certificate 127
Hotel/Motel Management Courses 195
Hotel/Motel Management Program 128
Human Services Courses 194
Human Services Program 129
Humanities Courses 196

I

Identification Cards 218
Illness, Student 21
Incomplete Grades 21
Independent Study 26
Indiana County Community College Center 7
  Directions 7
Information Technology Center 23
Information Sources 218
Interactive Television 26
Intercollegiate Athletics 226
Internet, Wireless 219
Intramurals 227
Italian Courses 197

L

Laurel Education Center 6
  Directions 6
Learning Outcomes Assessment 24
Learning Resources Center 22
Library 22
Library Science Courses 197
Library Science Program 130
Locations and Facilities 239
Lock/Locker Rental 218

M

Machine Technology Courses 202
Machine Technology Program
  Degree 131
  Certificate 132
Manufacturing Technology Courses 199
Manufacturing Technology Program
  Manufacturing Maintenance Apprenticeship Degree 133
  Manufacturing Process Technology Degree 134
  Nanofabrication Manufacturing Degree 135
Marketing Courses 199
Mathematics Courses 201
Media Services 21
Medical Assisting Courses 198
Medical Assisting Program 136
Metallurgy Courses 199
Mission/Vision/Values Statement 3
Mon Valley Education Center 6
  Directions 6
Multimedia and Photography Courses 198
Multimedia and Photography Program
  Multimedia Technology Degree 138
  Photography Degree 139
  Adobe Video Studio Certificate 140
  Photography Certificate 140
  Video/Television Certificate 141
Music Courses 202

N

New Kensington Education Center 6
  Directions 6
New Student Orientation 217
Nursing Courses 203
Nursing Program, Degree and Diploma 142

O

Office of Vocational Rehabilitation 217
Office Technology Courses 205
Office Technology Program
  Medical Administration Degree 147
  Office Administration Degree 148
  Medical Transcription Diploma 149
  Office Administration Diploma 150
  Medical Administration Certificate 151
  Medical Coding Certificate 151
  Office Administration Certificate 152
Online Courses 26
Orientation, New Students 217

INDEX

P

Paralegal Courses 197
Paralegal Program
  Degree 153
  Diploma 154
Parking 219
  Disabled Student Parking 219
Part-time Students 8
Payment Plan, TuitionPay 13
Payment Policy 12
Personal Data Record 225
Personal Development Courses 10, 206
Personnel Directory 236
Philosophy 3
Philosophy Courses 206
Phlebotomy Courses 206
Phlebotomy/Specimen Processing Program 155
Physics Courses 207
Placement Testing 9
Policies
  Affirmative Action 4
  AIDS 224
  Drug and Alcohol 223
  Sexual Harassment 224
  Smoking 223
Political Science Courses 207
President's List 23
Probation, Academic 22
Professional Staff Listing 236
Profile 5
Programs of Study 27
Psychology Courses 207
Public Safety Training Center 6
  Directions 6

R

Radiology Technology Courses 208
Radiology Technology Program 157
Reading Courses 209
Readmission 22
Real Estate Courses 209
Recognition of Achievement 23
Refund Policy 12
Registration 10
Regulations, Student 220
Regulations, Vehicle 222
Religion Courses 209
Repeating Courses 21
Restaurant/Culinary Management Courses 189
Restaurant/Culinary Management Program 161
Robotics Technology Courses 209
Robotics Technology Program 162

S

Scheduling of Events 230
Scholarships 15
Science Hall Map 242
Security, Campus 226
Services for Students with Disabilities 216
Sexual Harassment Policy 224
Smoking Policy 223
Sociology Courses 210
Spanish Courses 210
Speech Communication Courses 210
Standards of Academic Progress 21
  Early Intervention 22
  Academic Probation 22
  Academic Suspension 22
  Appeal Process 22
  Readmission 22
Student Activities 226
Student Concerns/Faculty 225
Student Development Center 216
Student Government Association 226
Student Handbook 215
Student Identification Cards 218
Student Illness 21
Student Life 227
Student (New) Orientation 217
Student Placement 217
Student Regulations 220
Student Right-to-Know 225
Student Rights and Responsibilities 220
Student Services and Resources 216
Student Use of Buildings 219
Suspension, Academic 22

T

TDD 217
Tech Prep Programs 8
Telephone Directory 2
Theatre Courses 211
Transcripts 25
  Transcript Abbreviations 25
Transfer Services 216
Transfer to Four-Year Colleges & Universities 29
Transfers, Graduate 11
Transportation 219
Travel, Tourism & Lodging Courses 211
Travel, Tourism & Lodging Management Program 163
TRIO (Student Support Services) 216
Tuition 12
Tutoring 217

U

Unit of Credit 21
Used Book Sale 218

V

Vehicle Regulations 222
Veterans Benefits 217

W

Web Technology Courses 211
Web Technology Program
  Web Commerce Degree 165
  Web Publishing Degree 166
  Web Development Certificate 167
  Web Publishing Certificate 167
Welding Courses 212
Welding Engineering Technology Program
  Degree 168
  Certificate 169
Wireless Internet 219
Withdrawal 11

MAJORS

Associate in Arts Degree — A.A.

The associate in arts degree is designed to parallel the first two years of a baccalaureate degree and transfer to four-year colleges and universities. Some of the areas of study are listed below. This list does not include all possible baccalaureate degree majors. If you plan to transfer to a four-year institution in a major other than one listed on this page, or if you are undecided as to your major, use code LIB.

Transfer

LBI	Biology Transfer
LBU	Business Transfer
LCH	Chemistry Transfer
LCI	Chiropractic Transfer
LCM	Communication Transfer
LCO	Computer Science Transfer
LCR	Criminal Justice Transfer
LEN	Engineering Transfer
LEG	English Transfer
LPH	Health & Physical Education Transfer
LHE	Health Professions Transfer
LHI	History Transfer
LHU	Humanities Transfer
LLI	Library Science Transfer
LMA	Mathematics Transfer
LMU	Music Transfer
LPY	Physics Transfer
LPO	Political Science Transfer
LPS	Psychology Transfer
LSO	Sociology Transfer
LTE	Teacher Education Transfer
LIB	Undecided Transfer

Associate in Fine Arts Degree — A.F.A.

AFA	Art

Associate in Applied Science Degree, Diploma, Certificate

If you are undecided about a major, choose the code that is closest to your possible major.

ACCOUNTING

ACT	Degree
ACCTS	Computer Accounting and Tax Specialist - Certificate

ARCHITECTURAL DRAFTING AND DESIGN

ADD	Degree

BAKING AND PASTRY

BAA	Apprenticeship - Degree
BAN	Non-Apprenticeship - Degree
BAPA	Diploma - Non-Apprenticeship
BPAA	Apprenticeship - Diploma
BAKPA	Non-Apprenticeship - Certificate

BIONANOTECHNOLOGY

BNT	Degree

BUSINESS

FIN	Financial Management - Degree
BUS	General Management - Degree
HRM	Human Resource Management - Degree
MKM	Marketing Management - Degree
RSM	Real Estate Management - Degree
SBM	Small Business Management - Degree
BUSG	Management - Diploma
FINMG	Financial Management - Certificate
BUSMG	General Management - Certificate
HRMGT	Human Resource Management - Certificate
MKTMG	Marketing Management - Certificate
RESMG	Real Estate Management - Certificate
SMBMG	Small Business Management - Certificate

CASINO/GAMING

CASNO	Certificate

COMPUTER INFORMATION SECURITY

CIS	Degree
COIFS	Certificate

COMPUTER NUMERICAL CONTROL

CNU	Degree
CNUCO	Certificate

COMPUTER SYSTEMS ELECTRONICS

ELO	Electro-Optics - Degree
CSE	Networking - Degree

COMPUTER TECHNOLOGY

CON	Networking - Degree
CPE	Programming for the Enterprise - Degree
CTS	Technical Support - Degree
CTT	Telecommunications - Degree
COTE	Diploma
COTT	Telecommunications - Diploma
CODMG	Database Application - Certificate
COFIO	Fiber Optic Technologies - Certificate
COTEC	Microcomputer Applications - Certificate
CONET	Networking - Certificate
COREP	PC Repair/A+ - Certificate
COPRG	Programming - Certificate
COWED	Web Development - Certificate

CRIMINAL JUSTICE

CJU	Degree
CJS	Information Security - Degree
CJUCO	Corrections Officer - Certificate

CULINARY ARTS

CUA	Apprenticeship - Degree
CUN	Non-Apprenticeship - Degree
CUNA	Non-Apprenticeship - Diploma
CUAA	Apprenticeship - Diploma

***DENTAL ASSISTING**

DEAS	Diploma
EXFDA	Expanded Functions Dental Assisting - Certificate

***DENTAL HYGIENE**

DEH	Degree

DIAGNOSTIC MEDICAL SONOGRAPHY

DMS	Degree

DIETETIC TECHNICIAN/NUTRITIONAL SERVICES MANAGEMENT

NSM	Degree

DINING ROOM MANAGEMENT

DINRM	Certificate

DRAFTING AND DESIGN TECHNOLOGY

DDC	CADD/CAM - Degree
DDM	Mechanical Drafting - Degree

EARLY CHILDHOOD EDUCATION

ECE	Degree
EACH	Diploma
EACHD	Director - Certificate
EACHE	Certificate

ELECTRONICS ENGINEERING TECHNOLOGY

EET	Electronics - Degree

ENGINEERING TECHNOLOGY

ENT	Degree

FIRE SCIENCE TECHNOLOGY

FSC	Degree
FSCT	Diploma
FSCTE	Certificate

GRAPHIC DESIGN AND ANIMATION

FLS	Flash Design - Degree
GRC	Graphic Design & Animation - Degree
GRCDN	Graphic Design - Certificate
GRC2D	2D Animation - Certificate
GRC3D	3D Animation - Certificate

HEATING, VENTILATION, AIR-CONDITIONING & REFRIGERATION

HVA	Degree
HVARE	Certificate

HORTICULTURE

FLO	Floriculture - Degree
HOR	Landscape, Design, Installation & Maintenance - Degree
TUR	Turfgrass Management - Degree
FLORT	Floriculture - Certificate
HORTT	Horticulture - Certificate
LANDN	Landscape Design - Certificate
LANIM	Landscape Installation & Maintenance - Certificate
TURMG	Turfgrass Management - Certificate

HOTEL/MOTEL MANAGEMENT

HOMOT	Certificate

HUMAN SERVICES

HUS	Degree

LIBRARY SCIENCE

LIBSC	Certificate

MACHINE TECHNOLOGY

MAT	Degree
MATEL	Certificate

MANUFACTURING TECHNOLOGY

CHP	Chemical Process Technology - Degree
MMA	Manufacturing Maintenance Apprenticeship - Degree
MAP	Manufacturing Process Technology - Degree
NFM	Nanofabrication Manufacturing - Degree

***MEDICAL ASSISTING**

PRMA	Diploma

MULTIMEDIA & PHOTOGRAPHY

MMT	Multimedia Technology - Degree
PHO	Photography - Degree
ADOBE	Adobe Video Studio - Certificate
PHOTO	Photography - Certificate
VIDTE	Video/Television - Certificate

***NURSING**

NUR	Degree

OFFICE TECHNOLOGY

OTA	Office Administration - Degree
OTM	Medical Administration - Degree
OADM	Office Administration - Diploma
OMTR	Medical Transcription - Diploma
OMADM	Medical Administration - Certificate
OMICC	Medical Coding/Billing - Certificate
OADMN	Office Administration - Certificate

PARALEGAL

LEA	Degree
LEAS	Diploma

***PHLEBOTOMY**

PHBSP	Phlebotomy/Specimen Processing Certificate
PHLEB	Phlebotomy - Certificate

RESTAURANT/CULINARY MANAGEMENT

RSC	Degree

***RADIOLOGY TECHNOLOGY**

RAD	Degree

ROBOTICS TECHNOLOGY

RBT	Degree

TRAVEL, TOURISM & LODGING MANAGEMENT

TTO	Degree

WEB TECHNOLOGY

WEC	Web Commerce - Degree
WEP	Web Publishing - Degree
COWED	Web Development - Certificate
WEPUB	Web Publishing - Certificate

WELDING ENGINEERING TECHNOLOGY

WET	Degree
WELTE	Certificate

All students must complete the Application for Admission which is available online at wccc.edu or by calling 724-925-4077. Programs with an asterisk (*) also require students to complete the Allied Health Programs Application.

Westmoreland County Community College
Youngwood Campus
145 Pavilion Lane
Youngwood, PA 15697
724-925-4000

Armstrong County Education Center
2215 Chaplin Avenue
Ford City, PA 16226
724-763-7116

Bushy Run Education Center
6707 Mellon Road
Export, PA 15632
724-327-8090

Fayette County Education Center
140 North Beeson Boulevard
Uniontown, PA 15401
724-437-3512

Greene County Education Center
100 EverGreene Drive
Suite 102
Waynesburg, PA 15370
724-627-3464

Indiana County Community College Center of WCCC
45 Airport Road
Indiana, PA 15701
724-357-1404

Laurel Education Center
Seventeen Lloyd Avenue
Latrobe, PA 15650
724-539-3390

Mon Valley Education Center
1181 Fells Church Road
Belle Vernon, PA 15012
724-379-4119

New Kensington Education Center
1150 Fifth Avenue
New Kensington, PA 15068
724-335-8110

WCCC Public Safety Training Center
65 Public Safety Drive
Smithton, PA 15479
724-872-2447

www. wccc.edu