WESTMORELAND COUNTY COMMUNITY COLLEGE 50

CELEBRATING FIFTY AMBITIOUS YEARS

1970-2020

2020-21 College Catalog

westmoreland.edu

Westmoreland County Community College

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TELEPHONE DIRECTORY

Admissions Office 724-925-4000
Advanced Technology Center 724-925-4269
Athletics 724-925-4129
College Store 724-925-4174
College Learning Center 724-925-4135
Continuing Education 724-925-4107
Counseling 724-925-4000
Disabled Student Services 724-925-4000

Division Offices

Art, Humanities, Social Sciences & Public Service 724-925-4046
Business, Math, Science & Engineering 724-925-4004
Distance Education & Learning Resources 724-925-4177
Health Professions & Culinary Arts/Hospitality 724-925-4029
Planning, Assessment & Institutional Effectiveness 724-925-4000
Technology 724-925-8650

Education Centers

Westmoreland-Advanced Technology Center 724-925-4269
Westmoreland-Fayette 724-437-3512
Westmoreland-Indiana 724-357-1404
Westmoreland-Latrobe 724-925-8473
Westmoreland-Murrysville 724-327-8090
Westmoreland-New Kensington 724-335-8110
Westmoreland-Public Safety Training Center 724-872-2447
Financial Aid 724-925-4000
Library 724-925-4100
Placement Assessment 724-925-4000
Registration 724-925-4000
Student Life 724-925-4000
Student Records 724-925-4000
TDD 724-925-4297
Transfer Services 724-925-4000
Tutoring 724-925-4135
Veteran's Services 724-925-4000

For other Westmoreland offices, call 724-925-4000

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, Westmoreland Business & Industry Center, Youngwood, PA 15697.

Westmoreland County Community College

2020-2021 Academic Calendar

Fall 2020

Classes begin	Aug. 17
Labor Day (college closed)	Sept. 7
No classes	Oct. 13
Thanksgiving break	Nov. 25-29
Last day of classes/final exams	Dec. 12

Spring 2021

Classes begin	Jan. 11
Dr. Martin Luther King Observance (college closed)	Jan. 18
No classes	Mar. 2
Spring Break	Mar. 31-Apr. 4
Last day of classes/final exams	May 8
Commencement	May 7

Summer 2021

First 5-week session classes begin	May 24
10-week session classes begin	May 24
Memorial Day (college closed)	May 31
8-week session classes begin	June 7
First 5-week session classes end	June 25
Second 5-week session classes begin	June 28
Independence Day Observed (college closed)	July 5
8-week session classes end	July 30
10-week session classes end	July 30
Second 5-week session classes end	July 30

Mission/Vision/Values

WESTMORELAND'S MISSION

Westmoreland County Community College improves the quality of life in the communities we serve through education, training and cultural enrichment.

WESTMORELAND'S VISION

Westmoreland County Community College is recognized as a premier institution of higher learning focused on student success, workforce development, economic growth and cultural experiences.

WESTMORELAND'S VALUES

1. Teaching and Learning: We are committed to excellent instruction and lifelong learning.
2. Innovation and Creativity: We are committed to creativity, new ideas and the advancement of art, culture and technology.
3. Equity and Inclusion: We are committed to an educational and workplace environment where all are treated with dignity and respect.
4. Collaboration and Teamwork: We are committed to cooperation within our college and to strong relationships with employers, school districts and other community partners.
5. Accountability and Integrity: We are committed to high, ethical educational standards.
6. Social Responsibility and Stewardship: We are committed to principles of service and good citizenship.

Accreditation

Westmoreland County Community College is accredited by the Middle States Commission on Higher Education (MSCHE), 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/accrediting organizations:

- The Baking and Pastry AAS, Culinary Arts program and Restaurant/Culinary Management program are accredited by the American Culinary Federation Education Foundation Accrediting Commission (ACFEFAC), a specialized accrediting agency recognized by the Council on Higher Education Accreditation (CHEA).
- 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 Diploma, Youngwood campus, is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB). Commission on Accreditation of Allied Health Education Programs, 25400 US Highway 19 N, Suite 158, Clearwater, FL, 33763, 727-210-2350.
- The Nursing AAS program is on full approval status by the Pennsylvania State Board of Nursing. The Nursing AAS program is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326; 404-975-5000; www.acenursing.org for achievement of quality and excellence in nursing education.
- The Diagnostic Medical Sonography AAS program is accredited through CAAHEP, 1361 Park St., Clearwater, FL 33756; 727-210-2350; www.caahep.org with the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS), 6021 University Boulevard, Suite 500, Ellicott City, MD 21043; 443-973-3251; www.jrcdms.org.

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

Profile

Founded: 1970

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

Phone: 724-925-4000

Online: www.westmoreland.edu

Enrollment: Approximately 4,645 full-time and part-time students

Programs: 63 associate degree, 18 diploma and 50 certificate programs with options that prepare students for careers or transfer to baccalaureate degree programs at four-year institutions.

Degrees Granted: Associate of arts degree, associate of fine arts degree, associate of science degree, associate of 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. The Student Achievement Center, Commissioners Hall and the Science Innovation Center 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, theater, art gallery, library, Student Services, College Learning Center, College Store, student lounges, cafeteria, gymnasium, 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 ADA accessible with designated ADA parking spaces. The Westmoreland smoking policy designates all buildings at the Youngwood campus and the education centers as smoke-free.

Off-Campus Centers: In addition to the main campus in Youngwood, Westmoreland provides access to quality educational opportunities in Indiana, Latrobe, Mt. Pleasant, Murrysville, New Kensington and Uniontown. The college also offers public safety training for fire, police and emergency service responders at the Public Safety Training Center located near Smithton.

Faculty: 76 full-time teaching faculty and approximately 250 part-time faculty

Academic Calendar: Two 15-week semesters (fall, spring); two 12-week sessions (fall, spring); and one 10-week, one 8-week and two 5-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.

Education Centers

Westmoreland County Community College has eight locations serving Westmoreland, Fayette and Indiana counties. Each semester, more than 1,100 students attend class close to home at a Westmoreland location right in their own community. In addition to the main campus in Youngwood, Westmoreland provides access to quality educational opportunities in Latrobe, Murrysville, New Kensington, Indiana and Uniontown. Plus, the college's Advanced Technology Center and Public Safety Training Center offer specialized training in specific areas of study. In addition, online courses are available to students at these sites. Student services such as counseling, advising and financial aid are available. Students can pay tuition and fees and purchase textbooks at the centers.

Westmoreland-Advanced Technology Center

Westmoreland's Advanced Technology Center (ATC) offers state-of-the-art labs and classrooms for a variety of careers in manufacturing and other technically oriented areas. The facility occupies 73,500-square-feet of RIDC-Westmoreland in Mt. Pleasant (the former Sony plant) and features technology equipped classrooms; specialized labs for hands-on training; open, flexible instructional space that allows for collaborative learning; administrative offices; and a student lounge.

DIRECTIONS: From New Stanton - Take I-70 East toward US-119/Greensburg. Take Exit 1 to merge onto US-119 South toward Connellsville and then exit on Technology Drive. Proceed to traffic light and turn left (intersection of Old 119/State Route 3093) and then make the first right into facility.

From Greensburg: Follow US-119 South/South Main St. Take the exit to stay on US-119 South toward Connellsville and exit on Technology Drive. Proceed to traffic light and turn left (intersection of Old 119/State Route 3093) and then make the first right into facility.

From Pittsburgh: Take I-376 East toward Monroeville then get on I-76 East. Take Exit 75 for US-119/PA-66 toward Greensburg. Take Exit 1 to merge onto US-119 South toward Connellsville Exit on Technology Drive. Proceed to traffic light and turn left (intersection of Old 119/State Route 3093) and then make the first right into facility.

Westmoreland-Fayette County

Westmoreland's Fayette County center is located in the Fayette County Community Action Agency building in Uniontown. The center houses traditional classrooms, a computer classroom, a videoconferencing classroom, a student lounge area and free parking for students.

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.

Westmoreland-Indiana County

Westmoreland-Indiana County is located at 45 Airport Road, Indiana, near the Jimmy Stewart Airport. Easily accessible from routes 286 and 119, the center houses technology-equipped classrooms, a distance learning classroom, a computer laboratory, a fully equipped Nursing lab, accommodations for workforce development training, a student lounge with Wi-Fi and ample parking.

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.

Westmoreland-Latrobe

Westmoreland-Latrobe is located at 130 Depot Street, Latrobe. The new center houses general and computer classrooms; a collaborative classroom; labs for biology, chemistry and allied health; faculty and administrative offices; a conference room; student study areas; and multipurpose rooms for student and community activities.

DIRECTIONS: From Route 30: Take Route 981 North toward Latrobe. (Route 981 becomes Lloyd Avenue.) Cross the bridge and bear right onto Main Street then take the first left onto Jefferson Street. Turn left onto Depot Street. The center is on your right.

From Route 22-New Alexandria: Take Route 981 South and turn right onto PA 981/Industrial Boulevard at the traffic light. The center is on your right at the intersection of Depot and Jefferson streets.

Westmoreland-Murrysville

Westmoreland-Murrysville is located at 6707 Mellon Road near Murrysville. The center houses technology-equipped classrooms, a distance learning classroom, a computer laboratory, a science laboratory, accommodations for workforce development training, a student lounge with Wi-Fi and plenty of parking.

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 Murrysville 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 Murrysville Center.

From Harrison City: At the intersection of Route 130 and Harrison City Export Road, travel north on Harrison City Export Road 3 miles. Bear right onto Mellon Road past the entrance to Westmoreland Country Club and proceed approximately 1 mile to the center on the right.

Education Centers

Westmoreland-New Kensington

Westmoreland-New Kensington is located at 1150 Fifth Avenue in downtown New Kensington. This houses traditional and technology equipped classrooms; science labs for biology, chemistry and healthcare related programs; a video conferencing classroom; computer labs; accommodations for workforce development training; a student lounge with Wi-Fi; multipurpose rooms for large college and community activities; and free parking. The site is also home of PA CareerLink Alle-Kiski, which provides career and workforce development services to employers as well as job-seekers.

DIRECTIONS: From C. L. Schmitt Bridge: At the second traffic signal, turn left onto 4th Avenue. Follow 4th Avenue up to 11th Street and turn right. Turn left onto 5th Avenue. Westmoreland is located on the right.

From Greensburg Road: At the Parnassus Intersection, (CVS), proceed straight through the traffic signal onto Industrial Boulevard. Stay on Industrial Boulevard through town and pass the C. L. Schmitt Bridge. At the stop sign, go straight and make a right onto 11th street (in front of the UniFirst). Proceed through first stop sign and turn left at the following stop sign onto 5th Avenue. Westmoreland is located on the right.

From Vandergrift/Leechburg; Follow Rte. 56 toward New Kensington. Turn right onto 7th Street (next to Valley High School track) and proceed straight to first traffic signal. Turn right onto Freeport Road and proceed to next traffic signal. Turn left onto Locust Street, cross the viaduct to next stop sign. Turn right onto 5th Avenue. Westmoreland is located on the right.

Westmoreland-Public Safety Training Center (PSTC)

The Westmoreland-Public Safety Training Center is designed to serve as the premiere source for keeping the region's first responders up-to-date with essential skills by providing realistic fire service, rescue, hazardous materials, emergency medical services and law enforcement training. The facility features a two-story Class A burn building and six-story tower with an attached residential building that simulates industrial, commercial and residential structures. Also onsite are an administration/classroom building, outdoor firing range, rope rescue and confined space rescue areas, structural collapse area, chlorine railcar, ponds and additional training props.

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

Admissions

High school graduates or those who hold a GED high school equivalency, HiSet, or DD 214 (certificate or discharge from active duty) are granted admission to the college. Individuals 18 years of age and older who have not earned a high school diploma or a GED, HiSet, or DD 214 are admitted to the college if they can demonstrate their ability to benefit from the college experience. After successfully completing 30 credits at Westmoreland County Community College (Westmoreland), 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. If you are a new student, submit the online Application for Admission at westmoreland.edu. If you have previously attended Westmoreland for college credit, then please contact the Student Records office to update your academic record.
2. Upon receipt of the Application for Admission, the Admissions Office will send information on placement assessment and registration.
3. Submit transcripts.
   A. First-time college students: request your high school transcript be sent to Westmoreland (includes home school).
   B. GED students: request GED scores to be sent to Westmoreland.
   C. Students must submit official transcripts from all coursework completed at regionally accredited colleges.
   D. Dual Enrollment students: request transcripts from college where courses were taken
4. Complete an Educational Planning session and register for classes.

Readmission

Former students who wish to return after a lapse of two years must submit a new Application for Admission. A re-entering student who has attended any other institution since leaving Westmoreland must request that an official transcript from each school be sent directly to the Office of the Registrar.

A student who interrupts residence for two or more years must meet the graduation requirements at the time of readmission and may not be readmitted to a degree, major and/or minor that is no longer active.

International Students

International students are encouraged to apply as early as possible to ensure timely acceptance and arrival. Students seeking to study on an F-1 visa status must apply for admission to Westmoreland online. Additionally, the following documents must be received and reviewed in order to issue an I-20:

1. Copy of passport
2. Official academic record, translated into English if necessary. This includes high school or secondary school completion/ graduation certificate or diploma.
3. Transcripts from postsecondary institutions, if applicable.
4. TOEFL Score of 61 or higher.
5. Statement of Financial Support for the entirety of the course of study.
6. Evidence of financial support, i.e. bank statements showing a minimum amount of $36,000.

If you are an international (F-1) student who is already in the United States and you wish to transfer to Westmoreland, then please complete the Student Transfer Status Report and call our Admissions Office at 724-925-4000.

Admission to Specific Programs

In addition to the general requirements, some programs have specific admission requirements. Students who do not meet the requirements for a specific program may become eligible after completing appropriate coursework, however, they must finish the selective process.

Full-time 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 Westmoreland are encouraged to contact the Admissions Office at 724-925-4000 for more information, an interview or a campus tour.

College Now!

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

Early College

This program is designed for motivated students with good academic and attendance records who wish to get a head start on college. While still in high school, students can complete up to 30 semester hours of general education coursework or even earn a college certificate by enrolling in regularly scheduled online and/or on-campus courses at Westmoreland. Students considering the Early College Program must be in their junior or senior year of high school, have a 2.5 cumulative grade point average on a 4.0 scale and meet the college's requirements for entry into the course.

College in the High School

Students can receive college credit for specific classes without even leaving high school. Unlike the Early College Program, students take dual enrollment classes in their regular school with high school teachers who have been certified to teach the course. This program allows high school students to fit college courses into a busy schedule while taking classes in a familiar environment. Interested students must be a sophomore, junior or senior with a cumulative grade point average on a 4.0 scale, and meet the college's requirements for entry into the course. Permission from a high school administrator is also required.

Admissions

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. Prior learning is experience-based learning attained outside the sponsorship of an accredited postsecondary educational institution (college or university). Credit for Prior Learning may be awarded for learning acquired from:

- Work and life experiences
- Community and volunteer extension courses
- Individual study and reading
- Civic, community and volunteer work
- Military
- Participation in informal courses and in-service training sponsored by associations, business, government and industry

Credit for Prior Learning is not awarded for the experience, but for demonstration of equivalent knowledge, skills or competencies that were a result of the experience.

Advanced Placement (AP)

A program authorized by the College Board that allows a student to study college-level subjects while enrolled in high school and to receive advanced placement and college credit for earning a qualified score on the course-related Advanced Placement Program exam. Credit may be awarded to students who attain a score of three or higher on the College Board Advanced Placement Examination. Students must have official Advanced Placement Examination scores sent directly to the Westmoreland Admissions Office to be considered for credit.

College-Level Examination Program (CLEP)

A set of standardized tests developed by the College Board for various subjects and on which a qualifying score can be used to earn college credit.

Defense Activity for Nontraditional Educational Support (DANTES/DSST)

A set of subject exams approved by the American Council on Education (ACE) that tests knowledge of both lower-level and upper-level college material. Credit may be awarded to students who take the 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 ACE.

International Baccalaureate (IB)

The "International Baccalaureate Diploma Program" is an academically challenging two-year pre-college diploma program comprised of three core requirements and six academic subject areas with final examinations that prepare students, 16 to 19 years of age, for higher education and life in a global society.

Departmental Examinations

Enrolled students who wish to demonstrate learning that is equivalent to a Westmoreland credit course may request to be examined and have their learning evaluated by a Westmoreland subject matter expert. The examination method may be written, oral, skill demonstration or a combination of all three at the discretion of the examining discipline.

Students may demonstrate mastery of Westmoreland 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.

Students must complete the Petition for Credit by Examination form to apply. This form is available in the division offices and at the Student Services Success Center. A $135 fee is charged for each exam.

Portfolio Assessment

Portfolio assessment allows students to present prior learning experiences in portfolio format. Check with the division dean to verify availability of portfolio assessment for the course. A $135 fee is charged for portfolio assessment.

Career and Technology Center Courses

Students may receive credit for approved occupational courses completed at area career and technology centers.

SOAR

SOAR (Students Occupationally and Academically Ready) is a career and technical educational plan that prepares students for college and careers in a diverse, high-performing workforce through articulation with the Pennsylvania Department of Education and local Career and Technology Centers (CTC). Students who have completed their Program of Study (POS) at a CTC with a minimum 2.5 cumulative grade point average are eligible for college credit for up to three years after graduating from high school. Students interested in this program are encouraged to work with their CTC teachers to complete the official POS paperwork.

The SOAR logo on an academic program description in this catalog indicates that for that degree, the college offers to award free college credit to qualifying graduates of Pennsylvania secondary Career and Technical Programs of Study according to a statewide articulation agreement with the Pennsylvania Department of Education (PDE). Under these Perkins IV Statewide Articulation Agreements, the college will award college credits to students who have met all of the criteria for qualification and have submitted all required documentation under the terms and conditions of the agreement. High school seniors and graduates who are completers of PDE Bureau of Career and Technical Education-approved secondary SOAR POS, should submit the required documentation to the Admissions Office to receive the advanced placement credits.

Admissions

Requirements for receiving advanced placement credits include:

- Earn a high school diploma, achieve a 2.5 or higher grade point average on a 4.0 scale in the aligned technical course, and complete the secondary school component of the PDE-approved Program of Study
- Achieve competent or advanced level on the secondary end-of-program assessment (e.g., NOCTI)
- Achieve proficiency on all the PDE-approved Program of Study secondary competencies
- Furnish documentation as required by the agreement
- Copy of high school diploma
- Official student transcript
- Completed secondary competency task list indicating proficiency on each task, with the official PDE competency cover sheet signed by your secondary program instructor
- PA Skills Certificate of PA Certificate of Competency from the technical end-of-program assessment
- Copies of any industry certifications earned
- The POS Perkins Statewide Articulation Agreement Documentation Coversheet completed by your secondary school

Credit for Certification Based on Published Guides

Enrolled students who can document completion of an approved apprenticeship or industrial/corporate training program may request credit by certification by contacting the Enrollment Center.

Industry Credentials

Enrolled students who have current industry credentials that are not addressed by the ACE guides may request credit by certification. To request credit, contact the division dean of the course.

Placement Assessment & Educational Planning

Pathways Advisors help students in choosing an appropriate program of study and develop a schedule of classes for their first semester based upon placement assessment scores and life goals. Students receive information about the advising sessions after they submit their application for admission to the college.

Students will be assigned either a counselor or Pathway Advisor. That student will remain with the person assigned until they complete 24 credit hours. After the completion of 24 credit hours, students will be assigned a faculty advisor. In some degree programs, students will have a counselor/advisor and faculty advisor from the beginning. The student and faculty advisor relationship should focus upon completion of degree requirements and helping the student to achieve their career goals.

Counseling

The counseling staff at Westmoreland 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 students with disabilities
- Personal concerns
- Probation counseling
- Crisis management

Counseling is confidential and free.

Career Planning

The Career Connections Center team are available to assist students in career planning and decision-making. The center has online assessment and planning tools to help students with decision-making. The student can review the test results and develop an educational plan with a Career Connections Center team member, or with enrollment staff when choosing a program of study, that will assist students as they work toward their career goals. In addition, students are encouraged to work with faculty, counselors and pathway advisors who can assist with career planning and educational goals.

Transfer Services

A transfer counselor's role is to help you determine the academic requirements of the transfer institution and to select coursework at Westmoreland that will meet those requirements. It is important to make sure you communicate with a transfer counselor every semester to ensure you have access to the most recent information. Those who plan to continue their education after completing coursework at Westmoreland should contact a transfer counselor in the Student Services Success Center. In addition, students should be in contact with the admissions department where they hope to transfer to determine appropriate coursework.

Registration

Registration begins approximately April 1 for the fall sessions, November 1 for the spring sessions and December 1 for the summer sessions. Class schedules can be viewed online at westmoreland.edu.

New students who have completed the Application for Admission will receive a letter from the college explaining the placement assessment and educational planning process, advising and registration procedures. Advisors and counselors are available to assist students in planning coursework for the first semester.

Students intending to transfer should consult the catalog of the college they wish to attend or consult with a counselor at that college. Transfer students may also receive assistance from a Westmoreland counselor.

All students, new and returning, have several opportunities to register for classes and receive academic advising. Returning

students may also register online at westmoreland.edu. Although returning students may register themselves via student planning, they are encouraged to discuss their academic plan with their assigned advisor.

Priority Registration for Veteran Students

Act 46 of 2014 requires public institutions of higher education in Pennsylvania to provide veteran students, as defined in the Act, with preference in course scheduling. Non-compliance may be reported to the Pennsylvania Department of Education by submitting the Higher Education Student Complaint form found at www.education.state.pa.us (Note: Act 46 applies to veteran students admitted to credit courses and programs offered at the institution).

For purposes of this policy, a veteran student is defined as an individual who:

- Served in the United States Armed Forces, including a reserve component and National Guard and was discharged/released from service under conditions other than dishonorable.
- Has been admitted to Westmoreland County Community College.
- Resides in Pennsylvania while attending Westmoreland County Community College.

Veteran students who have met all other registration requirements will be given course-scheduling preference. Course scheduling preference means that veteran students are permitted to register for classes prior to the regular registration periods as published in the Academic Calendar.

Eligibility of veteran students for course scheduling preference will be identified through college database records. Veteran students must verify status by submitting documentation to the Westmoreland Registrar. Documentation may be either a DD-214 form or NGB-22 form, which needs to be submitted one-time only.

Continuing veteran students who are eligible for course scheduling preference will be made aware of the earlier registration time through an email and the My.Westmoreland student portal; no additional action must be taken by the veteran student.

New veteran students are offered course-scheduling preference through participation in new student orientation session; prospective students are apprised of course scheduling preference through email communication and the college portal. Course registration is required and offered one week prior to early advising for returning students each semester. Interested veterans should contact the Enrollment Services Assistant at 724-925-4133 or Financial Aid at 724-925-4061.

Overload

Students who wish to take more than 19 credits must submit a Credit Overload Petition prior to registration. The request will be forwarded to the Vice President of Academic Affairs for approval. Students must indicate their reason for request, proposed class schedule with overload, and if they are working. Unofficial transcripts and anticipated class schedule must also be attached to the petition.

Developmental Education

Westmoreland is dedicated to the success of students in higher education and in the workforce. All students are required to attend a Placement Assessment and Educational Planning Session to determine appropriate course and program selection. Upon completing the placement assessment, some students may be required to take one or more preparatory courses in mathematics and/or English. The developmental mathematics courses are MTH 050-Basic Mathematics and MTH 052-Foundations of Algebra. The developmental English courses are ENG 085-College Literacy I and ENG 095-College Literacy II. These courses do not count toward graduation but strengthen the academic skills students need for success in college. Students who place into ENG 095 are required to co-enroll in ENG 161-College Writing, which is a required general education course.

First Year Seminar Course

First-time, credential-seeking students are required to complete PDV 101–First Year Seminar. This is a one-credit course designed to help students succeed in college by exploring such topics as academic culture; processes, procedures and resources at the college; and personal and academic goal setting. Students who have transferred less than 12 credits into Westmoreland from another institution are also required to complete this course.

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 Services Success 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

Students enrolled for at least 12 credits at Westmoreland County Community College may cross-register at Seton Hill College or the University of Pittsburgh at Greensburg. Enrollment is limited to one class (up to 4 credits) per semester and does not apply to the summer semester/terms. Cross-registration must be approved by the student's advisor/counselor, and the Director of Admissions and Registrar. Students are responsible submitting this form to the Director of Admissions and Registrar to be processed.

Change of 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. Students may not add/register/switch any course after the course has met for the first time. Students should review their class schedule and make any revisions before the

start of the semester.

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.

Change of Major

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

Drop

A Drop is the process of un-enrolling in one or more course(s) after students have completed their registration. Drops must occur during the first three weeks of the semester and no record of the course will appear on the transcript.

Withdrawal Policy

A student who wishes to initiate the course withdrawal process should talk with their instructor and/or their advisor or counselor. The withdrawal period begins at the end of the drop period that is typically after the third week of class, or at the 20% point in their course. From the 20-75%, a student may withdraw from a course by completing an official withdrawal form. An official W (withdrawal) grade will be noted on the transcript. After 75% of the course, students may only withdraw with the exception of an excused withdrawal.

For an excused withdrawal, such as a medical withdrawal or a withdrawal due to extenuating circumstances, a student may request a withdrawal at any point in the semester with supporting documentation. The Director of Student Success, Director of Admissions and Registrar, or Dean, must review the documentation, and provide a recommendation to the appropriate Vice President.

Students should note the following:

- The student is responsible for initiating and completing the withdrawal process.
- If a student does not want to remain in a class, they must follow the official withdrawal process.
- Failure to officially withdraw will result in a financial obligation to the college, regardless of the student's class attendance. You (the student) are still responsible for your financial obligations despite:
- Not receiving financial aid
- Not attending class
- Not fulfilling your payment plan obligations
- Receiving a notice that you will be dropped from your classes due to nonpayment
- On vacation, out of the country, or otherwise away from the college's physical site
- Not receiving your bill in the mail
- Method by which you register for classes
- Not paying your bill
- It is highly recommended that you communicate with your instructors prior to withdrawing from a course
- For institutional purposes, the day that you initiate the withdrawal will be the date that is entered as withdrawing
- A partial or total withdrawal by a student receiving Pell, SEOG, Work Study or student/parent Direct Loans may affect the student's Financial Aid Satisfactory Academic Progress (SAP) standing

Please review the Financial Aid SAP Policy for information. Additionally, you may be subject to a Return to Title IV calculation. Students who receive failing or incomplete grades may also be subject to this calculation. In some cases, this calculation results in a charge back of Title IV (federal) financial aid for which the student is responsible. When the Return to Title IV calculation results in a charge back of Title IV financial aid, the student will receive a letter to their home address indicating the amount charged back, the current account balance and the student's option for repayment. The Financial Aid Office can answer questions about Return to Title IV calculations.

Military Withdrawal

Whenever any member of the PA National Guard or other reserve component of the armed forces of the United States shall be called or ordered to active duty, other than active duty for training, including, in case of members of the PA National Guard, active State duty, the college shall grant the member or member's spouse a military leave or absence from their education. The member or member's spouse shall receive an "M" (Military Withdrawal) on their transcript for all classes they are unable to complete due to a military leave of absence.

Medical Withdrawal

Students may apply to withdraw from courses for medical reasons. Failure to officially withdraw may result in recording of failing grades. Students who wish to withdraw due to medical reasons should complete the Medical Withdrawal form that may be obtained on the portal or by contacting the Records Office. All approved requests for medical withdrawals will result in the assignment of "MW" grades for each course. Requests must be submitted to the Director of Admissions and Registrar no later than the dates published on the request form.

Transfer Information

Transfer of Credit

Credits earned at other regionally accredited colleges may apply to programs at Westmoreland as long as the grade is "C" or higher. Students must complete an Application for Admission and must have official transcripts sent directly to the Westmoreland 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

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 Westmoreland and transfer to a four- year institution. Students can be assured that with appropriate planning the transfer experience will be a successful one. The Westmoreland counseling staff 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, Westmoreland 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 Westmoreland has a large collection of college catalogs and other materials to help in the selection. Many senior institutions will visit Westmoreland 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 AA, AS AFA degrees, which are designed for students planning to transfer.

Career degree (AAS) programs prepare students for employment and therefore concentrate on job-related courses. AAS 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.

Westmoreland 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 graduates have successfully transferred to many colleges and universities.

Degree Completion Programs

Some colleges and universities have programs that require an associate of arts, associate of science or associate of applied science degree prior to admission. These programs guarantee junior status to associate degree holders and require two years of additional study. These programs are sometimes referred to as capstone programs. Degree completion programs do not necessarily require students to obtain a bachelor's degree in the same field as their associate degree.

The colleges and universities listed below have degree completion program agreements that require students to complete an associate of arts, associate of fine arts, associate of science or an associate of applied science degree at Westmoreland.

- Argosy University
- Bellevue University
- Bloomsburg University
- California University of Pennsylvania
- Carlow University
- Chamberlin College of Nursing
- Chatham University
- Concordia University
- Duquesne University
- Franklin University
- Geneva College
- Immaculata University
- Kaplan University
- LaRoche College
- Millersville University
- Pennsylvania College of Technology
- Pennsylvania State University/Regional Campuses
- Pittsburgh Technical College
- Point Park University
- Potomac College
- Robert Morris University
- Saint Francis University
- Saint Joseph University
- Saint Vincent College
- Seton Hill University
- Stark State College
- Strayer University
- University of Phoenix
- Waynesburg University
- West Liberty University

Articulation Agreements

An articulation agreement written between two institutions allows course credit at one college/university to be accepted or transferred and applied toward a degree or certificate at another college/university. Admission into a particular major could have a GPA requirement higher than admission to the college.

- Pennsylvania State System of Higher Education Universities
- PaTRAC Participating Institutions
- Argosy University
- American Public University
- Bellevue University

- Bethany College
- Bloomsburg University
- Burlington College
- California University of Pennsylvania
- Carlow University
- Chamberlin School of Nursing
- Chatham University
- Clarion University of Pennsylvania
- Concordia University
- Duquesne University
- Edinboro University
- Franklin University
- Geneva College
- Grand Canyon University
- Immaculata University
- Indiana University of Pennsylvania
- Kaplan University
- LaRoche College
- Millersville University
- Mount Aloysius
- Pennsylvania College of Technology
- Pennsylvania State University/Regional Campuses
- University of Pittsburgh/Oakland
- University of Pittsburgh/Greensburg
- Point Park University
- Potomac College
- Robert Morris University
- Saint Francis University
- Saint Joseph University
- Saint Vincent College
- Seton Hill University
- Slippery Rock University of Pennsylvania
- Stark State College
- Strayer University
- University of Phoenix
- Waynesburg University
- West Liberty University
- West Virginia University

Program-to-Program Agreements

Pennsylvania's Public School Code of 1949 requires the colleges and universities that participate in the commonwealth's Statewide College Credit Transfer System to develop agreements that will allow students to transfer full associate of arts (AA) degrees, the associate of science (AS) degree and the associate of applied science (AAS) degree in PreK-Grade–4 Education, into parallel bachelor's degree programs at the participating institutions with junior standing. Westmoreland County Community College has also negotiated program-to-program agreements with several additional universities listed below. These agreements allow Westmoreland graduates to move to a senior institution and have all their credits transfer and be counted toward graduation.

- Pennsylvania State Systems of Higher Education Universities
- PaTRAC Participating Institutions
- AA Business
- AA Criminal Justice
- AA Psychology
- AS Biology
- AS Chemistry
- AS Computer Science
- AS Mathematics
- AS Physics
- AAS Pre-K–Grade 4

Course-to-Course Agreements

Course-to-course articulation is when one college or university compares the content of courses to the content of courses at another college or university and determines transferability. Students use course articulation to ensure that the courses they complete will not have to be repeated at the institution to which they are transferring. Course articulation is usually completed when a student actually decides to transfer and may or may not be explained in a written document between the two institutions.

- Pennsylvania State System of Higher Education Universities
- PaTRAC Participating Institutions
- Pennsylvania State University
- University of Pittsburgh
- University of Pittsburgh/Bradford
- University of Pittsburgh/Greensburg
- University of Pittsburgh/Johnstown
- Duquesne University
- Gannon University
- Geneva College
- Grove City College
- LaRoche College
- Millersville University
- Penn College of Technology
- Point Park College
- Saint Vincent College
- Seton Hill University
- Washington and Jefferson College
- West Virginia University

Reverse Transfer Agreements

The reverse transfer agreement is designed to support students who earned college-level credits toward an associate degree while enrolled at Westmoreland, but did not complete sufficient credits to earn their community college certificate, diploma or degree.

Reverse transfer agreements streamline the process of transferring credits earned by students working toward their bachelor's degree back to Westmoreland to be evaluated for credit toward completion of certificate, diploma or associate degree.

- California University of Pennsylvania
- Indiana University of Pennsylvania
- Saint Vincent College
- Point Park University
- University of Pittsburgh/Greensburg

Expenses, Financial Aid & Scholarship

Residency Policy

Residency requirements are established for the purposes of assessing tuitions and fees. Residency is determined on a student's true and fixed home, and for a dependent student (as defined by the IRS) is determined by the parent's residence.

Commonwealth of Pennsylvania Residency

To establish residency in the state of Pennsylvania, you must demonstrate continuous residence for 12 consecutive months prior to registration at Westmoreland County Community College. Documentation must be received prior to the start of the term.

Westmoreland County Residency

To establish residency in Westmoreland County, a student must demonstrate continuous residence for at least four months. Documentation of proof of residency must be received prior to the start of the term.

Exceptions may be made for students moving into Westmoreland County if they can provide documentation that demonstrates an intent to remain in Westmoreland County. These exceptions may include a move due to employment, or parent's employment or for other purposes than attending college full-time. All documentation of proof is necessary. Further, a student may also need to demonstrate financial independence as a part of establishing residency.

Veterans and Their Dependents (House Bill 131)

Westmoreland County Community College allows veterans, their spouses and dependent children; military personnel, their spouses and their dependent children; and civilian personnel working on a military base, their spouses and their dependent children, who are admitted to a community college, to be charged the in-state, in-county rate, provided that the student is a resident of the state on the first day of the semester.

County Corporate Sponsorship

Westmoreland County Community College allows students whose residency is out-of-county, but who are employed by a company located in Westmoreland County that offers a tuition payment plan, to pay in-county rates as long as the Human Resources department of the company verifies this each semester by letter on company's letterhead and tuition payment plan.

Documents of Residency:

- PA Driver's License showing current address
- PA State ID CARD with current address and issue date
- Voter Registration Card
- Utility bills in student's name
- Documentation from employers

Tuition and Course Fees

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.

Tuition

1. Tuition per credit: 1-11 credits, 19 or more credits
   - Westmoreland County Residents.....$133 per credit
   - Out-of-County Residents .....$266 per credit
   - Out-of-State Residents .....$399 per credit
2. Flat Rate: 12-18 credits
   - Westmoreland County Residents..... $1,995
   - Out-of-County Residents $3,990
   - Out-of-State Residents $5,985

General Fee.....$67 per credit

Capital Fee

- Out-of-County Residents .....$6 per credit
- Out-of-State Residents .....$6 per credit

Lab Fees

- Courses with Labs $70
- Nursing Courses with Labs $80

Tuition Reduction for Older Adults

If you are a Pennsylvania resident age 60 or older you are eligible for a 50 percent reduction in tuition when you enroll in credit classes. Enrollment with a tuition reduction is contingent upon space availability in class. This reduction applies only to tuition charge and not to general fees, capital fees, textbooks, equipment/supplies or lab fees. To enroll, call the Registration Center at 1-800-262-2103.

Other Fees

1. Books & Supplies - These costs vary according to individual courses.
2. Departmental Exam $135
3. Portfolio Assessment..... $135
4. Returned check fee $25

   This fee is assessed if you pay by check and your bank returns the check to the college for any reason.

Expenses, Financial Aid & Scholarship

Payment Policy

The college accepts payment in the form of check and Discover, MasterCard or Visa. Payments may be made:

- Online via the student portal with a credit card
- Over the phone with a credit card
- By check or credit card at the Student Services Success Center
- By check at the education centers
- Check and credit card payments may also be made by mail.

Checks should be made payable to Westmoreland County Community College, and the student ID 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.

Tuition Payment Plan

Offered by Westmoreland in conjunction with Higher One, the Tuition Payment Plan lets students pay tuition and fees in monthly installments. The payment plan is not offered for Continuing Education classes or any past due balances. Enrollment in the Tuition Payment Plan must be finalized by the payment due date on your billing statement. For more information, visit tuitionpaymentplan.com/westmoreland or call 1-800-635-0120. Higher One assesses an enrollment fee for this service.

Refund Policy

All refunds to students or payers are calculated from the official starting date of the course. The number of weeks to determine refunds is calculated by counting the actual days from the starting date of the course and not by counting the course meeting dates.

All refund checks will be mailed to students and will not be held for pick-up.

For courses meeting for 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 second week of the course, you may be eligible to receive a 100% refund of tuition and fees. 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 second 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.

Expenses, Financial Aid & Scholarship

Financial Aid

Financial aid includes grants, scholarships, loans and part-time employment through work study. In general, the amount of assistance that a student may receive depends on their financial need. This need is determined through the U.S. Department of Education and is based on the information submitted in the Free Application for Federal Student Aid (FAFSA). Financial Aid is to be used for tuition, fees, books, housing and commuting expenses.

Types of Financial Aid

The types of financial aid available at Westmoreland County Community College include Grants, Student Employment, Loans, Scholarships and other. Grants are typically awarded based on need and generally do not have to be repaid.

- Federal Pell Grants are usually awarded to undergraduate students who have not yet earned a bachelor's degree. The actual award depends on the student's financial need; the college cost of attendance, the student's enrollment status and the length of the academic year in which the student is enrolled. Students can receive the Federal Pell Grant for up to the equivalent of 12 semesters.
- Federal Supplemental Educational Opportunity Grants (FSEOG) are awarded to undergraduate students with exceptional financial need. The amount of the award is determined by the student's need.

The Federal Work-Study Program enables students to earn money during the school year while also gaining valuable work experience, typically in part-time, career-related jobs. A student may work up to 19 hours per week and receives minimum wage for starting positions. Work-Study jobs requiring based on unique skills or seniority may receive wages as set by the department or institution. Work-Study jobs may be federal, state or institutionally funded.

Loans consist of money that the student borrows to help pay for college, and must be repaid (plus interest). There are two federal student loan programs:

- The William D. Ford Federal Direct Loan Program enables students and parents to borrow money at low interest rates directly from the federal government. The Direct Loan Program includes Direct Stafford Loans, which are available to undergraduate students and Direct PLUS Loans, which are available to parents of dependent students. A Direct Stafford Loan might be subsidized or unsubsidized. Direct PLUS Loans are always unsubsidized. Subsidized loans are based on financial need and are available only to undergraduate students. The federal government pays the interest on subsidized loans while the borrower is in college and during deferment. Unsubsidized loans are based on the student's education costs and other aid received. The borrower must pay all accrued interest on unsubsidized loans.

Other forms of financial aid that might be available to students include:

- State government aid. For more information on this available funding, contact PHEAA.org.
- Scholarship Aid from the college. Students should access www.westmoreland.edu/scholarships for additional information.
- Scholarships. Some states, local governments, colleges and community organizations. Access www.studentaid.gov.

Scholarships

A scholarship is financial aid awarded primarily on the basis of scholastic achievement. As with grants, scholarships do not have to be repaid. The Westmoreland County Community College Foundation coordinates a large number of scholarships established by private donors, area businesses and professional organizations. Scholarships vary in availability from year to year, and eligibility for each scholarship program varies. In general, these scholarships are based on criteria that may be comprised of field of study, financial need, credit hours earned, academic and individual achievement, and/or recent high school graduation.

Scholarship Application Process

Each application has specific criteria for eligibility and all application require the completion of an essay. Students may be directed to complete additional information for other scholarship opportunities such as the President's and Trustees' Meritorious and the Edward Hutchison Memorial Firefighters Scholarship. The Financial Aid Office will notify scholarship recipients through their Westmoreland email. Scholarship awards are applied directly to the recipient's student account for tuition, fees and bookstore costs. Foundation recipients will be asked to: 1) Complete a Free Application for Federal Student Aid (FAFSA), 2) Acknowledge receipt of your acceptance letter, 3) Write a thank you note to the donor(s) 4) Remain in good academic standing and continue to meet the specific criteria of the scholarship. Scholarship opportunities and important deadline dates are available online.

Begin your scholarship application now at https://westmoreland.academicworks.com/users/sign_in. Students should sign in using their Westmoreland username and password.

If you have been awarded a scholarship from an outside agency or organization, you are responsible for notifying the Financial Aid Office of this award.

State Grant Eligibility

The Pennsylvania State Grant Program is a financial assistance program that provides funding to eligible Pennsylvanians and helps them afford the costs of higher education at the undergraduate level.

To be considered for a Pennsylvania State Grant, you must complete the Free Application for Federal Student Aid (FAFSA) and complete the Pennsylvania State Grant Form. PHEAA's Board of Directors annually review and approve the formula for determining need. If the student meets all of the eligibility requirements, an award is calculated along with the federal need analysis, Pennsylvania State Grant policies and the Board-approved formula.

PHEAA Eligibility requirements include the following:

- Are a high school graduate as stipulated in the Pennsylvania State Grant law.
- Attend a postsecondary school approved by PHEAA for Pennsylvania State Grant purposes.
- Enrolled at least half-time (defined as at least six semester credits, but less than 12 semester credits per semester, or the equivalent).
- Unconditionally admitted and enrolled in an approved program of study of at least two academic years in length.
- Enrolled in a program of study where at least 50% of the total credit hours needed for completion of the program are earned through classroom instruction:
- Have made satisfactory academic progress (as defined by PHEAA).
- Have not already earned a bachelor's degree or its equivalent.
- Established Pennsylvania residency, as stipulated in the Pennsylvania State Grant law.
- Satisfactory character (for example, clear criminal background).

Federal Aid

Application Procedures

1. Students, parents and borrowers are required to use an FSA ID, made up of a username and password, to access certain U.S. Department of Education websites. Apply for an FSA ID at https://fsaid.ed.gov/.
2. Complete the FAFSA online at https://fafsa.ed.gov as soon as possible after October 1. In order for the Financial Aid Office to receive the application information from the federal processor, students must include Westmoreland as one of the colleges they plan to attend. Westmoreland's Title IV code is 010176.
3. It is recommended that the student/parent while completing the FAFSA utilize the Data Retrieval Tool (DRT) to download IRS tax information directly into the required student/parent financial data. If DRT is not utilized, please submit tax return transcripts, corrections and any other requested documentation to the Financial Aid Office in a timely manner.
4. To ensure timely consideration, students should have all requested documentation paperwork on file in the Financial Aid Office by April 15 for the upcoming fall term. The FAFSA is available online at https://fafsa.ed.gov.
5. Approximately 5 to 7 days after your FAFSA has been processed by the Department of Education, you will receive a Student Aid Report (SAR). Review the results. If corrections to your FAFSA are necessary, you may submit them electronically at www.fafsa.ed.gov.
6. When the Financial Aid Office has received your FAFSA results, we will review your file. Once it is determined that your file is complete, an award letter will be posted in your Westmoreland portal indicating the types of financial aid you are eligible to receive.

Basic Eligibility Requirements

To be eligible for financial aid, you must demonstrate that you are both qualified to enroll and have the ability to benefit from a post-secondary education. The ability to benefit requirement can be satisfied one of the following ways:

- Graduated from a U.S. High School, have a copy of your official final high school transcript sent or faxed to the Westmoreland County Community College's Admissions Office.
- Copy of your official GED.
- If you graduated from a foreign high school, bring in a copy of your original high school transcript.
- If you have attended another college and satisfactorily earned sixty credit hours of college credit prior to the fall 2012 semester, have your official transcript sent to the Admissions Office.
- If you have an academic transcript that you have successfully completed at least two-year program that is acceptable for full-credit toward a bachelor's degree.

Additional Eligibility Requirements:

- Be a citizen or eligible non-citizen of the United States.
- Have a valid Social Security Number.
- Be enrolled in a degree, diploma or certificate program.
- Be registered with Selective Service if male.
- Be in good academic standing and maintain satisfactory academic progress according to college, state and federal regulations.
- If you are attending two schools at the same time, you may only receive financial aid at one school. You may wish to pursue a consortium agreement to acquire funding for both colleges. Please check with a Financial Aid staff member.

Students may not be in a default or overpayment status on any type of federal financial aid.

Verification

Verification is the process through which the federal government requires confirmation of the accuracy of the information reported on the FAFSA. If the student is selected for verification, the student must provide clear evidence that the information reported on the FAFSA is true and correct.

Satisfactory Academic Progress

Federal regulations require that Westmoreland County Community College monitor the academic progress of students who apply for and/or receive federal student aid. These regulations apply to each financial aid applicant, regardless of whether a student has ever applied for or received financial aid. To receive any form of federal student aid, students must maintain satisfactory academic progress toward a degree or certificate.

Financial Aid Census Date

Westmoreland County Community College uses the term's Census Date to determine a student's enrollment status for awarding financial aid. The student's financial aid award is based on the anticipated full-time enrollment (e.g. 12 credit hours or more per semester). If the student's class schedule or actual attendance drops below full-time, the financial aid award will be adjusted downward, and if the student has already received financial aid, the student will have to repay a proportional amount of the funds applied to the student's account.

NOTE: If the student initially enrolls for the semester after the Census Date for that semester, the official Census Date will be the date you enroll.

Financial Aid Remedial Credit Limitation Policy

The U.S. Department of Education allows students up to one academic year (30 credit hours) of remedial (developmental) coursework. Remedial/Developmental Courses prepare a student for study at a postsecondary level. Remedial/Developmental courses are those courses that do not count toward your degree, diploma or certificate program of study and are not computed into a student's grade point average (GPA). This policy may impact a student's Title IV financial aid eligibility and awards, including the Federal Pell Grant, the Federal Supplemental Educational Opportunity Grant (FSEOG), Direct Loans and Federal Work-Study. Any student who enrolls in remedial courses after reaching the 30-credit limitation will require adjustments to their Title IV enrollment status and award(s). Any developmental credits above 30 credits will not be funded and will not count toward enrollment for financial aid purposes. The tuition and fees for developmental credits in excess of 30 will be the student's responsibility.

Rights and Responsibilities of Aid Recipients

The student has the right to know:

- What financial assistance is available at Westmoreland County Community College
- The deadlines for submitting applications for each of the financial aid programs available.
- The cost of attending Westmoreland County Community College and Westmoreland's refund policy
- The criteria used by the Financial Aid Office to select financial aid recipients.
- How the students' financial eligibility was determined.
- What resources are considered in the calculation of the student's financial aid eligibility?
- How much of the student's financial need is unmet, as determined by the Financial Aid Office.
- The terms and conditions of the various financial aid programs, including the criteria for continued eligibility in federal, state and institutional programs.
- The method by which disbursements will be made to the student and the frequency of those disbursements.
- The portion of the financial aid that must be repaid by the student, and what portion is grant and therefore not repayable. If the aid is a loan, the student has the right to know what the interest rate is, the total amount to be repaid, the procedure for repayment and when the repayment begins.
- How Westmoreland County Community College determines whether the student is making Satisfactory Academic Progress (SAP) for financial aid and what happens if the student is not.
- Upon request, the student can receive a paper copy of their financial aid award.

The Student is responsible for and required to:

- Report to the Westmoreland County Community College Financial Aid Office any change in the following:
  - Enrollment status
  - Residency changes
  - Additional earnings, funds or support received on the student's behalf.
- Be enrolled at least half-time. Half time is defined as six (6) credits per term.
- Assume responsibility for repayment of all loans accepted. Repay any funds received, which cannot be reasonably attributed to meeting educational expenses.
- Review the loan terms and process any documents regarding repayment prior to graduation.
- Participate in the loan entrance counseling program prior to receiving his/her first loan and exit interview at the conclusion of the student's enrollment at Westmoreland.
- For Federal Direct Student Loans, notify the loan servicer of address changes and other information as specified in the loan terms.
- Repay overpayments in Federal Pell Grant based on changes in enrollment or if received Federal Pell Grant from two schools at the same time.
- Maintain Satisfactory Academic Progress (SAP) in the course of study the student is pursuing.
- Complete mandatory exit counseling upon ceasing enrollment in at least 6.0 or more credits, if borrowed from the Federal Direct Loan program.
- Know the Student Withdrawal Policy and the effect on the receipt of financial aid.
- Notify the Financial Aid Office if the student is currently or becomes incarcerated in a federal, state or local penitentiary, prison, jail or reformatory, work farm or similar correctional institution. A conviction for any offense involving the possession or sale of illegal drugs during a period of enrollment for which the student received Title IV federal student aid may result in the loss of future financial aid eligibility. If the student is convicted of possessing or selling drugs after the submission of his/her FAFSA, the student must notify the Financial Aid Office. If a student successfully completes a drug rehabilitation program, the student may regain student aid eligibility on the date the program is successfully completed. For more information on how a drug conviction impacts the receipt of financial aid, review the drug questions: https://fafsa.ed.gov/help.htm

Repeated Coursework Policy

The Department of Education published Program Integrity regulations, which affect the enrollment status for students who repeat courses. These regulations may impact a student's financial aid eligibility and awards, including the Federal Pell Grant, FSEOG, Direct Loans and Federal Work-Study.

Regulations prevent the Financial Aid Office from paying for a course that has been passed and repeated more than one time. For a repeated course to be counted toward your enrollment status for financial aid purposes, you may only repeat a previously passed course once (a total of two attempts). If you enroll in a previously repeated and passed course for a third time; this course will not count toward your enrollment for financial aid purposes.

Refund Policy for Title IV Funding

The term Title IV Funds refers to the federal financial aid programs authorized under the Higher Education Act of 1965 (as amended) and includes the following programs: Unsubsidized Federal Stafford loans, Subsidized Federal Stafford loans, Federal PLUS loans, Federal Pell Grants and FSEOG.

An FSA credit balance occurs whenever the college credits FSA program funds to a student's account and the total amount of those FSA funds exceeds the student's allowable charges.

If FSA disbursements to the students account at the college creates an FSA credit balance, the credit balance will be paid directly to the student or parent as soon as possible, but no later than 14 days after the date the balance occurred on the students account, if the balance occurred after the first day of class of a payment period.

Student refund checks are generated and mailed to the student's permanent home address. All students are notified via email when the refund is ready to be mailed:

- Students need to update mailing address, if not current.
- No exceptions policy all checks are mailed. Checks cannot be picked up at the college.

The college may not require a student to take any actions to obtain his or her credit balance. It is the sole responsibility of the college to pay, or make available, any FSA credit balance within the 14-day regulatory time frames.

Return of Title IV Funds Policy

The Financial Aid Office is required to return funds received under Title IV if a student withdraws from all classes during the term before completing more than 60 percent of the term. The adjustments are calculated based on any of the following actions:

- The date the student officially withdraws or is suspended.
- The students last date of attendance at a documented academically related activity.
- The date the college determines the unofficial date of withdrawal.
- The date the student is reported by the faculty for non-attendance.

Title IV aid is earned in a prorated manner on days attended up to or greater than the 60 percent point in the semester. Title IV aid is viewed as 100 percent earned after that point in time.

All withdrawals for financial aid students are monitored by the Financial Aid Office. Students who withdraw from courses and/or reduce their course loads after registration may have their financial aid reduced accordingly.

In accordance with the federal regulations, the Financial Aid Office will return funds to the Title IV Fund programs in the following order: Unsubsidized Federal Direct Loans, Subsidized Federal Direct Loans, Federal PLUS Loans, Federal Pell Grants, FSEOG, other Federal sources of aid.

The college's responsibilities regarding the return of Title IV Funds are:

- Providing each student with the information given in this policy
- Identifying students who are affected by this policy and completing the Return of Title IV Funds calculation for these students.
- Returning of Title IV Funds that are due the Title IV programs.

The student's responsibilities in regard to the Return of Title IV Funds include:

Notification of proper withdrawal from the college i.e. completion of the required withdrawal documents. Returning of Title IV programs any funds that were disbursed directly to the student and which the student was determined to be ineligible for via the calculation. Failure to repay the overpayment to the college will jeopardize the student's eligibility for continued enrollment at the college.

Refund Policy for State Funds

PHEAA sends State Grant funds directly to your school. The school will then credit your account after first certifying your eligibility. The Financial Aid Office will assume the responsibility for returning overpayments received by the college and the student to state aid programs. Students are responsible for paying the college any overpayments that were disbursed directly to the student, which the student was determined to be ineligible to receive, based on the refund calculation.

Academic Information

Credit Hour

At Westmoreland, the semester credit hour is the basic unit of academic credit. One semester credit is equivalent to one 50-minute faculty instruction time per week for 15 weeks and a minimum of two hours of out of class student work per credit hour per week.

Grading Policy

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	Excellent	=	4.0
B	Good	=	3.0
C	Satisfactory	=	2.0
D	Passing	=	1.0
F	Failing	=	0.0
N	Failing due to lack of academic-related activity	=	0.0
W	Withdrawal	=	0.0
MW	Medical withdrawal	=	0.0
M	Military withdrawal	=	0.0
I	Incomplete	=	grade computed upon completion of course

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		Credit Hours		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 GPA

Academic Forgiveness

Students returning to the 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 the counselor or their faculty advisor to initiate the process. This is not included in the Satisfactory Academic Progress for federal financial aid and is only applicable to your Westmoreland GPA.

Repeating Courses

Students may repeat courses; however only the grade and credits earned the last time will be included in the calculation of grade point average.

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 the 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 grade report 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 appeal to the instructor of the course within one year from the end of the courses.

Attendance

The college is a non-attendance taking institution. Students are encouraged to attend all class sessions and complete all coursework, as they are integral components to the learning process and student success. If a student needs to withdraw from a course, then please consult page 11 of the catalog for reference. Specific programs may have different policies. Student should refer to the program handbooks and/or course syllabi.

Standards of Academic Progress

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

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 college-level credits will be placed on academic probation and will be subject to the following restrictions:

1. Enrollment is limited to 12 credits
2. While enrolled, students must meet with an advisor or counselor twice to discuss their academic progress and develop an education plan before they can register for subsequent semesters. The first meeting must be scheduled and take place no later than the add/drop deadline and the second must be scheduled and take place no later than the last full week of 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 Vice President of Academic Affairs.

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.
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 submitting a written request to the Vice President of Academic Affairs.

Readmission after Suspension

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 Resource Center

Library

The Library's print, audiovisual and digital collections are selected to support the college curricula and to provide materials for leisure reading and viewing. Collectively, these include over 25,000 books, 30 databases, and hundreds of instructional videos and popular films. A qualified professional staff is available during library hours to assist students in the use of library materials. Students who have questions or comments about library services should call 724-925-4100, email the Library at library@westmoreland.edu, or use the Chat Room on the library pages of the MyWestmoreland portal.

Student Access to Library Resources

All currently registered Westmoreland students have access to the digital databases to which the library subscribes by logging in to the MyWestmoreland portal and choosing the Library from the menu. Students also have access to the library's print books and Movie Collection DVDs at the Youngwood campus. They may make requests for materials through the Classic Library Catalog located on the portal. Students who take classes exclusively at education centers can add the location of that education center to their request and materials will be delivered via courier.

The college participates in the Westmoreland County Academic Libraries Reciprocal Borrowing Program, which provides the opportunity for Westmoreland students to borrow library materials directly from the following libraries: Saint Vincent College, Seton Hill University and the University of Pittsburgh at Greensburg. Students must present a valid Westmoreland student ID card when requesting borrowing privileges or reference assistance. Students may also borrow from Penn State libraries if they are Pennsylvania state residents and are issued a Resident Borrowers card by any Penn State library. 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

The College Learning Center (CLC) offers Westmoreland students tutoring and other educational services that are essential to academic success.

Tutoring

Tutorial services for credit courses are available through the CLC at no cost to students. Tutoring sessions are conducted on a limited individual or small group basis. A staff of professional, peer and volunteer tutors can provide students with assistance. Tutoring for various general courses such as math, reading/writing, biology and psychology is available. Assistance for other subjects varies and may not be available for all courses. Please check with the CLC to find out what subjects can be supported.

Free ONLINE TUTORING is also available to Westmoreland students through Brainfuse. Students can access this service by logging on to D2L: https://wccc.D2L.com/. On your homepage, choose one of your courses and look for Tools. Select Brainfuse HelpNow from the list of options.

Tutors can also assist students to develop the necessary study skills needed to improve classroom performance. Students are welcome to utilize any handouts or to take the Learning and Study Strategies Inventory (LASSI) that we offer.

Testing Services

The CLC offers testing services for make-up exams. A valid Westmoreland student ID card is required to take an exam in the CLC. All other items must be placed within a locker that requires a quarter deposit. Personal property cannot be left in the CLC. Appointments are necessary and must be made 24 hours in advance. All tests are filed under the instructor's last name; therefore, students should know their instructor's name prior to making an appointment. Following these procedures will help to provide an efficient and effective testing service. Enforcement of the Academic Dishonesty Policy will be observed by the CLC staff. Students who have been found responsible for violating the policy may not be permitted to test in the CLC for the remainder of the academic school year.

Testing services are also available at the education centers by appointment. If it is your preference to test at an education center, please indicate that to your instructor.

Cooperative Education

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 some career fields. Interested students should contact the Coordinator, Career Connections Center 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, Westmoreland web services and the Internet. Using a combination of outside services such as D2L, as well as dedicated lines and equipment, the college offers online courses linking the campus to Internet functions.

Instructional computer facilities include 40 microcomputer classrooms and 22 personal computer laboratories, 130 electronic classrooms and seven distance education web conferencing 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, email, spreadsheets, database management, graphics, several programming languages, file transfer, remote login, websites, tutorials, drafting and several operating systems. The labs are available to all registered students.

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

Delivery of Academic Programs

Courses in academic programs are taught via a variety of formats: traditional classrooms and laboratories; interactive web conferencing, media-enhanced classrooms; and individualized learning experiences such as independent study, honors seminars and online courses.

Distance Education

Westmoreland County Community College's online/distance learning courses offer a complementary alternative to the traditional learning environment. These modes of learning allow students from any location to use state-of-the-art interactive web conferencing technologies and a course management system at convenient times and locations for the student. This environment provides a flexible and engaging learning environment for students with a rigorous schedule.

Westmoreland currently uses D2L as a course management system and Zoom for web conferencing.

Students may complete required online assignments and access course materials using a personal computer at home, campus lab, library or at a preferred location. Testing options and technical requirements may be obtained in the course syllabus or from the online/distance learning student support site. Before registering for any of the distance education courses below, students are encouraged to speak with an academic advisor.

Types of Distance Education

The courses below require computer skills and Internet access, a Westmoreland generated email account, and supplemental hardware and software.

Blended (Hybrid) courses meet real-time in a face-to-face setting, at a predetermined classroom location, date and time. Instruction is split between learning activities online and in a specified location, based on subject matter. Students and instructors will meet in a face-to-face classroom/lab setting at least once a week and complete work asynchronously (outside of the classroom) for the remaining class time. A portion (no more than 50%) of the planned instruction and testing will occur outside of the classroom, when the students and instructor(s) are not in the same place. Courses will utilize a course management system and other technologically enhanced components. **Courses are indicated by ending in B_. (Course code example: PDV 101 BA).**

Blended-Live Interactive are courses where half of the content is delivered online and half via web conferencing. These are similar to traditional blended courses, with the exception being that the face-to-face component is replaced with live-streamed video meetings. Students may login to these courses from home, a library or computer lab and utilize chat, audio and video to communicate with their instructor and peers. Some instructors may teach from a classroom at a Westmoreland

location, allowing the student to attend either from home or in person. This method is supplemented by D2L, which is an online classroom that houses assignments, content, activities and grades. For the best experience, students are required to have access to a camera, microphone and audio. **Courses are indicated by ending in BWZN. (Course code example: BUS 120 BWZN)**

Live Interactive courses are live streamed, real-time courses that allow students to meet via video chat. Students may login to these courses from home, a library or computer lab and utilize chat, audio and video to communicate with their instructor and peers. Some instructors may teach from a classroom at a Westmoreland location, allowing the student to attend either from home or in person. This method is supplemented by D2L, which is an online classroom that houses assignments, content, activities and grades. For the best experience, students are required to have access to a camera, microphone and audio. **Courses are indicated by ending in WZN. (Course code example: ALH 120 WZN)**

Online courses are conducted online via a course management system. Students have the option of using a personal computer at home, campus lab, library or at preferred location. Students will interact with their instructor and classmates remotely via discussion boards, assignments and group projects, and adhere to deadlines set within the course. Online courses may require proctored exams at the discretion of the instructor. **Courses are indicated by ending in W_. (Course code example: EDU 200 WA- regular start, EDU W1 - late start).**

Web Conferencing courses are conducted real-time in a face-to-face setting at specific dates and times, involving two or more locations. Courses may be offered at the Youngwood campus or any of the college education centers (Westmoreland-Advanced Technology Center, Westmoreland-Fayette County, Westmoreland-Indiana County, Westmoreland-Latrobe, Westmoreland-Murrysville and Westmoreland-New Kensington). Instructors may alternate instructing from each location, communicating through a TV monitor, microphone or telephone conferencing system. Students may attend at any of these locations and will see and speak with the instructor and students at all sites in real time. A course management system and web conferencing technology will be utilized. **Courses are indicated by ending in _0. (Course code example: ALH 120 30-New Kensington)**

Independent Study

Independent study courses allow students to pursue a special interest, which is not offered as a regular course in the curriculum. The differences between an independent study 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.

State Authorization Reciprocity Agreement (SARA)

Westmoreland County Community College is a SARA-approved institution through the Pennsylvania Department of Education (PDE), and a member of the National Council for State Authorization Reciprocity Agreements (NC-SARA).

The State Authorization Reciprocity Agreement (SARA) is a voluntary agreement among its member states and U.S. territories that establishes comparable national standards for interstate offering of postsecondary distance education courses and programs. It is intended to make it easier for students to take online courses offered by postsecondary institutions based in another state. For the purposes of SARA, Distance Education is defined as: instruction offered by any means where the student and faculty member are in separate physical locations. It includes, but is not limited to, online, interactive video and correspondence courses or programs (SARA Manual, Section 1.12).

Act 48

Westmoreland is an approved provider for Act 48 courses/ training in the Commonwealth of Pennsylvania. Educators wishing to take Westmoreland courses to fulfill Act 48 requirements should check their course selection with their school district. Students must identify their interest in Act 48 by completing the Act 48 Continuing Professional Education Career Verification form prior to the start of classes.

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 AAC&U's Liberal Education and America's Promise (LEAP) initiative and value rubrics. Students are expected to achieve mastery 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 – Students will demonstrate clear and precise use of written, oral and/or nonverbal language to effectively express one's own ideas, perspectives and understandings as well as the ideas, perspectives and understandings of others.
- Quantitative Reasoning – Students will demonstrate the

ability to read, write, compute and solve quantitative problems presented in multiple ways.
- Citizenship and Social Responsibility – Students will develop the knowledge, skills, values and motivations to participate in both the political and non-political processes and institutions related to American citizenship and residence in the global community.
- Critical Thinking – Students will process information, artifacts and realities to make reasonable decisions and formulate applicable judgments.
- Information Literacy – Students will responsibly identify, access, develop, implement and evaluate relevant, credible information.
- Technology – Students will understand and use multiple forms of current and emerging technologies.

Academic Honors

President's List/Dean's List

At the end of each semester, full-time students who have completed 12 or more college-level credits with a grade-point average (GPA) of 4.0 are named to the President's List. Full-time students who obtain a GPA between 3.50 and 3.99, with no D or F grades are named to the Dean's List.

At the end of each semester, part-time students who have completed 12 or more college-level credits with a GPA of 4.0 are named to the President's List. Part-time students who complete 12 or more college-level credits with a GPA of 3.5 to 3.99 with no D or F grades are named to the Dean's List.

Students are evaluated and the GPA is calculated each time a student completes 12 or more college-level credits. Developmental courses are not included in the calculation of the GPA.

Honor's College

The Honors College at Westmoreland is the perfect fit for ambitious, engaged students who want to challenge themselves. The Honors College offers:
- Honors courses with smaller enrollment and experienced faculty members
- Opportunities for research, writing and experimentation
- Access to leadership training and community service projects
- Ability to participate in the Westmoreland Honors Ambassador Program
- Honors Seminar
- Designation of honors course work on your transcript
- Access to scholarships that are exclusive to honors students
- Enhanced transfer opportunities for those who plan to pursue a bachelor's degree
- Recognition of your accomplishment at Commencement

Admission to the Honors College

Westmoreland believes there are many attributes that lead to success. Therefore, there are multiple ways to be considered for the Honors College:
- Strong academic performance as represented by a 3.25 high school or previous college grade-point average.
- Alternatively, you may submit evidence of a particular area of interest or strength that you wish to develop by submitting a short written explanation along with (optionally) any other evidence you have (photographs, recordings, portfolios, newspaper clippings, etc.)

The Honors College at Westmoreland is for students who want more and are willing to put forth the effort it takes to succeed. The Honors College program is inclusive of thinkers, hard workers and bright minds seeking mentorship, supportive motivation and an opportunity to lead through success. If this is the program for you, apply today!

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, athletic and service excellence are honored annually at the Student Achievement Ceremony.

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.
- Selective Admission Programs (Dental Hygiene, Dental Assisting, Expanded Functions Dental Assisting (EFDA), Diagnostic Medical Sonography, Electrical Utility Technology, Medical Assisting, Nursing, Phlebotomy and Radiology Technology) will follow the catalog in effect the year of program acceptance.
- Earn at least 50 percent of credential requirements at Westmoreland County Community College under faculty instruction and evaluation. This does not include transfer credits, credits awarded for CLEP and other standardized exams, credit by exam.
- Maintain a grade point average of 2.0 or better in all coursework required and maintain a 2.0 average or better in the major.
- Fulfill all financial obligations to the college.

Note that developmental courses (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 degree from Westmoreland County Community College 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.

Academic Information

Transcripts

A transcript is a complete record of a student's academic history, including courses, grades, and degrees, diplomas and certificates earned at Westmoreland. Transcripts are issued electronically only at the request of the student. There is a $10 fee for each official transcript requested. Requests can be made at https://tsorder.studentclearinghouse.org. All financial obligations to the college must be paid before a transcript is issued.

Transcript/Abbreviations

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

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.

M — Military Withdrawal. Indicates withdrawal due to active duty. No grade points.

MW — Medical Withdrawal. Indicates withdrawal due to medical reasons. 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 program requirements. Developmental courses are designed to help students learn the skills necessary for college work. By completing developmental courses, students will improve their chances for success in their academic program.

Academic Guarantee

The Westmoreland 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 coursework tuition free for graduates of Westmoreland associate of 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, the college will develop an educational plan to address the specific skill deficiency.

Academic Programs

Westmoreland offers the associate of arts degree, associate of fine arts degree, associate of science degree, associate of applied science degree, diploma programs and certificate programs.

Associate of Arts Degree (AA)

The Associate of Arts degree requires a minimum of 62-64 credits. AA degree students are required to complete general education courses, designed to broaden and enhance their educational experience, and the remaining credit hours from transfer electives. The general education requirements are distributed over the areas of communications, humanities, social science, mathematics, natural science and tech literacy as outlined on page 29. The transfer electives may also be selected from the courses listed on page 29. When selecting transfer electives, it is recommended that the student seek the guidance of a counselor or advisor.

Associate of Science (AS)

An Associate of Science degree is an academic transfer degree designed for students who want to pursue a Bachelor of Science (BS) degree at a four-year institution. The AS degree requires the completion of at least 60 credit hours and provides students with a foundation in science, math, and technology required for students to continue into BS degree programs. Each AS degree will have required discipline-specific electives, as well as humanities and social science electives to choose from. We encourage students to work closely with their advisor or counselors to ensure they reach their goals for transfer.

Associate of Fine Arts Degree (AFA)

The Associate of 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.

Associate of Applied Science Degree (AAS)

The Associate of 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 of applied science degree may transfer to a four-year college. However, some credits may not transfer. The transfer of credits earned in an AAS degree depends on the senior institution's requirements.

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.

Programs of Study

Accounting
AAS 49
Certificates
Computer Accounting and Tax Specialist 50
General Accounting 51

Additive Manufacturing
AAS 46
Diploma 47
Certificate 48

Applied Industrial Technology
AAS 52

Architectural Drafting and Design
AAS 53

Art
AFA
Art Therapy 40
Graphic Design 41
Visual Arts 42
Certificate
Art Business 43
Art Technology 44

Baking and Pastry
AAS 54
Diploma 55
Certificate 56

Biology
Transfer, AS 34

Business
AA, Business Administration, Transfer 31
AAS
Entrepreneurship 62
Finance 63
Human Resource Management 64
Management 65
Marketing 66
Diploma 67
Certificate
Entrepreneurship 68
Finance 69
Human Resource Management 70
Management 71
Marketing 72
Real Estate 73

Chemistry
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Apprenticeship 93
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Diploma
Apprenticeship 95
Non-Apprenticeship 97

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Certificate 99

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Diploma 100

Dental Hygiene
AAS 102

Diagnostic Medical Sonography
AAS 105

Dietetic Technology/Nutritional Services Management
AAS 107

Dining Room Management
Certificate 108

Drafting and Design Technology
AAS
CADD/CAM 109
Mechanical Drafting and Design 110

Education/Pre-K–Grade 4
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Diploma 112
Certificate 113

Electrical Utility Technology
AAS 115

Electronics Engineering Technology
AAS 116

Programs of Study

Engineering Technology
AAS 117

Expanded Functions Dental Assisting
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Certificate 120

Forensic Science
AAS 121
Certificate 122

Health Science
AS 37

Heating, Ventilation, Air Conditioning and Refrigeration
AAS 123
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- Mechanic II 126

Hospitality Management
Certificate 127

Hotel and Resort Management
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Diploma 129
Certificate 130

Industrial Technology
AAS 131

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- Multimedia Technology 144
- Photography 145

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Certificate 163

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AAS 165
Diploma 166
Certificate 167

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Radiology Technology
AAS 168

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AAS 171
Diploma 172
Certificate 173

Robotics
AAS 174
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AAS 178
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Associate of Arts Degree (AA)

General Education Core Distribution and Electives – Gen Ed core must be distributed across columns I-VI and in Humanities and Social Sciences must be chosen from two or more disciplines. Electives can be chosen from columns II – VII (at least 21 credits).

I. English, Speech, PDV (10 credits)	II. Humanities (6-10 credits)*	III. Social Science (9 credits)	IV. Math (3 credits)	V. Natural Science w/lab (4-8 credits)*	VI. Tech Literacy (3 credits)	VII. Additional Electives
ENG 161	ART 155	ECN 158	MTH 157	BIO 145	CPT 145	ACC 155
ENG 164	ART 156	ECN 255	MTH 158	BIO 155	CPT 150	ACC 156
SPC 155 or 156	ART 157	ECN 256	MTH 160	BIO 156	CPT 160	ACC 219
PDV 101or 165	ART 158	GEO 155	MTH 161	BIO 171	EDU 200	ACC 222
	ART 160	HIS 155	MTH 172	BIO 172	GCT 125	ACC 230
	ART 162	HIS 156	MTH 173	BIO 210	GCT 161	ACC 234
	ART 165	HIS 249	MTH 180	BIO 255	GCT 163	ACC 250
	ASL 101	HIS 255	MTH 185	BIO 265	GCT 287	ACC 251
	ASL 102	HIS 256	MTH 271	BIO 275	HUM 140	ACC 255
	ASL 201	HIS 257	MTH 272	BIO 285	MED 155	ACC 256
	EDU 250	HIS 262	MTH 275	CHM 107	MED 160	BIO 107
	ENG 165	POL 155	MTH 277	CHM 108		BIO 120
	ENG 225	POL 156		CHM 155		BUS 140
	ENG 233	POL 200		CHM 156		BUS 158
	ENG 240	POL 220		CHM 250		BUS 205
	ENG 255	POL 255		CHM 251		BUS 241
	ENG 264	POL 256		CHM 264		BUS 244
	ENG 276	PSY 160		EPS 150		BUS 245
	FRN 155	PSY 161		EPS 163		BUS 249
	FRN 156	PSY 163		GEO 160		BUS 250
	FRN 255	PSY 165		PHY 107		BUS 275
	FRN 256	PSY 167		PHY 155		BUS 288
	HUM 156	PSY 250		PHY 156		CPT 163
	MED 158	PSY 260		PHY 255		CPT 180
	MUS 155	PSY 265		PHY 256		CPT 182
	MUS 255	PSY 267		PHY 259		CPT 213
	PHL 155	PSY 268				CPT 286
	PHL 160	PSY 269				CRJ 155
	PHL 161	PSY 270				CRJ 160
	REL 171	PSY 275				
	REL 181	SOC 155				
	SPA 155	SOC 161				
	SPA 156	SOC 162				
	SPA 255	SOC 255				
	SPA 256					

	CRJ 162
	CRJ 163
	CRJ 180
	CRJ 220
	CRJ 255
	CRJ 261
	CRJ 277
	CRJ 283
	CRJ 287
	CRJ 290
	ECE 185
	ENG 163
	ENG 250
	EPS 160
	FIN 155
	FIN 220
	FIN 246
	FSM 159
	HMS 155
	HMS 157
	HMS 170
	HMS 171
	HON 295
	HON 296
	HON 297
	HON 298
	HPE 156
	PHY 153
	PHY 258
	WEB 110
	WEB 140

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.

*Please see sequence #12 on the following page

Liberal Arts, AA

School of Art, Humanities, Social Sciences and Public Service

The Liberal Arts AA degree is designed to provide a comprehensive, two-year education while preparing students for transfer to a 4-year college or university. Its framework assures that students receive instruction in the full range of General Education topics (English, Humanities, Social Science, Mathematics, Natural Science and Tech Literacy) and that they can also pursue personal learning goals through elective courses. Completion of the degree requires a minimum of 60 credits.

Westmoreland has articulation agreements with many four-year colleges and universities that transfer this degree into numerous baccalaureate programs.

Students are advised to determine their major and transfer destination early in the program. This will aid in successful transfer. Students should consult with their faculty advisor and/or transfer counselor to assist in choosing courses that are most appropriate for their educational plan.

Program Learning Outcomes

- Communicate effectively in writing and speech.
- Solve problems and make decisions by applying both creative thinking and quantitative reasoning.
- Apply information and technological literacy in order to thrive in today's society.
- Understand how humans respond to their physical and social environment.
- Learn how personal community involvement can positively impact the world.
- Recognize diverse perspectives, cultures and values to make effective decisions built on social responsibility.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)*	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	Column VI
	3	Elective	Humanities Elective	3	F, Sp, Su		
	4	Elective	Tech Literacy Elective	3	F, Sp, Su		
	5	Elective	Social Science Elective	3	F, Sp, Su		
1st Spring	6	ENG 164	Advanced Composition	3	F, Sp, Su	ENG 161	
	7	SPC 155	Effective Speech	3	F, Sp, Su		SPC 156
	8	Elective	Mathematics Elective	3	F, Sp, Su	Placement	Page 29 Column IV
	9	Elective	Natural Science Elective	4	F, Sp, Su		Page 29 Column V
	10	Elective	General Elective	3	F, Sp, Su		Page 29
2nd Fall	11	Elective	Social Science Elective	3	F, Sp, Su		Page 29 Column III
	12	Elective*	Natural Science Elective or Foreign Language Elective	4	F, Sp, Su		Page 29 Column V or Column VI
	13	Elective	Humanities Elective	3	F, Sp, Su		
	15	Elective	General Elective	3	F, Sp, Su		Page 29
	16	Elective	General Elective	3	F, Sp, Su		Page 29
2nd Spring	17	Elective	Social Science Elective	3	F, Sp, Su		Page 29 Column III
	18	Elective	General Elective	3	F, Sp, Su		Page 29
	19	Elective	General Elective	3	F, Sp, Su		Page 29
	20	Elective	General Elective	3	F, Sp, Su		Page 29
	21	Elective	General Elective	3	F, Sp, Su		Page 29

Total Program Credits **60**

Business Administration, AA
School of Business

The associate of arts, business administration degree is designed primarily for those students who plan to transfer to a Pennsylvania Transfer and Articulation Oversight Committee (TAOC) four-year institution and are interested in majoring in an area of business such as accounting, finance, international business, general management, marketing and sales, human resource management or business information systems.

Note that although we offer ACC, BUS, ECN, FIN and MKT courses in online and face-to-face formats, many of these courses are not offered in multiple formats each semester. It is important to work with your advisor to find out which courses will be offered in your preferred format.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Transfer to a bachelor's degree program in a business discipline.
- Exhibit effective written and oral communication skills.
- Demonstrate knowledge of the practice of accounting, economics, finance, management and marketing, and the applications of these topics in the business environment.
- Use problem-solving and decision-making skills to appraise and evaluate business practices.
- Recognize ethical and global dimensions in business practice and how business integrates social responsibility into their ongoing operations.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	4	MTH 157	College Algebra	3	F, Sp, Su	MTH 100, MTH 100A or Placement	
	5	ACC 155	Accounting I	3	F, Sp, Su	MTH 050, MTH 050A or Placement	
	6	BUS 158	Principles of Management	3	F, Sp, Su		
1st Spring	7	HUM 156	Critical Thinking	3	F, Sp, Su		
	8	ACC 156	Accounting II	3	F, Sp, Su	ACC 155	
	9	ENG 164	Advanced Composition	3	F, Sp, Su	ENG 161	
	10	BUS 205	Business Law I	3	F, Sp, Su		
	11	Elective	Natural Science with Lab	4	F, Sp, Su		Page 29 Column V
2nd Fall	12	BUS 245	Principles of Marketing	3	F, Sp, Su		
	13	FIN 220	Business Finance	3	F, Sp, Su	ACC 155 or 165	
	14	BUS 244	Business Statistics	3	F, Sp, Su	MTH 050, MTH 050A or Placement	
	15	BUS 250	Calculus for Business	3	F, Sp, Su	MTH 157	
	16	ECN 255	Macroeconomics	3	F, Sp, Su	MTH 052, MTH 052A or Placement	
	17	Elective	Social Science Elective	3	F, Sp, Su		Page 29 Column III
2nd Spring	18	SPC 155	Effective Speech	3	F, Sp, Su		SPC 156
	19	BUS 288	Business Analytics	3	F, Sp, Su	FIN 220	
	20	ECN 256	Microeconomics	3	F, Sp, Su	MTH 052, MTH 052A or Placement	
	21	Elective	Humanities Elective	3	F, Sp, Su		Page 29 Column III
	22	Elective	Natural Science Elective	3	F, Sp, Su		Page 29 Column V

Total Program Credits **66**

Criminal Justice, AA

School of Art, Humanities, Social Sciences and Public Service

The associate of arts, criminal justice degree is designed primarily for those students who plan to transfer to a Pennsylvania Transfer and Articulation Oversight Committee (TAOC) four-year institution, and are interested in majoring in criminology, justice studies, administration of justice or criminal justice.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify relevant criminal justice laws, regulations and procedures.
- Demonstrate positive interpersonal and communication skills.
- Develop effective decision-making abilities within criminal justice.
- Identify the structure and components of the criminal justice system.
- Access criminal justice data.
- Examine contemporary issues in the administration of justice.
- Define and explain the major theories of crime and crime causation.
- Explain the historical development of criminology and criminal justice.
- Identify fundamental law enforcement concepts, theories and philosophies.
- Compare and contrast the juvenile justice system with other criminal justice systems.
- Explain the discuss ethical dilemmas in criminal justice
- Identify patterns and roles of differing peoples and cultures in criminal justice.
- Summarize the history of corrections and its changing aspects.
- Summarize the various roles of participants within criminal justice.
- Discuss individual constitutional and statutory rights within criminal justice.
- Discuss major issues impacting the state and federal criminal course system.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		Page 29 Column VI
	3	CRJ 155	Intro to Criminal Justice	3	F, Sp, Su		
	4	CRJ 163	Criminal Justice Procedure	3	F, Sp, Su		
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	PSY 160	General Psychology	3	F, Sp, Su		
1st Spring	7	CRJ 162	Police Administration I	3	F, Sp, Su	CRJ 155	
	8	ENG 164	Advanced Composition	3	F, Sp, Su	ENG 161	
	9	SOC 155	Principles of Sociology	3	F, Sp, Su		
	10	SPC 155	Effective Speech	3	F, Sp, Su		SPC 156
	11	MTH 161	Modern College Mathematics	3	F, Sp, Su	MTH 052, 052A or Placement	MTH 160
2nd Fall	12	CRJ 277	Ethics & CRJ	3	F		
	13	CRJ 290	Principles of Criminology	3	F, Sp, Su		
	15	ENG 255	Introduction to Literature	3	F, Sp, Su		
	16	HUM 156	Critical Thinking	3	F, Sp, Su		Page 29, Column II
	17	BIO 155	General Biology	4	F, Sp, Su		
2nd Spring	18	CRJ 180	Corrections	3	F, Sp, Su		
	19	CRJ 255	Juvenile Delinquency	3	F, Sp, Su		
	20	MTH 157	College Algebra	3	F, Sp, Su	MTH 100, 100A or Placement	
	21	BIO 156	General Biology II	4	F, Sp, Su	BIO 155	
	22	POL 155	American National Government	3	F, Sp, Su		

Total Program Credits 63

Psychology, AA

School of Art, Humanities, Social Sciences and Public Service

The associate of arts, psychology degree is designed primarily for those students who plan to transfer to a Pennsylvania Transfer and Articulation Oversight Committee (TAOC) four-year institution and are interested in majoring in psychology.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Trace the history of psychology as a science and distinguish among contemporary specialty areas.
- Differentiate among research methods in studying human behavior.
- Identify brain structures and their corresponding functions.
- Evaluate the major theories of learning and personality.
- Summarize the stages of prenatal development and discuss specific teratogens that can impact a developing child.
- Explain biological changes and selected theories of cognitive and psychosocial development across the lifespan.
- Describe how social situations affect attitudes, including prejudice and discrimination.
- Discuss how social interactions affect understanding of self and personal development.
- Describe psychological assessment instruments and their usefulness in diagnosing mental illness.
- Identify categories and symptoms of mental disorders using DSM criteria.
- Explain causes of mental illness along with past and current treatment.
- Identify specific areas of neuroanatomy and corresponding functions in health and disease.
- Compare available neuroimaging techniques and their usefulness in diagnosing brain pathology.
- Critique the advantages and disadvantages of non-experimental research techniques.
- Outline the components of experimental design, including independent and dependent variables.
- Infer whether an observed effect is statistically significant when provided the results of an inferential test.
- Describe the content or major sections of a research report.
- Illustrate an understanding of the limits of sensory memory, short term and long-term memory with respect to content and duration.
- Compare single-memory system views and multiple-memory system views of the brain.
- Summarize the difference between localist and distributed theories of memory, shallow and deep encoding strategies, and recall and recognition strategies.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		Page 29 Column VI
	3	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	4	MTH 157	College Algebra	3	F, Sp, Su	MTH 100, 100A or Placement	
	5	PSY 160	General Psychology	3	F, Sp, Su		
	6	SPC 155	Effective Speech	3	F, Sp, Su		
1st Spring	7	ENG 164	Advanced Composition	3	F, Sp, Su	ENG 161	
	8	MTH 160	Intro to Statistics	3	F, Sp, Su	MTH 052, 052A or Placement	
	9	PSY 161	Human Growth & Development	3	F, Sp, Su	PSY 160	
	10	PHL 161	Intro to Ethics	3	F, Sp, Su		
	11	Elective	PSY 163, 260 or 270	3	F, Sp, Su	PSY 160	
2nd Fall	12	SOC 155	Principles of Sociology	3	F, Sp, Su		
	13	BIO 155	General Biology	4	F, Sp, Su		
	15	PSY 250	Research Methods in Psychology	3	Sp, Su	PSY 160 & MTH 160	
	16	ART 155	Introduction to Art History	3	F, Sp, Su		Page 29
	17	ENG 255	Introduction to Literature	3	F, Sp, Su		
2nd Spring	18	Elective	General Elective	3	F, Sp, Su		Page 29
	19	Elective	PSY course (except 165)	3	F, Sp, Su	PSY 160	Page 29 Column III
	20	Elective	Social Science Elective	3	F, Sp, Su		Page 29 Column III
	21	Elective	PSY course (except 165)	3	F, Sp, Su	PSY 160	Page 29 Column III
	22	Elective	Natural Science with Lab	4	F, Sp, Su		Page 29 Column V

Total Program Credits **63**

Biology, AS
School of Math, Science and Engineering

The Biology AS is designed to prepare students for a rigorous four-year Biology program. This program focuses on the study of principles of biology, problem solving, critical thinking, laboratory skills, and technical communication. It is designed primarily for transfer to a Pennsylvania Transfer and Articulation Oversight Committee (TAOC) four-year institution.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate an understanding of fundamental biology concepts and principles.
- Apply problem solving, critical thinking and analysis skills to biology problems.
- Work effectively with units and significant digits.
- Carry out biology experiments as well as accurately record and analyze results of such experiments in writing.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 171	Career Pathway Exploration	3	F		
	2	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	3	MTH 158	Precalculus Mathematics	3	F, Sp, Su	MTH 157 or Placement	
	4	BIO 155	General Biology I	4	F, Sp, Su		
	5	CHM 155	General Chemistry I	4	F, Sp, Su	CHM 107 or HS Chemistry & MTH 052 or 052A, or Placement	
1st Spring	6	MTH 172	Analytical Geometry and Calculus I	4	F, Sp, Su	MTH 109, 158 or Placement	
	7	BIO 156	General Biology II	4	F, Sp, Su	BIO 155	
	8	CHM 156	General Chemistry II	4	F, Sp, Su	CHM 155	
	9	Elective	Humanities Elective	3	F, Sp, Su		Page 29 Column II
2nd Fall	10	CHM 250	Organic Chemistry I	4	F, Su	CHM 156	
	11	Elective	BIO Elective	3-4	F, Sp, Su		BIO 120,145,255, 265,285
	12	SPC 155	Effective Speech	3	F, Sp, Su		
	13	Elective	Social Science Elective	3	F, Sp, Su		Page 29 Column III
2nd Spring	14	CHM 251	Organic Chemistry II	4	Sp, Su	CHM 250	
	15	Elective	BIO Elective	4	F, Sp, Su		BIO 120,145,255, 265,285
	16	STM 296	STEM Seminar	1	Sp	9 credits of Natural Science and/or Math with at least one of these courses at the 200-level	
	17	Elective	Humanities Elective	3	F, Sp, Su		Page 29 Column II
	18	Elective	Social Science Elective	3	F, Sp, Su		Page 29 Column III

Total Program Credits **60-61**

Chemistry, AS
School of Math, Science and Engineering

The Chemistry AS is designed to prepare students for a rigorous four-year Chemistry program. This program focuses on the study of principles of chemistry, problem solving, critical thinking, laboratory skills and technical communication. It is designed primarily for transfer to a Pennsylvania Transfer and Articulation Oversight Committee (TAOC) four-year institution.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Safely conduct chemical experiments and analyze and interpret the results.
- Apply fundamental concepts of chemical reactivity.
- Apply the knowledge of chemical substances to predict properties and interactions.
- Demonstrate proficiency in writing formulas and names for inorganic, bioorganic and organic chemical compounds using the IUPAC system of nomenclature.
- Make use of dimensional analysis to solve chemical calculation problems.
- Evaluate technical references critically and apply concepts in peer-reviewed scientific literature.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 171	Career Pathway Exploration	3	F		
	2	PHY 255	Engineering Physics I	5	F	PHY 110 or HS Physics & Co-Requisite MTH 172	
	3	CHM 155	General Chemistry I	4	F, Sp, Su	CHM 107 or HS Chemistry & MTH 052 or 052A, or Placement	
	4	MTH 172	Analytical Geometry & Calculus I	4	F, Sp, Su	MTH 109, 158 or Placement	
1st Spring	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	MTH 173	Analytical Geometry & Calculus II	4	F, Sp, Su	MTH 172	
	7	PHY 256	Engineering Physics II	5	Sp	PHY 255	
	8	CHM 156	General Chemistry II	4	F, Sp, Su	CHM 155	
2nd Fall	10	Elective	Humanities Elective	3	F, Sp, Su		Page 29 Column II Recommendation: ENG 164
	11	CHM 250	Organic Chemistry I	4	F, Su	CHM 156	
	12	BIO 155 or CPT 160	General Biology I or Introduction to Programming	3-4	F, Sp, Su		
	13	MTH 271	Analytical Geometry & Calculus III	4	F, Su	MTH 173	
	14	PHY 259	Thermodynamics & Fluid Mechanics	3	F	PHY 255	
2nd Spring	15	CHM 251	Organic Chemistry II	4	Sp, Su	CHM 250	
	16	SPC 155	Effective Speech	3	F, Sp, Su		
	17	STM 296	STEM Seminar	1	Sp	9 credits of Natural Science and/or Math with at least one of these courses at the 200-level	
	18	Elective	Social Science Elective	3	F, Sp, Su		Page 29 Column III

Total Program Credits 60-61

Computer Science, AS
School of Technology

Students interested in pursuing a career in the computer field and planning to complete a bachelor's degree at a four-year school will consider the Computer Science AS degree. It is a mathematics-oriented degree and is designed to meet General Education requirements at local four-year institutions.

The Computer Science AS is designed primarily for those students who plan to transfer to a Pennsylvania Transfer and Articulation Oversite Committee (TAOC) four-year institution and are interested in majoring in Computer Science.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Translate scientific, engineering, and other technical problems into formulations, which can be processed by the computer.
- Apply knowledge of advanced mathematics to prepare logic diagrams and encode resulting equations for processing.
- Demonstrate academic knowledge required of all graduates including competency in: critical thinking, writing, information literacy, oral communication and quantitative reasoning.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	3	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	4	Restricted Elective	Restricted Elective	3	F, Sp, Su		
	5	CPT 160	Intro to Programming	3	F, Sp, Su		
	6	MTH 158	Precalculus Mathematics	3	F, Sp, Su	MTH 157 or Placement	
1st Spring	7	ENG 164	Advanced Composition	3	F, Sp, Su	ENG 161	
	8	MTH 172	Analytical Geometry and Calculus I	3	F, Sp, Su	MTH 109, 158 or Placement	
	9	PHL 155	Introduction to Logic	3	F, Sp, Su		
	10	CPT 145	Introduction to Computer Technology	3	F, Sp, Su		
	11	ART 155 or MUS 155	Introduction to Art History OR Music Listening: A Survey	3	F, Sp, Su		
2nd Fall	12	MTH 160	Introduction to Statistics	3	F, Sp, Su		
	13	CHM 155 or PHY 155	General Chemistry I OR College Physics I	4	F, Sp, Su	CHM 107 or HS Chemistry & MTH 052 or 52A, or Placement or PHY 110 or HS Physics & MTH 108 or 100, or Placement	
	14	CPT 163	Java Programming I	3	F, Sp, Su	CPT 160	
	15	SOC 155	Principles of Sociology	3	F, Sp, Su		HIS 156
	16	SPC 155	Effective Speech	3	F, Sp, Su		
2nd Spring	17	MTH 277	Discrete Mathematics	3	F, Sp, Su	MTH 172	
	18	CHM 156 or PHY 156	General Chemistry II OR College Physics Ii	4	F, Sp, Su	CHM 155 OR PHY 155	
	19	PSY 160	General Psychology	3	F, Sp, Su		HIS 156
	20	CPT 213	Java Programming II	3	F, Sp, Su		
	21	CPT 182	Operating Systems	3	F, Sp, Su		

Total Program Credits **63**

Restricted Electives: ART 155, ART 162, ENG 255, MUS 155, PHL 160, PHL 161, SPA 155

Health Science, AS
School of Health Professions

The Health Science AS provides the foundation necessary to prepare students for admission to a Health Professions program at Westmoreland or to transfer to a health science or health professions program at a four-year institution to pursue a career in a health-related field requiring a bachelor's or higher degree. The curriculum provides students with a balance of mathematics, science, humanities, English, social sciences and computer skills relevant to employment in health care professions or health-related fields.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify anatomical structures and explain the physiological aspects and functions of the human body.
- Demonstrate the use of scientific and mathematical reasoning in the critical analysis and evaluation of problems and the development of research-based solutions.
- Discuss the mental processes and behaviors associated with human psychology.
- Demonstrate mastery of vocabulary and appropriate terminology to understand and effectively communicate information related to anatomy and physiology.
- Demonstrate basic understanding of pharmacology and its use in the treatment of a variety of health conditions.
- Discuss nutrition in the context of body function, lifespan, social, economic and psychological implications.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	3	BIO 171	Anatomy & Physiology I	4	F, Sp, Su	CHM 107, 264, HS Chemistry and ENG 095 or Placement	
	4	PSY 160	General Psychology	3	F, Sp, Su		
	5	SOC 155	Principles of Sociology	3	F, Sp, Su		
	6	HUM 156	Critical Thinking	3	F, Sp, Su		
1st Spring	7	ENG 164	Advanced Composition	3	F, Sp, Su	ENG 161	
	8	BIO 172	Anatomy Physiology II	4	F, Sp, Su	BIO 171	
	9	ALH 122	Medical Terminology	3	F, Sp, Su		
	10	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	11	MTH 157	College Algebra	3	F, Sp, Su	MTH 100, 100A or Placement	
2nd Fall	12	BIO 265	Microbiology	4	F, Sp, Su	BIO 155 or 171 & CHM 107, HS Chemistry and ENG 095 or Placement	
	13	ALH 120	Pharmacology	3	F, Sp, Su	MTH 050, 050A or Placement	
	14	PSY 161	Human Growth & Development	3	F, Sp, Su	PSY 160	
	15	Elective	Humanities Elective	3	F, Sp, Su		Page 29 Column II
	16	CHM 155	General Chemistry I	4	F, Sp, Su	CHM 107, HS Chemistry and ENG 095 or Placement	
2nd Spring	17	CHM 156	General Chemistry II	4	F, Sp, Su	CHM 155	
	18	SPC 155	Effective Speech	3	F, Sp, Su		
	19	FSM 159	Nutrition	3	F, Sp		
	20	MTH 160	Introduction to Statistics	3	F, Sp, Su	MTH 052, 052A or Placement	

Total Program Credits **63**

Mathematics, AS
School of Math, Science and Engineering

The Mathematics AS is designed to prepare students for a rigorous four-year Mathematics Bachelor program. This program focuses on the study of the mathematics, physics and computer science principles necessary for a firm foundation that will allow students who complete the program to transfer to a Pennsylvania Transfer and Articulation Oversite Committee (TAOC) four-year institution.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate strong analytical, problem solving, organizational, and communication skills in various mathematical disciplines.
- Show competence in the skills and problem solving involved in the discipline of calculus.
- Apply concepts of mathematics in physics and computer programming.
- Utilize logical reasoning and foundational properties of mathematics to read proofs of mathematical theorems and create proofs of mathematical theorems.
- Apply standards of ethics concerning intellectual property in mathematical papers and proofs.
- Explore leadership, volunteerism, and community-building
- Gain admission to a four-year institution or employment in entry-level positions in stem-related fields.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 171	Career Pathway Exploration	3	F		
	2	MTH 172	Analytical Geometry and Calculus I	4	F, Sp, Su	MTH 109 or 158 or Placement	
	3	PHY 255	Engineering Physics I	5	F	PHY 110 or HS Physics Corequisite MTH 172	
	4	CPT 160	Introduction to Programming	3	F, Sp, Su		
1st Spring	5	Elective	Lab Science elective	4-5	F, Sp, Su		BIO 155, BIO 171, BIO 210, CHM 107, CHM 155, PHY 256, EPS 150
	6	CPT 180	C++ Programming	3	Sp, Su	CPT 160	
	7	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	8	MTH 173	Analytical Geometry and Calculus II	4	F, Sp, Su	MTH 172	
2nd Fall	11	Elective	Social Science Elective	3	F, Sp, Su		Page 29 Column III See **Recommendations****
	12	SPC 155	Effective Speech	3	F, Sp, Su		
	13	MTH 271	Analytical Geometry and Calculus III	4	F, Su	MTH 173	
	14	Elective	General Elective	3	F, Sp, Su		Page 29
	15	Elective	Humanities Elective	3	F, Sp, Su		Page 29 Column II Recommendation: PHL 155 or FRN 155
2nd Spring	16	MTH 277	Discrete Mathematics	3	Sp	MTH 172	
	17	MTH 272 or MTH 275	Differential Equations or Linear Algebra	3	Sp, Su	MTH 271 MTH 172	
	18	Elective	Humanities Elective	3	F, Sp, Su		Page 29 Column II Recommendation: PHL 155 or FRN 155
	19	STM 296	STEM Seminar	1	Sp	9 credits of Natural Science and/or Math with at least one of these courses at the 200-level	
	20	Elective	Social Science Elective	3	F, Sp, Su		Page 29 Column III See **Recommendations****
	21	Elective	General Elective	3	F, Sp, Su		Page 29

Total Program Credits **61-62**

**Recommendations for Social Science

For Mathematics Secondary Education:

PSY 160 General Psychology, PSY 165 Educational Psychology

For Actuarial Mathematics or Mathematics with Economics:

ECN 255 Macroeconomics, ECN 256 Microeconomics

Physics, AS
School of Math, Science and Engineering

The Physics AS is designed to prepare students for a rigorous four-year Physics program. This program focuses on the study of principles of physics, problem solving, critical thinking, laboratory skills and technical communication. It is designed primarily for transfer to a Pennsylvania Transfer and Articulation Oversight Committee (TAOC) four-year college or university.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate an understanding of fundamental physics concepts and principles.
- Apply problem solving, critical thinking and mathematics skills to physics problems.
- Work effectively with units and significant digits.
- Carry out physics experiments as well as accurately record and analyze results of such experiments in writing.
- Gain entry-level positions in a wide variety of STEM-related fields.
- Communicate technical details effectively with others.
- Work independently as well as in team environments.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 171	Career Pathway Exploration	3	F		
	2	PHY 255	Engineering Physics I	5	F	PHY 110 or HS Physics & Corequisite MTH 172	
	3	CHM 155	General Chemistry I	4	F, Sp, Su	CHM 107 or HS Chemistry & MTH 052 or 052A or Test	
	4	MTH 172	Analytical Geometry and Calculus I	4	F, Sp, Su	MTH 109 or 158 or Placement	
1st Spring	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	MTH 173	Analytical Geometry and Calculus II	4	F, Sp, Su	MTH 172	
	7	PHY 256	Engineering Physics II	5	Sp	PHY 255	
	8	CHM 156	General Chemistry II	4	F, Sp, Su	CHM 155	
2nd Fall	9	Elective	Humanities Elective	3	F, Sp, Su		Page 29 Column II
	10	PHY 259	Thermodynamics and Fluid Mechanics	3	F	PHY 255	
	11	SPC 155	Effective Speech	3	F, Sp, Su		
	12	MTH 271	Analytical Geometry and Calculus III	4	F, Su	MTH 173	
2nd Spring	13	Elective	Social Science Elective	3	F, Sp, Su		Page 29 Column III
	14	PHY 258	Modern Physics	3	Sp	PHY 255	
	15	STM 296	STEM Seminar	1	Sp	9 credits of Natural Science and/or Math with at least one of these courses at the 200-level	
	16	MTH 272	Differential Equations	3	Sp, Su	MTH 271	
	17	Elective	Social Science Elective	3	F, Sp, Su		Page 29 Column III
	18	Elective	Humanities Elective	3	F, Sp, Su		Page 29 Column II

Total Program Credits **61**

Art Therapy, AFA

School of Art, Humanities, Social Sciences and Public Service

The associate of fine arts degree program in art therapy offers a foundation curriculum parallel to the first two years of a bachelor's degree in art therapy (BA). As a transfer program, this option offers courses that provide an introduction to the field of art therapy and prepares the student for the first two years of a foundation before entering a senior institution. Students completing the AFA art therapy option are prepared for a range of careers that focus on communities requiring therapies such as returning combat veterans diagnosed with post-traumatic stress disorder, children and adults diagnosed with autism, and elderly individuals diagnosed with physical and mental challenges. Students develop skills in a range of studio art practice while simultaneously developing a greater understanding of the field of psychology and are introduced to how these fields work in tandem for effective therapeutic outcomes.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Summarize the role of art therapy in relation to the range of therapy practices.
- Differentiate the efficacy of creative therapies to promote psychological health.
- Assess the concept of creativity related to expressive therapies.
- Construct images that reflect their own creative problem-solving ideas and concepts.
- Explain historical, cultural and global development of works of art.
- Examine diversity in western and non-western visual traditions.
- Describe their own cultural context in the choices of image making.
- Critically develop and evaluate their own artwork and portfolio.
- Compare the relationship between visual and verbal communication skills.
- Communicate informed personal reactions to works of art.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ART 156	World Art Survey	3	F, Sp, Su		ART 158
	3	ART 162	Drawing I	3	F, Sp, Su		
	4	ATH 175	Expressive Therapies	3	F		
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	MTH 161	Modern College Mathematics	3	F, Sp, Su	MTH 052, 052A or Placement	Page 29 Column IV
1st Spring	7	ART 160	2-D Design	3	F, Sp		
	8	ART 185	Clay I – Touchstone	3	Sp		
	9	ART 165	Painting I	3	F, Sp, Su	ART 162	
	10	ART 155	Introduction to Art History	3	Sp		
	11	PSY 160	General Psychology	3	F, Sp, Su		
2nd Fall	12	ART 163	Drawing II	3	F, Sp, Su	ART 162	
	13	ASL 101	American Sign Language I	3	F, Sp, Su		
	14	PSY 265	Child Psychology	3	F, Sp, Su	PSY 160	
	15	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	16	EPS 150	Astronomy	4	F, Sp, Su		Page 29 Column V
2nd Spring	17	ART 285	Art Portfolio I	3	F, Sp, Su		
	18	ART 176	Introduction to Visual Art Therapy	3	Sp, Su	ART 162	
	19	ART 161	3-D Design	3	Sp, Su	ART 160	
	20	ENG 164	Advanced Composition	3	F, Sp, Su	ENG 161	
	21	PSY 270	Abnormal Psychology	3	F, Sp, Su	PSY 160	

Total Program Credits **62**

Graphic Design, AFA

School of Art, Humanities, Social Sciences and Public Service

The associate of fine arts in graphic design program offers a foundation curriculum parallel to the first two years of a baccalaureate in fine arts (BFA). As a transfer program, students will begin their graphic design program foundational learning experience before moving to a senior institution. Students completing the AFA program are prepared for a range of higher education options such as graphic design, brand identity, package design or environmental graphic design. The program is designed to enhance student visual literacy and conceptual skills in a state-of-the-art environment. Adobe's industry-leading digital communication tools and services lay the groundwork to facilitate innovative creative experiences. The components of this program develop technical competency, while cultivating aesthetic judgment, artistic quality and thought maturity that will provide students with a broad range of options for their future careers in visual communications.

The college also offers a graphic communications associate of applied science degree that prepares students for entry-level positions in production, sales and support in printing and publishing.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Outline key aspects and careers within the graphic design profession.
- Identify major design movements and influences from historical, cultural and social perspectives.
- Analyze and critique student, professional and historical design from multiple cultures and time periods.
- Integrate layout, typography, imagery and color elements in combination with the principles of art, design and visual perception.
- Experiment with concept development and visual planning strategies in the development of creative solutions for contemporary design issues.
- Demonstrate solid foundation skills and competency in the use of analog and digital tools, emerging technology and software applications.
- Incorporate safe practices in the use of various art/design materials, tools and equipment.
- Demonstrate constructive, organized work habits and clear communication skills.
- Prepare a portfolio of work that reflects a high level of conceptual engagement, knowledge and technical skills that demonstrates acceptable competencies for the AFA.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp		
	2	ART 160	2-D Design	3	F		
	3	ART 162	Drawing I	3	F		
	4	GCT 100	Design Technology I	1	F, Sp		
	5	GCT 115	Design & Layout I	3	F, Sp		
	6	GCT 151	Art & Illustration I	3	F, Sp		
	7	GCT 161	Creative Imaging I	3	F, Sp		
1st Spring	8	ART 142	Typography	3	Sp		ART 143
	9	ART 158	American Art	3	Sp		ART 159
	10	GCT 131	Type & Publishing I	3	Sp		
	11	GCT 155	Environmental Graphic Design I	3	Sp	Corequisite GCT 151	
	12	MED 160	Basic Photography	3	F, Sp		
2nd Fall	13	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	14	GCT 215	Design & Layout II	3	F	GCT 115	
	15	GCT 231	Type & Publishing II	3	F	GCT 131	
	16	GCT 255	Environmental Graphic Design II	3	F	GCT 155	
	17	Elective	Natural Science	4	F, Sp, Su		Page 29 Column V
2nd Spring	18	ENG 164	Advanced Composition	3	F, Sp, Su	ENG 161	ENG 165
	19	GCT 251	Art & Illustration II	3	Sp	GCT 151	
	20	GCT 261	Creative Imaging II	3	Sp	GCT 161	
	21	MTH 161	Modern College Mathematics	3	F, Sp, Su	MTH 052, 052A or Placement	MTH 157
	22	PSY 160	General Psychology	3	F, Sp, Su		Page 29 Column III

Total Program Credits 63

Visual Arts, AFA

School of Art, Humanities, Social Sciences and Public Service

The associate of fine arts degree program in visual 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 before moving to a senior institution. Students completing the AFA program are prepared for a range of higher education options such as art education, art therapy, art 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.

Program Learning Outcomes

Upon successful completion of this program, students will be able 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.
- Employ art studio safety and stewardship practices to enhance the economic and physical sustainability of their careers as artists.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ART 101	Studio Safety and Stewardship	2	F, Sp, Su		
	3	ART 155	Intro to Art History	3	F, Sp, Su		
	4	ART 160	2-D Design	3	F, Sp		
	5	ART 162	Drawing I	3	F, Sp, Su		
	6	MTH 161	Modern College Mathematics	3	F, Sp, Su	MTH 052, 052A or Placement	Page 29 Column IV
1st Spring	7	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	8	ART 161	3-D Design	3	Sp	ART 160	ART 163
	9	ART 165	Painting I	3	F, Sp	ART 162	ART 164
	10	SPC 155	Effective Speech	3	F, Sp, Su		
	11	Elective	Restricted Elective	3	F, Sp, Su		See List
2nd Fall	12	GCT 161	Creative Imaging I	3	F, Sp, Su		
	13	ART 285	Art Portfolio I	3	F, Sp, Su		ART 158
	14	ART 156	World Art Survey	3	F		ART 158
	15	ENG 164	Advanced Composition	3	F, Sp, Su	ENG 161	
	16	Elective	Restricted Elective	3	F, Sp, Su		See List
2nd Spring	17	Elective	Restricted Elective	3	F, Sp, Su		See List
	18	Elective	Social Science Elective	3	F, Sp, Su		Page 29 Column III
	19	EPS 150	Astronomy	4	F, Sp, Su		Page 29 Column V
	20	ART 286	Art Portfolio II	3	F, Sp, Su	ART 285	
	21	BUS 188	Social Media in Business	3	Sp		BUS 260

Total Program Credits 61

Restricted Electives:

ART 140 Illustration
ART 142 Typography
ART 143 Printmaking
ART 150 Airbrush Techniques
ART 159 Graphic Design History
ART 183 Book Arts I
ART 166 Painting II
ART 170 Special Topics
ART 185 Clay I
ART 188 Textiles I
MED 170 Digital Photography
Any partnership course with Touchstone Center for Crafts

Art Business, Certificate

School of Art, Humanities, Social Sciences and Public Service

The art business certificate provides practical information to sustain a career in art. Students learn the core principles of business, art law, grant writing, museum careers, contemporary art and other key concepts while examining the trends in art and the art market. Students will gain an understanding of the intricate art world network of galleries, auction house, dealers, artists, non- profits and more.

Career Opportunities

This certificate will expose students to a wide range of career tracks to initiate a professional path in creative industries and entrepreneurship. Jobs associated with museums will be introduced, from entry-level positions in visitor services and administrative assistants to advanced tracks, including curators, archivists, museum educators and technicians as well as fundraising and development.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Learn about the structure of the art world and the interplay between the commercial and non-profit sectors.
- Gain art market knowledge.
- Acquire knowledge about the range of careers within a museum.
- Develop transferable skills such as grant writing, collections management, and a marketing plan to sell an artwork.
- Have networking opportunities with regional art world professionals.
- Become familiar with current research resources for art law and art business.
- Foster knowledge about employment opportunities in the commercial art world, museum professions and the creative industries.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	BUS 188	Social Media in Business	3	F, Sp, Su		
	3	ART 170	Introduction to Grant Writing	3	F		
	4	ART 171	Art Law Legal Issues for Creative Professionals	3	F		
Spring	5	BUS 260	Small Business Management	3	F, Sp		BUS 262
	6	ART 172	Museum Careers	3	Sp		
	7	Elective	Restricted Elective	4	F, Sp, Su		See List
Total Program Credits				19			

Restricted Electives:

ART 157 Introduction to Contemporary Art (3)

ART 156 World Art (3)

ART 286 Capstone Portfolio II (3)

BUS 299 Business Internship (3)

Art Technology, Certificate

School of Art, Humanities, Social Sciences and Public Service

The art technology certificate introduces a fusion between art practice and technology, including two-dimensional and three-dimensional design, graphic software and robotics. Through interdisciplinary collaborations and individual projects, student will develop a foundational proficiency in working with a range of technologies, including options for welding, 3D printing and self- designing interdisciplinary research. Students will investigate how the arts/humanities, sciences and technology inform each other through a project-based curriculum that provides a full range of analytical and creative skill sets for 21st century employment.

Career Opportunities

This certificate will expose students to a wide range of career tracks to initiate a professional path in creative industries, designing and entrepreneurship. Students will be prepared for entry-level jobs associated with industrial design, animatronics, entertainment, media and communications as well as support jobs for a range of creative industries. The intersection of the arts and sciences provides critically needed skills on a broad front as articulated by the US Congressional STEAM caucus, for innovation in all employment sectors, and will especially begin a foundation track for research and development.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Examine ways to build multi-disciplinary projects.
- Engage in creative dialogues with the arts/humanities/ sciences and technology.
- Learn to think critically.
- Problem-solve creatively.
- Acquire new technical skills.
- Develop collaborative partnerships.
- Build innovative projects that may have social impact.
- Explore current research in STEAM initiatives and its role in the workforce.
- Foster links between the arts and sciences for a broad range of professional paths in creative and manufacturing industries.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ART 160	2D Design	3	F, Sp		
	3	ATT 150	Art Technology Systems I	4	F		
	4	Elective	Restricted Elective	3-4	F, Sp, Su		See List
1st Spring	5	GCT 161	Creative Imaging I	3	Sp		
	6	ART 161	3D Design	3	Sp		
	7	Elective	Restricted Elective	3-4	F, Sp, Su		See List
2nd Fall	8	DFT 266	3D Solid Modeling I	4	F		

Total Program Credits **24-25**

Restricted Electives:

ART 175 Special Topics (3-4)

ATT 151 Art Technology Systems II (4)

DFT 105 Technical Drafting I (4)

DFT 112 Introduction to Design, Materials and Processing (4)

MED 159 Basic Video Production (3)

RBT 110 Agile Robotics I (4)

WEL 125 Welding I (4)

Associate of Applied Science Degree (AAS)

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 that have been determined to best meet the needs of that particular career field. The distribution of general education requirements and the courses that meet these requirements are shown in the list below.

Requirements of the associate of 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 following courses.

I. English, (6 credits)	II. Humanities (0-3 credits)	III. Social Science (3 credits)	IV. Mathematics (3 credits)	V. Natural Science w/lab (0-4 credits)	VI. Tech Literacy (3 credits)
ENG 161	ART 155	ECN 255	BUS 120	BIO 107	ARC 210
ENG 162	ART 156	ECN 256	BUS 244	BIO 110	CPT 145
ENG 163	ART 158	ECN 260	MTH 100	BIO 120	CPT 150
ENG 164	ART 159	GEO 155	MTH 100A	BIO 130	DFT 258
ENG 166	ART 160	HIS 155	MTH 108	BIO 145	DFT 266
	ART 162	HIS 156	MTH 109	BIO 155	GCT 161
	ART 165	HIS 249	MTH 157	BIO 160	MED 105
	ASL 101	HIS 255	MTH 158	BIO 171	WEB 110
	ENG 165	HIS 256	MTH 160	BIO 210	
	ENG 245	HIS 257	MTH 161	CHM 107	
	ENG 255	HIS 262	MTH 172	CHM 108	
	ENG 158	POL 155	MTH 173	CHM 155	
	ENG 264	POL 200	MTH 180	CHM 264	
	ENG 275	PSY 160	MTH 185	EPS 150	
	ENG 290	PSY 161	MTH 271	EPS 160	
	FRN 155	PSY 163	MTH 272	EPS 163	
	FRN 156	PSY 165		GEO 160	
	HUM 156	PSY 167		PHY 107	
	MUS 155	PSY 260		PHY 153	
	MUS 160	PSY 265		PHY 155	
	PHL 155	PSY 267		PHY 255	
	PHL 160	PSY 268			
	PHL 161	PSY 269			
	REL 171	PSY 270			
	REL 181	SOC 155			
	SPA 155	SOC 161			
	SPA 156	SOC 162			
	SPC 155	SOC 255			
	SPC 156				
	SPCC 157				
	SPC 158				
	SPC 255				

Additive Manufacturing, AAS
School of Technology

The Additive Manufacturing, AAS will provide students with the necessary working knowledge and hands-on experience to operate a production-level 3D printer capable of producing various types of precision polymer and metal parts in the field of additive manufacturing. The operation duties would include preparing 3D CADD files for additive manufacturing process including design improvements, material handling and storage, mold design as a secondary process, routine maintenance, and production management. The primary focus of this program is the front-end operation of an industrial production 3D printing machine.

Career Opportunities

Graduates of the Additive Manufacturing Technology program will be qualified to prepare CADD files for additive production and efficiently operate and manage a precision production 3D printer. Expected job titles within additive manufacturing: AM Production Designer, AM Operator, AM Production Supervisor, AM Technician.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify the various 3D printing processes employed in additive manufacturing.
- Operate precision industrial production 3D printers in the field of additive manufacturing.
- Prepare solid model CADD files for 3D printing.
- Convert traditional machine part documents to 3D solid model CADD files in preparation of a 3D printing process.
- Manage multiple printers focused on maximizing production output, operational safety, and reduction of material waste.
- Design products exclusively for 3D print production.
- Use 3D printers for rapid-prototyping and concept engineering of new product development.
- Perform basic maintenance and troubleshooting of various types of industrial 3D printers.
- Create molds and castings as a secondary process employed in traditional manufacturing

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	MTH 108	Mathematics for the Technologies I	4	F, Sp	MTH 052, 052A or Placement	
	3	RBT 111	Electrical Components	4	F		
	4	DFT 110 or DFT 105	Blueprint Reading or Technical Drafting I	2 -4	F		
	5	DFT 112	Introduction to Design, Materials, and Processes	3	F		
	6	AMT 101	Introduction to Additive Manufacturing	3	F		
1st Spring	7	DFT 266	3D Solid Modeling I	4	Sp		
	8	EGR 104	Engineering Materials	3	Sp	Corequisite: MTH 109 or MTH 158	
	9	AMT 102	Material Handling & Safety	3	Sp	AMT 101	
	10	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	11	MTH 109	Mathematics for the Technologies II	4	F, Sp, Su	MTH 108	
2nd Fall	12	EGR 221	Statics and Strength of Materials	4	F	Corequisite: PHY 107	
	13	AMT 201	3D Printer Operation, Maintenance, and Management	4	F	DFT 105 or 110, DFT 266, AMT 102	
	14	PHY 107	Applied Physics	4	F	MTH 108, 100, 100A or Placement	
	15	Elective	Social Science Elective	3	F, Sp, Su	See Catalog Description	Column III
2nd Spring	16	DFT 208	Product Design	3	Sp	EGR 104, DFT 112 or DFT 207	
	17	DFT 267	3D Solid Modeling II	4	Sp	DFT 266	
	18	AMT 202	Additive Manufacturing Mold Design	4	Sp	AMT 201 Corequisite DFT 208	
	19	ENG 162	Technical Communications	3	Sp	ENG 161	

Total Program Credits **63-65**

Additive Manufacturing, Diploma
School of Technology

The Additive Manufacturing, AAS will provide students with the necessary working knowledge and hands-on experience to operate a production-level 3D printer capable of producing various types of precision polymer and metal parts in the field of additive manufacturing. The operation duties would include preparing 3D CADD files for additive manufacturing process including design improvements, material handling and storage, mold design as a secondary process, routine maintenance, and production management. The primary focus of this program is the front-end operation of an industrial production 3D printing machine.

Career Opportunities

Students who successfully complete an Additive Manufacturing Technology diploma will be qualified to prepare CADD files for additive production and possess working knowledge of advanced 3D printers utilized in the field of additive manufacturing. Expected job titles within additive manufacturing: AM Production Designer, AM CADD Operator, AM Technician, and AM Engineering Assistant.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify the various 3D printing processes employed in additive manufacturing.
- Prepare solid model CADD files for 3D printing.
- Convert traditional machine part documents to 3D solid model CADD files in preparation of a 3D printing process.
- Coordinate production output, operational safety, and reduction of material waste.
- Design products exclusively for 3D print production.
- Perform basic maintenance and troubleshooting of various types of industrial 3D printers.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	MTH-108	Mathematics for the Technologies I	4	F, Sp	MTH 052, 052A or Placement	
	3	RBT 111	Electrical Components	4	F		
	4	DFT 110 or DFT 105	Blueprint Reading or Technical Drafting I	2 -4	F		
	5	DFT 112	Introduction to Design, Materials, and Processes	3	F		
	6	AMT 101	Introduction to Additive Manufacturing	3	F		
1st Spring	7	DFT 266	3D Solid Modeling I	4	Sp		
	8	EGR 104	Engineering Materials	3	Sp	MTH 109 or MTH 158	
	9	AMT 102	Material Handling & Safety	3	Sp	AMT 101	
	10	ENG 161	College Writing	3	Sp	ENG 085 or Placement	
	11	MTH 109	Mathematics for the Technologies II	4	F, Sp, Su	MTH 108	
Total Program Credits				34-36			

Additive Manufacturing, Certificate
School of Technology

The Additive Manufacturing, Certificate prepares students with the basic working knowledge of a production level 3D printer capable of producing various types of precision polymer and metal parts in the field of additive manufacturing. The fundamental duties of an operator are explored including, traditional manufacturing processes, 3D CADD documentation, and electronic components related to additive manufacturing. The primary focus of this certificate is to prepare for continuation of the AMT program or entry-level career opportunities in additive manufacturing.

Career Opportunities

Students who complete a certificate in Additive Manufacturing can expect entry-level operator or clerk positions in additive manufacturing. Students who already possess an AAS degree in another area will use this certificate to enhance their current skills. Expected job titles within additive manufacturing: AM Production Designer, AM Production Assistant, and AM Technician.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify the various 3D printing processes employed in additive manufacturing.
- Explain the proper methods of handling and storing printing materials used in the field of additive manufacturing.
- Perform basic maintenance and troubleshooting of various types of industrial 3D printers.
- Compare traditional and additive manufacturing for effective operation selection.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	MTH-108	Mathematics for the Technologies I	4	F, Sp	MTH 052, 052A or Placement	
	3	RBT 111	Electrical Components	4	F		
	4	DFT 110 or DFT 105	Blueprint Reading or Technical Drafting I	2 -4	F		
	5	DFT 112	Introduction to Design, Materials, and Processes	3	F		
	6	AMT 101	Introduction to Additive Manufacturing	3	F		

Total Program Credits 17-19

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 Westmoreland, 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.

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.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Appropriately record financial transactions and prepare pertinent financial statements for sole proprietorships, partnerships and corporations.
- Prepare various types of tax returns.
- Effect cost and managerial accounting practices.
- 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.
- Practice ethical conduct.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	4	BUS 120	Mathematics of Business	3	F, Sp, Su	MTH 050, 050A or Placement	
	5	ACC 155	Accounting I	3	F, Sp, Su	MTH 050, 050A or Placement	
	6	BUS 158	Principles of Management	3	F, Sp, Su		
1st Spring	7	ACC 156	Accounting II	3	F, Sp, Su	ACC 155	
	8	ENG 163	Business Communication	3	F, Sp, Su	ENG 161	ENG 164
	9	ECN 255	Macroeconomics	3	F, Sp, Su	MTH 052, 052A or Placement	
	10	ACC 234	Payroll & Spreadsheet Software	3	F, Sp, Su		
	11	ACC 250	Principles of Taxation	3	F, Sp	ACC 155	
2nd Fall	12	ACC 219	Managerial Accounting	3	F, Sp, Su	ACC 156	
	13	ACC 251	Corporate Taxation	3	F		ECN 260, BUS 278
	14	FIN 220	Business Finance	3	F, Sp, Su	ACC 155 or 165	
	15	ACC 255	Intermediate Accounting I	3	F, Sp	ACC 156	
	16	SPC 155	Effective Speech	3	F, Sp, Su		SPC 156
2nd Spring	17	ACC 230	Integrated Accounting Software	3	F, Sp	ACC 155	
	18	ACC 256	Intermediate Accounting II	3	F, Sp	ACC 156	
	19	ACC 222	Principles of Auditing	3	F, Sp, Su	ACC 156	
	20	BUS 288	Business Analytics	3	F, Sp, Su	FIN 220	
	21	FIN 266	Financial Statement Analysis	3	F, Sp, Su	FIN 220	

Total Program Credits **61**

Accounting, Certificate

COMPUTER ACCOUNTING & TAX SPECIALIST

School of Business

The Computer Accounting and Tax Specialist Certificate 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. Courses included in this certificate may be applied toward the Accounting AAS program.

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.

Program Learning Outcomes

Upon successful completion of this program, students will be able 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ACC 155	Accounting I	3	F, Sp, Su	MTH 050, 050A or Placement	
	3	ACC 234	Payroll and Spreadsheet Software	3	F, Sp, Su		
	4	ACC 251	Corporate Taxation	3	F		ECN 260, BUS 278
Spring	5	ACC 156	Accounting II	3	F, Sp, Su	ACC 155	
	6	ACC 230	Integrated Accounting Software	3	F, Sp	ACC 155	
	7	ACC 250	Principles of Taxation	3	F, Sp	ACC 155	

Total Program Credits 19

Accounting, Certificate

GENERAL ACCOUNTING

School of Business

The General Accounting Certificate is designed to provide an entry-level general bookkeeping education, as well as provide for proficiency in the use of the personal computer in performing accounting functions. The curriculum is designed to provide the student with computer experience in several specialty fields within accounting, including the use of the most popular accounting software programs.

Career Opportunities

Students who complete this certificate program may be employed in general bookkeeping positions including entry-level payroll, accounts receivable or accounts payable positions.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Record financial transactions and prepare pertinent financial statements for sole proprietorships, partnerships and corporations.
- Create a fully integrated accounting software system for maintaining accounting records.
- Construct spreadsheets that can quantify accounting and business problems and display charts.
- Utilize computer software for accounting and financial reporting.
- Display positive interpersonal and communications skills as a member of a business office work team.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	BUS 120	Mathematics for Business	3	F, Sp,Su	MTH 050, 050A or Placement	
	3	CPT 195	Excel for Windows	3	F, Sp		
	4	ACC 155	Accounting I	3	F, Sp, Su	MTH 050, 050A or Placement	
Spring	5	ACC 156	Accounting II	3	F, Sp, Su	ACC 155	
	6	ACC 230	Integrated Accounting Software	3	F, Sp	ACC 155	
	7	ACC 250	Principles of Taxation	3	F, Sp	ACC 155	

Total Program Credits 19

Applied Industrial Technology, AAS
School of Technology

Industry in the Southwestern Pennsylvania region is dynamic and employees who have a broad educational background in industrial technology are a valuable commodity. The applied industrial technology degree will allow students to customize their educational pathway and pursue education and training in more than one skill group while integrating a core set of foundation courses including applied math, science and communication. Students who complete this degree program will be employable in various industries including manufacturing, oil and gas, technical sales, warehouse operations, and transportation. Students will engage in classroom discussions, research activities and laboratory exercises that will enhance existing and develop new knowledge, skills and abilities.

Career Opportunities

Students who complete this program may accept positions such as general maintenance and repair workers, production managers, manufacturing and technical sales representatives, production workers, machinists, dispatchers, supervisors, electrical technicians, telecommunications technicians, safety specialists and many others.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate the skills, professional values and ethics necessary to be employed in the various industries that employ individuals with technical or trades-related skills associated with the management and energy sectors.
- Demonstrate effective oral and written communication skills with corporate officers, supervisors, government officials, front line workers and colleagues.
- Demonstrate knowledge, skills and abilities in multiple technological and trades related disciplines.
- Identify, install, troubleshoot, construct, form, weld, assemble, wire or develop systems or processes based upon selected educational pathways.
- Implement safe work practices in all occupational areas
- Apply and demonstrate compliance with applicable regulations, laws, governing bodies or associations as necessary depending upon chosen disciplines.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Students must select two certificates		Certificate	Heating, Ventilation and Air Conditioning Mechanic I, Certificate	15	F, Sp, Su		
		Certificate	Heating, Ventilation and Air Conditioning Mechanic II, Certificate	15	F, Sp, Su	HVAC Mech I Cert	
		Certificate	Robotics Basic Systems, Certificate	16	F		
		Certificate	Robotics Technician I, Certificate	16	Sp	Adv. Man. Basic Systems Certificate	
		Certificate	Journeyman Machining Technology I, Certificate	16	F		
		Certificate	Journeyman Machining Technology II, Certificate	16	Sp		
		Certificate	Welding Engineering Technology I, Certificate	15	F, Sp, Su		
		Certificate	Welding Engineering Technology II, Certificate	15	F, Sp, Su	Welding Eng. Tech I, Cert	
Additional courses to complete degree	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	3	DFT 258	AutoCAD	4	F, Sp, Su		
	4	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	
	5	MTH 108	Mathematics for the Technologies I	4	F, Sp, Su	MTH 052, 052A or Placement	
	6	PSY 160	General Psychology	3	F, Sp, Su		
	7	Elective	Restricted Electives	9-14	F, Sp, Su		See List

Total Program Credits **61**

Restricted Electives: Technical courses with the prefix: EMA, NGT, MTT, CNC, WEL, HAC, ELC, RBT, ARC, DFT, EGR

Architectural Drafting and Design, AAS
School of Technology

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.

Career Opportunities

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

Program Learning Outcomes

Upon successful completion of this program, students will be able 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 affect a 2-D CADD system.
- Utilize construction industry vocabulary.
- Originate and interpret drawings using these construction industry standards.
- Determine cost estimates utilizing appropriate construction materials.
- Apply appropriate specifications, building codes and local ordinances in a job assignment.
- Network with building inspectors, architects, engineers, designers and clients.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ARC 101	Building Materials & Estimating	3	F		
	3	ARC 105	Architectural Drafting I	4	F		
	4	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	5	MTH 108	Mathematics for Technologies I	4	F, Sp, Su	MTH 052, 052A or Placement	
1st Spring	6	ARC 102	Contracts and Specifications	3	Sp		
	7	ARC 106	Architectural Drafting II	4	Sp	ARC 105	
	8	ARC 210	Architectural AutoCAD I	4	Sp		
	9	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	
	10	MTH 109	Mathematics for Technologies II	4	F, Sp, Su	MTH 108	
2nd Fall	11	ARC 119	Introduction to Surveying	3	F	MTH 108	
	12	ARC 211	Architectural AutoCAD II	4	F	ARC 210	
	13	EGR 221	Statics and Strength of Materials	4	F	Co: PHY 107 or 155	
	14	PHY 107	Applied Physics	4	F	MTH 100, 100A or 108	
2nd Spring	15	ARC 215	Architectural Presentation	4	Sp	ARC 210	
	16	ARC 262	Piping, Structuring Detailing and Electromechanical Drafting	4	Sp	ARC 210 or DFT 258	
	17	Elective	Restricted Elective	3-4	F, Sp, Su		See List
	18	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III

Total Program Credits **61-62**

Restricted Electives: Courses with ARC, DFT, EGR or HAC Prefix

Baking and Pastry, AAS

APPRENTICESHIP

School of Culinary Arts/Hospitality

The baking and pastry apprenticeship program is one of the majors comprising the college's School of Culinary Arts/ Hospitality and is accredited by the American Culinary Federation Education Foundation Accrediting Commission (ACFEFAC). This apprenticeship program is sponsored by The American Culinary Federation Laurel Highlands Chapter (ACFLHC) and Westmoreland. A cooperative program, it combines academic course work with 4,000 hours of supervised on-the-job learning 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 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. Registration and membership fees are required and payable to the ACF during the first week of class. 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 and program tool kit are required for all lab classes. Business attire may be required for some class assignments.

Employment must be secured in an approved facility that will provide full-time employment. 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 or Seven Springs Mountain Resort as well as the other approved apprenticeship sites. For more information, call the Westmoreland Admissions Office at 724-925-4000.

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.

Program Learning Outcomes

Upon successful completion of this program, students will be able 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 pastry items and confectionery items.
- 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 systems of operation within the bakery and pastry industry.
- Demonstrate basic food preparation skills with additional attention to food cost.
- Design and prepare artistic showpieces and centerpieces.
- Research and adhere to sound practices for sanitation and safety.
- Develop basic practical mathematical skills.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	BKP 141	Baking I	4	F, Sp		
	3	CUL 121	Apprenticeship I	2	F		
	4	FSM 103	Introduction to the Hospitality Industry	3	F, Sp		FSM 113
	5	FSM 117	Wait Staff/Dining Room Training	1	F, SP		
	6	FSM 118	Sanitation	2	F, Sp		
1st Spring	7	BKP 142	Baking II	3	F, Sp	BKP 141	
	8	CUL 122	Apprenticeship II	2	Sp	CUL 121	
	9	FSM 105	Foods I	4	F, Sp		
	10	BKP 242	Bakery/Deli Merchandising Techniques	3	Sp	BKP 141	
1st Summer	11	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	12	CPT 150	Microcomputer Concepts	3	F, Sp, Su		

Continued on next page

Baking and Pastry, AAS

APPRENTICESHIP

School of Culinary Arts/Hospitality

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
2nd Fall	13	BKP 243	Healthy Cooking Trends	4	F, Sp	FSM 105	
	14	BKP 245	Decorating Techniques	3	F, Sp		
	15	CUL 123	Apprenticeship III	2	F	CUL 122	
	16	FSM 215	Purchasing and Operations	3	F, Sp		
2nd Spring	17	BKP 247	Specialty/Artistic Techniques	4	Sp	BKP 142	
	18	CUL 224	Apprenticeship IV	2	Sp	CUL 123	
	19	FSM 235	Supervision and Training	3	F, Sp		
	20	FSM 170	Food Culture & Religion	3	F, Sp		Page 45 Column II
2nd Summer	21	BUS 120	Mathematics of Business	3	F, Sp, Su	MTH 050, 0520 or Placement	MTH 100
	22	ENG 163	Business Communication	3	F, Sp, Su	ENG 161	ENG 164
	23	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III

Total Program Credits 64

Baking and Pastry, Diploma

APPRENTICESHIP

School of Culinary Arts/Hospitality

The baking and pastry apprenticeship program is one of the majors comprising the college's School of Culinary Arts/ Hospitality and is accredited by the American Culinary Federation Education Foundation Accrediting Commission (ACFEFAC). This apprenticeship program is sponsored by The American Culinary Federation Laurel Highlands Chapter (ACFLHC) and Westmoreland. A cooperative program, it combines academic course work with 4,000 hours of supervised on-the-job learning 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 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. Registration and membership fees are required and payable to the ACF during the first week of class. 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 and program tool kit are required for all lab classes. Business attire may be required for some class assignments.

Employment must be secured in an approved facility that will provide full-time employment. 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 or Seven Springs Mountain Resort as well as the other approved apprenticeship sites. For more information, call the Westmoreland Admissions Office at 724-925-4000.

Career Opportunities

Graduates of the baking and pastry program may accept 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.

Program Learning Outcomes

Upon successful completion of this program, students will be able 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 pastry items and confectionery items.
- 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 systems of operation within the bakery and pastry industry.
- Demonstrate basic food preparation skills with additional attention to food cost.
- Design and prepare artistic showpieces and centerpieces.
- Research and adhere to sound practices for sanitation and safety.
- Develop basic practical mathematical skills.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	BKP141	Baking I	4	F, Sp		
	3	CUL 121	Apprenticeship I	2	F		
	4	FSM 103	Introduction to Hospitality Industry	3	F, Sp		FSM 113
	5	FSM 117	Wait Staff/Dining Room Training	1	F, Sp		
	6	FSM 118	Sanitation	2	F, Sp		
1st Spring	7	BKP 142	Baking II	3	F, Sp		
	8	CUL 122	Apprenticeship II	2	Sp		
	9	FSM 105	Foods I	4	F, Sp		
	10	BKP 242	Bakery/Deli Merchandising Techniques	3	F, Sp	BKP 141	
2nd Fall	11	BKP 243	Healthy Cooking Trends	4	F, Sp	FSM 105	
	12	BKP 245	Decorating Techniques	3	F, Sp		
	13	CUL 123	Apprenticeship III	2	F	CUL 122	
	14	FSM 215	Purchasing and Operations	3	F, Sp		
2nd Spring	15	BKP 247	Specialty/Artistic Techniques	4	Sp		
	16	CUL 224	Apprenticeship IV	2	Sp	CUL 123	
	17	FSM 235	Supervision and Training	3	F, Sp		

Total Program Credits **46**

Baking and Pastry, AAS

NON-APPRENTICESHIP

School of Culinary Arts/Hospitality

Baking and pastry is one of the majors comprising the college's School of Culinary Arts/Hospitality. This curriculum is designed to prepare students for various positions in the baking industry. The program of study provides students with skills necessary to produce 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 and program tool kit are required for all lab classes. Business attire may be required for some class assignments.

This program is accredited by the American Culinary Federation Education Foundation Accrediting Commission (ACFEFAC).

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.

Program Learning Outcomes

Upon successful completion of this program, students will be able 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 pastry items and confectionery items.
- 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 systems of operation within the bakery and pastry industry.
- Demonstrate basic food preparation skills with additional attention to food cost.
- Design and prepare artistic showpieces and centerpieces.
- Research and adhere to sound practices for sanitation and safety.
- Develop basic practical mathematical skills.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	BKP 141	Baking I	4	F, Sp		
	3	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	4	FSM 103	Introduction to the Hospitality Industry	3	F, Sp		FSM 113
	5	FSM 105*	Foods I	4	F, Sp		
	6	FSM 118	Sanitation	2	F, Sp		
1st Spring	7	BKP 142	Baking II	3	F, Sp	BKP 141	
	8	BKP 245	Decorating Techniques	3	F, Sp		
	9	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	10	ENG 163	Business Communication	3	F, Sp, Su		ENG 164
	11	FSM 235	Supervision and Training	3	F, Sp		
2nd Fall	12	BKP 144	Baking III	3	F	BKP 142	
	13	BKP 243	Healthy Cooking	4	F, Sp	FSM 105	
	14	FSM 215	Purchasing and Operations	3	F, Sp		
	15	FSM 170	Food Culture & Religion	3	F, Sp		Page 45 Column II
	16	Elective	Mathematics Elective	3	F, Sp, Su		
2nd Spring	17	BKP 242	Bakery/Deli Merchandising Techniques	3	Sp	BKP 141	
	18	BKP 247	Specialty/Artistic Techniques	4	Sp	BKP 142	
	19	FSM 219	Hospitality Internship	3	F, Sp, Su	Instructor Permission	
	20	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III

Total Program Credits 61

Baking and Pastry, Diploma

NON-APPRENTICESHIP

School of Culinary Arts/Hospitality

Baking and pastry is one of the majors comprising the college's School of Culinary Arts/Hospitality. This curriculum is designed to prepare students for various positions in the baking industry. The program of study provides students with skills necessary to produce 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 and program tool kit 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 or training specialist.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Frozen desserts based on local, regional and international traditions and diversity.
- Prepare and decorate cakes, cookies and centerpieces.
- Prepare pastry items and confectionary items.
- Prepare and evaluate baked items using both scratch and convenience techniques and products as to market usage.
- 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 systems of operation within the bakery and pastry industry.
- Demonstrate basic food preparation skills with additional attention to food cost.
- Design and prepare artistic showpieces and centerpieces.
- Research and adhere to sound practices for sanitation and safety.
- Develop basic practical mathematical skills.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	BKP 141	Baking I	4	F, Sp		
	3	FSM 103	Intro to Hospitality Industry	3	F, Sp		FSM 113
	4	FSM 105	Foods I	4	F, Sp		
	5	BKP 247	Specialty/Artistic Techniques	4	F		
	6	FSM 118	Sanitation	2	F, Sp		
1st Spring	7	BKP 142	Baking II	3	F, Sp		
	8	BKP 242	Bakery/Deli Merchandising Techniques	3	Sp		
	9	FSM 215	Purchasing and Operations	3	F, Sp		
	10	FSM 235	Supervision and Training	3	F, Sp		
2nd Fall	11	BKP 144	Baking III	3	F		
	12	BKP 243	Healthy Cooking Trends	4	F, Sp		
	13	BKP 245	Decorating Techniques	3	F, Sp		
	14	FSM 219	Hospitality Internship	3	F, Sp, Su	Instructor Permission	

Total Program Credits 43

Baking and Pastry, Certificate

NON-APPRENTICESHIP

School of Culinary Arts/Hospitality

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 and program tool kit 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, baker, cake decorator, baking sales representative, institutional baker, retail baker, wholesale baker, production supervisor, food batch maker, operations manager or training specialist.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Frozen desserts based on local, regional and international traditions and diversity.
- Prepare and decorate cakes, cookies and centerpieces
- Make mathematical yield adjustments.
- Demonstrate basic food preparation skills with additional attention to food cost.
- Practice basic interpersonal and customer service skills and techniques.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall or Spring	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	BKP 141	Baking I	4	F, Sp		
	3	BKP 245	Decorating Techniques	3	F, Sp		
	4	FSM 105	Foods I	4	F, Sp		
	5	FSM 113	Customer Service	3	F, Sp		
	6	FSM 118	Sanitation	2	F, Sp		

Total Program Credits 17

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.

Business Education

In response to the new dynamics of a service-based economy, the business department at Westmoreland offers a wide range of programs and courses designed to prepare students for the new challenges that await them in the field of management.

Note that although we offer ACC, BUS, ECN, FIN and MKT courses in online and face-to-face formats; many of these courses are not offered in multiple formats each semester. It is important to work with your advisor to find out what courses will be offered in your preferred format.

Associate of Applied Science Degree

The AAS business degree program is offered in several areas of concentration: financial management, general management, human resource management, marketing management and small business management. All the AAS areas of concentration contain a solid business core of general management courses augmented by several courses 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 AAS provides a solid academic background in applied business management that can be completed in two years of full-time study.

Associate of Arts Degree

The Business Division also offers an AA in Business Administration (see page 31). This degree option is designed specifically for students who plan to transfer to a four- year college or university to further their business education.

Business Diploma

A 36-credit business diploma is offered as a two-semester alternative to the more comprehensive associate degree program. The business diploma program provides a general, interdisciplinary experience into the field of business at an introductory level. The 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.

Business Certificate

Westmoreland offers several business certificates covering specific topics in business. Certificates are available in finance, general management, human resource management, marketing management, real estate 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 topical area.

Business, AAS

ENTREPRENEURSHIP

School of Business

The entrepreneurship 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 entrepreneurship option may 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.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Exhibit effective written and oral communication skills.
- Demonstrate knowledge of the business environment.
- Demonstrate proficiency with the core principles of small business theory and practice.
- Practice effective problem-solving and decision-making skills.
- Recognize ethical and global dimensions in business practice.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	BUS 140	Introduction to Business	3	F, Sp, Su		
	4	BUS 120	Mathematics of Business	3	F, Sp, Su	MTH 050, 050A or Placement	
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	FIN 155	Personal Finance	3	F, Sp, Su		
1st Spring	7	ACC 165	Accounting for Managers	3	F, Sp, Su	MTH 050, 050A or Placement	
	8	BUS 158	Principles of Management	3	F, Sp, Su		
	9	BUS 205	Business Law I	3	F, Sp, Su		
	10	ECN 256	Microeconomics	3	F, Sp, Su	MTH 052, 052A or Placement	
	11	ENG 163	Business Communication	3	F, Sp, Su	ENG 161	ENG 164
2nd Fall	12	ACC 120	QuickBooks	1	F, Sp, Su		
	13	BUS 188	Social Media in Business	3	F, SP, Su		
	14	BUS 245	Principles of Marketing	3	F, Sp, Su		
	15	BUS 260	Small Business Management	3	F, Sp, Su		
	16	FIN 220	Business Finance	3	F, Sp, Su		
	17	SPC 155	Effective Speech	3	F, Sp, Su		SPC 156
2nd Spring	18	BUS 240	Techniques of Selling	3	F, Sp, Su		
	19	BUS 262	Entrepreneurship	3	F, Sp		
	20	FIN 266	Financial Statement Analysis	3	F, Sp, Su	FIN 220	
	21	RLS 209	Real Estate Finance	3	F, Sp		
	22	BUS 296	Business Strategy	3	F, Sp, Su	45 Credits in Business AAS	

Total Program Credits **62**

Business, AAS

FINANCE

School of Business

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

Career Opportunities

The field of finance addresses how individuals and business institutions allocate and use resources over time while considering the risks associated with their projects. Finance is used by individuals, governments, businesses and nonprofit organizations. Careers in commercial banking, real estate, financial planning and insurance are examples of career paths one can take after studying finance.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Exhibit effective written and oral communication skills.
- Demonstrate knowledge of the business environment.
- Demonstrate proficiency with the core principles of financial theory and practice.
- Practice effective problem-solving and decision-making skills.
- Recognize ethical and global dimensions in business practice.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	BUS 140	Introduction to Business	3	F, Sp, Su		
	4	BUS 120	Mathematics of Business	3	F, Sp, Su	MTH 050, 050A or Placement	
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	BUS 245	Principles of Marketing	3	F, Sp, Su		
1st Spring	7	BUS 158	Principles of Management	3	F, Sp, Su		
	8	ENG 163	Business Communication	3	F, Sp, Su	ENG 161	ENG 164
	9	BUS 205	Business Law I	3	F, Sp, Su		
	10	ECN 256	Microeconomics	3	F, Sp, Su	MTH 052, 052A or Placement	
	11	ACC 155	Accounting I	3	F, Sp, Su	MTH 050, 050A or Placement	
2nd Fall	12	BUS 244	Business Statistics	3	F, Sp	MTH 052, 052A or Placement	
	13	ECN 260	Money & Banking	3	F, Sp		
	14	ACC 156	Accounting II	3	F, Sp, Su	ACC 155 or 165	
	15	ECN 255	Macroeconomics	3	F, Sp, Su	MTH 052, 052A or Placement	
	16	FIN 220	Business Finance	3	F, Sp, Su	ACC 155 or 165	
2nd Spring	17	SPC 155	Effective Speech	3	F, Sp, Su		SPC 156
	18	FIN 246	Principles of Insurance	3	Sp		BUS 278
	19	FIN 266	Financial Statement Analysis	3	F, Sp, Su	FIN 220	
	20	BUS 296	Business Strategy	3	F, Sp, Su	45 Credits in Business AAS	
	21	BUS 288	Business Analytics	3	F, Sp, Su	FIN 220	

Total Program Credits **61**

Business, AAS

HUMAN RESOURCE MANAGEMENT

School of Business

The human resource 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 resource management option may 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.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Exhibit effective written and oral communication skills.
- Demonstrate knowledge of the business environment.
- Demonstrate proficiency with the core principles of human resource theory and practice.
- Practice effective problem-solving and decision-making skills.
- Recognize ethical and global dimensions in business practice.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	BUS 140	Introduction to Business	3	F, Sp, Su		
	4	BUS 120	Mathematics of Business	3	F, Sp, Su	MTH 050, 050A or Placement	
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	ECN 255	Macroeconomics	3	F, Sp, Su	MTH 052, 052A or Placement	
1st Spring	7	BUS 158	Principles of Management	3	F, Sp, Su		
	8	ENG 163	Business Communication	3	F, Sp, Su	ENG 161	ENG 164
	9	BUS 245	Principles of Marketing	3	F, Sp, Su		
	10	BUS 205	Business Law I	3	F, Sp, Su		
	11	ECN 256	Microeconomics	3	F, Sp, Su	MTH 052, 052A or Placement	
2nd Fall	12	BUS 241	Human Resource Management	3	F, Sp, Su		
	13	ACC 165	Accounting for Managers	3	F, Sp, Su	MTH 050, 050A or Placement	
	14	BUS 249	Labor Relations	3	F, Sp		
	15	FIN 220	Business Finance	3	F, Sp, Su	ACC 155 or 165	
	16	SPC 155	Effective Speech	3	F, Sp, Su		SPC 156
2nd Spring	17	BUS 258	Supervisory Management	3	F, Sp, Su		
	18	BUS 275	Organizational Behavior	3	F, Sp, Su		
	19	BUS 285	Compensation Management	3	F, Sp		
	20	BUS 296	Business Strategy	3	F, Sp, Su	45 Credits in Business AAS	
	21	FIN 246	Principles of Insurance	3	Sp		BUS 278

Total Program Credits **61**

Business, AAS

MANAGEMENT

School of Business

The 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 may 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.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Exhibit effective written and oral communication skills.
- Demonstrate knowledge of the business environment.
- Demonstrate proficiency with the core principles of management theory and practice.
- Practice effective problem-solving and decision-making skills.
- Recognize ethical and global dimensions in business practice.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	BUS 140	Introduction to Business	3	F, Sp, Su		
	4	BUS 120	Mathematics of Business	3	F, Sp, Su	MTH 050, 050A or Placement	
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	ECN 255	Macroeconomics	3	F, Sp, Su	MTH 052, 052A or Placement	
1st Spring	7	BUS 158	Principles of Management	3	F, Sp, Su		
	8	ENG 163	Business Communication	3	F, Sp, Su	ENG 161	ENG 164
	9	ACC 165	Accounting for Managers	3	F, Sp, Su	MTH 050, 050A or Placement	
	10	BUS 205	Business Law I	3	F, Sp, Su		
	11	ECN 256	Microeconomics	3	F, Sp, Su	MTH 052, 052A or Placement	
2nd Fall	12	BUS 241	Human Resource Management	3	F, Sp, Su		
	13	BUS 244	Business Statistics	3	F, Sp, Su	MTH 052, 052A or Placement	
	14	BUS 245	Principles of Marketing	3	F, Sp, Su		
	15	FIN 220	Business Finance	3	F, Sp, Su	ACC 155 or 165	
	16	SPC 155	Effective Speech	3	F, Sp, Su		SPC 156
2nd Spring	17	BUS 249	Labor Relations	3	F, Sp, Su		
	18	BUS 258	Supervisory Management	3	F, Sp, Su		
	19	BUS 275	Organizational Behavior	3	F, Sp		
	20	BUS 288	Business Analytics	3	F, Sp, Su	FIN 220	
	21	BUS 296	Business Strategy	3	F, Sp, Su	45 Credits in Business AAS	

Total Program Credits 61

Business, AAS

MARKETING

School of Business

The marketing option provides an introduction to business with an emphasis on marketing theory and application. 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 may 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.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Exhibit effective written and oral communication skills.
- Demonstrate knowledge of the business environment.
- Demonstrate proficiency with the core principles of marketing theory and practice.
- Practice effective problem-solving and decision-making skills.
- Recognize ethical and global dimensions in business practice.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	BUS 140	Introduction to Business	3	F, Sp, Su		
	4	BUS 120	Mathematics of Business	3	F, Sp, Su	MTH 050, 050A or Placement	
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	ECN 255	Macroeconomics	3	F, Sp, Su	MTH 052, 052A or Placement	
1st Spring	7	BUS 158	Principles of Management	3	F, Sp, Su		
	8	ENG 163	Business Communication	3	F, Sp, Su	ENG 161	ENG 164
	9	ACC 165	Accounting for Managers	3	F, Sp, Su	MTH 050, 050A or Placement	
	10	BUS 205	Business Law I	3	F, Sp, Su		
	11	SPC 155	Effective Speech	3	F, Sp, Su		SPC 156
2nd Fall	12	BUS 188	Social Media for Business	3	F, Sp, Su		
	13	MKT 253	Global Marketing	3	F, Sp		BUS 278
	14	BUS 245	Principles of Marketing	3	F, Sp, Su		
	15	FIN 220	Business Finance	3	F, Sp, Su	ACC 155 or 165	
	16	MKT 252	Public Relations	3	F, Sp, Su		
2nd Spring	17	BUS 240	Techniques of Selling	3	F, Sp		
	18	MKT 242	Retailing	3	F, Sp		
	19	MKT 251	Consumer Behavior	3	F, Sp		
	20	MKT 254	Advertising and Promotion	3	F, Sp		
	21	BUS 296	Business Strategy	3	F, Sp, Su	45 Credits in Business AAS	
Total Program Credits				61			

Business, Diploma
School of Business

The business diploma program is designed to provide the student with a selection of general business management courses. Courses included in this diploma may be applied toward several Business AAS programs.

Career Opportunities

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

Program Learning Outcomes

Upon successful completion of this program, students will be able 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	BUS 140	Introduction to Business	3	F, Sp, Su		
	4	BUS 120	Mathematics of Business	3	F, Sp, Su	MTH 050, 050A or Placement	
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	ACC 165	Accounting for Managers	3	F, Sp, Su	MTH 050, 050A or Placement	
Spring	7	BUS 158	Principles of Management	3	F, Sp, Su		
	8	BUS 245	Principles of Marketing	3	F, Sp, Su		
	9	ECN 255	Macroeconomics	3	F, Sp, Su		
	10	BUS 205	Business Law I	3	F, Sp, Su		
	11	FIN 220	Business Finance	3	F, Sp, Su	ACC 155 or 165	

Total Program Credits 31

Business, Certificate

ENTREPRENEURSHIP

School of Business

The Business Entrepreneurship Certificate is designed to provide the student with an introduction to the ownership, operation and management of small business ventures. Courses included in this certificate may be applied toward the Business AAS – Entrepreneurship.

Career Opportunities

Graduates of the Business Entrepreneurship Certificate may 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.

Program Learning Outcomes

Upon successful completion of this program, students will be able 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall or Spring	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	BUS 188	Social Media for Business	3	F, Sp, Su		
	3	BUS 260	Small Business Management	3	F, Sp, Su		
	4	FIN 155	Personal Finance	3	F, Sp, Su		
	5	BUS 240	Techniques of Selling	3	F, Sp, Su		
	6	BUS 262	Entrepreneurship	3	F, Sp		
	7	FIN 266	Financial Statement Analysis	3	F, Sp, Su	FIN 220	

Total Program Credits 19

Business, Certificate

FINANCE

School of Business

The Finance Certificate offers students the opportunity to gain proficiency in managing the financial function in a business. Courses included in this certificate may be applied toward the Business AAS Finance option.

Career Opportunities

Graduates of the financial management option may 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.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Participate in developing and implementing a financial plan.
- Manage the financial activities in a business organization.
- Engage in investment planning and credit management.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ACC 155	Accounting I	3	F, Sp, Su	MTH 050, 050A or Placement	
	3	ECN 256	Microeconomics	3	F, Sp, Su	MTH 052, 052A or Placement	
1st Spring	4	FIN 220	Business Finance	3	F, Sp, Su	ACC 155 or 165	
	5	FIN 246	Principles of Insurance	3	Sp		
2nd Fall	6	ECN 260	Money & Banking	3	F, Sp,Su	ECN 256	
	7	FIN 266	Financial Statement Analysis	3	F, Sp, Su	FIN 220	
Total Program Credits				19			

Business, Certificate

HUMAN RESOURCE MANAGEMENT

School of Business

The Business Human Resource 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. Courses included in this certificate may be applied toward the Business AAS Human Resource Management option.

Career Opportunities

Graduates of the Business Human Resource Management Certificate may 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.

Program Learning Outcomes

Upon successful completion of this program, students will be able 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall or Spring	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	BUS 241	Human Resource Management	3	F, Sp, Su		
	3	BUS 258	Supervisory Management	3	F, Sp, Su		
	4	BUS 249	Labor Relations	3	F, Sp, Su		
	5	BUS 275	Organizational Behavior	3	F, Sp, Su		
	6	BUS 285	Compensation Management	3	F, Sp, Su		
	7	FIN 246	Principles of Insurance	3	F, Sp, Su		BUS 278

Total Program Credits 19

Business, Certificate

MANAGEMENT

School of Business

The Management Certificate is designed to provide an introductory view of general management in an enterprise environment. Courses included in this certificate may be applied toward the Business AAS General Management Option.

Career Opportunities

The 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.

Program Learning Outcomes

Upon successful completion of this program, students will be able 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall or Spring	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	BUS 120	Mathematics of Business	3	F, Sp, Su	MTH 050, 050A or Placement	
	3	BUS 140	Introduction to Business	3	F, Sp, Su		
	4	ACC 165	Accounting for Managers	3	F, Sp, Su	MTH 050, 050A or Placement	
Fall or Spring	5	BUS 158	Principles of Management	3	F, Sp, Su		
	6	BUS 245	Principles of Marketing	3	F, Sp, Su		
	7	FIN 220	Business Finance	3	F, Sp, Su	ACC 165 or 155	

Total Program Credits 19

Business, Certificate

MARKETING

School of Business

The Marketing Certificate offers students the opportunity to gain proficiency in managing the marketing function in a business. Courses included in this certificate may be applied toward the Business AAS Marketing option.

Career Opportunities

Graduates of the marketing option may 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.

Program Learning Outcomes

Upon successful completion of this program, students will be able 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall or Spring	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	BUS 245	Principles of Marketing	3	F, Sp, Su		
	3	BUS 188	Social Media for Business	3	F, Sp, Su		
	4	MKT 254	Advertising and Promotion	3	F, Sp, Su		
	5	MKT 251	Consumer Behavior	3	F, Sp, Su		
	6	MKT 253	Global Marketing	3	F, Sp		BUS 278
	7	MKT 242	Retailing	3	F, Sp		

Total Program Credits 19

Business, Certificate

REAL ESTATE

School of Business

The Real Estate Certificate offers students the opportunity to gain proficiency in real estate brokerage and management.

Career Opportunities

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

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Participate in the buying and selling of real estate.
- Manage rental properties.
- Engage in real estate transactions.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	BUS 240	Techniques of Selling	3	F, Sp, Su		
	3	RLS 101	Fundamentals of Real Estate	2	F, Sp, Su		
	4	RLS 102	Real Estate Practices	2	F, Sp, Su		
	5	RLS 205	Property Management	3	F, Sp		
	6	RLS 209	Real Estate Finance	3	F, Sp		
	7	RLS 210	Law of Real Estate	3	F		
Total Program Credits				17			

Communication Design

School of Art, Humanities, Social Sciences and Public Service

The Communication Design program serves the community as an active learning environment that immerses students in a range of media channels to improve digital literacy. The program incorporates the latest Mac OS/iOS devices and Adobe desktop and mobile apps to enable students to create experiences anywhere, anytime seamlessly across desktops, tablets, phones and web/mobile. Students create in an environment that encourages and develops the formation of the habitual behaviors of research and communication; design thinking and creative problem solving; collaboration and technical skills while mindful of culture, habitat and resources.

Individuals develop interdisciplinary thinking required to evolve into innovative, perceptive and responsible production designers/technicians, knowledgeable customer service/sales and technical support staff essential for commercial and wide-format printing, digital publishing and interactive PDFs, and web and mobile communication's evolving environment and workforce requirements.

Associate of Applied Science Degree

The Communication Design program encourages students to expand their knowledge and techniques and evaluate traditional and digital skills for developing design solutions for our swiftly changing environment, society and consumers. The program focuses on design and layout, illustration and imaging, and animation, web, and social media in a design context while keeping contemporary business in mind.

Students develop design thinking and creative problem solving skills and apply them to conceptual and technical courses in creating and delivering compelling print, dynamic media, and mobile/web content to audiences and users across diverse media and surfaces-visual fields.

Internships provide students a professional experience to exhibit their knowledge

Communication Design Certificate

The college offers two certificates for students active or interested in communication design career choices. The certificates provide individuals basic, relevant knowledge, technical skills and hands-on experience to: earn credentials for proof of concentrated study; increase their value to their organization; update/strengthen current knowledge and skills; explore or change careers; pursue an area of personal interest; or start a small business venture.

Associate of Fine Arts Degree, AFA

The School of Art, Humanities, Social Sciences and Public Services offers an AFA degree in graphic design (see page 63). This degree is designed especially for students who plan to transfer to a four-year college or university to further their communication/visual arts education.

Communication Design, AAS

School of Art, Humanities, Social Sciences and Public Service

The Communication Design AAS is a project-based learning, tightly sequenced curriculum designed to enhance a student's creative, visual and technical knowledge and proficiency of graphic design, interactive design, and dynamic media for entry-level workforce employment. Students apply designer-based insights and integrate iOS devices and Adobe desktop and mobile apps to produce and deploy their work across print, screen-based media, and web and mobile communications.

Career Opportunities

Students can pursue a wide range of career tracks in interactive design, publication design, branding, advertising, motion graphics, graphic/web design, information visualization, exhibition/retail design and environmental graphics. About 25 percent of individuals are contract professionals working on creative/technical projects.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Conceive appropriate design ideas, concepts and solutions.
- Develop and prototype potential visual communication design solutions for specific problems for intended audience.
- Create visual communications demonstrating competent formal design skills based in basic design principles and aesthetics: appropriate typography, composition and construction of relevant imagery.
- Utilize the appropriate media, materials, tools, technology, such as, Adobe desktop and mobile apps and Android and iOS smartphones and tablets and various techniques to create visual communications.
- Develop interpersonal skills to interact effectively and harmoniously within a creative team or independently with a client.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	3	GCT 100	Design Technology I	1	F, Sp		
	4	GCT 125	Emerging Technology I	3	F, Sp		
	5	GCT 151	Art & Illustration I	3	F, Sp		
	6	GCT 161	Creative Imaging I	3	F,Sp, Su		
	7	PSY 160	General Psychology	3	F, Sp, Su		
1st Spring	8	GCT 115	Design & Layout I	3	F, Sp		
	9	GCT 131	Type & Publishing I	3	Sp		
	10	GCT 155	Environmental Graphic Design I	3	Sp	Coreq: GCT 151	
	11	GCT 163	Emerging Technology II	3	Sp	GCT 151	
	12	GCT 180	2D Animation	3	Sp		
2nd Fall	13	GCT 200	Design Technology II	3	F		
	14	GCT 215	Design & Layout II	3	F	GCT 115	
	15	GCT 255	Environmental Graphic Design II	3	F	GCT 155	
	16	GCT 287	Emerging Technology III	3	F	GCT 163	
	17	GCT 290	Design Works	3	F	24 GCT credits	
2nd Spring	18	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	
	19	GCT 295	Emerging Technology IV	3	Sp	GCT 163	
	20	GCT 299	Design Internship	3	Sp	GCT Program Adv	GCT 261
	21	MTH 161	Modern College Mathematics	3	F, Sp, Su	MTH 052, 052a or Placement	
	22	SPC 156	Interpersonal Communication	3	F, Sp, Su		

Total Program Credits **61**

Communication Design, Certificate

GRAPHICS AND PUBLISHING

School of Art, Humanities, Social Sciences and Public Service

The Communication Design, Graphics and Publishing Certificate provides students with the basic skills and knowledge of design theory and industry-based technology to produce graphic art and visual materials necessary to effectively communicate visual and conceptual information through digital publishing, specialty graphics, and commercial printing and digital printing output. Courses included in this certificate may be applied toward the Communication Design AAS degree.

Career Opportunities

Students can become entry-level production layout artists and customer service and sales for small and medium-sized business, advertising firms, and publishing and printing industries. About 29 percent of individuals are self- employed professionals working on creative and technical projects. Employment is projected to increase by 13 percent from 2010 to 2020, about as fast as the average for all occupations.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate proficiency with Apple computers, Adobe design software and various print and prepress production techniques and processes.
- Integrate design and typographic principles, appropriate tools, materials and processes to create, edit and troubleshoot digital elements for print and web communications.
- Communicate effectively, develop appropriate attitudes, soft skills and work habits while working collaboratively within a creative team or independently.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	GCT 100	Design Technology I	1	F, Sp		
	3	GCT 115	Design & Layout I	3	F, Sp		
	4	GCT 131	Type & Publishing I	3	F, Sp		
Spring	5	GCT 151	Art & Illustration I	3	F, Sp		
	6	GCT 155	Environmental Graphic Design I	3	Sp	Corequisite GCT 151	
	7	GCT 161	Creative Imaging I	3	F,Sp, Su		

Total Program Credits 17

Communication Design, Certificate

WEB AND MOBILE

School of Art, Humanities, Social Sciences and Public Service

The Communication Design, Web and Mobile Certificate provides students with basic hands-on experience with the tools to visualize and communicate information in compelling ways across media and formats. The certificate focuses on Web design and structure, and stresses the importance of accessibility, usability and optimization and best practices. Courses included in this certificate may be applied toward the Communication Design AAS degree.

Career Opportunities

Graduates of the certificate will have acquired the basic skills necessary for entry-level positions such as Web graphic designers or multimedia artists within the fields of web design and content development. Almost all individuals are self-employed professionals working on creative and technical projects. Employment is expected to grow by 8 percent from 2010 to 2020, slower than the average for all occupations.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate proficiency with Apple computers, Adobe production software and various multimedia, web and mobile production techniques and processes
- Effectively research, plan and implement static and motion content design, optimization and publishing for screen-based media, and web and mobile communications
- Communicate effectively, develop appropriate attitudes, soft skills and work habits while working collaboratively with a creative team or independently.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	GCT 100	Design Technology I	1	F, Sp		
	3	GCT 115	Design & Layout I	3	F, Sp		
	4	GCT 125	Emerging Technology I	3	F, Sp		
Spring	5	GCT 163	Emerging Technology II	3	Sp		
	6	GCT 151	Art & Illustration I	3	F, Sp		
Fall	7	GCT 287	Emerging Technology III	3	F		

Total Program Credits 17

Computer Technology
School of 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. These 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 Westmoreland 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 Computer Technology AAS offers four options: programming, networking, technical support and web publishing. The diploma of computer technology is a shorter-term program that covers the fundamentals of computer technology. There are also several computer technology certificate programs that cover selected topics in depth.

Associate of Applied Science Degree

The Computer Technology AAS is offered as four options: programming, networking, technical support and web publishing. Each of these areas of concentration was chosen to reflect the projected needs of the information technology industry. The AAS 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 Computer Technology AAS 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

Westmoreland offers several certificates covering selected technology topics. Certificates are available in networking, microcomputer support, programming, web applications, web development and PC Repair/A+. 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 Westmoreland graduate or student in the workforce who needs to upgrade or expand his or her technical skills. Certificate courses can be applied toward AAS degree options.

Computer Technology, AAS

NETWORKING

School of Technology

The Computer Technology AAS Networking option provides students with extensive hands-on instruction in all facets of network operation and administration. Cisco Systems is the world leader in networking for the internet. Cisco networking technicians and professionals design, build, maintain and troubleshoot computer network systems. Graduates can work anywhere computer networks are used (LANs or WANs). These include corporations, offices, banks, hospitals, schools and all levels of government.

Career Opportunities

Graduates of the networking option may 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 network. Certification is the key to this field. The more credentials the better. Our certificates and degrees prepare students to pass Cisco certification exam for Cisco Certified Entry Networking Technician (CCENT) and CompTIA A+ certification.

Program Learning Outcomes

Upon successfully completing this program, students will be able 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 145	Intro to Computer Technology	3	F, Sp, Su		
	3	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	4	CPT 172	Introduction to Networks (Cisco I)	4	F		
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	MTH 157	College Algebra	3	F, Sp, Su	MTH 100, 100A or Placement	
1st Spring	7	CIS 209	Network Security Fundamentals	3	Sp		
	8	CPT 182	Operating Systems	3	Sp, Su	CPT 145	
	9	CPT 216	Routing and Switching Essentials (Cisco II)	4	Sp	CPT 172	
	10	CPT 198	Fiber Optic Technology	3	Sp		
	11	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	ENG 163
2nd Fall	12	SOC 155	Principles of Sociology	3	F, Sp, Su		Page 45 Column III
	13	CPT 214	Wireless Communication	3	F	CPT 172 OR CPT 183	
	14	CPT 219	Fiber Optic Analysis Design	3	F	CPT 198	
	15	CPT 248	PC Hardware	3	F, Su	CPT 182	
	16	CPT 262	Windows Client Server	3	F	CPT 182	
2nd Spring	17	SPC 155	Effective Speech	3	F, Sp, Su		SPC 156
	18	CPT 249	PC Troubleshooting	3	Sp, Su	CPT 248	
	19	CPT 256	Linux Desktop	3	Sp	CPT 182	
	20	CPT 264	Windows Server Management	3	Sp	CPT 262	
	21	CPT 286	System Analysis and Design	3	Sp, Su		

Total Program Credits 63

Computer Technology, AAS

PROGRAMMING

School of Technology

Behind every application lies a database or storage that is one of the most valuable assets of any enterprise – it is data. Developed in consultation with professionals in the field, the programming option provides the student with a strong background in the programming and data extraction skills necessary for success as a programmer/coder by providing hands-on experience in Python, C++, JAVA, SQL and other software tools. 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 Computer Technology AAS Programming Option may find employment as computer programmers/coders, 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.

Program Learning Outcomes

Upon successfully completing this program, students will be able 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.
- Integrate and apply mathematical skills to solve quantitative problems.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 145	Intro to Computer Technology	3	F, Sp, Su		
	3	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	4	CPT 156	Programming with Python	3	F		
	5	CPT 160	Intro to Programming	3	F, Sp, Su		
	6	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
1st Spring	7	MTH 157	College Algebra	3	F, Sp, Su	MTH 100, 100A or Placement	
	8	OFT 100	Basic Keyboarding	1	F, Sp, Su		
	9	CPT 182	Operating Systems	3	Sp, Su	CPT 145	
	10	CPT 180	C++ Programming	3	Sp, Su	CPT 160	
	11	CPT 196	Access for Windows	3	F, Sp	CPT 150	
	12	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	ENG 163
2nd Fall	13	CPT 235	Database Management Systems	3	F	CPT 196	
	14	CPT 163	Java Programming I	3	F	CPT 160	
	15	CPT 201	Web Content Development	3	F *		
	16	CPT 203	HTML and CSS	3	F		
	17	CPT 271	PHP & SQL	3	F	CPT 196	
2nd Spring	18	CPT 206	JavaScript	3	Sp	CPT 203	
	19	CPT 213	Java Programming II	3	Sp	CPT 163	
	20	SOC 155	Principles of Sociology	3	F, Sp, Su		Page 45 Column III
	21	CPT 286	System Analysis and Design	3	Sp, Su		
	22	SPC 155	Effective Speech	3	F, Sp, Su		SPC 156

Total Program Credits 62

* Online in odd years

Computer Technology, AAS

TECHNICAL SUPPORT

School of Technology

The Computer Technology AAS Technical Support Option 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, websites and application software. Students are prepared to take the Microsoft Office Specialist (MOS) certification exams.

Career Opportunities

Graduates of the Technical Support Option may find employment as technical support technicians, network technicians, junior systems analysts, technical sales representatives, customer service technicians, help-desk analyst, IT trainers and Web content developers. 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.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Understand the concepts of computer design and operation.
- Install, configure and troubleshoot popular microcomputer applications.
- Describe the principles of WAN/LAN network administration.
- Maintain website content.
- Troubleshoot and repair computer hardware and software.
- Develop competency in the Microsoft Office productivity suite.
- Develop oral, written and listening communication skills.
- Integrate and apply mathematical skills to solve quantitative problems.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 145	Introduction to Computer Technology	3	F, Sp, Su		
	3	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	4	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	5	MTH 157	College Algebra	3	F, Sp, Su	MTH 100, 100A or Placement	Page 45 Column IV
	6	SOC 155	Principles of Sociology	3	F, Sp, Su		Page 45 Column III
1st Spring	7	CPT 182	Operating Systems	3	Sp, Su	CPT 145	
	8	CPT 183	Local Area Networks	3	Sp, Su		
	9	CPT 195	Excel for Windows	3	F, Sp		
	10	OFT 190	Word for Windows	3	F, Sp		
	11	OFT 235	Customer Service	3	F, Sp, Su		
2nd Fall	12	CPT 196	Access for Windows	3	F, Sp	CPT 150	
	13	CPT 201	Web Content Development	3	F*		
	14	CPT 248	PC Hardware	3	F, Su		
	15	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	ENG 163
	16	OFT 185	PowerPoint	1	F, Sp		
	17	OFT 210	Office Technologies	3	F		
2nd Spring	18	CPT 249	PC Troubleshooting	3	Sp, Su	CPT 248	
	19	CPT 199 or CPT 259	Internship or User Support Operations	3	Sp	CPT 150	
	20	CPT 256	Linux Desktop	3	Sp	CPT 182	
	21	CPT 278	Integrated office Applications	3	Sp	CPT 195, CPT 196, OFT 185, and OFT 190	
	22	SPC 155	Effective Speech	3	F, Sp, Su		SPC 156

Total Program Credits 62

* Online in odd years

Computer Technology, AAS

WEB PUBLISHING

School of Technology

The Computer Technology AAS 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 a more important position in the operation of business, from commerce to communication, web publishers play a more 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, electronic commerce, web development, web content management, web marketers, technical support and corporate communications.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Plan and create effective, cohesive design solutions using a variety of web technologies.
- Blend web design, computer technology and business commerce techniques for delivery of interactive projects over the internet.
- Utilize appropriate scripting technologies to generate dynamic, interactive web pages and perform client-side processing functions.
- Demonstrate knowledge of internet-based strategies.
- Work effectively as part of a 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 the resources necessary to maintain skills as technology continues to evolve.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	GCT 125	Emerging Technology I	3	F, Sp		
	4	WEB 110	Web Design	3	F		
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	WEB 140	Dreamweaver - Basic	3	F		
1st Spring	7	CPT 196	Access for Windows	3	F, Sp	CPT 150	
	8	SPC 156	Interpersonal Communication	3	F, Sp, Su		SPC 155
	9	WEB 188	Social Media	3	F, Sp		
	10	WEB 235	Interactive Design	3	Sp		
	11	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	ENG 163
2nd Fall	12	CPT 203	HTML & CSS	3	F		
	13	CPT 271	PHP and SQL	3	F	CPT 196	
	14	CPT 201	Web Content Development	3	F*		
	15	WEB 102	Acrobat Essentials	1	F, Sp		
	16	BUS 120	Math of Business	3	F, Sp, Su	Test	
	17	MKT 254	Advertising and Promotion	3	Sp		SPC 156
2nd Spring	18	WEB 260	Search Engine Optimization Basics	3	Sp	CPT 203	
	19	OFT 235	Customer Service	3	F, Sp, Su		
	20	CPT 206	JavaScript	3	Sp	CPT 203	
	21	WEB 277	E-Commerce Technology	3	Sp	CPT 201, CPT 203, AND CPT 271	
	22	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III

Total Program Credits 62

* Online in odd years

Computer Technology, Diploma
School of Technology

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 may find employment as technical support technicians, technical sales representatives, customer service technicians, help-desk analysts and IT trainers.

Program Learning Outcomes

Upon successfully completing this program, students will be able 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	CPT 145	Intro Computer Technology	3	F, Sp, Su		
	4	CPT 248	PC Hardware	3	F, SP		
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	MTH 157	College Algebra	3	F, Sp, Su	MTH 100, 100A or Placement	Page 45 Column IV
Spring	7	CPT 182	Operating Systems	3	Sp, Su	CPT 145	
	8	CPT 181	Intro to Telecommunications	3	F		
	9	CPT 249	PC Troubleshooting	3	Sp, Su	CPT 248	
	10	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	ENG 163
	11	WEB 188	Social Media	3	F, Sp, Su		

Total Program Credits 31

Computer Technology, Certificate

MICROCOMPUTER SUPPORT

School of Technology

The Microcomputer Support Certificate offers instruction in the Microsoft Office suite of productivity software products and will guide students toward the Microsoft Office Specialist (MOS) professional certification. Courses included in this certificate may be applied toward the Computer Technology AAS Technical Support option.

Career Opportunities

Graduates of the Microcomputer Support Certificate may find employment as technical support technicians, junior systems analysts, technical sales representatives, customer service technicians, help-desk analysts and IT trainers.

Program Learning Outcomes

Upon successfully completing this program, students will be able 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 145	Introduction to Computer Technology	3	F, Sp, Su		
	3	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	4	OFT 190	Word for Windows	3	F, Sp, Su		
Spring	5	CPT 182	Operating Systems	3	Sp, Su	CPT 145	
	6	CPT 195	Excel for Windows	3	F, Sp, Su		
	7	CPT 196	Access for Windows	3	F, Sp	CPT 150	
	8	OFT 185	PowerPoint	1	F, Sp, Su		
Total Program Credits				20			

Computer Technology, Certificate

NETWORKING

School of Technology

The Computer Technology Networking Certificate provides students with an intensive educational experience in network operation and administration. Coursework may lead to Cisco Certification. Courses included in this certificate may be applied toward the Computer Technology AAS Networking Option.

Career Opportunities

Graduates of the Networking Certificate may find employment as network administrators, network technicians, technical sales representatives, customer service representatives, technical support analysts or IT trainers.

Program Learning Outcomes

Upon successfully completing this program, students will be able 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F		
	2	CPT 145	Introduction to Computer Technology	3	F, Sp, Su		
	3	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	4	CPT 172	Introduction Networks (Cisco I)	4	F		
Spring	5	CPT 182	Operating Systems	3	Sp, Su	CPT 145	
	6	CPT 216	Routing and Switching Essentials (Cisco II)	4	Sp	CPT 172	
	7	CIS 198	Fiber Optic Technology	3	Sp		
Total Program Credits				21			

Computer Technology, Certificate

PC REPAIR/A+

School of Technology

The PC Repair/A+ Certificate prepares the student for employment as a PC repair technician and provides the instructional material to prepare for the A+ industry certification exam. Courses included in this certificate may be applied toward the Computer Technology AAS Networking option.

Career Opportunities

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

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Install, configure and operate various operating systems.
- Understand the architecture and troubleshoot several popular PC operating systems.
- Become proficient in the installation and configuration of PC hardware.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F		
	2	CPT 145	Introduction to Computer Technology	3	F, Sp, Su		
	3	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	4	CPT 248	PC Hardware	3	F, Su		
Spring	5	CPT 182	Operating Systems	3	Sp, Su	CPT 145	
	6	CPT 249	PC Troubleshooting	3	Sp, Su	CPT 248	
	7	CPT 256	Linux Desktop	3	Sp	CPT 182	

Total Program Credits 19

Computer Technology, Certificate

PROGRAMMING

School of Technology

The Computer Technology Programming Certificate offers the student a firm foundation in Python, C++ and JavaScript, several of the most popular programming languages being used in industry. Courses included in this certificate may be applied toward the Computer Technology AAS Programming option.

Career Opportunities

Graduates of the Programming Certificate may find employment as computer programmers, programmer analysts, technical sales representatives, technical support analysts and web developers.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Build full-featured application programs.
- Enhance application design with object-oriented programming skills.
- Create, test and debus computer programs.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 145	Introduction to Computer Technology	3	F, Sp, Su		
	3	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	4	CPT 160	Introduction to Programming	3	F, Sp, Su		
	5	CPT 156	Programming with Python	3	F		
Spring	6	CPT 180	C++	3	Sp, Su		
	7	CPT 196	Access for Windows	3	F, Sp	CPT 150	
	8	CPT 182	Operating Systems	3	Sp, Su	CPT 145	

Total Program Credits 22

Computer Technology, Certificate

WEB APPLICATIONS

School of Technology

The Web Applications Certificate provides students with the technical and creative skills needed for a quality web application. Students develop a range of skills including interface design, web coding, web graphics, production and interactive design. Students use industry standard software and often work in a team-based environment to create content collaboratively. Courses included in this certificate may be applied toward the Web Technology AAS Web Publishing option.

Career Opportunities

Graduates may find employment as an entry-level web designer with web design, internet companies, advertising and design agencies.

The Web Applications Certificate is available as either a face-to-face or completely online program of study.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Use current software and technology to create website layouts while applying color theory and graphic design principles.
- Demonstrate proficiency in the design, development and administration of web pages and websites.
- Develop skills for effective oral and written communication, presentation and critical thinking.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	WEB 110	Web Design	3	F		
	4	WEB 140	Dreamweaver	3	F		
Spring	5	GCT 125	Emerging Technology I	3	F, Sp		
	6	WEB 188	Social Media	3	F, Sp		
	7	WEB 235	Interactive Design	3	Sp		

Total Program Credits 19

Computer Technology, Certificate

WEB DEVELOPMENT

School of Technology

The Computer Technology Web Development Certificate builds on the Web Applications certificates and offers the student exposure to a variety of web page development tools and modern programming languages. Courses included in this certificate may be applied toward the Web Technology AAS Web Publishing option.

Career Opportunities

Graduates of the Web Development Certificate program may find employment as computer programmers, systems analysts, PC technicians, programmer analysts, technical sales representatives, technical support analysts or web developers.

The Web Development Certificate is available as either a face-to-face or completely online program of study.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Design and create Internet and intranet-based web solutions.
- Enhance websites with interactivity for real-time processing.
- Identify and correct problems associated with websites.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 201	Web Content Development	3	F*		
	3	CPT 203	HTML & CSS	3	F		
	4	WEB 110	Web Designs	3	F		
Spring	5	CPT 206	JavaScript	3	Sp	CPT 203	
	6	WEB 260	Search Engine Optimization Basics	3	Sp	CPT 203	
	7	WEB 277	E-Commerce Technology	3	Sp	CPT 203, CPT 201, CPT 271	
Total Program Credits				19			

* Online in odd years

Criminal Justice, AAS

School of Art, Humanities, Social Sciences and Public Service

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.

Career Opportunities

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

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Apply relevant laws, regulations and procedures to a law enforcement situation.
- 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 policy/community relations.
- Practice positive interpersonal and communication skills as a member of the criminal justice environment.
- Practice appropriate investigative techniques.
- Adhere to accepted practices 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 office.

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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	CRJ 155	Introduction to Criminal Justice	3	F, Sp, Su		
	3	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	4	CRJ 160	Criminal Law I	3	F, Sp, Su		
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	PSY 160	General Psychology	3	F,Sp, Su		
1st Spring	7	CRJ 163	Criminal Procedure	3	F, Sp, Su		
	8	CRJ 172	Substance Abuse and Crime	3	F, Sp, Su		SWK 172
	9	POL 255	American State & Local Government	3	F, Su		SOC 155
	10	Elective	Restricted Elective	3	F, Sp, Su		See List
	11	HUM 156	Critical Thinking	3	F, Sp, Su		
2nd Fall	12	MTH 161	Modern College Mathematics	3	F, Sp, Su	MTH 052, 052 A or Placement	Page 45 Column IV
	13	CRJ 255	Juvenile Delinquency	3	F, Sp, Su		
	14	CRJ 296	Criminalistics	3	F, Sp, Su		CRJ 263
	15	CRJ 290	Principles of Criminology	3	F, Sp, Su		
	16	ENG 164	Advanced Composition	3	F, Sp, Su	ENG 161	ENG 162, 163, 168
2nd Spring	17	Elective	Restricted Elective	3	F, Sp, Su		See List
	18	CRJ 162	Police Administration I	3	Sp, Su		
	19	CRJ 287	Multiculturalism and CRJ System	3	F, Sp, Su		
	20	SPC 155	Effective Speech	3	F, Sp, Su		
	21	Elective	Restricted Elective	3	F, Sp, Su		See List

Total Program Credits 61

Restricted Electives:

CRJ 195 Private Security
CRJ 189 Corrections
CRJ 220 Research Methods in Criminal Justice
CRJ 225 Criminology of Terrorism
CRJ 261 Criminal Law II
CRJ 262 Crime Prevention
CRJ 263 Investigative Concepts
CRJ 265 White Collar Crime
CRJ 276 Community Relations
CRJ 277 Ethics in the Criminal Justice System
CRJ 283 Institutional Treatment of Adolescents and Juveniles
CRJ 296 Introduction to Criminalistics
POL 155 American National Government
PSY 270 Abnormal Psychology

Criminal Justice, AAS

CYBER SECURITY

School of Art, Humanities, Social Sciences and Public Service

The Cyber 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 tool s 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 77.

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, security technician, or other network position with an emphasis on security.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Apply relevant laws, regulations and procedures to a law enforcement situation.
- Practice appropriate investigative techniques.
- Identify and assess potential security risks against PCs, websites, programs and networks.
- Adhere to accepted practices in criminal procedures related to assist, force, search, and seizure.
- 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 office.
- Demonstrate a moral code of ethics and understand the legal responsibilities in the security field.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	CIS 168	Principles of Information Security	3	F, Sp, Su		
	3	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	4	CPT 181	Intro to Telecommunications	3	F		
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	CRJ 101	Introduction to Homeland Security	3	F		CRJ 155
1st Spring	7	CIS 212	Digital Forensics Fundamentals	3	Sp		
	8	CPT 182	Operating Systems	3	Sp, Su	CPT 150	
	9	CPT 183	Local Area Networks	3	Sp, Su		
	10	CRJ 163	Criminal Procedure	3	F, Sp, Su		
	11	ENG 162	Technical Communications	3	F, Sp, Su	ENG 161	ENG 163
	12	MTH 161	Modern College Mathematics	3	F, Sp, Su	MTH 052, 052A or Placement	Page 45 Column IV
2nd Fall	13	CIS 210	Advanced Digital Forensics	3	F		
	14	CPT 214	Wireless Communication	3	F		
	15	CRJ 195	Intro to Private Security	3	F, Su		CRJ 220
	16	CRJ 296	Introduction to Criminalistics	3	Sp, Su		CRJ 263
	17	SPC 155	Effective Speech	3	F, Sp, Su		SPC 156
2nd Spring	18	CIS 209	Network Security Fundamentals	3	Sp		
	19	CPT 256	Linus Desktop	3	Sp	CPT 182	
	20	CIS 255	Ethical Hacking and Software Defense	3	Sp	CIS 168	
	21	CRJ 265	White Collar Crime	3	Sp*		CRJ 277
	22	SOC 155	Introduction to Sociology	3	F, Sp, Su		Page 45 Column III

Total Program Credits 64

* CRJ 265 offered every 4th semester

Criminal Justice, Certificate

CORRECTIONS OFFICER

School of Art, Humanities, Social Sciences and Public Service

The Corrections Officer Certificate is designed for those who seek entry-level employment with a corrections facility.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Apply relevant laws, regulations and procedures within a correctional facility.
- Provide correctional institution care of adults and/or juveniles.
- Adhere to practices found in the criminal justice system.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	CRJ 155	Introduction to Criminal Justice	3	F, Sp, Su		
	3	CRJ 180	Corrections	3	F, Su		
	4	CRJ 255	Juvenile Delinquency	3	F, Sp, Su		
	5	CRJ 283	Institutional Treatment of Adolescents and Juveniles.	3	F, Sp, Su		
	6	CRJ 290	Principles of Criminology	3	F, Sp, Su		
	7	CRJ 172	Substance Abuse and Crime	3	F, Sp, Su		SWK 172

Total Program Credits 19

Criminal Justice, Certificate

SECURITY PROFESSIONAL

School of Art, Humanities, Social Sciences and Public Service

The Security Professional Certificate is designed for those students who seek entry-level positions in the field of private security.

Career Opportunities

This certificate is designed for those students seeking employment in the field of private security or those already employed in the field who are seeking to enhance their skills and advancement opportunities. Individuals may be employed as security officers, security guards, loss prevention specialists, campus security officers, and gaming surveillance officers.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Recognize the basic concepts and principles of private security.
- Identify the roles and responsibilities of private security.
- Describe the procedures, processes and policies for protection of private and public facilities, infrastructure, employees and visitors.
- Prepare to monitor and answer alarms, conduct risk and vulnerability assessments and implement emergency/disaster plans and procedures.
- Classify components of integrated security systems.
- Evaluate legal issues and decisions that face security professionals.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Follow Sequence	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	CRJ 195	Intro to Private Security	3	F, Su		
	3	CRJ 262	Crime Prevention	3	F		
	4	CRJ 296	Criminalistics	3	Sp, Su	CRJ 155	CRJ 263
	5	CRJ 287	Multiculturalism and CRJ System	3	F, Sp, Su		CRJ 101
	6	HSM 102	Principles of Emergency Services	3	Su		
	7	HSM 103	Vulnerability Assessments & Physical Security	3	F		
Total Program Credits				19			

Culinary Arts, AAS

APPRENTICESHIP

School of Culinary Arts/Hospitality

The culinary arts apprenticeship program is one of the majors comprising the college's School of Culinary Arts/Hospitality. This apprenticeship program, sponsored by The American Culinary Federation Laurel Highlands (ACFLHC) Chapter and Westmoreland, is accredited by the American Culinary Federation Education Foundation Accrediting Commission (ACFEFAC). A cooperative program, it combines academic course work with 4,000 hours of supervised on-the-job learning 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. Registration and membership fees are required and payable to the ACF during the first week of class.

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 and program tool kit are required for all lab classes.

Employment must be secured in an approved facility that will provide full-time employment.

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 or Seven Springs Mountain Resort as well as other approved apprenticeship sites. For information, contact the Westmoreland Admissions Office, 724-925-4000.

Career Opportunities

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

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- 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.
- Apply standards of nutrition and wellness in food preparation.
- Design set-up and prepare meals and buffets and serve meals.
- Design menus with descriptive wording and layout designs.
- Plan and execute food production and requisitions within an established food and labor budget.
- Recognize quality standards in fresh vegetables, meats, poultry, game and all other foodstuffs.
- Demonstrate supervisory and interpersonal skills within a food service team.
- Demonstrate basic skills in culinary artistries including ice carving, tallow sculpting, cake decorating and garniture display
- Utilize the technology to maintain systems of operation
- Research and adhere to sound practices for sanitation and safety
- Develop basic practical mathematical skills.

Continued on next page

Culinary Arts, AAS

APPRENTICESHIP

School of Culinary Arts/Hospitality

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CUL 121	Apprenticeship I	2	F		
	3	FSM 103	Introduction to Hospitality	3	F, Sp		FSM 113
	4	FSM 105	Foods I	4	F, Sp		
	5	FSM 117	Wait Staff/Dining Room Training	1	F, SP		
	6	FSM 118	Sanitation	2	F, Sp		
1st Spring	7	BKP 141	Baking I	4	F, Sp		
	8	CUL 122	Apprenticeship II	2	Sp	CUL 121	
	9	FSM 235	Supervision and Training	3	F, Sp		
	10	FSM 218	Hospitality Marketing	3	F, Sp		
1st Summer	11	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	12	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
2nd Fall	13	CUL 123	Apprenticeship III	2	F	CUL 122	
	14	CUL 132	Garde Manger	3	F, Sp	FSM 105	
	15	FSM 112	Quantity Foods	4	F, Sp	FSM 105	
	16	FSM 215	Purchasing and Operations	3	F, Sp		
2nd Spring	17	CUL 224	Apprenticeship IV	2	Sp	CUL 123	
	18	CUL 232	Food Specialties	3	F, Sp	FSM 105	
	19	FSM 119	Beverage Management	1	F, Sp		FSM 120
	20	FSM 159	Nutrition	3	F, Sp		BKP 243
	21	FSM 170	Food Culture & Religion	3	F, Sp		Page 45 Column II
2nd Summer	22	BUS 120	Mathematics of Business	3	F, Sp, Su	MTH 050, 050A or Placement	MTH 100
	23	ENG 163	Business Communication	3	F, Sp, Su	ENG 161	ENG 164
	24	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III

Total Program Credits **64**

Culinary Arts, Diploma

APPRENTICESHIP

School of Culinary Arts/Hospitality

The culinary arts apprenticeship program is one of the majors comprising the college's School of Culinary Arts/Hospitality. This apprenticeship program is sponsored by the American Culinary Federation Laurel Highlands (ACFLHC) Chapter and Westmoreland. A cooperative program, it combines academic course work with 4,000 hours of supervised on-the-job learning 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. Registration and membership fees are required and payable to the ACF during the first week of class.

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 and program tool kit are required for all lab classes. Business attire may be required for some class assignments

Employment must be secured in an approved facility that will provide full-time employment.

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 or Seven Springs Mountain Resort and other approved apprenticeship training sites. For more information, contact the Westmoreland Admissions Office, 724-925-4000.

Career Opportunities

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

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- 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.
- Apply standards of nutrition and wellness in food preparation.
- Design set-up and prepare meals and buffets and serve meals.
- Design menus with descriptive wording and layout designs.
- Plan and execute food production and requisitions within an established food and labor budget.
- Recognize quality standards in fresh vegetables, meats, poultry, game and all other foodstuffs.
- Demonstrate supervisory and interpersonal skills within a food service team.
- Demonstrate basic skills in culinary artistries including ice carving, tallow sculpting, cake decorating and garniture display.
- Utilize the technology to maintain systems of operation.
- Research and adhere to sound practices for sanitation and safety.
- Develop basic practical mathematical skills.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CUL 121	Apprenticeship I	2	F		
	3	FSM 103	Introduction to the Hospitality Industry	3	F, Sp		FSM 113
	4	FSM 105	Foods I	4	S, Sp		
	5	FSM 117	Wait Staff/Dining Room Training	1	F, Sp		
	6	FSM 118	Sanitation	2	F, Sp		
1st Spring	7	BKP 141	Baking I	4	F, Sp		
	8	CUL 122	Apprenticeship II	2	Sp	CUL 121	
	9	FSM 235	Supervision and Training	3	F, Sp		
	10	FSM 218	Hospitality Marketing	3	F, Sp		
2nd Fall	11	CUL 123	Apprenticeship III	2	F	CUL 122	
	12	CUL 132	Garde Manger	3	F, Sp	FSM 105	
	13	FSM 112	Quantity Foods	4	F, Sp	FSM 105	
	14	FSM 215	Purchasing and Operations	3	F, Sp		
2nd Spring	15	CUL 224	Apprenticeship IV	2	Sp	CUL 123	
	16	CUL 232	Food Specialties	3	F, Sp	FSM 105	
	17	FSM 159	Nutrition	3	F, Sp, Su	FSM 105	BKP 243
	18	FSM 119	Beverage Management	1	F, Sp		FSM 120

Total Program Credits **46**

Culinary Arts, AAS

NON-APPRENTICESHIP

School of Culinary Arts/Hospitality

The culinary arts non-apprenticeship program is one of the majors comprising the college's School of Culinary Arts/Hospitality. 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 and program tool kit 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 American Culinary Federation Education Foundation Accrediting Commission (ACFEFAC)

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.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- 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.
- Apply standards of nutrition and wellness in food preparation.
- Design set-up and prepare meals and buffets and serve meals.
- Design menus with descriptive wording and layout designs.
- Plan and execute food production and requisitions within an established food and labor budget.
- Recognize quality standards in fresh vegetables, meats, poultry, game and all other foodstuffs.
- Demonstrate supervisory and interpersonal skills within a food service team.
- Demonstrate basic skills in culinary artistries including ice carving, tallow sculpting, cake decorating and garniture display.
- Utilize the technology to maintain systems of operation.
- Research and adhere to sound practices for sanitation and safety.
- Develop basic practical mathematical skills.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	CUL 130	Basic Culinary Skills	3	F, Sp		
	4	FSM 103	Introduction to the Hospitality Industry	3	F, Sp		FSM 113
	5	FSM 105	Foods I	4	F, Sp		
	6	FSM 117	Wait Staff/Dining Room Training	1	F, Sp		
	7	FSM 118	Sanitation	2	F, Sp		
1st Spring	8	BKP 141	Baking I	4	F, Sp		
	9	FSM 119	Beverage Management	1	F, Sp		FSM 120
	10	BUS 120	Mathematics of Business	3	F, Sp, Su	MTH 050, 050A or Placement	
	11	FSM 218	Hospitality Marketing	3	F, Sp		
	12	FSM 112	Quantity Foods	4	F, Sp	FSM 105	
	13	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
1st Fall	14	FSM 159	Nutrition	3	F, Sp		
	15	FSM 215	Purchasing and Operations	3	F, Sp		
	16	CUL 132	Garde Manger	3	F, Sp	FSM 105	
	17	ENG 163	Business Communication	3	F, Sp, Su	ENG 161	ENG 164
	18	BKP 243	Healthy Cooking Trends	4	F, Sp	FSM 105	FSM 159
	19	CUL 232	Food Specialties	3	F, Sp	FSM 105	
2nd Spring	20	FSM 213	A la Carte Kitchen	4	Sp	FSM 105 & 112	
	21	FSM 219	Hospitality Internship	3	Sp	Instructor Permission	
	22	BKP 142	Baking II	3	F, Su	BKP 141	
	23	FSM 235	Supervision and Training	3	F, Sp		
	24	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III

Total Program Credits 70

Culinary Arts, Diploma

NON-APPRENTICESHIP

School of Culinary Arts/Hospitality

The culinary arts non-apprenticeship program is one of the majors comprising the college's School of Culinary Arts/Hospitality. 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 and program tool kit 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.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- 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.
- Apply standards of nutrition and wellness in food preparation.
- Design set-up and prepare meals and buffets and serve meals.
- Design menus with descriptive wording and layout designs.
- Plan and execute food production and requisitions within an established food and labor budget.
- Recognize quality standards in fresh vegetables, meats, poultry, game and all other foodstuffs.
- Demonstrate supervisory and interpersonal skills within a food service team.
- Demonstrate basic skills in culinary artistries including ice carving, tallow sculpting, cake decorating and garniture display.
- Utilize the technology to maintain systems of operation.
- Research and adhere to sound practices for sanitation and safety.
- Develop basic practical mathematical skills.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CUL 130	Basic Culinary Skills	3	F, Sp		
	3	FSM 103	Introduction to the Hospitality Industry	3	F, Sp		FSM 113
	4	FSM 105	Foods I	4	S, Sp		
	6	FSM 118	Sanitation	2	F, Sp		
1st Spring	7	BKP 141	Baking I	4	F, Sp		
	8	FSM 112	Quantity Foods	4	F, Sp	FSM 105	
	9	FSM 215	Purchasing and Operations	3	F, Sp		
	10	FSM 119	Beverage Management	1	F, Sp		FSM 120
	11	FSM 117	Wait Staff/Dining Room Training	1	F, Sp		
2nd Fall	12	CUL 132	Garde Manger	3	F, Sp	FSM 105	
	13	FSM 159	Nutrition	3	F, Sp, Su	FSM 105	BKP 243
	14	CUL 232	Food Specialties	4	F, Sp	FSM 105	
	15	FSM 218	Hospitality Marketing	3	F, Sp		
2nd Spring	16	BKP 142	Baking II	3	F, Sp	BKP 141	
	17	FSM 213	A la Carte Kitchen	4	Sp	FSM 105 & 112	
	18	FSM 219	Hospitality Internship	3	F, Sp	Instructor Permission	
	19	FSM 235	Supervision and Training	3	F, Sp		

Total Program Credits **52**

Cyber Security, AAS
School of Technology

The Cyber Security program provides a comprehensive foundation in the theory and application of both technical and non-technical security skills. The program covers a range of competencies required by the quickly evolving digital security industry. Some of these skills include applying protection, detection, and response technologies and procedures to identify threats, vulnerabilities, exploits, and controls in various digital environments. Emphasis is placed on identifying, analyzing, mitigating, and communicating risks to digital systems using various tools, techniques, and technologies.

Career Opportunities

Cybercrime is a multibillion-dollar industry that adversely impacts virtually everyone in some manner. Cyber security professionals are in high demand, both now and in future. The U.S. Bureau of Labor Statistics projects an 18 percent growth in employment opportunities for information security analysts through 2024—that is 11 percent higher than the average rate of growth for all occupations.

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.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Apply the principles and components of cyber security.
- Use computer forensics to investigate cyber-attacks.
- Implement ethical hacking to assess cyber security.
- Postures and vulnerabilities.
- Design and implement secure networks.
- Design, implement, and maintain a local area network.
- Analyze and solve computer hardware and software problems.
- Develop oral, written, and listening communication skills.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 145	Introduction to Computer Technology	3	F, Sp, Su		
	3	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	4	CIS 168	Principles of Information Security	3	F		
	5	CPT 181	Intro to Telecommunications	3	F		
	6	MTH 157	College Algebra	3	F, Sp, Su	MTH 100, 100A or Placement	Page 45 Column IV
1st Spring	7	CIS 212	Digital Forensics Fundamentals	3	Sp		
	8	CPT 182	Operating Systems	3	Sp, Su	CPT 145	
	9	CPT 183	Local Area Networks	3	Sp, Su		
	10	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	11	SOC 155	Principles of Sociology	3	F, Sp, Su		Page 45 Column III
2nd Fall	12	CIS 210	Advanced Digital Forensics	3	F	CIS 212	
	13	CPT 214	Wireless Communication	3	F	CPT 171 OR CPT 183	
	14	CPT 248	PC Hardware	3	F, Su		
	15	CPT 156	Programming with Python	3	F		
	16	CPT 262	Windows Client Server	3	F	CPT 182	
2nd Spring	17	CIS 209	Network Security Fundamentals	3	Sp		
	18	CIS 255	Ethical Hacking and Software Defense	3	Sp	CIS 168	
	19	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	ENG 163
	20	CPT 256	Linux Desktop	3	Sp	CPT 182	
	21	SPC 155	Effective Speech	3	F, Sp, Su		SPC 156

Total Program Credits 61

Cyber Security, Certificate
School of Technology

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 cybercrimes by becoming more familiar with the intricacies of computer evidence handling and documentation, and cybercrime determination, evaluation, and prosecution. Current computer professionals can expand their existing networking experience by increasing their knowledge of information security and expanding their careers into the information security discipline.

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.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Communicate with law enforcement professionals and network professionals with respect to cybercrimes and information security.
- Determine the scope and cost of specific security intrusions.
- Evaluate potential security vulnerabilities.
- Administer Internet security procedures and devices.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 145	Introduction to Computer Technology	3	F, Sp, Su		
	3	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	4	CPT 181	Introduction to Telecommunications	3	F		
	5	CIS 168	Principles of Information Security	3	F		
1st Spring	6	CPT 182	Operating Systems	3	Sp, Su	CPT 145	
	7	CPT 183	Local Area Networks	3	Sp, Su		
	8	CIS 212	Digital Forensics Fundamentals	3	Sp		

Total Program Credits 22

Dental Assisting, Diploma
School 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 Dental Assisting National Board (DANB) Radiation Health and Safety (RHS) Exam. Upon successful completion of the Dental Assisting Program, national DANB certification may be earned as a Certified Dental Assistant (CDA) upon successful completion of the DANB Infection Control (ICE) Exam and General Chairside (GC) Exam.

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 312-440-4653 or at 211 East Chicago Ave., Chicago, Illinois 60611.

Special Admission and Selection Criteria

Admission to the Dental Assisting program is highly competitive and enrollment is limited. Specific criteria for admission and selection are as follows:

- Applicants must be a graduate of accredited secondary school programs or hold GED equivalency certificates prior to selection.
- Students must attend a placement assessment and educational planning session and complete any developmental courses that may be required based on the placement assessment prior to program admission.
- Students may take the Dental Assisting program's general education courses before acceptance into the program. All courses must be completed with a "C" or better.
- Applicants who have completed college-level credit courses must have a 2.0 GPA or higher as of the application deadline.
- Applicants may repeat any of the program-required general education courses one time in an attempt to raise course grade and/or GPA.
- If there are more qualified applicants than available seats, the Dental Assisting program will use a selective admission process based on GPA.

Application Process for Health Profession Programs

- Complete and submit an Application for Admission to Westmoreland County Community College.
- Complete and submit an application for the specific Health Profession Program (Dental Assisting, Dental Hygiene, Diagnostic Medical Sonography, Expanded Functions Dental Assisting, Medical Assisting, Nursing*, Phlebotomy/Specimen Processing* or Radiology).
- Submit all required documents to the Admissions Office by the deadline.
- Submit official transcript from all secondary schools attended, graduate equivalency degree (GED) programs and any other formal educational program beyond high school.

For fall start:

Application Deadline – January 12 prior to fall start
Acceptance Notification – Mid-March.

Final Admission Criteria

Students accepted into the School of Health Professions including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing are required to have a criminal background check, child abuse history and drug screening at the student's expense.

The Program Director of each Health Profession Program gives the accepted student directions for setting up a password-secure Castle Branch Account.

Castle Branch is the background screening and compliance tracking company, which provides Westmoreland County Community College Health Profession Programs with student background screening services.

Castle Branch background screening and compliance management includes:

- Background Checks (FBI Fingerprint Check, Criminal Background Check and Child Abuse Clearances)
- Urine Drug Screen
- Immunization and Record Tracking
- Houses PPD (TB screening)
- CPR Training Documentation
- Liability Insurance (if applicable for program)
- Houses the results of the Required Health Physical.

Final admission is conditional pending receipt of Urine Drug Screen and receipt and evaluation of Criminal Background Check to determine if there is any conviction that may bar the applicant from entering the Health Profession Programs.

Essential Cognitive, Physical and Behavioral Functions

The Westmoreland County Community College Health Profession Programs including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing require that students meet certain functional abilities essential to each program. A detailed list is available in each program's handbook.

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.

Dental Assisting, Diploma
School of Health Professions

Program Learning Outcomes

Upon successful completion of this program, students will be able 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.
- 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	DAS 100	Intro to Dental Assisting	4	F		
	3	DAS 101	Oral Anatomy	2	F		
	4	DAS 102	Dental Material for Dental Assisting	2	F		
	5	DAS 103	Dental Assisting Lab	4	F		
	6	DAS 105	Dental Rad for Dental Assisting	3	F		
	7	BIO 107	Human Biology	3	F, Sp, Su		BIO 171 & 172
Spring	8	DAS 104	Dental Science	4	Sp	DAS 100, 101,102, 103, 105	
	9	DAS 106	CLN Dental Assisting I	5	Sp	DAS 100, 101,102, 103, 105	
	10	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	11	PSY 160	General Psychology	3	F, Sp, Su		
Summer	12	DAS 108	CLN Dental Assisting II	4	Su	DAS 104, 106	
	13	DAS 109	Practice Management	2	Su	DAS 104, 106	
	14	SPC 156	Interpersonal Communication	3	F, Sp, Su		

Total Program Credits 43

Dental Hygiene, AAS
School 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 312-440-4653 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 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 (or placement equivalent) must be completed prior to testing for the dental hygiene program.
- Students must attend a placement assessment and educational planning session and complete any developmental courses that may be required based on the placement assessment.
- Applicants must complete the following courses with a grade of "C" or better prior to the program's application deadline: BIO 171, CHM 264, SOC 155, and PSY 160.
- Applicants must have a minimum 2.5 cumulative GPA in program-required courses as of the application deadline. Applicants may repeat any of the program-required general education courses one time in an attempt to raise course grade and/or GPA.
- Qualified applicants must take the Dental Hygiene admission examination. Applicants will be notified of testing dates.
- If there are more qualified applicants than available seats, the Dental Hygiene program will use a selective admission process based on GPA and the Dental Hygiene admission examination score.
- 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.

Application Process for Health Profession Programs

- Complete and submit an Application for Admission to Westmoreland County Community College.
- Complete and submit an application for the specific Health Profession Program (Dental Assisting, Dental Hygiene, Diagnostic Medical Sonography, Expanded Functions Dental Assisting, Medical Assisting, Nursing*, Phlebotomy/Specimen Processing* or Radiology).
- Submit all required documents to the Admissions Office by the deadline.
- Submit official transcript from all secondary schools attended, graduate equivalency degree (GED) programs and any other formal educational program beyond high school.

For Fall Start:

Application Deadline – January 12 prior to Fall start
Acceptance Notification – Mid-March.

Final Admission Criteria

Students accepted into the School of Health Professions including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing are required to have a criminal background check, child abuse history and drug screening at the student's expense.

The Program Director of each Health Profession Program gives the accepted student directions for setting up a password-secure Castle Branch Account.

Castle Branch is the background screening and compliance tracking company, which provides Westmoreland County Community College Health Profession Programs with student background screening services.

Castle Branch background screening and compliance management includes:

- Background Checks (FBI Fingerprint Check, Criminal Background Check and Child Abuse Clearances)
- Urine Drug Screen
- Immunization and Record Tracking
- Houses PPD (TB screening)
- CPR Training Documentation
- Liability Insurance (if applicable for program)
- Houses the results of the Required Health Physical.

Final admission is conditional pending receipt of Urine Drug Screen and receipt and evaluation of Criminal Background Check to determine if there is any conviction that may bar the applicant from entering the Health Profession Programs.

Essential Cognitive, Physical and Behavioral Functions

The Westmoreland County Community College Health Profession Programs including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing require that students meet certain functional abilities essential to each program. A detailed list is available in each program's handbook.

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.

Program Learning Outcomes

Upon successful completion of this program, students will be able 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.
- 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.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Prior to Application Deadline	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	BIO 171	Anatomy and Physiology I	4	F, Sp, Su	CHM 155, 107, 264 or HS Chemistry and ENG 095 or Placement	
	3	CHM 264	Chemistry for the Health Sciences	4	F, Sp, Su	CHM 107 or CHM 155	
	4	SOC 155	Principles of Sociology	3	F, Sp, Su		
	5	PSY 160	General Psychology	3	F, Sp, Su		
1st Fall	6	DAH 101	Introduction to Dentistry	3	F		
	7	DAH 102	Dental Materials	2	F		
	8	DAH 104	Head, Neck and Dental Anatomy	4	F		
	9	BIO 172	Anatomy and Physiology II	4	F, Sp, Su	BIO 171	
	10	ENG161	College Writing	3	F, Sp, Su	ENG 085 or placement	
1st Spring	11	DAH 103	Medical Emergencies	1	Sp	DAH 101, 102, 104	
	12	DAH 105	Dental Radiology	3	Sp		
	13	DAH 111	Dental Hygiene Lecture	3	Sp		
	14	DAH 112	Dental Hygiene Lab	4	Sp		
	15	DAH 113	Oral Histology/Embryology	2	Sp		
	16	DAH 114	Periodontics I	3	Sp		
1st Summer	17	DAH 106	Nutritional Biochemistry	2	Su	DAH 103, 105, 111, 112, 113, 114	
	18	DAH 109	Oral Pathology	2	Su		
	19	DAH 115	Clinical Dental Hygiene I	5	Su		
	20	DAH 117	Local Anesthesia	3	Su		
	21	CPT 150	Microcomputer Concepts	3	F, Sp, Su		

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Dental Hygiene, AAS
School of Health Professions

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
2nd Fall	22	BIO 265	Microbiology	4	F, Sp, Su	BIO 155 or BIO 171, and CHM 107, 155, 264 or HS Chemistry	
	23	DAH 205	Periodontics II	1	F	DAH 106, 109, 115, 117	
	24	DAH 206	Clinical Dental Hygiene II	6	F		
	25	DAH 207	Pharmacology	2	F		
	26	DAH 209	Community Dental Health	3	F		
2nd Spring	27	DAH 208	Clinical Dental Hygiene III	6	Sp	DAH 205, 206, 207, 209	
	28	ENG 163	Business Communications	3	F, Sp, Su	ENG 161	
	29	BUS 120	Math of Business	3	F, Sp, Su	MTH 050, 050A or placement	ACC 155
	30	SPC 156	Interpersonal Communications	3	F, Sp, Su		

Total Program Credits **93**

Diagnostic Medical Sonography, AAS
School of Health Professions

The Diagnostic Medical Sonography (DMS) 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.

Special Admission and Selection Criteria

Admission to the DMS program is highly competitive and enrollment is limited. Specific criteria for admission and selection are as follows:

- Applicants must be graduates of an accredited secondary school program or hold a GED equivalency certificate prior to selection.
- Students must attend a placement assessment and educational planning session and complete any developmental courses that may be required based on the placement assessment by the application deadline.
- Applicants must complete the following required courses with a grade of "C" or better prior to the program's application deadline: SPC 156, BIO 171/172, MTH 157, and PHY 110. Any other DMS general education courses taken prior to program admission must also be completed with a grade of "C" or better.
- Applicants must have a minimum 2.5 cumulative GPA in program-required courses as of the application deadline. Applicants may repeat any of the program-required general education courses one time in an attempt to raise course grade and/or GPA as of the application deadline.
- Qualified applications must take the DMS admission examination. Applicants will be notified of testing dates.
- If there are more qualified applicants than available seats, the DMS program uses a selective admission process based on GPA and the DMS admission examination score.
- Applicants to the DMS program should review the following websites 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 and Obstetrics & Gynecology.

Application Process for Health Profession Programs

- Complete and submit an Application for Admission to Westmoreland County Community College.
- Complete and submit an application for the specific Health Profession Program (Dental Assisting, Dental Hygiene, Diagnostic Medical Sonography, Expanded Functions Dental Assisting, Medical Assisting, Nursing*, Phlebotomy/Specimen Processing* or Radiology).
- Submit all required documents to the Admissions Office by the deadline.
- Submit official transcript from all secondary schools attended, graduate equivalency degree (GED) programs and any other formal educational program beyond high school.

Final Admission Criteria

Students accepted into the School of Health Professions including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing are required to have a criminal background check, child abuse history and drug screening at the student's expense.

The Program Director of each Health Profession Program gives the accepted student directions for setting up a password-secure Castle Branch Account.

Castle Branch is the background screening and compliance tracking company, which provides Westmoreland County Community College Health Profession Programs with student background screening services.

Castle Branch background screening and compliance management includes:

- Background Checks (FBI Fingerprint Check, Criminal Background Check and Child Abuse Clearances)
- Urine Drug Screen
- Immunization and Record Tracking
- Houses PPD (TB screening)
- CPR Training Documentation
- Liability Insurance (if applicable for program)
- Houses the results of the Required Health Physical.

Final admission is conditional pending receipt of Urine Drug Screen and receipt and evaluation of Criminal Background Check to determine if there is any conviction that may bar the applicant from entering the Health Profession Programs.

Diagnostic Medical Sonography, AAS
School of Health Professions

Essential Cognitive, Physical and Behavioral Functions

The Westmoreland County Community College Health Profession Programs including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing require that students meet certain functional abilities essential to each program. A detailed list is available in each program's handbook.

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.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Completely and safely perform the skills of an entry-level diagnostic medical sonographer.
- Demonstrate the role of diagnostic medical sonographer in relationship to the interdisciplinary functions and members of the health care team.
- Demonstrate honesty, integrity and caring.
- Exhibit professional proficiency and currency in skills and patient care.
- Demonstrate 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Prior to Application Deadline	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	SPC 156	Interpersonal Communication	3	F, Sp, Su		SPC 155
	3	BIO 171	Anatomy & Physiology I	4	F, Sp, Su	CHM 107,155, 264 or HS Chemistry & ENG 095 or Placement	
	4	BIO 172	Anatomy & Physiology II	4	F, Sp, Su	BIO 171	
	5	MTH 157	College Algebra	3	F, Sp, Su	MTH 100, 100A or Placement	MTH 160
	6	PHY 110	Fundamentals of Physics	3	F, Sp, Su	MTH 052, 052A or Placement	
1st Fall	7	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	8	DMS 103	Cross-Sectional Anatomy for Ultrasound	2	F	Admission to program	
	9	DMS 105	Abdominal I	4	F	Co: DMS 105, 113	
	10	DMS 113	Acoustical Principles & Instrumentation I	4	F	Co: DMS 105, 113	
	11	ALH 122	Medical Terminology	3	F, Sp, Su		
1st Spring	12	DMS 114	Acoustical Principles & Instrumentation II	3	Sp	DMS 103, 105, 113	
	13	DMS 204	Gynecology	4	Sp	Co: DMS 114, 201, 205	
	14	DMS 201	Patient Care / Legal / Ethical Issues	2	Sp	Co: DMS 114, 204, 205	
	15	DMS 205	Abdominal II	4	Sp	Co: DMS 114, 204, 201	
	16	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
1st Summer	17	DMS 210	Clinical I	3	Su	DMS 201, 204, 205, 114	
2nd Fall	18	DMS 106	Obstetrics I	3	F	DMS 210	
	19	DMS 208	Introduction to Vascular	3	F	Co: DMS 205, 211	
	20	DMS 211	Clinical II	3	F	Co: DMS 205, 208	
	21	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	
2nd Spring	22	DMS 212	Clinical III	3	Sp	DMS 205, 208, 211	
	23	DMS 206	Obstetrics II	3	Sp	Co: DMS 207, 212	
	24	HUM 156	Critical Thinking	3	F, Sp, Su		
	25	DMS 207	Small Parts, Breast & Neuro	3	Sp	Co: DMS 206, 212	

Total Program Credits 77

Dietetic Technology/Nutritional Services Management, AAS

School of Culinary Arts/Hospitality

Dietetic Technology/Nutritional Services Management is one of the majors included in the college's School of Culinary Arts/Hospitality. 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 food service managers, dietary managers or nutrition 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 Association of Food and Nutrition Professionals and to write the certification examination to become a Certified Dietary Manager (CDM). Students will be required to provide medical proof of good physical health to begin the first laboratory course. Students are expected to be well groomed in compliance with standards of sanitation. Uniforms, program tool kit 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.

Program Learning Outcomes

Upon successful completion of this program, students will be able 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, counsel clients and families from diverse backgrounds in medical nutrition therapy.
- Demonstrate the ability to work as part of a production team to prepare quantity foods.
- 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 following industry standards.
- Apply organizational and communication skills in supervising food production.
- Implement cost control procedures applying mathematical concepts of profit and loss.
- Enforce sanitation and safety standards.
- Write job descriptions, specifications and work schedules for nutritional services employees.
- Design menus, analyze specialized meal patterns and write 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.
- Research and adhere to sanitation and safety practices
- Develop basic practical mathematical skills.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	DTT 111	Introduction to Dietetics	3	F		
	4	FSM 105	Foods I	4	F, Sp		
	5	FSM 118	Sanitation	2	F, Sp		
	6	FSM 159	Nutrition	3	F, Sp, Su		
1st Spring	7	CUL 135	Speed Scratch Cooking	3	Sp		
	8	DTT 114	Topics in Nutrition and Health	3	Sp		
	9	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	10	FSM 112	Quantity Foods	4	F, Sp	FSM 105	
	11	Elective	Mathematics Elective	3	F, Sp, Su		BUS 120
2nd Fall	12	BKP 141	Baking I	4	F, Sp		
	14	BKP 243	Healthy Cooking Trends	4	F, Sp	FSM 105	
	15	ENG 163	Business Communications	3	F, Sp, Su		ENG 164
	16	FSM 215	Purchasing and Operations	3	F, Sp		
	17	Elective	Social Science Elective	3	F, Sp, Su		
2nd Spring	18	DTT 199	Nutritional Services Management Practicum	3	F, Sp, Su	DTT 114, FSM 112 & Instructor Permission	
	19	FSM 113	Customer Service	3	F, Sp		
	20	FSM 235	Supervision & Training	3	F. Sp		
	21	FSM 170	Food Culture & Religion or Humanities Elective	3	F, Sp, Su		Page 45 Column II

Total Program Credits 61

Dining Room Management, Certificate
School of Culinary Arts/Hospitality

Dining room management is one of the majors comprising the School of Culinary Arts/Hospitality. 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 attire may be required for some class assignments.

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 Learning Outcomes

Upon successful completion of this program, students will be able 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.
- Identify the basic laws of food and beverage service.
- Identify diverse customer expectations.
- Collect and organize marketing information to reflect local, regional and international differences.
- Utilize the technology to maintain acceptable dining room systems of operation.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	FSM 103	Intro to the Hospitality Industry	3	F, Sp		
	3	FSM 113	Customer Service	3	F, Sp		
	4	FSM 117	Wait Staff/Dining Room Training	1	F, Sp		
	5	FSM 118	Sanitation	2	F, Sp		
Spring	6	FSM 119	Beverage Management	1	F, Sp		
	7	FSM 120	Wine Appreciation and Service	1	Sp		
	8	FSM 218	Hospitality Marketing	3	F, Sp		
	9	FSM 219	Hospitality Internship	3	F, Sp, Su	Instructor Permission	

Total Program Credits 18

Drafting and Design Technology, AAS

COMPUTER AIDED DRAFTING & DESIGN (CADD)/COMPUTER AIDED MANUFACTURING (CAM)

School of Technology

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 workforce 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.

Program Learning Outcomes

Upon successfully completing this program, students will be able 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 affect 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
- Network with machine operators, engineers and customers.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp		
	2	DFT 105	Technical Drafting I	4	F		
	3	DFT 112	Introduction to Design, Materials and Processes	3	F, Sp		
	4	ENG 161	College Writing	3	F, Sp, Su	Placement	
	5	MTH 108	Mathematics for Technologies I	4	F, Sp, Su	MTH 052, 052A or Placement	
	6	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III
1st Spring	7	CNC 111	Computer Numerical Control I	4	F, Sp		
	8	DFT 106	Technical Drafting II	4	Sp	DFT 105	
	9	PHY 107	Applied Physics	4	Sp	MTH 100, 100A or 108	
	10	MTH 109	Mathematics for Technologies II	4	F, Sp, Su	MTH 108 or Placement	
2nd Fall	11	CNC 112	Computer Numerical Control II	5	F, Sp	CNC 111	
	12	DFT 266	3D Solid Modeling I	4	F		
	13	EGR 221	Statics and Strength of Materials	4	F	PHY 107 or 155	
	14	DFT 258	AutoCAD	4	F, Sp		
2nd Spring	15	ARC 262	Piping, Structural Detailing and Electromechanical Drafting	4	Sp	ARC 210 or DFT 258	
	16	MTT 111	Machining I	4	F, Sp		
	17	DFT 267	3D Solid Modeling II	4	Sp	DFT 266	
	18	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	

Total Program Credits 66

Drafting and Design Technology, AAS

MECHANICAL DRAFTING AND DESIGN

School of Technology

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.

Career Opportunities

Recent graduates of this program have accepted jobs with the following titles: drafter, detailer, drafting technician, drafting technician trainee and CADD first-level entry position.

Program Learning Outcomes

Upon successfully completing this program, students will be able 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 operate 2-D CADD and 3-D solid modeling systems.
- 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- and three-dimensional drawings using a stand-alone mini-computer.
- Network with machine operators, designers, engineers and customers.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp		
	2	DFT 105	Technical Drafting I	4	F		
	3	DFT 112	Introduction to Design, Materials and Processes	3	F, Sp		
	4	ENG 161	College Writing	3	F, Sp, Su	ENG 161 or Placement	
	5	MTH 108	Mathematics for Technologies I	4	F, Sp, Su	MTH 052, 052A or Placement	
1st Spring	6	DFT 106	Technical Drafting II	4	Sp	DFT 105	
	7	DFT 258	AutoCAD	4	F, Sp		
	8	ENG 162	Technical Communication 3	3	F, Sp, Su	ENG 161	
	9	MTH 109	Mathematics for Technologies II	4	F, Sp, Su	MTH 108 or Placement	
	10	PHY 107	Applied Physics	4	F	MTH 100, 100A or 108	
2nd Fall	11	DFT 207	Tool Design	4	F	DFT 106	
	12	DFT 266	3D Solid Modeling I	4	F		
	13	EGR 110	Descriptive Geometry	3	F		
	14	EGR 221	Statics and Strength of Materials	4	F	PHY 107 or 155	
2nd Spring	15	ARC 262	Piping, Structural Detailing and Electromechanical Drafting	4	Sp	ARC 210 or DFT 258	
	16	DFT 208	Product Design	4	Sp	EGR 105 or DFT 112 & 207	
	17	DFT 267	3D Solid Modeling II	4	Sp	DFT 266	
	18	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III

Total Program Credits **63**

Education/Pre-K–Grade 4, AAS

School of Art, Humanities, Social Sciences and Public Service

This program reflects the standards established by the National Association of Education for Young Children (NAEYC) for students in the field of early childhood education (ECE). The program provides a foundation in the who, what, and why of effective ECE from infancy through nine years. Supervised observational field experience is required and can be completed at the Westmoreland Campus Children's Center, students' work-site classrooms, or approved off-campus locations including Head Start, public schools and Intermediate Unit classrooms.

Career Opportunities

Graduates of this program have accepted positions with the following titles: preschool teacher, group supervisor, assistant group supervisor, center supervisor and home visitor. Other graduates have started their own childcare centers, family day care home or group day care home. With experience and additional education, graduates may be employed as program directors. Many graduates transfer to four-year institutions to obtain degrees in ECE and seek Pre-K to Grade 4 PA certification for employment in early childhood or elementary school settings. Transfer to 4-year institutions requires a minimum 3.0 GPA and successful completion of PAPA/PRAXIS exams.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Formulate a plan to support and value relationships with families and communities.
- Demonstrate the use of systematic observations and other effective assessments to positively influence children's development.
- Design, implement and evaluate appropriate curriculum that promotes positive development and learning in all young children.
- Identify and utilize ethical guidelines and other professional standards related to early childhood practices.
- Evaluate and design learning environments that are healthy, respectful, and supportive of all children.
- Demonstrate technological skills needed to manage information and to educate your children.

Students enrolled in the associate degree program must be certified in first aid/CPR prior to graduation.

The Westmoreland Education/Pre-K–Grade 4 program is a participating agency of PA KEY-funded workshops and courses for program directors and practitioners.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp		
	2	ECE 155	Introduction to Early Childhood Education	3	F, Sp, Su		
	3	ECE 156	Infant & Toddler Development	3	F, Sp, Su		
	4	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	5	MTH 180	Elements of Math I	3	F	MTH 052, 052A or Placement	
	6	PSY 160	General Psychology	3	F, Sp, Su		SOC 155
1st Spring	7	ECE 157	Child Growth & Development	3	F, Sp, Su		
	8	ECE 165	Family & Society	3	F. Sp		
	9	ECE 166	Early Childhood Language and Literacy	3	F, Sp		
	10	MTH 185	Elements of Math II	3	Sp	MTH 180	
	11	ART 155	Intro to Art History	3	F, Sp, Su		MUS 155
2nd Fall	12	BIO 155	General Biology I	4	F, Sp, Su		
	13	ECE 167	Creative Experiences	3	F, Sp		
	14	ECE 255	Early Childhood Education Curriculum	3	F, Sp		
	15	ECE 256	Assessment & Observation of Young Children	3	F, Sp		
	16	ENG 255	Introduction to Literature	3	F, Sp, Su		
2nd Spring	17	ENG 250	Teaching English to Speakers of Other Languages	3	Sp		
	18	ECE 257	Introduction to Exceptional Development	3	F, Sp		
	19	ECE 284	Early Childhood Education Practicum	4	F, Sp, Su	ECE 191, 40 hours of observation, and 2.0 GPA	
	20	HIS 255	Early U.S. and PA History	3	F, Sp, Su		
	21	Elective	Restricted Elective	3	F, Sp, Su		See List

Total Program Credits 63

Restricted Electives:

101 American Sign Language
CPT 150 Microcomputer Concepts
ECE 168 Child Care Management
ECE 170 Child Health, Safety & Nutrition
ECE 265 Education of Young Children with Special Needs
EDU 200 Intro to Instructional Technology
PSY 165 Educational Psychology

Education/Pre-K–Grade 4, Diploma

School of Art, Humanities, Social Sciences and Public Service

This curriculum focuses on competencies for early childhood education (ECE) students as identified by the National Association for the Education of Young Children (NAEYC). The diploma does not require a supervised field experience. Credits earned in this program can be applied toward the requirements of the AAS degree and will lead to entry-level positions in ECE.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Develop plans that support and value relationships with families and communities.
- Demonstrate the use of systematic observations and other effective assessments to positively influence children's development.
- Identify and use ethical guidelines and other professional standards related to early childhood practices.
- Utilize professional knowledge of child development to design and evaluate environments that are healthy, respectful, supportive, and challenging for all children.
- Design, implement and evaluate appropriate curriculum for all children ages birth to nine years.

Students enrolled in the associate degree program must be certified in first aid/CPR prior to graduation.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp		
	2	ECE 157	Child Growth & Development	3	F, Sp, Su		
	3	ECE 155	Introduction to Early Childhood Education	3	F, Su		
	4	ECE 166	Early Childhood Language and Literacy	3	F, Su		
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	MTH 180	Elements of Math I	3	F	MTH 052, 052A or Placement	
1st Spring	7	ECE 156	Infant & Toddler Development	3	Sp, Su		
	8	ECE 255	Early Childhood Education Curriculum	3	Sp		
	9	ECE 167	Creative Experiences	3	Sp		
	10	ECE 165	Family & Society	3	F. Sp		
		ECE 257	Introduction to Exceptional Development	3	Sp		
	12	ECE 256	Assessment & Observation of Young Children	3	F, Sp		

Total Program Credits **34**

Education/Pre-K–Grade 4, Certificate

School of Art, Humanities, Social Sciences and Public Service

Credits earned in this program can be applied toward the requirements of the diploma or associate degree.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Demonstrate an understanding of child growth and development from birth to nine years.
- Formulate a plan to support and value positive relationships with families.
- Identify and utilize ethical guidelines and other professional standards related to the early childhood profession.

Students enrolled in the associate degree program must be certified in first aid/CPR prior to graduation.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp		
	2	ECE 157	Child Growth & Development	3	F, Sp, Su		
	3	ECE 155	Introduction to Early Childhood Education	3	F, Su		
Spring	4	ECE 156	Infant & Toddler Development	3	Sp, Su		
	5	ECE 167	Creative Experiences	3	Sp		
	6	ECE 165	Family & Society	3	F, Sp		

Total Program Credits **16**

Credentials from Outside Agencies

The Early Childhood PreK-Grade 4 program offers courses that are approved for the educational components for some credentials that are offered by external agencies. Students interested in completing their educational requirements for external credentials should arrange to speak with the program director who can advise on the courses that will meet the requirements for their chosen credentials.

Directors Credential

Those who are interested in obtaining the Pennsylvania Early Childhood Director Credential should review information found at the PA Keys website in the Degrees & Credentials section under Career Development. The program director will advise students on which courses they need to complete based on prior work and academic experience.

Child Development Associate (CDA) Credential

Those who wish to further their career and professional development can complete the educational requirements for the nationally recognized CDA Credential. The program director will advise students on the courses they need to complete based on the CDA setting they choose to pursue. Those interested in pursuing the CDA should review the additional experience, portfolio and professional requirements they must complete as a portion of their candidacy through the national CDA program. These requirements can be found at the Council for Professional Recognition website at www.CDACouncil.org.

Electrical Utility Technology, AAS
School of Technology

The EUT AAS will prepare students for mid-level positions in the electric utility industry. Students who complete this program will develop a comprehensive understanding of the activities associated with electric utility line work, including circuit analysis, technical communication, heavy equipment operation, working with high voltage electricity, class A CDL license, first aid and CPR certifications, electrical transmission and distribution, and the safety aspects related to each. Students will engage in classroom and laboratory activities that will develop the basic technical skills necessary to obtain a position within the electric utility industry. In addition, students will be required to participate in a 10-week, compensated field experience with FirstEnergy that supplements the learning process.

Special Admission and Selection Criteria

- Students who are accepted must have and maintain a valid driver's license.
- Students must successfully pass a background screening for criminal and driving records conducted by FirstEnergy.
- Students must successfully pass a physical capabilities test administered by Industrial Physical Capability Services, Inc.
- Students must pass a Department of Transportation CDL physical and provide a copy of the Medical Examiners Certificate to FirstEnergy.
- Students must meet all academic and hands-on training requirements as part of FirstEnergy's selection process.

Career Opportunities

Graduates of the EUT AAS mayaccept positions such as electric utility line worker, lineman, cable worker, electrical utility foreman, electrical line supervisor and electrical line contractor.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Adhere to safety practices, such as checking equipment regularly and erecting barriers around work areas.
- Open switches or attach grounding devices to remove electrical hazards from disturbed or fallen lines or to facilitate repairs.
- Climb poles or use truck-mounted buckets to access equipment.
- Place insulating or fireproofing materials over conductors and joints.
- Install, maintain and repair electrical distribution and transmission systems, including conduits, cables, wires and related equipment such as transformers, circuit breakers and switches.
- Identify defective sectionalizing devices, circuit breakers, fuses, voltage regulators, transformers, switches, relays or wiring using wiring diagrams and electrical-testing instruments.
- Demonstrate operation of vehicles equipped with tools and materials to jobsites.
- Coordinate work assignment preparation and completion.
- Inspect and test power lines and auxiliary equipment to locate and identify problems using reading and testing instruments.
- String wire conductors and cables between poles, towers, trenches, pylons and buildings; setting lines in place; and using winches to adjust tension.
- Identify and explain the components of an electrical distribution and transmission system.
- Develop the key technical skills necessary to secure a job in the electric utility industry.
- Install, maintain and troubleshoot electrical distribution and transmission systems.
- Demonstrate and utilize technology to maintain and troubleshoot various electrical industry systems.
- Demonstrate and utilize personal and interpersonal skills as an integral member of a team.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	ELC 191	Basic Principles of Industrial Electricity	4	F		
	4	EUT 101	Overhead Line Technology I	5	F		
	5	MTH 108	Mathematics for Technologies I	4	F, Sp, Su	MTH 052, 052A or Placement	
1st Spring	6	ELC 106	Circuit Analysis I	4	Sp		
	7	ELC 192	Industrial Electrical Equipment	4	Sp	ELC 191	
	8	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	9	EUT 102	Overhead Line Technology II	5	Sp	EUT 101	
2nd Fall	10	ELC 107	Circuit Analysis II	4	F	ELC 106 & MTH 108	
	11	EUT 201	Overhead Line Technology III	5	F	EUT 102	
	12	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	
	13	PSY 160	General Psychology	3	F, Sp, Su		
2nd Spring	14	BUS 249	Labor Relations	3	F, Sp, Su		
	15	ELC 223	Power Distribution and Transmission	4	Sp	ELC 106, 107 & 191 and EUT 101 & 102	
	16	EUT 202	Overhead Line Technology II	5	Sp	EUT 201	
	17	HUM 156	Critical Thinking	3	Sp		

Total Program Credits **63**

Electronic Engineering Technology, AAS
School of Technology

Electronics engineering technology is concerned with the theory and practice of applied electronics engineering. It is designed to provide students with the skills and knowledge required to work with electronic equipment in a wide variety of high-tech forms, often assisting electronics engineers. Graduates generally maintain, repair, test and modify complex electronic systems, conduct research and develop products.

Career Opportunities

Recent graduates of the electronics engineering technology program have accepted positions with the following titles: electronics engineering technician, electrical technician and industrial technician.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Design and construct basic circuitry based on an in-depth knowledge of electronic devices, circuits and embedded systems.
- Apply mathematics to the development of ideas based on scientific and engineering principles.
- Install, maintain and repair electronic circuits and systems using extensive knowledge of theory, test equipment and procedures.
- Apply understanding of electronic devices, circuits, systems, software 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	3	ELC 106	Circuit Analysis I	4	Sp		
	4	MTH 108	Mathematics for Technologies I	4	F, Sp, Su	MTH 052, 052A or Placement	
	5	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III
1st Spring	6	ELC 102	Electronic Devices	4	Sp	ELC 106	
	7	ELC 107	Circuit Analysis II	4	F, Sp	ELC 106 & MTH 108	
	8	ELC 114	Digital Techniques	4	Sp	ELC 106	
	9	MTH 109	Mathematics of Technologies II	4	F, Sp, Su	MTH 108 or Placement	
2nd Fall	10	ELC 202	Linear Electronics	4	F	ELC 102 & 107, MTH 109 or 158	
	11	ELC 206	Microprocessors	4	F	ELC 114	
	12	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	ENG 163 or 164
	13	PHY 155	College Physics I	4	F, Sp, Su	MTH 108, 100, or 100A and PHY 110 or HS Physics	
2nd Spring	14	DFT 258	AutoCAD	4	F, Sp		
	15	PHY 156	College Physics II	4	F, Sp, Su	PHY 155	
	16	ELC 213	Microprocessor Applications	4	Sp	ELC 206	
	17	Elective	Restricted Elective	4	F, SP, Su		See List

Total Program Credits 62

Restricted Electives: ELC 192, 199, 200, 201, 208, 209, 221, 222, 223; EMA 140, 220

Engineering Technology, AAS
School of Technology

The Engineering Technology AAS is designed to prepare students for an entry-level position in STEM-related industries and businesses.

Career Opportunities

Many positions are available in companies looking for workers with a solid STEM education and background. This program can give you the edge in securing an entry-level position in such companies with a two-year associate of applied science degree. The range of opportunities is almost limitless as the need for workers with solid skills in applied science, technology, engineering, and mathematics will continue to be in high demand. A partial list of job titles that apply to this degree includes manufacturing engineering technologist; electromechanical engineering technologist; industrial engineering technologist or technician; nanotechnology engineering technologist; sales engineering technician; materials engineering technologist; mechanical engineering technologist or technician; and civil engineering technician.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Utilize strong analytical, problem-solving, organizational, communication, and team skills.
- Apply concepts of physics (mechanics, thermo-fluids, vibrations, electricity and magnetism, and optics), mathematics (up through a first course in calculus/analytic geometry), engineering (materials, manufacturing processes, descriptive geometry, statics, strength of materials, quality control, and kinematics), and technology (HP-50g®, Excel®, AutoCAD®, Inventor®/Solid Works®, Working Model®, and Python®) to the design and analysis of engineering systems.
- Gain entry-level positions in a wide variety of STEM-related industries and business.
- Become a life-long learner not only through formal training and education but also by self-study.
- Be well rounded with interests that include leadership, volunteerism, and community building.
- Appreciate the importance of ethical engineering and good citizenship in all aspects of life and the engineering profession.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp		
	2	DFT 105	Technical Drafting I	4	F		
	3	MTH 157	College Algebra	3	F, Sp, Su	MTH 100, 100A or Placement	
	4	EGR 101	Introduction to Engineering I	3	F		
	5	EGR 110	Descriptive Geometry	3	F		
	6	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
1st Spring	7	DFT 112	Introduction to Design, Materials and Processes	3	F, Sp		
	8	MTH 158	Precalculus Mathematics	3	F, Sp	Placement or MTH 157	
	9	DFT 266	Solid Modeling I (Inventor)	4	F, Sp, Su		
	10	EGR 104	Engineering Materials	3	Sp	Corequisite MTH 158	
	11	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	ENG 163 or 164
2nd Fall	12	MTH 172	Analytical Geometry & Calculus I	4	F, Sp, Su	MTH 158	
	13	PHY 155	College Physics I	4	F, Su	MTH 100 or 108 & PHY 110 or HS Physics	
	14	DFT 258	AutoCAD	4	F, Sp, Su	DFT 105	
	15	EGR 221	Statics & Strength of Materials	4	F	PHY 107 or 155	
2nd Spring	16	PHY 156	College Physics II	4	Sp	PHY 155	
	17	EGR 210	Quality Control	3	Sp	MTH 172	
	18	EGR 227	Kinematics	3	Sp	PHY 155 & MTH 172	
	19	Elective	Social Science	3	F, Sp, Su		Page 45 Column III

Total Program Credits 62

Expanded Functions Dental Assisting, AAS
School of Health of Professions

The Expanded Functions Dental Assisting (EFDA) provides students with training in advanced skills recognized by the Pennsylvania State Board of Dentistry as legal functions for the Expanded Functions Dental Assistant. Graduates of the EFDA program are qualified to take the Pennsylvania Certification Exam for EFDA.

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 EFDA program is highly competitive and enrollment is limited. Specific criteria for admission and selection are listed below. Each applicant must meet one of the following:

- Applicants must hold a Certified Dental Assistant (CDA) credential or a Registered Dental Hygienist (RDH) license
- Applicants may be currently enrolled in an accredited Dental Assisting program and pass the Dental Assisting National Board (DANB) prior to the start of the semester
- Applicants may apply without a CDA credential after three years of clinical experience. All applicants applying without a CDA credential must have a letter verifying three years recent chairside dental assisting experience including dates and hours from the employing dentist.

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.

Application Process for Health Profession Programs

- Complete and submit an Application for Admission to Westmoreland County Community College
- Complete and submit an application for the specific Health Profession Program (Dental Assisting, Dental Hygiene, Diagnostic Medical Sonography, Expanded Functions Dental Assisting, Medical Assisting, Nursing*, Phlebotomy/Specimen Processing* or Radiology)
- Submit all required documents to the Admissions Office by the deadline.
- Submit official transcript from all secondary schools attended, graduate equivalency degree (GED) programs and any other formal educational program beyond high school.

For fall start:

Application Deadline January 12 prior to fall start Acceptance Notification Mid-March

For spring start (EFDA certificate only):

Application Deadline May 15 prior to spring start Acceptance Notification Mid-August

Final Admission Criteria

Students accepted into the School of Health Professions including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing are required to have a criminal background check, child abuse history and drug screening at the student's expense.

The Program Director of each Health Profession Program gives the accepted student directions for setting up a password-secure Castle Branch Account.

Castle Branch is the background screening and compliance tracking company, which provides Westmoreland County Community College Health Profession Programs with student background screening services.

Castle Branch background screening and compliance management includes:

- Background Checks (FBI Fingerprint Check, Criminal Background Check and Child Abuse Clearances)
- Urine Drug Screen
- Immunization and Record Tracking
- Houses PPD (TB screening)
- CPR Training Documentation
- Liability Insurance (if applicable for program)
- Houses the results of the Required Health Physical

Final admission is conditional pending receipt of Urine Drug Screen and receipt and evaluation of Criminal Background Check to determine if there is any conviction that may bar the applicant from entering the Health Profession Programs.

Essential Cognitive, Physical and Behavioral Functions

The Westmoreland County Community College Health Profession Programs including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing require that students meet certain functional abilities essential to each program. A detailed list is available in each program's handbook.

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.

Expanded Functions Dental Assisting, AAS
School of Health of Professions

Career Opportunities

Graduates who have earned the EFDA AAS degree and passed the Expanded Functions Pennsylvania Certification Exam may seek career opportunities in a variety of dental settings including private practice, dental clinics, laboratory and administrative duties in dental office management. This degree will increase access to care within Pennsylvania and provide oral health care in public health clinics.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Provide safe and competent services to dental patients including placing and removing rubber dams, matrices and wedges; applying cavity liners and bases; placing, condensing, carving and contouring amalgam restorations; placing and finishing composite resin restorations; placing sealants; coronal polishing and fluoride restorations.
- Demonstrate understanding of dental technologies and proper use/ care of dental devices and equipment.
- Demonstrate commitment to lifelong learning and professional advancement in the healthcare delivery system.
- Demonstrate professionalism in all aspects of dental practice including appearance, communication and behaviors.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	DAS 100	Intro to Dental Assisting	4	F		
	3	DAS 101	Oral Anatomy	2	F		
	4	DAS 102	Dental Material for Dental Assisting	2	F		
	5	DAS 103	Dental Assisting Lab	4	F		
	6	DAS 105	Dental Rad for Dental Assisting	3	F		
	7	BIO 107	Human Biology	3	F, Sp, Su		BIO 171 & 172
1st Spring	8	DAS 104	Dental Science	4	Sp	DAS 100, 101,102, 103, 105	
	9	DAS 106	CLN Dental Assisting I	5	Sp	Corequisite DAS 104	
	10	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	11	PSY 160	General Psychology	3	F, Sp, Su		
1st Summer	12	DAS 108	CLN Dental Assisting II	4	Su	DAS 104, 106	
	13	DAS 109	Practice Management	2	Su	DAS 104, 106	
	14	SPC 156	Interpersonal Communication	3	F, Sp, Su		
2nd Fall	15	DAE 101	EFDA I	6	F	DAS 108, 109	
	16	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	17	ENG 163	Business Communication	3	F, Sp, Su	ENG 161	
2nd Spring	18	DAE 102	EFDA II	3	Sp	DAE 101	
	19	BUS 120	Mathematics of Business	3	F, Sp, Su	MTH 050, 050A or Placement	MTH 157 or MTH 161

Total Program Credits **61**

Expanded Functions Dental Assisting, Certificate
School of Health of Professions

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Provide safe and competent services to dental patients including placing and removing rubber dams, matrices and wedges; applying cavity liners and bases; placing, condensing, carving and contouring amalgam restorations; placing and finishing composite resin restorations; placing sealants; coronal polishing and fluoride restorations.
- Demonstrate understanding of dental technologies and proper use/ care of dental devices and equipment.
- Demonstrate commitment to lifelong learning and professional advancement in the healthcare delivery system.
- Demonstrate professionalism in all aspects of dental practice including appearance, communication and behaviors.

Fall Start

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV	First Year Seminar	1	F, Sp, Su		
	2	DAE 100	Dental Anatomy	2	F		DAS 101 or DAH 104
	3	DAE 101	EFDA I	6	F		
	4	SPC 156	Interpersonal Communication	3	F, Sp, Su		
Spring	5	DAE 102	EFDA II	3	Sp	DAE 101	
	6	CPT 150	Microcomputer Concepts	3	F, Sp, Su		

Total Program Credits 18

Spring Start

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Spring	1	PDV	First Year Seminar	1	F, Sp, Su		
	2	DAE 100	Dental Anatomy	2	Sp		DAS 101 or DAH 104
	3	DAE 101	EFDA I	6	Sp		
	4	SPC 156	Interpersonal Communication	3	F, Sp, Su		
Summer	5	DAE 102	EFDA II	3	Su	DAE 101	
	6	CPT 150	Microcomputer Concepts	3	F, Sp, Su		

Total Program Credits 18

Forensic Science, AAS

School of Math, Science and Engineering

The Forensic Science AAS is designed to provide students with the skills, knowledge and hands-on experiences to prepare them for work as a forensic science technician.

A Forensic Science Certificate-Forensic Science Investigator program is also available.

Career Opportunities

Graduates of this program can work as crime science technicians, lab technicians, evidence room technicians or fingerprint identification technicians.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Handle chemicals and biological specimens safely with proper health and environmental considerations.
- Handle laboratory equipment safely.
- Perform analytical tests.
- Collect, identify, classify, and analyze physical evidence related to criminal investigations.
- Perform tests on weapons or substances, such as fiber, hair and tissue to determine significance to investigations.
- Testify as expert witnesses on evidence or crime laboratory techniques.
- Serve as specialists in an area of expertise, such as fingerprinting, handwriting or biochemistry.
- Ensure chain of custody of evidence.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 171	Career Pathway Exploration	3	F, Sp, Su		
	2	BIO 110	Intro to Forensic Biology	4	F, Sp, Su		
	3	CHM 120	Chemical Lab and Safety	3	F		
	4	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
1st Spring	6	MTH 157	College Algebra	3	F, Sp, Su	MTH 100, 100A or Placement	
	7	ALH 120	Pharmacology	3	F, Sp, Su	MTH 050, 050A or Placement	
	8	BIO 160	Introduction to Forensic Toxicology	4	Sp		
	9	BIO 171	Anatomy & Physiology I	4	F, Sp, Su	CHM 107, 155 or 264 or HS Chemistry & ENG 095 or Placement	
	10	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	
2nd Fall	11	MTH 160	Introduction to Statistics	3	F, Sp, Su	MTH 052, 052A or Placement	
	12	BIO 130	Introduction to Pathology	4	F, Su		
	13	BIO 172	Anatomy & Physiology II	4	F, Sp, Su	BIO 171	
	14	CRJ 155	Intro to Criminal Justice	3	F, Sp, Su		
	15	CRJ 163	Criminal Procedures	3	F, Sp, Su		
2nd Spring	16	BIO 265	Microbiology	4	F, Sp, Su	BIO 155 or 171 and CHM 107, 155 264 or HS Chemistry & ENG 085 or Placement	
	17	CHM 199	Chemistry Internship I	3	F, Sp, Su		
	18	CHM 264	Chemistry for Health Science	4	F, Sp, Su	CHM 107, 155 or HS Chemistry	
	19	CRJ 296	Introduction to Criminalistics	3	F, Sp, Su		
	20	PHL 161	Introduction to Ethics	3	F, Sp, Su		

Total Program Credits 65

Forensic Science, Certificate

School of Math, Science and Engineering

The Forensic Science Certificate is designed to provide additional skills for those who wish to become forensic investigators for a police department, law firm, insurance company or other investigative agency.

A Forensic Science AAS program is also available

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Analyze scientific evidence from crime scenes.
- Use scientific evidence in criminal investigations.
- Utilize skills as an expert witness in conjunction with other skills (lawyer, clinical lab technician, nurse, policeman, etc.).

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	BIO 110	Intro to Forensic Biology	4	F, Sp, Su		
	3	BIO 130	Introduction to Pathology	4	F, Su		
	5	CRJ 155	Intro to Criminal Justice	3	F, Sp, Su		
Spring	4	BIO 160	Introduction to Forensic Toxicology	4	Sp		
	6	CRJ 163	Criminal Procedures	3	F, Sp, Su		
	7	CRJ 296	Introduction to Criminalistics	3	F, Su		

Total Program Credits **22**

Heating, Ventilation, Air Conditioning and Refrigeration, AAS
School of Technology

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 HVACR systems for residential and commercial applications. The heating ventilation and air conditioning diploma is designed to prepare students for entry-level positions in the HVAC&R field. Students learns the refrigerants used in the industry, the basic refrigeration cycle, calculate design load and duct sizing to ACCA standards, fabricate ductwork, and control circuitry. The skills to install and service gas and oil furnaces are stressed. Students will install and service water based heating and cooling systems, air conditioners and heat pumps, basic wiring, and learn refrigerant recovery techniques. Successful completion of this program leads to the associate of applied science degree.

Career Opportunities

Recent graduates of the HVAC program have obtained jobs with the following titles: HVAC instructor, HVAC system designer, service technician, installer, inside salesperson, maintenance technician, contractor and troubleshooter.

Program Learning Outcomes

Upon successful completion of this degree, students will be able to:

- Demonstrate the skills, professional values and ethics necessary to be employed in the heating, ventilation and air conditioning field.
- Demonstrate effective oral and written communication skills with customers, salesman and fellow employees.
- Describe the general principles and terminology of HVAC systems.
- Become certified in EPA Refrigerant Handling by preparing to pass the EPA Refrigeration Exam.
- Understand basic electrical and control circuitry.
- Demonstrate the ability to utilize direct digital controls.
- Design, install and maintain hydronic heating and cooling equipment.
- Use computers and the internet to calculate HVAC loads, design ducts and hydronic systems.
- Build and maintain heating, air conditioning, ventilation and heat pump equipment.
- Understand the operation of gas and oil furnaces.
- Understand and implement heating and air conditioning systems that utilize natural technologies.
- Demonstrate the ability to read and understand blueprints for residential and commercial structures.
- Design, install and maintain heating and cooling equipment.
- Identify and demonstrate the proper use of HVAC hand tools, meters and gauges.
- Demonstrate the ability to fabricate ductwork.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	HAC 257	Commercial Refrigeration	4	F		
	3	HAC 101	Introduction to Refrigeration/AC	4	F		
	4	HAC 240	HVAC Duct Fabrication	2	F		
	5	HAC 175	Direct Digital Controls	2	F		
	6	HAC 280	Residential Wiring	3	F		
1st Spring	7	HAC 105	Blueprint Reading for HVAC Technicians	2	Sp		
	8	HAC 170	HVACR Control Sys	2	Sp		
	9	HAC 255	Air Conditioning/Heat Pumps	4	Sp		
	10	HAC 150	ACCA Man J and Man D Load Est.	4	Sp		
	11	HAC 290	EPA Refrigerant Exam Prep.	3	Sp		
2nd Fall	12	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	13	HAC 250	Gas and Oil Heating Technology	4	F		
	14	HAC 256	Geothermal and Solar Technology	3	F		
	15	MTH 108	Mathematics for Technologies I	4	F, Sp, Su	MTH 052, 052A or Placement	
	16	Elective	Drafting (DFT courses)	3-4	F, Sp, Su		
2nd Spring	17	DFT 258	AutoCAD	4	F, Sp, Su		
	18	ENG 162,163, or 164	Technical or Business Comm. or Adv. Comp	4	F, Sp, Su	ENG 161	
	19	HAC 260	Hydronics	4	Sp		
	20	Science	Science Elective	3-4	F, Sp, Su		Page 45 Column V
	21	Social Science	Social Science Elective	3	F, Sp, Su		Page 45 Column III

Total Program Credits **65-67**

Heating, Ventilation and Air Conditioning, Diploma
School of Technology

The heating ventilation and air conditioning diploma is designed to prepare students for entry-level positions in the HVAC &R field. In the classroom and through lab experiences the student learns the refrigerants used in the industry, the basic refrigeration cycle, to fabricate ductwork, and control circuitry. The students also learn the skills to install and service gas and oil furnaces. Students will install and service of water based heating and cooling systems, air conditioners and heat pumps, basic wiring, and learn refrigerant recovery techniques.

Career Opportunities

Graduates of this program will obtain jobs as ductwork fabricators, service technicians, installers, maintenance technicians or troubleshooters.

Program Learning Outcomes

Upon successful completion of this degree, students will be able to:

- Demonstrate the skills, professional values and ethics necessary to be employed in the heating, ventilation and air conditioning field.
- Demonstrate effective oral and written communication skills with customers, salesman and fellow employees.
- Identify and demonstrate the proper use of HVAC hand tools, meters and gauges.
- Describe the general principles and terminology of HVAC systems.
- Design, install and maintain heating and cooling equipment.
- Design, install and maintain hydronic heating and cooling equipment.
- Demonstrate the ability to utilize direct digital controls.
- Understand and implement heating and air conditioning systems that utilize natural technologies.
- Demonstrate the ability to read blueprints for residential and commercial structures.
- Read and interpret electrical ladder and pictorial diagrams to understand basic electrical and control circuitry in HVAC systems.
- Demonstrate the ability to fabricate ductwork.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	HAC 101	Introduction to Refrigeration/AC	4	F		
	3	HAC 240	HVAC Duct Fabrication	2	F		
	4	HAC 175	Direct Digital Controls	2	F		
	5	HAC 250	Gas and Oil Heating Technology	4	F		
	6	HAC 256	Geothermal and Solar Technology	3	F		
1st Spring	7	HAC 105	Blueprint Reading for HVAC Technicians	2	Sp		
	8	HAC 170	HVACR Control Sys	2	Sp		
	9	HAC 255	Air Conditioning/Heat Pumps	4	Sp		
	10	HAC 260	Hydronics	4	Sp		
	11	HAC 290	EPA Refrigerant Exam Prep.	3	Sp		

Total Program Credits 31

Heating, Ventilation and Air Conditioning, Certificate

MECHANIC I

School of Technology

The Heating, Ventilation and Air Conditioning Mechanic I Certificate is designed to prepare students for entry-level positions in the HVAC field. The class and lab experiences will help the student develop skills to work with the installation and service of heating and cooling systems, air conditioners and heat pumps, basic wiring, gas and oil furnaces, and refrigerant recovery techniques.

Career Opportunities

Graduates of this program can obtain jobs as service technicians, installers, maintenance technicians or troubleshooters.

Program Learning Outcomes

Upon successful completion of this degree, students will be able to:

- Demonstrate the skills, professional values and ethics necessary to be employed in the heating, ventilation and air conditioning field.
- Demonstrate effective oral and written communication skills with customers, salesman and fellow employees.
- Describe the general principles and terminology of HVAC systems.
- Identify and interpret occupational health and safety standards in the entry-level occupation.
- Demonstrate the ability to utilize direct digital controls
- Design, install and maintain heating and cooling equipment.
- Understand the operation of gas and oil furnaces.
- Build and maintain air conditioning, gas furnace and oil burning systems.
- Demonstrate the ability to utilize direct digital controls.
- Understand and implement heating and air conditioning systems that utilize natural technologies.
- Build and maintain air conditioning and heat pump equipment.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	HAC 101	Introduction to Refrigeration/AC	4	F		
	3	HAC 240	HVAC Duct Fabrication	2	F		
	4	HAC 175	Direct Digital Controls	2	F		
	5	HAC 250	Gas and Oil Heating Technology	4	F		
	6	HAC 256	Geothermal and Solar Technology	3	F		
Total Program Credits				16			

Heating, Ventilation and Air Conditioning, Certificate

MECHANIC II

School of Technology

The Heating, Ventilation and Air Conditioning Mechanic II Certificate is designed to prepare students for entry-level positions in the HVAC field. In the classroom and through lab experiences the student will learn the types of refrigerants used in the industry, the basic refrigeration cycle, how to fabricate ductwork and how to utilize control circuitry. The students will also learn to install and service hydronic systems.

Career Opportunities

Graduates of this program can obtain jobs as ductwork fabricators, service technicians, installers, maintenance technicians and/or troubleshooters.

Program Learning Outcomes

Upon successful completion of this degree, students will be able to:

- Demonstrate the skills, professional values and ethics necessary to be employed in the heating, ventilation and air conditioning field.
- Demonstrate effective oral and written communication skills with customers, salesman and fellow employees.
- Describe the general principles and terminology of HVAC systems.
- Demonstrate the ability to read blueprints for residential and commercial structures.
- Identify and interpret occupational health and safety standards in the entry-level occupation.
- Read and interpret electrical ladder and pictorial diagrams to wire and troubleshoot HVAC systems.
- Design, install and maintain hydronic heating and cooling equipment.
- Use control logic to find and repair electrical problems in air conditioning and heat pump systems.
- Identify and demonstrate the proper use of HVAC hand tools, meters and gauges.
- Become certified in EPA Refrigerant Handling by preparing to pass the EPA Refrigeration Exam.
- Demonstrate the ability to fabricate ductwork.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Spring	7	PDV 101	First-Year Seminar	1	F, Sp, Su		
	8	HAC 105	Blueprint Reading for HVAC Technicians	2	Sp		
	9	HAC 170	HVACR Control Sys	2	Sp		
	10	HAC 255	Air Conditioning/Heat Pumps	4	Sp		
	11	HAC 260	Hydronics	4	Sp		
	7	HAC 290	EPA Refrigerant Exam Prep.	3	Sp		

Total Program Credits **16**

Hospitality Management, Certificate

School of Culinary Arts/Hospitality

Hospitality management is one of the areas included in the college's School of Culinary Arts/Hospitality. This curriculum is designed to prepare students for entry-levels of management positions in the hospitality industry. Emphasis is given to the development of hospitality knowledge and skills in essential areas such as sanitation, customer service, · marketing, and management. Business attire may be required for some classes.

Career Opportunities

Graduates of the hospitality management certificate program may accept positions as sales representative, assistant restaurant manager, assistant food service director, dining room manager, training and development specialist or customer service representatives.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify the procedures and responsibilities of departmental teams with a hospitality operation.
- Identify and satisfy diverse customer expectations.
- Demonstrate sanitation and safety.
- Utilize technology to maintain systems of operation.
- Research, evaluate and write menus, purchase orders and inventories.
- Supervise a hospitality team utilizing personal and interpersonal skills.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall or Spring	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	FSM 113	Customer Service	3	F, Sp		
	3	FSM 118	Sanitation	2	F, Sp		
	4	FSM 235	Supervision and Training	3	F, Sp		
	5	FSM 215	Purchasing & Operations	3	F, Sp		
	6	FSM 218	Hospitality Marketing	3	F, Sp		
	7	CPT 150	Microcomputer Concepts	3	F, Sp, Su		

Total Program Credits 18

Hotel and Resort Management, AAS
School of Culinary Arts/Hospitality

Hotel and Resort Management is one of the majors comprising the college's School of Culinary Arts/Hospitality. This curriculum is designed to prepare students for various positions with the hotel/lodging industry. Emphasis is given to the development of knowledge and skills in essential areas such as social and economic tourism, salesmanship, marketing, food and beverage, event management, lodging management, property management and recreation. This program also requires the student to arrange and participate in three credits of approved internship so that classroom learning can be applied or experienced at lodging and resort facilities.

Students are expected to be well groomed in compliance with standards of sanitation. Uniforms and program tool kit 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; customer service representatives; and tourism promotion representatives.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify 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 the tourism and lodging industry.
- Practice the technical skills needed for successful daily operation of a lodging and resort business.
- Recognize the role of management in controlling and supervising the functions of the various departments, properties and activities of tourism and lodging operations.
- Analyze and apply marketing objectives and sales strategies to the operations necessary for the management of tourism and lodging facilities.
- Recognize the economic and social impact of tourism and lodging 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.
- Analyze the records, financial data and systems of operation necessary for the management of lodging systems.
- Satisfy diverse customer expectations.
- Research and adhere to practices for sanitation and safety.
- Develop basic practical mathematical skills.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp		
	2	FSM 113	Customer Service	3	F, Sp		
	3	FSM 117	Wait Staff/Dining Room Training	1	F, Sp		
	4	FSM 118	Sanitation	2	F, Sp		
	5	TRV 171	Travel and Tourism Principles	3	F, Sp		
	6	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	7	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
1st Spring	8	FSM 105	Foods I	4	F, Sp		
	9	HMT 160	Executive Housekeeping and Front Office Procedures	3	Sp		
	10	HMT 170	Casino/Gaming Operations	3	Sp		
	11	BUS 120	Mathematics of Business	3	F, Sp, Su	MTH 050, 050A or Placement	
	12	ENG 163	Business Communication	3	F, Sp, Su	ENG 161	ENG 164
2nd Fall	13	FSM 157	Catering	3	F	FSM 105*	
	14	FSM 215	Purchasing and Operations	3	F		
	15	HMT 161	Recreational Facilities Management	3	F		
	16	HMT 262	Lodging and Property Management	3	F		
	17	FSM 170	Food Culture & Religion	3	F, Sp		Page 45 Column II
2nd Spring	18	FSM 119	Beverage Management	1	F, Sp		
	19	FSM 112	Quantity Foods	4	F, Sp	FSM 105	
	20	FSM 218	Hospitality Marketing	3	F, Sp		
	21	FSM 235	Supervision and Training	3	F, Sp		
	22	HMT 264	Convention and Meeting Management	3	Sp		
	23	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III
Summer	24	FSM 219	Hospitality Internship	3	F, Sp, Su	Instructor Permission	

Total Program Credits 67

Hotel and Resort Management, Diploma
School of Culinary Arts/Hospitality

Hotel and Resort Management is one of the majors comprising the college's School of Culinary Arts/Hospitality. This curriculum is designed to prepare students for positions with the hotel/ lodging/resort industry. Emphasis is given to the development of knowledge and skills in essential areas such as social and economic tourism, salesmanship, event management, lodging management, property management and recreation.

Students are expected to be well groomed in compliance with standards of sanitation. Uniforms and program tool kit 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 a diploma in this program may be employed in positions such as assistant hotel/motel managers; food, beverage and banquet assistant managers; convention and special event coordinators; sales assistants, department assistants for lodging facilities; customer service representatives; and tourism promotion representatives.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify 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 the tourism and lodging industry.
- Practice the technical skills needed for successful daily operation of a lodging and resort business.
- Recognize the role of management in controlling and supervising the functions of the various departments, properties and activities of tourism and lodging operations.
- Analyze and apply marketing objectives and sales strategies to the operations necessary for the management of tourism and lodging facilities.
- Recognize the economic and social impact of tourism and lodging 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.
- Analyze the records, financial data and systems of operation necessary for the management of lodging systems.
- Satisfy diverse customer expectations.
- Research and adhere to sound practices for sanitation and safety.
- Develop basic practical mathematical skills.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	FSM 113	Customer Service	3	F, Sp		
	3	FSM 117	Wait Staff/Dining Room Training	1	F, Sp		
	4	FSM 118	Sanitation	2	F, Sp		
	5	HMT 161	Recreational Facilities Management	3	F		
	6	TRV 171	Travel and Tourism Principles	3	F		
	7	FSM 105	Foods I	4	F, Sp		
1st Spring	8	FSM 235	Supervision and Training	3	F, Sp		
	9	HMT 160	Executive Housekeeping and Front Office Procedures	3	Sp		
	10	HMT 170	Casino/Gaming Operations	3	Sp		
	11	HMT 264	Convention and Meeting Management	3	Sp		
	12	FSM 112	Quantity Foods	4	F, Sp	FSM 105	
2nd Fall	13	FSM 157	Catering	3	F	FSM 105	
	14	FSM 215	Purchasing and Operations	3	F, Sp		
	15	FSM 218	Hospitality Marketing	3	F, Sp		
	16	HMT 262	Lodging and Property Management	3	F		
	17	FSM 119	Beverage Management	1	F, Sp		
	18	FSM 219	Hospitality Internship	3	F, Sp, Su	Instructor Permission	

Total Program Credits **49**

Hotel and Resort Management, Certificate
School of Culinary Arts/Hospitality

Hotel and Resort Management is one of the majors comprising the college's School of Culinary Arts/Hospitality. This curriculum is designed to prepare students for entry positions with the hotel/lodging industry. Emphasis is given to the development of knowledge and skills in essential areas such as social and economic tourism, salesmanship, event management, lodging management, property management and recreation.

Career Opportunities

Students earning a certificate in this program may be employed in positions such as front desk clerks; beverage and banquet servers and hosts; room service attendants; housekeeping supervisors; and activities coordinators.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify 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 the tourism and lodging industry.
- Practice the technical skills needed for successful daily operation of a lodging and resort business.
- Recognize the role of management in controlling and supervising the functions of the various departments, properties and activities of tourism and lodging operations.
- Utilize interpersonal and personal skills within tourism and lodging properties using acceptable procedures, practices and acquired skills.
- Satisfy diverse customer expectations.
- Research and adhere to practices for sanitation and safety.
- Develop basic practical mathematical skills.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	HMT 161	Recreational Facilities Management	3	F		
	3	HMT 262	Lodging & Property Management	3	F		
	4	TRV 171	Travel/Tourism Principles	3	F		
Spring	5	HMT 160	Executive Housekeeping and Front Office	3	Sp		
	6	HMT 170	Casino/Gaming Operations	3	Sp		
	7	HMT 264	Convention and Meeting Management	3	Sp		

Total Program Credits 19

Industrial Technology, Diploma
School of Technology

Industry in the Southwestern Pennsylvania region is dynamic and employees who have a broad educational background in industrial technology are a valuable commodity. The industrial technology diploma will allow students to customize their educational pathway and pursue education and training in more than one skill group while integrating a core set of foundation courses including applied math, science and communication. Students who complete this diploma will be employable in various industries including manufacturing, oil and gas, technical sales, warehouse operations and transportation. Students will engage in classroom discussions, research activities and laboratory exercises that will enhance and develop knowledge, skills and abilities.

Career Opportunities

Students who complete this program may accept positions such as general maintenance and repair workers, production managers, manufacturing and technical sales representatives, production workers, machinists, dispatchers, supervisors, electrical technicians, telecommunications technicians, safety specialists and many others.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate the skills, professional values and ethics necessary to be employed in the various industries that employ individuals with technical or trades-related skills associated with the management and energy sectors
- Demonstrate effective oral and written communication skills with corporate officers, supervisors, government officials, front line workers and colleagues
- Demonstrate knowledge, skills and abilities in multiple technological and trades related disciplines
- Identify, install, troubleshoot, construct, form, weld, assemble, wire or develop systems or processes based upon selected educational pathways
- Implement safe work practices in all occupational areas
- Apply and demonstrate compliance with applicable regulations, laws, governing bodies or associations as necessary depending upon chosen disciplines.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Students must select two certificates		Certificate	Heating, Ventilation and Air Conditioning Mechanic I, Certificate	15	F, Sp, Su		
		Certificate	Heating, Ventilation and Air Conditioning Mechanic II, Certificate	15	F, Sp, Su	HVAC Mech I Cert	
		Certificate	Robotics – Basic Systems, Certificate	16	F		
		Certificate	Robotics – Technician I, Certificate	16	Sp	Adv. Man. Basic Systems Cert	
		Certificate	Journeyman Machining Technology I, Certificate	16	F		
		Certificate	Journeyman Machining Technology II, Certificate	16	Sp		
		Certificate	Welding Engineering Technology I, Certificate	15	F, Sp, Su		
		Certificate	Welding Engineering Technology II, Certificate	15	F, Sp, Su	Welding Eng. Tech I, Cert	
Total Program Credits				30-32			

Journeyman Machining Technology, AAS
School of Technology

This program prepares students for employment, advancement and certification in both the manual and computer numerical control (CNC) machining industries. Students will learn to read and interpret prints, use common hand tools, set up and operate metal cutting machines including mills, lathes and grinders and use precision measuring equipment. Students will also learn to create machine code programs for CNC equipment, and load, troubleshoot and execute the programs on CNC equipment including three-, four- and five-axis mills and two- and three- axis lathes. Students will fulfill the required classroom training hours for the Pennsylvania Journeyman Certificate, which may be obtained by completing the required shop experience hours from an associated machine shop.

Career Opportunities

Graduates of this program can expect to be employed as machinists, tool and die makers, metalworkers, CNC programmers and CNC operators. This program can also benefit those desiring to become managers and designers.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Select appropriate materials and processes to produce parts
- Interpret conventional and GD&T blueprints.
- Utilize mathematics in the layout and production of parts.
- Design parts and fixtures using CAD drafting software.
- Produce G-code machine programs using CAM software.
- Effectively plan and sequence work operations.
- Produce quality parts and fixtures using various materials.
- Inspect parts based on tolerance specifications.
- Analyze and solve hardware and production problems.
- Communicate effectively and appropriately.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp		
	2	CNC 111	Computer Numerical Control I	4	F, Sp		
	3	MTT 101	Blueprints	4	F		
	4	MTT 111	Machining I	4	F		
	5	MTH 108	Mathematics for Technologies I	4	F, Sp, Su	MTH 052, 052A or Placement	
1st Spring	6	CNC 112	Computer Numerical Control II	4	F, Sp	CNC 111	
	7	DFT 258	AutoCAD	4	F, Sp		
	9	MTT 112	Machining II	4	Sp	MTT 111	
	10	MTH 109	Mathematics for Technologies II	4	F, Sp, Su	MTH 108 or Placement	
2nd Fall	11	CNC 213	Computer Numerical Control III	4	F	CNC 112	
	12	MTT 207	Tool Design	3	F		
	13	MTT 201	Inspection	3	F	MTT 101	
	14	Elective	Restricted Elective	4	F, Sp, Su		See List
	15	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
2nd Spring	16	ENG 162	Technical Communication	3	F, Sp, Su	ENGL 161	
	17	DFT 112	Introduction to Design, Materials, and Processing	3	F, Sp		
	18	MTT 202	Maintenance	3	Sp	MTT 111	
	19	Elective	Restricted Elective	4	F, Sp, Su		See List
	20	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III
Total Program Credits				**66**			

Restricted Electives:
DFT 266 Inventor
CNC 214 Computer Numerical Control IV
MTT 213 Machining III
MTT 214 Machining IV
WEL 125 Introduction to Welding
Courses with prefix: DFT, EMA, ELC, EGR, HAC, MET, PHY, WEL (Prefix courses must be approved and meet credit requirements.)

Journeyman Machining Technology, Diploma
School of Technology

This program is specifically designed for those who are employed full-time and are seeking to complete the classroom training hours for the Pennsylvania Journeyman Certification by taking one course per semester. This state certification can subsequently be achieved by completing the required number of shop experience hours with companies who are setup with the state in association with the Westmoreland classroom program.

Students will learn to read and interpret prints, use common hand tools, set up and operate metal cutting machines including mills, lathes and grinders, and use precision measuring equipment. Students will also learn to create machine code programs for CNC equipment and load, troubleshoot and execute the programs on CNC mills and lathes.

Students will receive 33 college level credits toward an AAS degree. The Journeyman Machining Technology degree may be achieved by completing the necessary additional credits.

Career Opportunities

Graduates of this program can expect to increase their employability as machinists, tool and die makers, metalworkers, CNC programmers and CNC operators.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Select appropriate materials and processes to produce parts.
- Interpret conventional and GD&T blueprints.
- Utilize mathematics in the layout and production of parts.
- Design parts and fixtures using CAD drafting software.
- Produce G-code machine programs using CAM software.
- Effectively plan and sequence work operations.
- Produce quality parts and fixtures using various materials.
- Inspect parts based on tolerance specifications.
- Analyze and solve hardware and production problems.
- Communicate effectively and appropriately.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp		
	2	CNC 111	Computer Numerical Control I	4	F, Sp		
	3	MTT 101	Blueprints	4	F		
	4	MTT 111	Machining I	4	F		
	5	MTH 108	Mathematics for Technologies I	4	F, Sp, Su	MTH 052, 052A or Placement	
1st Spring	6	CNC 112	Computer Numerical Control II	4	F, Sp	CNC 111	
	7	DFT 207	Tool Design	3	F, Sp		
	9	MTT 202	Maintenance	3	Sp	MTT 101	
	10	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	11	DFT 112	Introduction to Design, Materials, and Processing	3	F, Sp	DFT 112	

Total Program Credits 33

Journeyman Machining Technology I, Certificate
School of Technology

This program prepares students for entry-level employment in both the manual and computer numerical control (CNC) machining industries. Students will learn the basic use of machine shop hand tools, mills, lathes and grinders. Students will produce and execute G-code programs on CNC mills and lathes. Students will learn to read and interpret both conventional and GD&T blueprints. Students will also gain the mathematical skills necessary to machine shop production.

This is the first of four certificate programs for students pursuing the Journeyman Machining Technology AAS.

Career Opportunities

Graduates of this program can expect to be employed as entry-level machinists, tool and die makers, metalworkers, CNC programmers and CNC operators. These classes may also be used toward a Pennsylvania Journeyman Certification with shops associated with Westmoreland.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Use basic shop hand tools to produce simple parts.
- Operate manual mills, lathes and grinders.
- Write and troubleshoot CNC G-code programs.
- Execute programs on CNC mills and lathes.
- Interpret conventional and GD&T blueprints.
- Use mathematics to solve shop equations.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp		
	2	CNC 111	Computer Numerical Control I	4	F, Sp		
	3	MTT 101	Blueprints	4	F		
	4	MTT 111	Machining I	4	F		
	5	MTH 108	Mathematics for Technologies I	4	F, Sp, Su	MTH 052, 052A or Placement	
Total Program Credits				17			

Journeyman Machining Technology II, Certificate

School of Technology

This program prepares students for upper entry-level employment in both the manual and computer numerical (CNC) machining industries. Students will learn to produce G-code programs for CNC mills and lathes using MasterCAM. Students will also learn the properties of materials and the processes used to turn raw materials into finished products. Students will learn to design and draw parts using AutoCAD. Students will also advance their mathematical skills for machine shop production.

This is the second of four certificate programs for students pursuing the Journeyman Machining Technology degree.

Career Opportunities

Graduates of this program can expect to be employed as upper entry-level machinists, tool and die makers, metalworkers, CNC programmers and CNC operators. These classes may also be used toward a Pennsylvania Journeyman Certification with shops associated with Westmoreland.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Generate G-code programs using MasterCAM.
- Execute these programs on CNC mills and lathes.
- Select appropriate materials and processes to produce parts.
- Design parts and fixtures using AutoCAD.
- Solve advanced mathematical shop formulas.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Spring	1	PDV 101	First Year Seminar	1	F, Sp		
	2	CNC 112	Computer Numerical Control II	4	F, Sp	CNC 111	
	3	DFT 258	AutoCAD	4	F, Sp		
	4	MTH 109	Mathematics for Technologies II	4	F, Sp, Su	MTH 108 or Placement	
	5	MTT 112	Machining II	4	Sp	MTT 111	
Total Program Credits				17			

Journeyman Machining Technology III, Certificate

School of Technology

This program prepares students for lower mid-level employment in both the manual and computer numerical (CNC) machining industries. Students will learn to produce multi-axis mill and lathe G-code programs using MasterCAM. They will also learn the design principles for creating jigs and fixtures used in production work. Students will learn to use manual and digital methods to inspect parts to specific tolerances. Students will also learn to communicate effectively.

This is the third of four certificate programs for students pursuing the Journeyman Machining Technology AAS.

Career Opportunities

Graduates of this program can expect to be employed as lower mid-level machinists, tool and die makers, metalworkers, CNC programmers and CNC operators. These classes may also be used toward a Pennsylvania Journeyman Certification with shops associated with Westmoreland.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Generate multi-axis G-code using MasterCAM.
- Execute these programs on multi-axis lathes and mills.
- Design and build production jigs and fixtures.
- Inspect parts based on tolerance specifications.
- Communicate effectively and appropriately.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp		
	2	CNC 213	Computer Numerical Control III	4	F	CNC 112	
	3	MTT 207	Tool Design	3	F		
	4	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	5	MTT 201	Inspection	3	F	MTT 101	
	6	Elective	Restricted Elective	4	F, Sp, Su		See List

Total Program Credits 18

Restricted Electives:
DFT 266 Inventor
MTT 213 Machining III

WEL 125 Introduction to Welding
Courses with prefix: DFT, EMA, ELC, EGR, HAC, MET, PHY, WEL (Prefix courses must be approved and meet credit requirements.)

Journeyman Machining Technology IV, Certificate
School of Technology

This program prepares students for upper mid-level employment in both the manual and computer numerical (CNC) machining industries. Students will learn to effectively use advanced manual operations on mills, lathes and grinders in the production of parts. Students will also learn to perform periodic maintenance and repair shop equipment and systems. Students will also acquire technical communication skills and take a social study elective.

This is the fourth of four certificate programs for students pursuing the Journeyman Machining Technology degree.

Career Opportunities

Graduates of this program can expect to be employed as mid-level machinists, tool and die makers, metalworkers, CNC programmers and CNC operators. These classes may also be used toward a Pennsylvania Journeyman Certification with shops associated with Westmoreland.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Effectively produce parts using manual mills, lathes and grinders
- Utilize special tooling and fixtures in precision machining
- Perform periodic maintenance and repair shop equipment
- Demonstrate technical communication skills
- Complete the degree requirements with an elective study.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Spring	1	PDV 101	First Year Seminar	1	F, Sp		
	2	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	
	3	DFT 112	Introduction to Design, Materials, and Processing	3	F, Sp		
	4	MTT 202	Maintenance	3	Sp	MTT 111	
	5	Elective	Restricted Elective	4	Sp		See List
	6	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III
Total Program Credits				17			

Restricted Electives:
DFT 266 Inventor
CNC 214 Computer Numerical Control IV
MTT 213 Machining III
MTT 214 Machining IV
WEL 125 Introduction to Welding
Courses with prefix: DFT, EMA, ELC, EGR, HAC, MET, PHY, WEL (Prefix courses must be approved and meet credit requirements.)

Manufacturing Technology, AAS

MANUFACTURING PROCESS TECHNOLOGY

School of Technology

The Manufacturing Technology AAS 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.

Program Learning Outcomes

Upon successful completion of this program, students will be able 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 manufacturing 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	3	ELC 106	Circuit Analysis I	4	F, Sp		
	4	MTH 108	Mathematics for Technologies I	3	F, Sp, Su	MTH 052, 052A or Placement	
	5	CHM 107	Introductory Concepts in Chemistry I	4	F, Sp, Su	MTH 052, 052A or Placement	
	6	DFT 112	Introduction to Design, Materials & Processing	3	F		
1st Spring	7	DFT 258	AutoCAD	4	F, Sp		
	8	ELC 100	Programmable Logic Control I	4	Sp		
	9	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	ENG 163 or 164
	10	PHY 150	Energy & Society	3	F, Sp, Su		
2nd Fall	11	PHY 107	Applied Physics	4	F, Sp	MTH 108, 100 or 100A	
	12	EGR 180	Principles of Industrial Hydraulics	4	F		
	13	ELC 200	Programmable Logic Control II	4	F	ELC 100	
	14	ELC 209	Instrumentation & Process Control	4	F	ELC 106	
2nd Spring	15	EGR 210	Quality Control	3	Sp	MTH 108	
	16	MPT 199	MPT Internship	3	Sp	Instructor Permission	ELC 201
	17	MPT 240	Introduction to Automated Manufacturing	3	Sp		
	18	MTH 160	Introduction to Statistics	3	F, Sp, Su	MTH 052, 052A or Placement	
	19	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III

Total Program Credits **64**

The Medical Assisting program prepares the graduate to assist the physician with the care and treatment of patients in administrative and clinical procedures. The Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of Medical Assisting Education Review Board (MAERB). Graduates apply for the national Certified Medical Assistant (CMA) examination. Students are also eligible for the Registered Medical Assistant (RMA), Certified Clinical Medical Assistant (CCMA) and the Registered Phlebotomy Technician (RPT) credentials.

Career Opportunities

The medical assistant may be employed in physician offices, clinics, hospitals, ambulatory care centers, nursing care facilities, medical laboratories and other health care facilities. Medical Assistants may also work as phlebotomists.

Special Admission and Selection Criteria

- 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.
- Students must attend a placement assessment and educational planning session and complete any developmental courses that may be required based on the placement evaluation.
- All developmental courses must be completed with a minimum grade of "C." Students who have attempted developmental courses three or more times will not be considered for admission. Applicants must demonstrate math skills at the MTH 052 level and English skills at ENG 085 level (via placement testing) or have successfully completed that course.

Application Process for Health Profession Programs

- Complete and submit an Application for Admission to Westmoreland County Community College.
- Complete and submit an application for the specific Health Profession Program (Dental Assisting, Dental Hygiene, Diagnostic Medical Sonography, Expanded Functions Dental Assisting, Medical Assisting, Nursing*, Phlebotomy/Specimen Processing* or Radiology).
- Submit all required documents to the Admissions Office by the deadline.
- Submit official transcript from all secondary schools attended, graduate equivalency degree (GED) programs and any other formal educational program beyond high school.

For Fall Start:

Application Deadline January 12 prior to fall start Acceptance Notification Mid-March

- The Medical Assisting program at Westmoreland County Community College requires a separate application from the general Westmoreland application. Students must complete all required developmental coursework before starting the program. Enrollment is limited due to clinical site placement for practicum hours. Students cannot enroll in Medical Assisting (MAS) core classes until formally accepted into the program. Applications received after January 12 will be considered based on space availability.

- Applicants must have a 2.0 GPA in the courses required for the program. If the GPA is less than 2.0, one or more of the courses can be repeated in order to meet this requirement by the deadline date. The student must maintain a 2.0 GPA in order to progress in the program.

Final Admission Criteria

Students accepted into the School of Health Professions including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing are required to have a criminal background check, child abuse history and drug screening at the student's expense.

The Program Director of each Health Profession Program gives the accepted student directions for setting up a password-secure Castle Branch Account.

Castle Branch is the background screening and compliance tracking company, which provides Westmoreland County Community College Health Profession Programs with student background screening services.

Castle Branch background screening and compliance management includes:

- Background Checks (FBI Fingerprint Check, Criminal Background Check and Child Abuse Clearances)
- Urine Drug Screen
- Immunization and Record Tracking
- Houses PPD (TB screening)
- CPR Training Documentation
- Liability Insurance (if applicable for program)
- Houses the results of the Required Health Physical.

Final admission is conditional pending receipt of Urine Drug Screen and receipt and evaluation of Criminal Background Check to determine if there is any conviction that may bar the applicant from entering the Health Profession Programs.

Essential Cognitive, Physical and Behavioral Functions

The Westmoreland County Community College Health Profession Programs including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing require that students meet certain functional abilities essential to each program. A detailed list is available in each program's handbook.

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.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Perform administrative functions such as patient reception, scheduling appointments, form preparation, ordering supplies and maintaining patient records.
- Assist physician with general physical examination and related patient procedures.
- Collect, transport, handle and process laboratory specimens for analysis.
- Administer medications measure vital signs.
- 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.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	OFT 110	Document Processing I	3	F, Sp, Su	OFT 100	
	3	BIO 107	Human Biology	3	F, Sp, Su		BIO 171 & 172
	4	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	5	MAS 100	Introduction to Medical Assisting	4	F		
Spring	6	ALH 122	Medical Terminology	3	F, Sp, Su		
	7	PSY 160	General Psychology	3	F, Sp, Su		
	8	ALH 120	Pharmacology	3	F, Sp, Su	MTH 050, 050A or Placement	
	9	MAS 105	Administrative Procedures	3	Sp	MAS 100	
	10	MAS 110	Clinical Procedures	4	Sp	MAS 100	
Summer	11	OFT 235	Customer Service	3	F, Sp, Su		
	12	MAS 120	Practicum	3	Su	MAS 105, MAS 110	

Total Program Credits 36

Medical/Healthcare Management, AAS
School of Health Professions

This Medical/Healthcare Management AAS combines specific course work in human biology, medical terminology, medical billing and inpatient/outpatient coding. During the last semester, students will have the opportunity to apply their skills by completing an internship. This curriculum is designed to provide the student with the knowledge to enter the medical billing/coding arena.

Career Opportunities

Graduates with the Medical/Healthcare Management AAS may find employment as medical office personnel, medical registrars, billing specialists, insurance verifiers, schedulers, entry-level coders, claims processors and unit secretaries.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate skill 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.
- Demonstrate proficiency in word processing, written communication, medical terminology, medical billing, coding and reimbursement.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	BIO 107	Human Biology	3	F, Sp, Su		BIO 171 & 172
	3	BUS 140	Intro to Business	3	F, Sp, Su		BUS 158 or 258
	4	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	5	OFT 110	Document Processing	3	F, Sp, Su	OFT 100 or Placement	
	6	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
1st Spring	7	OFT 235	Customer Service	3	Sp, Su		
	8	HCM 130	A&P for Medical Offices	3	F, Sp	BIO 107 or BIO 171 & 172	
	9	HCM 145	Medical Office Procedures	3	F, Sp		
	10	HCM 155	Electronic Health Records	3	F, Sp, Su		
	11	HCM 250	Diagnostic Medical Coding	3	F, Sp, Su	BIO 107 or BIO 171 & 172	
2nd Fall	12	BUS 120	Math of Business	3	F, Sp, Su	MTH 050, 050A or Placement	
	13	HCM 150	Introduction to Health Information	3	F, Sp, Su		
	14	HCM 165	Law & Ethics Healthcare	3	F, Sp, Su		
	15	SPC 156	Interpersonal Communication	3	F, Sp, Su		SPC 155
	16	HCM 260	Procedural Medical Coding	3	Sp	BIO 107 or BIO 171 & 172	
2nd Spring	17	ENG 163	Business Communication	3	F, Sp, Su	ENG 161	ENG 162 or 164
	18	SOC 155	Principles of Sociology	3	F, Sp, Su		PSY 160
	19	HCM 199	Internship	3	F, Sp, Su	HCM 145, 250, 260 and Major QPA 2.0	BUS 241
	20	HCM 270	Hospital Billing Coding	3	F, Sp	BIO 107, HCM 130, 250, 260	
	21	HCM 285	Advanced Medical Coding	3	F, Sp	HCM 145,250 & 260 and 20 credit hours of HCM courses	

Total Program Credits 61

Medical/Healthcare Management, Diploma
School of Health Professions

The Medical/Healthcare Management Diploma combines course work in human biology, medical terminology, transcription, medical office duties, electronic health record and billing processes. Courses included in this diploma program may be applied toward the Medical/Healthcare Management AAS.

Career Opportunities

Graduates of the medical/healthcare management diploma program may find employment as medical administrative assistants, medical office personnel, medical records assistants, unit secretaries, admissions clerks, claims processors and medical records technicians.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate proficiency in writing, basic math and communication.
- Collect, prepare, file, store and retrieve information.
- Demonstrate proficiency using practice management and electronic health record software.
- Produce CMS 1500 claim forms.
- Work independently or in teams to demonstrate effective interpersonal and problem-solving skills, attitudes and work habits.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	BIO 107	Human Biology	3	F, Sp, Su		BIO 171 & 172
	3	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	4	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	5	HCM 145	Medical Office Procedures	3	F, Sp		
	6	SPC 156	Interpersonal Communication	3	F, Sp, Su		SPC 155
Spring	7	BUS 120	Math for Business	3	F, Sp, Su	MTH 050, 050A or Placement	
	8	OFT 235	Customer Service	3	Sp, Su		
	9	HCM 130	A&P for Medical Offices	3	F, Sp	BIO 107 or BIO 171 & 172	
	10	HCM 150	Introduction to Health Information	3	F, Sp, Su		
	11	HCM 155	Electronic Health Records	3	F, Sp, Su		
Total Program Credits				31			

Medical/Healthcare Management, Certificate
School of Health Professions

The Medical/Healthcare Management Certificate is designed for students who are interested in medical administration. Course work combines medical terminology, medical office procedures and medical billing management software. Courses in this certificate may be applied toward the Medical/Healthcare Management Diploma and AAS.

Career Opportunities

Graduates with the Medical/Healthcare Management Certificate may find employment as medical administrative assistants, medical office personnel, medical records assistants and patient access representatives.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate skills in electronic processing and claims processing.
- Collect, prepare, file, store and retrieve information.
- Demonstrate proficiency and implement medical insurance and electronic health regulations by using various software programs.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall or Spring	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	OFT 110	Document Processing I	3	F, Sp, Su	OFT 100	
	3	HCM 145	Medical Office Procedures	3	F, Sp		
	4	OFT 235	Customer Service	3	Sp, Su		
	5	HCM 150	Introduction to Health Information	3	F, Sp, Su		
	6	HCM 155	Electronic Health Records	3	F, Sp, Su		

Total Program Credits 19

Multimedia and Photography, AAS

MULTIMEDIA TECHNOLOGY

School of Art, Humanities, Social Sciences and Public Service

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 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 freelancers working on a variety of creative and technical multimedia projects.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Systematically design, produce and analyze non-broadcast 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 non-broadcast 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	3	MED 155	Intro to Multimedia	3	F,Sp,Su		
	4	MED 110	Digital Presentation	3	F,Sp		
1st Spring	5	MED 170	Digital Photography Photoshop	3	F,Sp,Su		
	6	MED 240	Audio Techniques	3	Sp		
	7	MED 150	Editing and Video Tech/Premiere Pro	3	F,Sp		
	8	MED 158	History of Cinema	3	F,Sp,Su		
	9	PSY 160	General Psychology	3	F, Sp, Su		
	10	SPC 155	Effective Speech	3	F, Sp, Su		
2nd Fall	11	MED 159	Basic Video Production	3	F,Sp		
	12	MED 255	Public Relations	3	F,Sp		
	13	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	
	14	MED 260	Interactive Multimedia	3	F		
	15	MED 256	Advertising	3	F,Sp		
2nd Spring	16	MED 257	Television Production	3	Sp	MED159	
	17	BUS 120	Business Math	3	F, Sp, Su	MTH 050, 050A or Placement	
	18	MED 270	Adv Editing and Video Tech Premiere Pro	3	Sp	MED150	
	19	MED 290	Video Special Effects	3	Sp	MED150	
	20	MED 271	Adv Digital Photography Photoshop	3	F, Sp	MED 170	
	21	MED 299	Internship	3	F,Sp,Su	Instructor Permission and 30 cr MED completed	

Total Program Credits **61**

Multimedia and Photography, AAS

PHOTOGRAPHY

School of Art, Humanities, Social Sciences and Public Service

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.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Produce a portfolio that 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	3	BUS 140	Introduction to Business	3	F, Sp, Su		
	4	MED 160	Basic Photography	3	F, Sp, Su		
	5	MED 110	Digital Presentation	3	F,Sp		
1st Spring	6	MED 170	Digital Photography Photoshop	3	F, Sp, Su		
	7	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	
	8	MED 159	Basic Video Production	3	F, Sp		
	9	MED 161	Portrait Photography	3	F, Sp	MED 160	
	10	MED 255	Public Relations	3	F, Sp		
	11	SPC 155	Effective Speech	3	F, Sp, Su		
2nd Fall	12	MED 150	Editing and Video Tech/Premiere Pro	3	F, Sp		
	13	MED 256	Advertising	3	F, Sp		
	14	MED 260	Interactive Multimedia	3	F		
	15	MED 271	Adv Digital Photography Photoshop	3	F, Sp	MED 170	
	16	BUS 120	Business Math	3	F, Sp, Su	MTH 050, 050A or Placement	
2nd Spring	17	MED 199	Internship	3	F, Sp, Su	Instructor Permission and 30 cr MED completed	
	18	MED 200	Portfolio Development	3	F, Sp	MED 170 & 271	
	19	MED 263	Photojournalism	3	Sp	MED 170 & 161 or 271	
	20	MED 266	Studio/Location Photography	3	Sp	MED 161, 170 & 271	
	21	PSY 160	General Psychology	3	F, Sp, Su		

Total Program Credits **60**

Multimedia and Photography, Certificate

ADOBE VIDEO STUDIO

School of Art, Humanities, Social Sciences and Public Service

The Adobe Video Studio Certificate provides students with an intensive experience in Windows-based video, audio and DVD digital software. Courses included in this certificate may be applied toward the Multimedia and Photography AAS Multimedia Technology Option.

Career Opportunities

Graduates of the Adobe Video Studio certificate program may find employment as computer support specialists in the field of multimedia as technicians and/or customer sales or service representatives.

Program Learning Outcomes

Upon successful completion of this program, students will be able 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	MED 150	Editing and Video Tech/Premiere Pro	3	F, Sp		
	3	MED 240	Audio Techniques	3	F		
	4	MED 260	Interactive Multimedia	3	F		
Spring	5	MED 270	Adv Editing and Video Tech/Premiere Pro	3	Sp	MED 150	
	6	MED 290	Video Special Effects	3	Sp	MED 150	

Total Program Credits 16

Multimedia and Photography, Certificate

VIDEO/TELEVISION

School of Art, Humanities, Social Sciences and Public Service

The Video/Television Certificate provides students with an intensive experience in video and television production techniques and processes. Courses included in this certificate may be applied toward the Multimedia and Photography AAS Multimedia Technology Option.

Career Opportunities

Graduates of the video/television certificate program may find employment as entry-level video camera and editing technicians, customer sales or service representatives.

Program Learning Outcomes

Upon successful completion of this program, students will be able 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	MED 240	Audio Techniques	3	F		
	3	MED 150	Editing and Video Tech/Premiere Pro	3	F, Sp		
	4	MED 159	Basic Video Production	3	F, Sp		
Spring	5	MED 257	Television Production	3	Sp	MED 159	
	6	MED 290	Video Special Effects	3	Sp	MED 150	
Total Program Credits				16			

Nanotechnology, AAS

School of Math, Science and Engineering

The Nanotechnology AAS prepares students for work in diverse fields such as biotechnology, pharmaceutical research, nanomanufacturing, semiconductor manufacturing, and more. Students learn to work with materials at nanoscale in analysis, production, and data collection. Graduates' skills include product flow, quality control, and problem solving. Students complete the first three semesters at Westmoreland then complete nanotechnology courses at the Nanofabrication Facility at Penn State University (PSU) in University Park, PA. Students need to apply for admission for the nanotechnology program at PSU at least one semester prior to the semester at PSU. Tuition for MPT courses completed at Penn State will be equal to Westmoreland tuition.

Career Opportunities

Occupations for graduates of this program include laboratory, quality control, and manufacturing technicians in fields such as bionanotechnology, medicine, pharmaceutical and semiconductor manufacturing, optoelectronics, biomedical applications, and microelectromechanical devices.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate an understanding of nanotechnology principles and concepts
- Apply concepts from chemistry, engineering, electronics and mathematics to nanotechnology experiments and nanomanufacturing.
- Apply understanding of nanofabrication manufacturing systems to practical situations and laboratory results to experimental applications.
- Operate and maintain nanotechnology electromechanical equipment used in nanotechnology laboratories and basic nanofabrication manufacturing.
- Identify, analyze and troubleshoot problems using systems approach.
- Schedule production, test materials, integrate systems.
- Communicate effectively and appropriately; record and report information significant to the job.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 171	Career Pathway Exploration	3	F, Sp		
	2	MPT 101	Introduction to Nanotechnology	1	F, Sp, Su		
	3	MTH 157	College Algebra	3-4	F, Sp, Su	MTH 100, 100A or Placement	MTH 158, 172, 173, 271, 272, 275, 277, 108, or 109
	4	ENG 161	College Writing	3	F, Sp, Su		
	5	CHM 107	Introductory Concepts in Chemistry I	4	F, Sp, Su	MTH 052 or 052A or Placement	CHM 108, 155, 156, or 264
1st Spring	6	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	ENG 164
	7	CPT 145	Introduction to Computer Technology	3	F, Sp, Su		CPT 150, 160, DFT 258, or 266
	8	PHY 107	Applied Physics	4	F, Sp, Su	MTH 100, 100A, 108, or Placement	PHY 155, 156, 255, or 256
	9	Elective	Restricted Program Elective	3-4	F, Sp, Su		
	10	Elective	Restricted Program Elective	3-4	F, Sp, Su		
2nd Fall	11	SOC 155	Principles of Sociology	3	F, Sp, Su		PSY 160, ECN 255, 256, or GEO 155
	12	PHL 155	Introduction to Logic	3	F, Sp, Su		PHL 161, SPC 155, or 156
	13	Elective	Restricted Program Elective	3-4	F, Sp, Su		
	14	Elective	Restricted Program Elective	3-4	F, Sp, Su		
2nd Spring	15	MPT 211	Material Safety & Equipment	3	Sp, Su	MTH 157 & ENG 161	
	16	MPT 212	Basic Nanotechnology Process	3	Sp, Su	MTH 157 & ENG 161	
	17	MPT 213	Materials in Nanotechnology	3	Sp, Su	MTH 157 & ENG 161	
	18	MPT 214	Patterning in Nanotechnology	3	Sp, Su	MTH 157 & ENG 161	
	19	MPT 215	Material Modification for Nano	3	Sp, Su	MTH 157 & ENG 161	
	20	MPT 216	Char, Testing of Nano Structures	3	Sp, Su	MTH 157 & ENG 161	

Total Program Credits 60-65*

* This program requires at least 60 credits. Courses taken to fulfil Restricted Program Electives may not also be used to fulfil other course requirements within the program.

Nanotechnology, AAS
School of Math, Science and Engineering

Restricted Program Electives:

ALH 120 Pharmacology
ALH 122 Medical Terminology
BIO 107 Human Biology
BIO 145 Botany
BIO 155 General Biology I
BIO 156 General Biology II
BIO 171 Anatomy & Physiology I
BIO 172 Anatomy & Physiology II
BIO 210 Zoology
BIO 255 Making Sense of Classical Genetics
BIO 265 Microbiology
BIO 275 Biochemistry
BIO 285 Molecular Genetics
BUS 158 Principles of Management
BUS 260 Small Business Management
BUS 262 Entrepreneurship
CHM 107 Intro. Concepts in Chemistry
CHM 108 Intro. Concepts in Chemistry II
CHM 155 General Chemistry I
CHM 156 General Chemistry II
CHM 250 Organic Chemistry I
CHM 251 Organic Chemistry II
CHM 264 Chemistry for the Health Sciences
CPT 145 Introduction to Computer Technology
CPT 150 Microcomputer Concepts

Restricted Program Electives continued:

CPT 160 Introduction to Programming
CPT 163 Java Programming
CPT 180 C++ Programming
CPT 182 Operating Systems
CPT 213 Java Programming II
DFT 112 Introduction to Design, Materials and Processing
EGR 104 Engineering Materials
EGR 210 Quality Control
EGR 221 Statics and Strength of Materials
EGR 227 Kinematics
ELC 102 Electronic Devices
ELC 106 Circuit Analysis I
ELC 107 Circuit Analysis II
ELC 114 Digital Techniques
ELC 202 Linear Electronics
ELC 206 Microprocessors
ELC 213 Microprocessor Applications
MTH 160 Introduction to Statistics
PHY 107 Applied Physics
PHY 155 College Physics I
PHY 156 College Physics II
PHY 255 Engineering Physics I
PHY 256 Engineering Physics II
PHY 258 Modern Physics
PHY 259 Thermodynamics and Fluid Mechanics

Nursing, AAS
School of Health Professions

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.

The program is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326; phone 404-975-5000. The ACEN is responsible for the specialized accreditation of nursing education programs: Associate Degree. The ACEN is nationally recognized as a specialized accrediting agency for both postsecondary and higher degree programs in nursing education. The Nursing program utilizes Standardized testing to evaluate student performance.

Admission Criteria for the 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 associate degree nursing program must submit the appropriate forms to the Admissions Office.

Application Process for Health Profession Programs

- Complete and submit an Application for Admission to Westmoreland County Community College
- Complete and submit an application for the specific Health Profession Program
- Submit all required documents to the Admissions Office by the deadline.
- Submit official transcript from all secondary schools attended, GED programs and any other formal educational program beyond high school.
- Qualified applicants must take a preadmission examination administered by Westmoreland; eligible candidates will be notified of the testing dates once all required information has been submitted.
- Students who test into developmental courses must complete them with a "C" or better prior to application deadline.
- Applicant must earn a "C" grade or better in any general education and/or support course taken or attempted to be eligible to take the entrance exam.

For Fall Start:

Application Deadline January 12 prior to fall start Acceptance Notification Mid-March

For Spring Start

Application Deadline May 15 prior to spring start Acceptance Notification Mid-August

Admission Criteria

- Graduate of accredited secondary school program or hold a graduate equivalency degree (GED) certificate prior to selection.
- High school transcript 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 each 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 application requirements by completing MTH 052, MTH 052A, CHM 107, and BIO 107 with a "C" grade or better.
- Students must attend a placement assessment and educational planning session and complete any developmental courses that may be required based on the placement evaluation prior to applying for the Nursing program.
- 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

Students accepted into the School of Health Professions including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing are required to have a criminal background check, child abuse history and drug screening at the student's expense.

The Program Director of each Health Profession Program gives the accepted student directions for setting up a password-secure Castle Branch Account.

Castle Branch is the background screening and compliance tracking company, which provides Westmoreland County Community College Health Profession Programs with student background screening services.

Castle Branch background screening and compliance management includes:

- Background Checks (FBI Fingerprint Check, Criminal Background Check and Child Abuse Clearances)
- Urine Drug Screen
- Immunization and Record Tracking
- Houses PPD (TB screening)
- CPR Training Documentation
- Liability Insurance (if applicable for program)
- Houses the results of the Required Health Physical.

Final admission is conditional pending receipt of Urine Drug Screen and receipt and evaluation of Criminal Background Check to determine if there is any conviction that may bar the applicant from entering the Health Profession Programs.

Essential Cognitive, Physical and Behavioral Functions

The Westmoreland County Community College Health Profession Programs including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing require that students meet certain functional abilities essential to each program. A detailed list is available in each program's handbook.

Program Learning Outcomes

Caring (QSEN: Patient Centered Care)

1. Manage safe, quality, evidenced-based, patient-centered care with respect for diversity across the lifespan.

Competency (QSEN: Safety)

2. Manage technical aspects of care by following the standards of safe, professional practice.

Communication (QSEN: Teamwork and Collaboration)

3. Manage therapeutic and professional communication when participating in the collaborative care of patients and their families.

Clinical Judgment (QSEN: Evident-Based Practice and Informatics)

4. Integrate the nursing process, critical thinking, and clinical reasoning to manage patient care.
5. Identify information technologies to coordinate safe care for individuals and their families.

Commitment (QSEN: Quality Improvement)

6. Analyze nursing actions within the legal and ethical framework of nursing practice by conducting self in a civil and professional manner.

Fall Entry/Day Program

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Apply to Nursing Program by January 12 for Fall Start							
Summer	1	BIO 171	Anatomy & Physiology I	4	F, Sp, Su	CHM 107, 155, 264 or HS Chemistry & ENG 095 or Placement	
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
1st Fall	3	BIO 172	Anatomy & Physiology II	4	F, Sp, Su	BIO 171	
	4	NSG 112	Intro to Professional Nursing & Healthcare Across the Lifespan	3	F, Sp	BIO 171 & CPT 150	
	5	NSG 114	Health & Physical Assessment	3	F, Sp	BIO 171 & CPT 150	
	6	NSG 116	Foundations of Nursing Care	7	F, Sp	BIO 171 & CPT 150	
1st Spring	7	ALH 120	Pharmacology	3	F, SP, Su	MTH 050, 050A or Placement	
	8	PSY 160	General Psychology	3	F, Sp, Su		
	9	NSG 124	Medical Surgical Care of the Adult	9	F, Sp	BIO 171, 172, CPT 150, NSG 112, 114 & 116	
2nd Fall	10	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	11	NSG 225	Nursing Care of the Childbearing Family/Infant/Child	4	F, Sp	All Level I ADN Nursing & Support Courses	
	12	NSG 240	Psychiatric Mental Health Nursing	3	F, Sp	All Level I ADN Nursing & Support Courses	
	13	NSG 255	Advanced M/S Aging Adult	3	F, Sp	All Level I ADN Nursing & Support Courses	
	14	BIO 265	Microbiology	4	F, Sp, Su	BIO 155 or 171; CHM 107, 155, 264 or HS Chemistry; & ENG 085 or Placement	
2nd Spring	15	NSG 260	Advanced M/S Care of Chronically Ill	3	F, Sp	All Level I ADN Nursing & Support Courses	
	16	NSG 270	Advanced M/S Care of Acutely Ill	3	F, Sp	All Level I ADN Nursing & Support Courses	
	17	ENG 164	Advanced Composition	3	F, Sp, Su	ENG 161	
	18	Elective	Mathematics Elective: MTH 157 or 160 Recommended	3	F, Sp, Su	Placement	
	19	NSG 280	Manager of Nursing Care	4	F, Sp	All Level I & II ADN Nursing & Support Courses	

Total Program Credits 72

PDV 101 – First Year Seminar is required for all first-time credential-seeking students.

Nursing, AAS
School of Health Professions

Spring Entry/Part-Time Evening Program

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	BIO 171	Anatomy & Physiology I	4	F, Sp, Su	CHM 107, 155, 264 or HS Chemistry & ENG 095 or Placement	
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
1st Spring	3	BIO 172	Anatomy & Physiology II	4	F, Sp, Su	BIO 171	
	4	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	5	PSY 160	General Psychology	3	F, Sp, Su		
Apply to Nursing Program by May 15 for Spring Start							
Summer	6	BIO 265	Microbiology	4	F, Sp, Su	BIO 155 or 171; CHM 107, 155, 264 or HS Chemistry; & ENG 085 or Placement	
2nd Fall	7	ENG 164	Advanced Composition	3	F, Sp, Su	ENG 161	
	8	ALH 120	Pharmacology	3	F, SP, Su	MTH 050, 050A or Placement	
	9	Elective	Mathematics Elective: MTH 157 or 160 Recommended	3	F, Sp, Su	Placement	
2nd Spring	10	NSG 112	Intro to Professional Nursing & Healthcare Across the Lifespan	3	F, Sp	BIO 171 & CPT 150	
	11	NSG 114	Health & Physical Assessment	3	F, Sp	BIO 171 & CPT 150	
	12	NSG 116	Foundations of Nursing Care	7	F, Sp	BIO 171 & CPT 150	
3rd Fall	13	NSG 124	Medical Surgical Care of the Adult	9	F, Sp	ALH 120, BIO 171, 172, CPT 150, NSG 112, 114 & 116	
3rd Spring	15	NSG 255*	Advanced M/S Aging Adult	3	F, Sp	All Level I ADN Nursing & Support Courses	
	15	NSG 225*	Nursing Care of the Childbearing Family/Infant/Child	4	F, Sp	All Level I ADN Nursing & Support Courses	
	16	NSG 240*	Psychiatric Mental Health Nursing	3	F, Sp	All Level I ADN Nursing & Support Courses	
4th Fall	17	NSG 260*	Advanced M/S Care of Chronically Ill	3	F, Sp	All Level I ADN Nursing & Support Courses	
	18	NSG 270*	Advanced M/S Care of Acutely Ill	3	F, Sp	All Level I ADN Nursing & Support Courses	
	19	NSG 280**	Manager of Nursing Care	4	F, Sp	All Level I & II ADN Nursing & Support Courses	

Total Program Credits 72

PDV 101 – First Year Seminar is required for all first-time credential-seeking students.

* Level II Nursing Courses - must be completed with a "C" grade or better prior to beginning NSG 280**

Nursing, Advanced Standing to AAS for LPNs
School of Health Professions

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.

The program is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326; phone 404-975-5000. The ACEN is responsible for the specialized accreditation of nursing education programs: Associate Degree. The ACEN is nationally recognized as a specialized accrediting agency for both postsecondary and higher degree programs in nursing education.

The Nursing program utilizes standardized testing to evaluate student performance.

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
- Students must attend a placement assessment and educational planning session and complete any developmental courses that may be required based on the placement evaluation
  - Students who test into developmental courses must complete all courses with a C grade or above prior to application deadline.

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, on each 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 application requirements by completing MTH 052 or 052A, 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
  - Students must earn a "C" grade or better in all nursing and corequisite courses to be eligible for pre-entrance testing.
  - Transfer courses are not calculated into GPA
- Applicants must take the I PN-RN Foundations of Nursing examination administered by Westmoreland; eligible applicants will be notified of the testing date and fee
- LPN applicants must submit an Application for Admission Form and Allied Health Programs Application to the Admissions Office

Level 2 (LPNs)

Day Program Option	
Application Deadline	January 12 prior to fall start
LPN Transition Course: NSG 200/ NSG 114	Summer semester prior to fall start
Start Nursing Classes	Fall Semester
Evening Program Option	
Application Deadline	May 15 prior to spring start
LPN Transition Course: NSG 200/ NSG 114	Fall semester prior to spring start
Start Nursing Classes	Spring Semester

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 the students responsibility to provide transcripts to admissions office.
- Westmoreland 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
  - ENG 161 – College Writing
  - ALH 120 – Pharmacology
  - CPT 150 – Microcomputer Concepts
- Additional required documents:
  - LPN Program Transcript
  - Copy of Current LPN License

Final Admission Criteria

Students accepted into the School of Health Professions including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing are required to have a criminal background check, child abuse history and drug screening at the student's expense.

The Program Director of each Health Profession Program gives the accepted student directions for setting up a password-secure Castle Branch Account.

Castle Branch is the background screening and compliance tracking company, which provides Westmoreland County Community College Health Profession Programs with student background screening services.

Castle Branch background screening and compliance management includes:

- Background Checks (FBI Fingerprint Check, Criminal Background Check and Child Abuse Clearances)
- Urine Drug Screen
- Immunization and Record Tracking
- Houses PPD (TB screening)
- CPR Training Documentation
- Liability Insurance (if applicable for program)
- Houses the results of the Required Health Physical.

Final admission is conditional pending receipt of Urine Drug Screen and receipt and evaluation of Criminal Background Check to determine if there is any conviction that may bar the applicant from entering the Health Profession Programs.

- Positive Urine Drug Screen will result in denial of admission.
- Any record of child abuse will result in denial of admission.
- According to federal sentencing guidelines, any punishment over one year indicates a felony.
- Any felony conviction within the past 10 years will result in denial of admission to any Health Profession Program.
- Any misdemeanor will be evaluated based on the nature of the offense, length of time since the offense and explanatory letter/material submitted by the applicant.

Essential Cognitive, Physical and Behavioral Functions

The Westmoreland County Community College Health Profession Programs including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing require that students meet certain functional abilities essential to each program. A detailed list is available in each program's handbook.

Program Learning Outcomes

Caring (QSEN: Patient Centered Care)

- Manage safe, quality, evidenced-based, patient-centered care with respect for diversity across the lifespan.

Competency (QSEN: Safety)

- Manage technical aspects of care by following the standards of safe, professional practice.

Communication (QSEN: Teamwork and Collaboration)

- Manage therapeutic and professional communication when participating in the collaborative care of patients and their families.

Clinical Judgment (QSEN: Evident-Based Practice and Informatics)

- Integrate the nursing process, critical thinking, and clinical reasoning to manage patient care.
- Identify information technologies to coordinate safe care for individuals and their families.

Commitment (QSEN: Quality Improvement)

- Analyze nursing actions within the legal and ethical framework of nursing practice by conducting self in a civil and professional manner.

Nursing, Advanced Standing to AAS for LPNs
School of Health Professions

Daylight Program

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	BIO 171	Anatomy & Physiology I	4	F, Sp, Su	CHM 107, 155, 264 or HS Chemistry & ENG 095 or Placement	
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
1st Spring	4	BIO 172	Anatomy & Physiology II	4	F, Sp, Su	BIO 171	
	5	ALH 120	Pharmacology	3	F, SP, Su	MTH 050, 050A or Placement	
	6	PSY 160	General Psychology	3	F, Sp, Su		
Apply to Nursing Program by January 12 for Fall Start							
Credit for Prior Learning	7	NSG 112	Intro to Professional Nursing & Healthcare Across the Lifespan	3	F, Sp	BIO 171 & CPT 150	
	8	NSG 116	Foundations of Nursing Care	7	F, Sp	BIO 171 & CPT 150	
	9	NSG 124	Medical Surgical Care of the Adult	9	F, Sp	BIO 171, 172, CPT 150, NSG 112, 114 & 116	
1st Summer	10	NSG 114	Health & Physical Assessment	3	F, Sp, Su	BIO 171 & CPT 150	
	11	NSG 200	LPN Transition into Associate Degree Nursing	3	Su	All Level I ADN Nursing & Support Courses. Must be an LPN and accepted into ADN program.	
2nd Fall	12	BIO 265	Microbiology	4	F, Sp, Su	BIO 155 or 171; CHM 107, 155, 264 or HS Chemistry; & ENG 085 or Placement	
	13	NSG 225*	Nursing Care of the Childbearing Family/Infant/Child	4	F, Sp	All Level I ADN Nursing & Support Courses	
	14	NSG 240*	Psychiatric Mental Health Nursing	3	F, Sp	All Level I ADN Nursing & Support Courses	
	15	NSG 255*	Advanced M/S Aging Adult	3	F, Sp	All Level I ADN Nursing & Support Courses	
2nd Spring	16	NSG 260*	Advanced M/S Care of Chronically Ill	3	F, Sp	All Level I ADN Nursing & Support Courses	
	17	NSG 270*	Advanced M/S Care of Acutely Ill	3	F, Sp	All Level I ADN Nursing & Support Courses	
	18	ENG 164	Advanced Composition	3	F, Sp, Su	ENG 161	
	19	Elective	Mathematics Elective: MTH 157 or 160 Recommended	3	F, Sp, Su	Placement	
	20	NSG 280**	Manager of Nursing Care	4	F, Sp	All Level I & II ADN Nursing & Support Courses	

Total Program Credits 72

PDV 101 – First Year Seminar is required for all first-time credential-seeking students.

* Level II Nursing Courses - must be completed with a "C" grade or better prior to beginning NSG 280**

Nursing, Advanced Standing to AAS for LPNs
School of Health Professions

Evening Program

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	BIO 171	Anatomy & Physiology I	4	F, Sp, Su	CHM 107, 155, 264 or HS Chemistry & ENG 095 or Placement	
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
1st Spring	4	BIO 172	Anatomy & Physiology II	4	F, Sp, Su	BIO 171	
	5	ALH 120	Pharmacology	3	F, SP, Su	MTH 050, 050A or Placement	
	6	PSY 160	General Psychology	3	F, Sp, Su		
Apply to Nursing Program by May 15 for Spring Start							
1st Summer	7	BIO 265	Microbiology	4	F, Sp, Su	BIO 155 or 171; CHM 107, 155, 264 or HS Chemistry; & ENG 085 or Placement	
	8	ENG 164	Advanced Composition	3	F, Sp, Su	ENG 161	
	9	Elective	Mathematics Elective: MTH 157 or 160 Recommended	3	F, Sp, Su	Placement	
Credit for Prior Learning	10	NSG 112	Intro to Professional Nursing & Healthcare Across the Lifespan	3	F, Sp	BIO 171 & CPT 150	
	11	NSG 116	Foundations of Nursing Care	7	F, Sp	BIO 171 & CPT 150	
	12	NSG 124	Medical Surgical Care of the Adult	9	F, Sp	BIO 172, CPT 150, NSG 112, 114 & 116	
2nd Fall	13	NSG 114	Health & Physical Assessment	3	F, Sp, Su	BIO 171 & CPT 150	
	14	NSG 200	LPN Transition into Associate Degree Nursing	3	Su	All Level I ADN Nursing & Support Courses. Must be an LPN and accepted into ADN program.	
2nd Spring	15	NSG 225*	Nursing Care of the Childbearing Family/Infant/Child	4	F, Sp	All Level I ADN Nursing & Support Courses	
	16	NSG 240*	Psychiatric Mental Health Nursing	3	F, Sp	All Level I ADN Nursing & Support Courses	
	17	NSG 255*	Advanced M/S Aging Adult	3	F, Sp	All Level I ADN Nursing & Support Courses	
3rd Fall	18	NSG 260*	Advanced M/S Care of Chronically Ill	3	F, Sp	All Level I ADN Nursing & Support Courses	
	19	NSG 270*	Advanced M/S Care of Acutely Ill	3	F, Sp	All Level I ADN Nursing & Support Courses	
	20	NSG 280**	Manager of Nursing Care	4	F, Sp	All Level I & II ADN Nursing & Support Courses	

Total Program Credits 75

PDV 101 – First Year Seminar is required for all first-time credential-seeking students.

* Level II Nursing Courses - must be completed with a "C" grade or better prior to beginning NSG 280**

Office Technology, AAS

OFFICE ADMINISTRATION

School of Business

The Office Technology AAS 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 Technology AAS may find employment as administrative assistants, executive office managers, office managers, executive secretaries, receptionists and personnel clerks. Opportunities are available in large corporations, small business offices, insurance offices, nonprofit organizations, legal offices and government offices.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Develop advanced keyboarding, document processing and information management skills.
- Achieve proficiency using the Microsoft Office Suite in word processing, spreadsheets, database applications, presentation and desktop publishing software applications.
- Proofread and edit copy with a high degree of accuracy.
- Use appropriate office procedures in records 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.
- Work independently or in teams to demonstrate effective interpersonal and problem-solving skills attitudes, work habits, professional behavior and ethics.
- Demonstrate academic knowledge required of all graduates including competency in critical thinking, writing, information literacy, oral communication and quantitative reasoning.
- Provide ethical service to a diverse customer base.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	BUS 120	Math of Business	3	F, Sp, Su	MTH 050, 050A or Placement	
	3	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	4	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	5	OFT 110	Document Processing I	3	F, Sp, Su	OFT 100	
	6	OFT 190	Word for Windows	3	F, Sp		
1st Spring	7	CPT 195	Excel for Windows	3	F, Sp		
	8	ENG 163	Business Communication	3	F, Sp, Su	ENG 161	ENG 162
	9	OFT 120	Document Processing II	3	Sp	OFT 110	
	10	OFT 185	PowerPoint	1	F, Sp		
	11	SPC 156	Interpersonal Communication	3	F, Sp, Su		SPC 155
	12	WEB 188	Social Media	3	F, Sp		
2nd Fall	13	CPT 196	Access for Windows	3	F, Sp	CPT 150	
	14	OFT 140	Office Procedures	3	F, Su		
	15	OFT 210	Office Technologies	3	F		
	16	OFT 220	Transcription	3	F	OFT 110	
	17	WEB 102	Acrobat Essentials	1	F, Sp		
	18	Elective	Restricted Elective	3	F, Sp		See List
2nd Spring	19	CPT 278	Integrated Office Applications	3	Sp	CPT 195, CPT 196, OFT 185 & OFT 190	
	20	OFT 225	Proofreading	3	Sp		
	21	OFT 235	Customer Service	3	F, Sp, Su		
	22	OFT 280 or OFT 299	Office Management or Internship	3	F, Sp, Su	OFT 110, OFT 140, and 20 hours of OFT courses	
	23	Elective	Social Science Elective	3	F, Sp, Su		

Total Program Credits 63

Restricted Electives:

BUS 158 Principles of Management
LAS 101 The Legal Assistant
BUS 241 Human Resource Management
BUS 258 Supervisory Management

Office Technology, Diploma

OFFICE ADMINISTRATION

School of Business

The Office Administration Diploma offers course work in office administration, office procedures and computer applications. Courses in this diploma may be applied toward the Office Technology AAS.

Career Opportunities

Graduates of the Office Administration Diploma may find employment as administrative assistants, office managers, receptionists, personnel clerks and word processors. Opportunities are available in large corporations, small business offices, insurance offices, nonprofit organizations, legal offices and government offices.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Key documents using touch-typing with a high degree of speed and accuracy.
- Understand filing principles and office procedures
- Achieve proficiency using Microsoft Office word processing, spreadsheets and presentation software applications.
- Compose and edit business correspondence, reports and forms.
- Provide ethical service to a diverse customer base.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	4	OFT 110	Document Processing I	3	F, Sp, Su	OFT 100	
	5	OFT 140	Office Procedures	3	F, Su		
	6	OFT 190	Word for Windows	3	F, Sp		
Spring	7	BUS 120	Mathematics of Business	3	F, Sp, Su	MTH 050, 050A or Placement	
	8	CPT 195	Excel for Windows	3	F, Sp		
	9	ENG 163	Business Communication	3	F, Sp, Su	ENG 161	
	10	OFT 120	Document Processing II	3	Sp	OFT 110	
	11	OFT 185	PowerPoint	1	F, Sp		
	12	OFT 235	Customer Service	3	F, Sp, Su		

Total Program Credits 32

Office Technology, Certificate

CUSTOMER SERVICE

School of Business

The Customer Service Certificate is designed to reach quality customer service by examining the attitudes, knowledge and skills that are needed to work effectively in any job that has contact with clients, customers or patients. Course work combines customer service skills with other courses that emphasize interpersonal communications, keyboarding, mathematics and computer applications. Topics will include improving customer loyalty, customer service, handling complaints and customer relations. Courses in this certificate may be applied toward the Office Technology AAS.

Career Opportunities

Graduates of the Customer Service Certificate may find employment as customer service assistants, customer service representatives, office managers, technical support clerks, customer service clerks and administrative assistants. The job category of customer service representative has been defined as a high-priority occupation for the Westmoreland-Fayette Workforce Investment Area with an estimated average salary of $30,930 and an annual job growth rate of 14%. The Pennsylvania Department of Labor anticipates 134 job openings per year in our region.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Provide ethical service to a diverse customer base.
- Demonstrate skills in using Microsoft Office.
- Perform mathematical calculations required by business.
- Perform data entry with speed and accuracy.
- Professionally communicate verbally and in writing.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	OFT 110	Document Processing I	3	F, Sp, Su	OFT 100	
	4	SPC 156	Interpersonal Communication	3	F, Sp, Su		
Spring	5	BUS 120	Mathematics of Business	3	F, Sp, Su	MTH 050, 050A or Placement	
	6	BUS 140	Introduction to Business	3	F, Sp, Su		
	7	OFT 235	Customer Service	3	F, Sp, Su		
Total Program Credits				19			

Office Technology, Certificate

OFFICE ADMINISTRATION

School of 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 and PowerPoint. Courses in this certificate may be applied toward the Office Technology AAS.

Career Opportunities

Graduates of the Office Administration Certificate may find employment as administrative office support, receptionists and personnel clerks.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Develop keyboarding, word processing, spreadsheet and presentation skills.
- Use appropriate office procedures in records information management, telephone communications, electronic and hard copy mail, meetings and conferences and travel arrangements.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	OFT 110	Document Processing I	3	F, Sp, Su	OFT 100	
	3	OFT 140	Office Procedures	3	F, Su		
	4	OFT 190	Word for Windows	3	F, Sp		
Spring	5	CPT 195	Excel for Windows	3	F, Sp		
	6	OFT 120	Document Processing II	3	Sp	OFT 110	
	7	OFT 185	PowerPoint	1	F, Sp		

Total Program Credits 17

Paralegal, AAS

School of Art, Humanities, Social Sciences and Public Service

The Paralegal AAS 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.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate effective communication skills, orally and verbally, by actively listening, and by reading and understanding legal documents
- Utilize 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, evaluate 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
- Illustrate the 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ENG 161	College Writing	3	F, Sp, Su	ENG 085 Placement	
	3	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	4	LAS 101	The Legal Assistant	3	F		
	5	LAS 111	Legal Analysis	3	F		
	6	BUS 120	Business Math	3	F,Sp, Su	MTH 050, 0520 or Placement	
1st Spring	7	ENG 163	Business Communications	3	F, Sp, Su	ENG 161	
	8	HUM 156	Critical Thinking	3	F, Sp, Su		
	9	LAS 115	Torts	3	Sp	LAS 101 & 111	
	10	LAS 125	Litigation I	3	Sp	LAS 101 & 111	
	11	LAS 210	Legal Writing	3	Sp	ENG 161 & LAS 111	
1st Summer	12	LAS 140	Domestic Relations	3	Su	LAS 101 & 111	
2nd Fall	13	LAS 120	Estates and Trusts	3	F	LAS 101 & 111	
	14	LAS 215	Legal Research	3	F	LAS 210	
	15	OFT 140	Office Procedures	3	F, Su		
	16	RLS 210	Laws of Real Estate	3	F		
	17	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III
2nd Spring	18	Elective	Restricted Elective	3	F, Sp, Su		See List
	19	CRJ 160	Criminal Law I	3	F, Sp, Su		
	20	LAS 293	Internship	3	F, SP, Su	LAS 215 & GPA of 2.0	
	21	Elective	Restricted Elective	3	F, Sp, Su		See List

Total Program Credits 61

Restricted Electives:

ACC 155 Accounting I
BUS 205 Business Law I
BUS 249 Labor Relations
CRJ 163 Criminal Procedure
CRJ 261 Criminal Law II
CRJ 263 Investigative Concepts
LAS 200 Constitutional Power & Civil Liberty
OFT 110 Document Processing I

Paralegal, Diploma

School of Art, Humanities, Social Sciences and Public Service

The Paralegal Diploma 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.

Program Learning Outcomes

Upon successful completion of this program, students will be able 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ENG 161	College Writing	3	F, Sp, Su	ENG 085 Placement	
	3	RLS 210	Laws of Real Estate	3	F		
	4	LAS 101	The Legal Assistant	3	F		
	5	LAS 111	Legal Analysis	3	F		
Spring	6	LAS 210	Legal Writing	3	Sp	ENG 161 & LAS 111	
	7	LAS 125	Litigation I	3	Sp	LAS 101 & 111	
	8	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III
	9	BUS 120	Business Math	3	F,Sp, Su	MTH 050, 050A or Placement	
Fall	10	LAS 215	Legal Research	3	F	LAS 210	
	11	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	12	Elective	Restricted Elective	3	F, Sp, Su		See List

Total Program Credits **34**

Restricted Electives:

ACC 155 Accounting I
BUS 205 Business Law I
BUS 249 Labor Relations
CRJ 163 Criminal Procedure
CRJ 261 Criminal Law II
CRJ 263 Investigative Concepts
LAS 200 Constitutional Power & Civil Liberty
OFT 110 Document Processing I

Phlebotomy/Specimen Processing, Certificate
School of Health Professions

The purpose of the program is twofold. First the student must function as a phlebotomist in a hospital or other healthcare setting. The second purpose is to prepare the student to function as a laboratory specimen processor or laboratory aide in a clinical laboratory setting.

Admission to the program is limited by the availability of clinical sites. A separate application to the Phlebotomy/Specimen Processing Program is required. Students with previous phlebotomy certification and documented two years of clinical experience may apply to test out of the phlebotomy courses and earn a Specimen Processing Only Certificate.

The Phlebotomy Only Certificate option is for those students who desire to be a phlebotomist only and not to learn the laboratory specimen processor skills.

Graduates are eligible to sit for the Registered Phlebotomy Technician (RPT) examination.

Career Opportunities

As a phlebotomist, the graduate may draw blood in physicians' offices, blood banks, hospitals, ambulatory care centers, nursing care centers and other healthcare facilities. In addition to phlebotomy, a specimen processor will collect, evaluate and process various laboratory samples.

Special Admission and Selection Criteria

- Applicants must be graduates of an accredited secondary school program or hold a GED equivalency certificate prior to selection.

Application Process for Health Profession Programs

- Complete and submit an Application for Admission to Westmoreland County Community College
- Complete and submit an application for the specific Health Profession Program
- Submit all required documents to the Admissions Office by the deadline.
- Submit official transcript from all secondary schools attended, graduate equivalency degree (GED) programs and any other formal educational program beyond high school.
- Enrollment is limited due to clinical site placement for practicum hours. Students cannot enroll in Phlebotomy (PHB) core classes until formally accepted into the program.
- Courses must be completed with a C grade or better (at least 2.0 GPA)

For Fall Start:

- Application Deadline May 1 prior to fall start Acceptance Notification May 30

Essential Cognitive, Physical and Behavioral Functions

The Westmoreland County Community College Health Profession Programs including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing require that students meet certain functional abilities essential to each program. A detailed list is available in each program's handbook.

Final Admission Criteria

Students accepted into the School of Health Professions including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing are required to have a criminal background check, child abuse history and drug screening at the student's expense.

The Program Director of each Health Profession Program gives the accepted student directions for setting up a password-secure Castle Branch Account.

Castle Branch is the background screening and compliance tracking company, which provides Westmoreland County Community College Health Profession Programs with student background screening services.

Castle Branch background screening and compliance management includes:

- Background Checks (FBI Fingerprint Check, Criminal Background Check and Child Abuse Clearances)
- Urine Drug Screen
- Immunization and Record Tracking
- Houses PPD (TB screening)
- CPR Training Documentation
- Liability Insurance (if applicable for program)
- Houses the results of the Required Health Physical.

Final admission is conditional pending receipt of Urine Drug Screen and receipt and evaluation of Criminal Background Check to determine if there is any conviction that may bar the applicant from entering the Health Profession Programs.

- Positive Urine Drug Screen will result in denial of admission.
- Any record of child abuse will result in denial of admission.
- According to federal sentencing guidelines, any punishment over one year indicates a felony.
- Any felony conviction within the past 10 years will result in denial of admission to any Health Profession Program.
- Any misdemeanor will be evaluated based on the nature of the offense, length of time since the offense and explanatory letter/material submitted by the applicant.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Collect, transport, handle, and process laboratory specimens for analysis.
- Demonstrate professional conduct, stress management, and interpersonal and communications skills with patients, peers, and other communications.
- Display an understanding of requisitioning and the legal implications of their work.
- Recognize and act upon individual needs for continuing education as a function of growth and maintenance of professional competence.

Phlebotomy/Specimen Processing, Certificate
School of Health Professions

Phlebotomy/Specimen Processing Certificate

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ALH 122	Medical Terminology	3	F, Sp Su		
	3	PHB 101	Clinical Phlebotomy	4	F, Sp		
	4	PHB 105	Specimen Processing	4	F, Sp		
	5	PHB 110	Specimen Processing Practicum	4	F, Sp		

Total Program Credits 16

Phlebotomy ONLY Processing Certificate

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ALH 122	Medical Terminology	3	F, Sp Su		
	3	PHB 101	Clinical Phlebotomy	4	F, Sp		
	4	PHB 110	Specimen Processing Practicum	4	F, Sp		

Total Program Credits 12

Plumbing, AAS
School of Technology

The Plumbing AAS program provides students with an in-depth background of the plumbing industry. By combining theory and practical shop experiences, students will develop the skills needed for design, installation, maintenance, and troubleshooting plumbing systems for residential and commercial applications. The plumbing AAS degree is designed to prepare students for entry-level positions in the plumbing field. Students learn the tools used in the industry, the meaning of quality customer service, design a plumbing design to standards, and perform plumbing tasks. The skills to install and service plumbing hardware are stressed. Students will install and service water based heating and cooling systems, and residential and commercial water supply and waste systems. Successful completion of this program leads to the associate of applied science degree.

Career Opportunities

Plumbing program graduates can obtain jobs with the following titles: Sprinkler fitter, fitter, pipe fitter, steamfitter, master plumber, plumbing apprentice, service plumber, residential plumber, plumber gasfitter.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify typical plumbing tools and power tools.
- Install fixtures and faucets, plastic pipe and fittings, drain, waste and vent systems.
- Install copper pipe and fittings, cast iron pipe and fittings.
- Install water heaters.
- Introduce fuel gas supply systems.
- Develop an understanding of the servicing of piping systems, sizing, fixtures and appliances.
- Sewage systems including backflow prevention, indirection and special waste systems.
- Understand water booster pumps, recycling systems, and sump pump systems.
- Identify different types of venting systems.
- Develop an understanding of compressed air and other pressurized systems.
- Understand processes for water supply treatment.
- Identify methods for locating buried water and sewer lines.
- Study the installation of plumbing for mobile homes and mobile home parks.
- Understand the practices necessary for swimming pools and hot tub installation.
- Develop the skills to install and service hydronic and geothermal systems.
- Study the different related trades that apply to the plumber.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	PMB 101	Plumbing I	4	F		
	3	CMT 101	Related Trades	4	F, Sp		
	4	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	5	MTH 108	Mathematics for Technologies I	4	F, Sp, Su	MTH 052, 052A or Placement	
1st Spring	6	WEL 125	Introduction to Welding	4	F, Sp, Su		
	7	DFT 258	AutoCAD	4	F, Sp, Su		
	8	CHM 107	Introductory Concepts in Chemistry I	3	F, Sp, Su		
	9	PMB 200	Plumbing Code	3	Sp		
	10	HAC 105	Blueprint reading	2	Sp		
2nd Fall	11	PMB 121	Estimating for the Plumber	2	F		
	12	CMT 121	Contracts for the Tradesman	2	F		
	13	WEL 227	GTAW	4	F, Sp	WEL 125	
	14	ENG 162	Technical Communications	3	F, Sp, Su	ENG 161	
	15	HAC 256	Geothermal and Solar Technology	3	F		
2nd Spring	16	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column II
	17	HAC 260	Hydronics	4	F, Sp		
	18	Elective	Drafting Elective	3	F, Sp, Su		Any 3 or 4 credit DFT course
	19	WEL 230	Pipe Welding	3	F, Sp, Su	WEL 227	
	20	PMB 250	Advanced Plumbing Techniques	4	Sp		
Total Program Credits				61-62			

Plumbing, Diploma
School of Technology

This program provides students with an in-depth background of the plumbing industry. By combining theory and practical shop experiences, students will develop the skills needed for design, installation, maintenance, and troubleshooting plumbing systems for residential and commercial applications. The plumbing diploma is designed to prepare students for entry-level positions in the plumbing field. Students learn the tools used in the industry, the meaning of quality customer service, design a plumbing design to standards, and perform plumbing tasks. The skills to install and service plumbing hardware are stressed. Students will install and service water based heating and cooling systems, and residential and commercial water supply and waste systems. Successful completion of this program leads to the plumbing diploma.

Career Opportunities

Plumbing program graduates can obtain jobs with the following titles: Sprinkler fitter, fitter, pipe fitter, steamfitter, plumbing apprentice, service plumber, residential plumber.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify typical plumbing tools and power tools.
- Install fixtures and faucets, plastic pipe and fittings, drain, waste and vent systems.
- Install copper pipe and fittings, cast iron pipe and fittings.
- Install water heaters.
- Introduce fuel gas supply systems.
- Develop an understanding of the servicing of piping systems, sizing, fixtures and appliances.
- Sewage systems including backflow prevention, indirection and special waste systems.
- Understand water booster pumps, recycling systems and Sump pump systems.
- Sizing water supply piping systems.
- Identify different types of venting systems.
- Develop and understanding of compressed air and other pressurized systems.
- Understand processes for water supply treatment.
- Identify methods for locating buried water and sewer lines.
- Study the installation of plumbing for mobile homes and mobile home parks.
- Understand the practices necessary for swimming pools and hot tub installation.
- Develop the skills to install and service hydronic and geothermal systems.
- Develop quality soft skills.
- Study the different related trades that apply to the plumber.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	PMB 101	Plumbing I	4	F		
	3	HAC 256	Geothermal and Solar Technology	3	F		
	4	PMB 121	Estimating for the Plumber	2	F		
	5	MTH 108	Math for Technologies	4	F		
Spring	6	CMT 101	Related Trades	4	Sp		
	7	PMB 200	Plumbing Code	3	Sp		
	8	HAC 105	Blueprint Reading	2	Sp		
	9	PMB 250	Advanced Plumbing Technologies	4	Sp		
	10	HAC 260	Hydronics	4	F, Sp		

Total Program Credits 31

Plumbing, Certificate
School of Technology

This program provides students with an in-depth background of the plumbing industry. By combining theory and practical shop experiences, students will develop the skills needed for design, installation, maintenance, and troubleshooting plumbing systems for residential and commercial applications. The plumbing certification is designed to prepare students for entry-level positions in the plumbing field. Students learn the tools used in the industry, design a plumbing design to standards, and perform plumbing tasks to standard code. The skills to install and service plumbing hardware are stressed. Students will install and service water based heating and cooling systems, and residential and commercial water supply and waste systems. Successful completion of this program leads to the plumbing certification.

Career Opportunities

Plumbing program graduates can obtained jobs with the following titles: Sprinkler fitter, fitter, pipe fitter, steamfitter, plumbing apprentice, service plumber, and residential plumber.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify typical plumbing tools and power tools.
- Install fixtures and faucets, plastic pipe and fittings, drain, waste and vent systems.
- Install copper pipe and fittings, cast iron pipe and fittings.
- Install water heaters.
- Introduce fuel gas supply systems.
- Develop an understanding of the servicing of piping systems, sizing, fixtures and appliances.
- Develop the skills to install and service hydronic and geothermal systems.
- Develop blueprint reading and job estimating skills.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	PMB 101	Plumbing I	4	F		
	3	HAC 260	Hydronics	4	F, Sp		
	4	PMB 121	Estimating for the Plumber	2	F		
	5	HAC 105	Blueprint Reading	2	F		
	6	PMB 200	Plumbing Code	3	F		

Total Program Credits 16

Radiology Technology, AAS
School 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 other specialized imaging modalities. With additional education through either employer based training or formal education, radiographers can progress to careers in Computed Tomography (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

Selection to the Radiology Technology program is highly competitive and enrollment is limited. Specific criteria for admission and selection are as follows:

- Applicants must be graduates of an accredited secondary school program or hold a GED equivalency certificate prior to the time of application.
- Students must attend a placement assessment and educational planning session and complete any developmental courses that may be required based on the placement assessment by the application deadline.
- Applicants must complete BIO 171 with a grade of "C" or better prior to the program's application deadline. Any other Radiology Technology general education courses taken prior to program admission must also be completed with a grade of "C" or better.
- Applicants must have a minimum 2.5 cumulative GPA in program-required courses as of the application deadline. Applicants may repeat any of the program-required general education courses one time in an attempt to raise course grade and/or GPA.
- If there are more qualified applicants than available seats, the Radiology Technology program uses a selective admission process based on GPA.
- Applicants to the radiology program should review the ARRT rules and regulations and the AART standard of ethics prior to submitting their application. Information can be found on the AART website, http://www.arrt.org.

Application Process for Health Profession Programs

- Complete and submit an Application for Admission to Westmoreland County Community College
- Complete and submit an application for the specific Health Profession Program
- Submit all required documents to the Admissions Office by the deadline.
- Submit official transcript from all secondary schools attended, graduate equivalency degree (GED) programs and any other formal educational program beyond high school.

For Fall Start

Application Deadline January 12 prior to fall start

Acceptance Notification Mid-March

Final Admission Criteria

Students accepted into the School of Health Professions including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing are required to have a criminal background check, child abuse history and drug screening at the student's expense.

The Program Director of each Health Profession Program gives the accepted student directions for setting up a password-secure Castle Branch Account.

Castle Branch is the background screening and compliance tracking company, which provides Westmoreland County Community College Health Profession Programs with student background screening services.

Castle Branch background screening and compliance management includes:

- Background Checks (FBI Fingerprint Check, Criminal Background Check and Child Abuse Clearances)
- Urine Drug Screen
- Immunization and Record Tracking
- Houses PPD (TB screening)
- CPR Training Documentation
- Liability Insurance (if applicable for program)
- Houses the results of the Required Health Physical.

Final admission is conditional pending receipt of Urine Drug Screen and receipt and evaluation of Criminal Background Check to determine if there is any conviction that may bar the applicant from entering the Health Profession Programs.

- Positive Urine Drug Screen will result in denial of admission.
- Any record of child abuse will result in denial of admission.
- According to federal sentencing guidelines, any punishment over one year indicates a felony.
- Any felony conviction within the past 10 years will result in denial of admission to any Health Profession Program.
- Any misdemeanor will be evaluated based on the nature of the offense, length of time since the offense and explanatory letter/material submitted by the applicant.

Essential Cognitive, Physical and Behavioral Functions

The Westmoreland County Community College Health Profession Programs including Nursing, Dental Programs, Radiology, Sonography, Medical Assisting, Phlebotomy and Specimen Processing require that students meet certain functional abilities essential to each program. A detailed list is available in each program's handbook.

Readmission Policy

Students returning to the program after removal must successfully complete laboratory remediation from a tutor and a laboratory exam commensurate with the knowledge level when the student left the program.

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 Learning Outcomes

Upon successful completion of this program, students will be able 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.

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.

Radiology Technology, AAS
School of Health Professions

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Prior to Application Deadline	1	BIO 171	Anatomy and Physiology I	4	F, Sp, Su	CHM 107, 155, 264 or HS Chemistry and ENG 095 or Placement	
1st Fall	2	PDV 101	First-Year Seminar	1	F, Sp, Su		
	3	ALH 122	Medical Terminology	3	F, Sp, Su		
	4	BIO 172	Anatomy and Physiology II	4	F, Sp, Su	BIO 171	
	5	RAD 111	Intro to Radiographic Procedures and Patient Care I	4	F	Admission to the program	
	6	RAD 121	Principles of Radiology Image Capture & Display	3	F	Co: RAD 111	
1st Spring	7	PHY 125	Physics for Radiology	3	Sp	PHY 110 or HS Physics	
	8	MTH 157	College Algebra	3	F, Sp, Su	MTH 100, 100A or Placement	
	9	RAD 131	Digital Image Acquisition & Display	3	Sp	RAD 121	
	10	RAD 141	Radiographic Procedures & Patient Care II	4	Sp	Co: RAD 131, 146	
	11	RAD 146	Clinical Education I	4	Sp	Co: RAD 131, 146	
1st Summer	12	RAD 215	Clinical Education II	3	Su	RAD 131, 141, 146	
	13	RAD 255	Clinical Education III	3	Su	Co: RAD 215	
2nd Fall	14	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	15	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	16	PSY 160	General Psychology	3	F, Sp, Su		
	17	RAD 211	Radiographic Procedures & Patient Care III	4	F	RAD 215, 255	
	18	RAD 216	Clinical Education IV	4	F	Co: RAD 211	
2nd Spring	19	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	
	20	RAD 221	Radiographic Pathology & Job Search Preparation	3	Sp	RAD 211, 216	
	21	RAD 226	Clinical Education V	5	Sp	Co: RAD 221, 231	
	22	RAD 231	Radiology Technology Capstone	1	Sp	Co: RAD 221, 226	
	23	SPC 156	Interpersonal Communication	3	F, Sp, Su		

Total Program Credits **74**

Restaurant/Culinary Management, AAS
School of Culinary Arts/Hospitality

Restaurant/Culinary Management is one of the majors comprising the college's School of Culinary Arts/Hospitality. 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 and program tool kits 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 American Culinary Federation Education Foundation Accrediting Commission (ACFEFAC).

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.

Program Learning Outcomes

Upon successful completion of this course, students will be able to:

- Identify the procedures and responsibilities of departmental teams within a foodservice operation.
- Identify and satisfy diverse customer expectations.
- Identify, prepare, season and cook according to recipe soups, sauces, salads, meats, fish, poultry, game, vegetables and desserts.
- 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, analyze and apply marketing objectives and strategies to food service operations.
- Supervise a food service operation team utilizing personal and interpersonal skills.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
	3	FSM 103	Introduction to Hospitality Industry	3	F, Sp		
	4	FSM 105	Foods I	4	F, Sp		
	5	FSM 117	Wait Staff/Dining Room Training	1	F, Sp		
	6	FSM 118	Sanitation	2	F, Sp		
	7	FSM 119	Beverage Management	1	F, Sp		
1st Spring	8	BKP 141	Baking I	4	F, Sp		
	9	CUL 135	Speed Scratch Cooking	3	Sp		
	10	FSM 112	Quantity Foods	4	F, Sp	FSM 105	
	11	FSM 113	Customer Service	3	F, Sp		
	12	Elective	Mathematics Elective	3	F, Sp, Su		BUS 120
2nd Fall	13	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	14	FSM 159	Nutrition	3	F, Sp, Su		BKP 243
	15	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III
	16	FSM 215	Purchasing and Operations	3	F, Sp		
	17	FSM 170	Food Culture & Religion	3	F, Sp, Su		Page 45 Column II
	18	FSM 157	Catering	3	F		
2nd Spring	19	FSM 218	Hospitality Marketing	3	F, Sp		
	20	FSM 219	Hospitality Internship	3	F, Sp, Su	Instructor Permission	
	21	FSM 235	Supervision and Training	3	F, Sp		
	22	FSM 213	Ala Carte Kitchen	4	F, Sp,	FSM 105 & FSM 112	
	23	ENG 163	Business Communications	3	F, Sp, Su		ENG 164
Total Program Credits				66			

Restaurant/Culinary Management, Diploma
School of Culinary Arts/Hospitality

Restaurant/culinary management is one of the majors comprising the college's School of Culinary Arts/Hospitality. The curriculum is designed to prepare students for mid-level 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 accordance with industry sanitation standards. Uniforms and program tool kits 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.

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.

Program Learning Outcomes

Upon successful completion of this course, students will be able to:

- Identify the procedures and responsibilities of departmental teams within a foodservice operation.
- Identify and satisfy diverse customer expectations.
- 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.
- Prepare quantity foods with emphasis on food cost controls.
- Research, evaluate and write menus, purchase orders, production schedules and inventories.
- Demonstrate sanitation and safety.
- Utilize technology to maintain systems of operation.
- Analyze and apply marketing objectives and strategies to food service operations.
- Supervise a food service operation team utilizing personal and interpersonal skills.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	FSM 113	Customer Service	3	F, Sp		
	3	FSM 117	Wait Staff/Dining Room Training	1	F, Sp		
	4	FSM 118	Sanitation	2	F, Sp		
	5	FSM 105	Foods I	4	F, Sp		
	6	FSM 159	Nutrition	3	F, Sp, Su		
	7	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
Spring	8	FSM 112	Quantity Foods	4	F, Sp	FSM 105	
	9	FSM 215	Purchasing and Operations	3	F, Sp		
	10	FSM 218	Hospitality Marketing	3	F, Sp		
	11	FSM 235	Supervision and Training	3	F, Sp		
	12	FSM 219	Hospitality Internship	3	F, Sp, Su		
Total Program Credits				33			

Restaurant/Culinary Management, Certificate

School of Culinary Arts/Hospitality

Restaurant/culinary management is one the majors comprising the college's School of Culinary Arts/Hospitality. This curriculum is designed to prepare students for entry-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 accordance with industry sanitation standards. Uniforms and program tool kits 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.

Career Opportunities

Graduates of the restaurant/culinary management certificate program may accept positions as sales representative, assistant restaurant manager, assistant food service director, party planner, dining room manager, training and development specialist or customer service representatives.

Program Learning Outcomes

Upon successful completion of this course, students will be able to:

- Identify the procedures and responsibilities of departmental teams within a food service operation.
- Identify and satisfy diverse customer expectations.
- Prepare, season and cook according to recipe: soups, sauces, meats, salads, meats, fish, poultry, game, vegetables and desserts.
- Demonstrate sanitation and safety.
- Utilize technology to maintain systems of operation.
- Utilize personal and interpersonal skills as a team member.

Sugg. Term	Seq. #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	FSM 113	Customer Service	3	F, Sp		
	3	FSM 117	Wait Staff/Dining Room Training	1	F, Sp		
	4	FSM 118	Sanitation	2	F, Sp		
	5	FSM 235	Supervision and Training	3	F, Sp		
Spring	6	FSM 105	Foods I	4	F, Sp		
	7	FSM 219	Hospitality Internship	3	F, Sp, Su	Instructor Permission	
	8	CPT 150	Microcomputer Concepts	3	F, Sp, Su		
Total Program Credits				20			

Robotics, AAS
School of Technology

A robotics graduate will function as a skilled technician who can work with modules and components in a complex automated system. This would include analysis of these systems as a whole. The program is designed to provide students with the knowledge they need to assist manufacturing, mechanical and electrical engineers in all phases of design, development, production, testing and operations. Graduates will have the knowledge and skills required to manage, investigate, repair and troubleshoot automated systems with the aim of operational efficiency. Robotics graduates would usually carry out their work at production facilities, workshops or service sites.

Career Opportunities

Advanced manufacturing and robotics is a blend of mechanical, electrical, electronics and computerized technologies that together form complex automated systems. The need for skilled individuals to support these systems is ongoing. Graduates of the Robotics AAS may accept positions such as industrial technician, process specialist, and automation technician.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Describe what an advanced manufacturing and robotics system is and the inter-relationships of components and modules within a system.
- Explain the role of mechanical components and electrical devices in automated systems, modules and subsystems.
- Describe the basic components and operation of a programmable logic controller.
- Describe the basic components and operation of industrial robotics.
- Apply various techniques to analyze and troubleshoot automated systems including industrial robotics.
- Explain the role of electronic devices in complex automated systems.
- Work effectively as part of a technology team.
- Perform as part of a team to complete a complex automated systems project.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	3	RBT 111	Electrical Components	4	F		
	4	RBT 121	Mechanical Components & Electric Motors	4	F		
	5	RBT 135	Industrial Robotics	4	F		
	6	RBT 140	Digital Fund & Programmable Logic Controllers	4	F	Corequisite: RBT 111	
1st Spring	7	RBT 130	Electro-Pneumatic & Hydraulic Control Circuits	4	Sp		
	8	RBT 230	Automation Systems	4	Sp	RBT 140	
	9	RBT 240	Motor Control	4	Sp	RBT 111 & 121	
	10	RBT 245	Robotics Control Systems	4	Sp	RBT 135 & 140	
2nd Fall	11	RBT 221	Process Control Technology	4	F	RBT 111	
	12	RBT 225	Industrial Electronics for Advanced Manufacturing	4	F	RBT 111	
	13	RBT 250	Mechanical Components and Systems	4	F	RBT 121	
	14	RBT 265	Robotics and Automation	4	F	RBT 135 & RBT 245	
2nd Spring	15	MTH 108	Math for the Technologies I	4	F, Sp, Su	MTH 052, 052A or Placement	
	16	DFT 258	AutoCAD	4	F, SP		
	17	PSY 160	Psychology	3	F, Sp, Su		
	18	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	
Total Program Credits				66			

Robotics, Certificate

BASIC SYSTEMS

School of Technology

This Basic Systems Certificate introduces the student to basic electrical, mechanical and computerized components used in basic manufacturing systems. Topics covered include functional descriptions, physical properties and operation of electrical and mechanical components and devices. An introduction to digital logic devices, programmable logic controllers and programming these is also covered. Technical documentation such as data sheets, schematic diagrams, wiring diagrams, timing diagrams and system specifications are covered. System materials, lubrication requirements and surface properties are investigated. Students receive hands-on practical experience in the use and application of basic electrical instruments and mechanical measuring devices. An emphasis is placed on safe work habits and procedures, systematic preventive maintenance, localization and correction of malfunctions, and troubleshooting techniques.

Career Opportunities

Manufacturing systems is a blend of mechanical, electrical, electronics and computerized technologies that together form complex automated systems. The need for skilled individuals to support these systems is ongoing. Graduates of the Basic Systems Certificate will be able to configure and troubleshoot basic manufacturing systems.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Describe and apply safety rules while working on basic manufacturing systems.
- Explain the physical operation of electromagnetic and electrostatic components such as coils, solenoids, relays and various sensors used in basic manufacturing systems.
- Describe the inter-relationships of components and modules within basic manufacturing systems with a focus on electro- pneumatic and electro-hydraulic control systems.
- Describe troubleshooting, maintenance and safety issues associated with basic manufacturing systems.
- Perform as part of a team to complete a complex automated systems project.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	3	RBT 111	Electrical Components	4	F		
	4	RBT 121	Mechanical Components & Electric Motors	4	F		
	5	RBT 135	Industrial Robotics	4	F		
	6	RBT 140	Digital Fund & Programmable Logic Controllers	4	F	Corequisite: RBT 111	
Total Program Credits				17			

Robotics, Certificate

TECHNICIAN I

School of Technology

A Robotics Technician I will function as a skilled technician who can analyze and assess complex manufacturing systems as well as work with modules and components in these systems. This technician can manage, investigate, repair and troubleshoot advanced manufacturing systems with the aim of operational efficiency and cost control. Topics covered include both theory and a hands-on experience with process control systems, advanced programmable controller functions and operation, microcontrollers and industrial electromechanical control systems. An emphasis is placed on safe work habits and procedures, systematic preventive maintenance, localization and correction of malfunctions, and troubleshooting techniques. Students must complete the Basic Systems before enrolling in the Robotics I certificate.

Career Opportunities

Manufacturing systems is a blend of mechanical, electrical, electronics and computerized technologies that together form complex automated systems. The need for skilled individuals to support these systems is ongoing. Graduates of the Robotics Technician I Certificate will be able to configure and troubleshoot manufacturing systems.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Describe and apply safety rules while working on manufacturing systems.
- Analyze the technical specifications of manufacturing systems, modules and components.
- Derive and determine parameters for manufacturing systems and components.
- Tune proportional, integral and derivative (PID) control loops.
- Connect regulating components to PID control systems.
- Measure, interpret and analyze electrical, microcontroller and PLC values.
- Operate and program industrial robotic systems.
- Apply understanding of electronic systems and devices to manufacturing systems.
- Perform scheduled and preventive maintenance.
- Perform as part of a team to complete a complex automated systems project.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Spring	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	RBT 130	Electro-Pneumatic & Hydraulic Control Circuits	4	Sp		
	3	RBT 230	Automation Systems	4	Sp	RBT 140	
	4	RBT 240	Motor Control	4	Sp	RBT 111	
	5	RBT 245	Robotic Control Systems	4	Sp	RBT 135 & RBT 140	
Total Program Credits				17			

Robotics, Certificate

TECHNICIAN II

School of Technology

A Robotics Technician II will function as a skilled technician who can analyze and assess complex manufacturing systems as well as work with modules and components in these systems. This technician can manage, investigate, repair and troubleshoot advanced manufacturing systems with the aim of operational efficiency and cost control. Topics covered include both theory and a hands-on experience with advanced mechanical systems, industrial robotics systems, motor drive systems, manufacturing work cell applications and project management. An emphasis is placed on safe work habits and procedures, systematic preventive maintenance, localization and correction of malfunctions, and troubleshooting techniques. Students must complete the Basic Systems and Technician I certificates before enrolling in the Robotics Technician II Certificate.

Career Opportunities

Manufacturing systems is a blend of mechanical, electrical, electronics and computerized technologies that together form complex automated systems. The need for skilled individuals to support these systems is ongoing. Graduates of the Advanced Manufacturing and Robotics Technician II Certificate will be able to configure and troubleshoot manufacturing systems.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Program manufacturing systems and modules including PLCs.
- Connect and configure PLC networks.
- Analyze systems operations.
- Incorporate relevant technical literature into understanding system operations.
- Apply understanding of electrical systems and devices to manufacturing systems.
- Propose procedural and operational changes based on sound judgment.
- Observe, follow and influence cost control and process efficiency procedures.
- Describe and apply safety rules while working on manufacturing systems.
- Perform as part of a team to complete a complex automated systems project.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
2nd Fall	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	RBT 211	Process Control Technology	4	F	RBT 111; co-req RBT 225	
	3	RBT 225	Industrial Electronics for Advanced Manufacturing	4	F	RBT 111, 140	
	4	RBT 250	Mechanical Components and Systems	4	F	RBT 121	
	5	RBT 265	Robotics and Automation	4	F	RBT 135, 140, 245	
Total Program Credits				17			

Social Work, AAS

School Art, Humanities, Social Sciences and Public Service

The Social Work program is designed to provide students with the knowledge base for the profession and general skills to enter into the workforce and/or transfer to a bachelor's program. Students who want to pursue a career in social work have a sincere concern for others, ability to motivate others and desire to make a change in the world. The program allows for classroom instruction about the field including networking with agency workers in the area and learning about available programs. The program includes the opportunity to spend one semester in an agency where the skills and knowledge acquired in the classroom will be applied. The student will also earn general education credits that will apply to a bachelor's program.

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 services and social work positions in the community. Students in this program are usually interested in working in the fields of child welfare, counseling, adoption, drug and alcohol, healthcare, mental health, aging, community organization, politics and race relations.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Identify target populations, their needs, interactions and goals including the aging population
- Use their local human services system to access services for clients
- Provide basic casework services to clients
- Conduct an interview and prepare written documentation and assessments
- Use appropriate problem solving methods to advance the client
- Organize and facilitate a support, education or task group
- Identify client strengths and weaknesses and build action plans accordingly
- Provide quality services to clients of various cultures and abilities while respecting the historical and societal influences on their lived experience
- Utilize a basic knowledge of substance abuse issues when identifying and treating client problems
- Analyze how political, community, and societal structures affect social services programs and funding
- Describe developmental theories of the human life cycle and how different phases of human development influence the clients and the decisions they make
- Demonstrate a knowledge of the present day social welfare system and how it has been influenced throughout history
- Articulate knowledge of the values and code of ethics of the helping professions
- Express self-awareness regarding personal motives for choosing this field and profession
- Articulate personal values that are reflected in professional behavior, appearance, and communication
- Explain attitudes about self in relation to others in the context of current social issues
- Exhibit knowledge of the present day social welfare system, how it has been influenced throughout history and the history of the profession.

Continued on Next Page

Social Work, AAS

School Art, Humanities, Social Sciences and Public Service

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp		
	2	SWK 155	Introduction to Social Work	3	F		
	3	PSY 160	General Psychology	3	F, Sp, Su		
	4	SOC 155	Principles of Sociology	3	F, Sp, Su		
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
	6	Elective	Math Elective: MTH 160 Recommended	3	F, Sp, Su	MTH 052, 052A or Placement	Page 45 Column III
1st Spring	7	ENG 164	Advanced Composition	3	F, Sp, Su	ENG 161	
	8	SWK 157	Interviewing and Recordkeeping Skills	3	Sp	HMS 155	
	9	PSY 161	Human Growth and Development	3	F, Sp, Su	PSY 160	
	10	CPT 150	Microcomputer Concepts	3	F, Sp, Su		Page 45 Column VI
	11	Elective	Restricted Elective	3	F, SP, Su		See List
2nd Fall	12	SWK 160	Group Process	3	F, Su	HMS 155 and 157	
	13	SWK 162	Problem Solving	3	F	HMS 155 and 157	
	14	SWK 171	Introduction to Gerontology	3	F		
	15	PSY 270	Abnormal Psychology	3	F, Sp, Su	PSY 160	
	16	Elective	Restricted Elective	3	F, Sp, Su		See List
2nd Spring	17	SWK 170	Race & Diversity in the US	3	Sp, Su		
	18	SWK 172	Drug and Alcohol Dependency	3	Sp, Su		
	19	SWK 258	Social Work Practicum I	4	F, Sp, Su	HMS 155 and 157	
	20	Elective	Humanities Elective: PHL 160 or 161 recommended	3	F, Sp, Su		Page 45 Column II
	18	Elective	Restricted Elective	3	F, Sp, Su		See List

Total Program Credits 62

Restricted Electives:

ASL 101 American Sign Language I
PHL 160 Introduction to Philosophy
ASL 102 American Sign Language II
PHL 161 Introduction to Ethics
BIO 155 General Biology I
PSY 265 Child Psychology
BUS 158 Principles of Management
PSY 268 Adolescent Psychology
HIS 155 Early Western Civilization
HIS 156 Modern Western Civilization
SOC 161 Sociology of Family
HIS 255 Early US and PA History
SOC 162 Contemporary Social Problems
HMS 163 Introduction to Social Welfare
SPC 155 Effective Speech
HMS 259 Social Work Practicum II

Social Work, Certificate

School Art, Humanities, Social Sciences and Public Service

The Social Work Certificate is designed for those students who are seeking entry-level positions in the field of social work or are currently employed within an agency that will recognize this achievement with compensation and/or advancement.

Career Opportunities

This certificate is intended to increase a person's general knowledge of the field, interviewing skills, ability to run group sessions, understanding of psychological disorders and the facts about drugs and alcohol, treatment and prevention. Individuals completing this program will have advanced knowledge and skills to work in any setting providing direct care.

Program Learning Outcomes

Upon successfully completing this program, students will be able to:

- Utilize knowledge of the social work profession including types of clients, professional ethics, social service systems, diagnosis and treatment when working with clients and agencies.
- Demonstrate social work skills such as interviewing, group counseling and documenting.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Semester	1	PDV 101	First-Year Seminar	1	F, Sp, Su		
	2	OFT 110	Document Processing I	3	F, Sp, Su	OFT 100 or Placement	
	2	SWK 155	Introduction to Social Work	3	F, Sp, Su		
2nd Semester	3	SWK 157	Interviewing and Recordkeeping Skills	3	F, Sp, Su	HMS 155	
	4	SWK 172	Drug and Alcohol Dependency	3	F, Sp, Su		
3rd Semester	5	SWK 160	Group Process	3	F, Sp, Su	HMS 155, HMS 157	
	6	PSY 160	Introduction to Psychology	3	F, Sp, Su		
Total Program Credits				19			

Welding Engineering Technology, AAS
School of Technology

The Welding Engineering Technology AAS provides students with an in-depth background of the welding industry. By combining classroom theory and practical experience, students will develop the skills needed for entry-level jobs in the field of welding. Welding courses include practice for welding certifications offered in house by our AWS Accredited Testing Facility. Those planning careers in welding need manual dexterity, good hand- eye coordination and good eyesight. 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, as well as possess good problem-solving aptitude, shop math skills and exhibit a strong work ethic. Successful completion of this program of study leads to the associate of applied science degree.

Career Opportunities

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, technical sales representative and entrepreneur.

Program Learning Outcomes

Upon successful completion of this course, students will be able to:

- Successfully weld SMAW, GMAW and GTAW in all positions, on various materials, with or without joint preparation.
- Read, interpret and create blueprints.
- Demonstrate ability to make sound decisions in design and manufacturing of welded fabrications/assemblies based on the following: joint design, welding equipment, metallurgy, material application.
- Communicate technical information effectively, demonstrate accurate record keeping and utilize technical reference materials.
- Identify defects by use of DT/NDT methods.
- Maintain and troubleshoot welding, industrial and plant equipment.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp		
	2	WEL 125	Welding I	4	F, Sp, Su		
	3	DFT 110	Blueprint Reading	2	F		
	4	WEL 209	Industrial Maintenance	3	F		
	5	WEL 220	Welding Codes	3	F		
	6	DFT 258	AutoCAD	4	F, Sp		
1st Spring	7	MET 105	Welding Metallurgy I	3	Sp		
	8	WEL 221	Metal Fabrication	4	F, Sp, Su	WEL 125 & DFT 110	
	9	WEL 228	SMAW	4	Sp	WEL 125	
	10	WEL 226	GMAW	4	Sp	WEL 125	
2nd Fall	11	MET 205	Welding Metallurgy II	3	F	MET 105	
	12	WEL 227	GTAW	4	F, Sp	WEL 125	
	13	WEL 222	Fundamentals of Aluminum	4	F, Sp, Su	WEL 125	
	14	MTH 108	Mathematics for Technologies I	4	F, Sp, Su	MTH 052, 052A or Placement	
	15	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
2nd Spring	16	WEL 224	NDT and DT	3	Sp	MET 105	
	17	WEL 225	Advanced Fabrication	3	Sp	WEL 221	
	18	WEL 230	Pipe Welding	3	Sp	WEL 227	
	19	ENG 162	Technical Communication	3	F, Sp, Su	ENG 161	ENG 163 or 164
	20	Elective	Social Science Elective	3	F, Sp, Su		Page 45 Column III
Total Program Credits				65			

Welding Engineering Technology, Diploma
School of Technology

The Welding Engineering Technology Diploma provides students with an in-depth background of the welding industry. By combining classroom theory and practical experience, students will develop the skills needed for entry-level jobs in the field of structural welding. Welding courses include practice for welding certifications offered in house by our AWS Accredited Testing Facility. Those planning careers in welding need manual dexterity, good hand-eye coordination and good eyesight. 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, as well as possess good problem-solving aptitude, shop math skills and exhibit a strong work ethic. Successful completion of this program of study leads to the Welding Engineering Technology Diploma.

Career Opportunities

Students who earn their Welding Engineering Technology Diploma will be prepared to enter the workforce as an entry-level structural welder, welder's helper, or entry-level fabricator.

Program Learning Outcomes

Upon successful completion of this course, students will be able to:

- Successfully weld SMAW, GMAW in all positions, on various materials, with or without joint preparation.
- Read, interpret and create blueprints.
- Demonstrate ability to make sound decisions in design and manufacturing of welded fabrications/assemblies based on the following: joint design, welding equipment, metallurgy, material application.
- Communicate technical information effectively.
- Identify defects by use of DT/NDT methods.
- Maintain and troubleshoot welding, industrial and plant equipment.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1	F, Sp		
	2	WEL 125	Welding I	4	F, Sp, Su		
	3	DFT 110	Blueprint Reading	2	F		
	4	WEL 209	Industrial Maintenance	3	F		
	5	WEL 220	Welding Codes	3	F		
	6	DFT 258	AutoCAD	4	F, Sp		
1st Spring	7	MET 105	Welding Metallurgy I	3	Sp		
	8	WEL 221	Metal Fabrication	4	F, Sp, Su	WEL 125 & DFT 110	
	9	WEL 228	SMAW	4	Sp	WEL 125	
	10	WEL 226	GMAW	4	F, Sp	WEL 125	
Total Program Credits				32			

Welding Engineering Technology I, Certificate
School of Technology

The Welding Engineering Technology I Certificate provides students with an overview of basic safety, print reading and the fundamentals of welding. By combining classroom theory and practical experience, students will develop the skills needed to supplement an entry-level job in manufacturing or maintenance. Welding courses include practice for welding certifications offered in house by our AWS Accredited Testing Facility. Those planning careers in welding need manual dexterity, good hand- eye coordination and good eyesight. 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, as well as possess good problem-solving aptitude, shop math skills and exhibit a strong work ethic.

Career Opportunities

The Welding Engineering Technology I Certificate is a good primer for students seeking an entry-level job in manufacturing. This certificate also serves well for those already working, seeking to supplement their career with a basic knowledge of welding, safety and print reading.

Program Learning Outcomes

Upon successful completion of this course, students will be able to:

- Weld SMAW, GMAW and GTAW in the flat position, on various materials, with or without joint preparation
- Read, interpret and create blueprints
- Communicate technical information effectively.
- Identify plant equipment, and potential problems of plant equipment.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	WEL 125	Welding I	4	F, Sp, Su		
	3	DFT 110	Blueprint Reading	2	F		
	4	WEL 209	Industrial Maintenance	3	F		
	5	WEL 220	Welding Codes	3	F		
	6	DFT 258	AutoCAD	4	F, Sp		
Total Program Credits				17			

Welding Engineering Technology II, Certificate
School of Technology

The Welding Engineering Technology II Certificate provides students with a practical knowledge of welding. By combining classroom theory and practical experience, students will develop the skills needed for entry-level jobs in the field of welding. Welding courses include practice for welding certifications offered in house by our AWS Accredited Testing Facility. Those planning careers in welding need manual dexterity, good hand-eye coordination and good eyesight. 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, as well as possess good problem-solving aptitude, shop math skills and exhibit a strong work ethic.

Career Opportunities

Students who earn the Welding Engineering Technology Certificate II will have the necessary skill to apply for an entry-level production welding job using SMAW, GMAW or FCAW.

Program Learning Outcomes

Upon successful completion of this course, students will be able to:

- Weld SMAW and GMAW in all positions, on various materials, with or without joint preparation.
- Read, interpret and create blueprints.
- Demonstrate the ability to predict the metallurgical changes of steel as they weld and cool their work.
- Communicate technical information effectively.
- Identify defects by use of DT/NDT methods.
- Maintain and troubleshoot welding, industrial and plant equipment.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Spring	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	MET 105	Welding Metallurgy I	3	Sp		
	3	WEL 221	Metal Fabrication	4	F, Sp, Su	WEL 125 & DFT 110	
	4	WEL 228	SMAW	4	Sp	WEL 125	
	5	WEL 226	GMAW	4	Sp	WEL 125	
Total Program Credits				16			

Welding Engineering Technology III, Certificate
School of Technology

The Welding Engineering Technology III Certificate provides students with an overview of basic safety, print reading and the fundamentals of welding. By combining classroom theory and practical experience, students will develop the skills needed to supplement an entry-level job in manufacturing or maintenance. Welding courses include practice for welding certifications offered in house by our AWS Accredited Testing Facility. Those planning careers in welding need manual dexterity, good hand- eye coordination and good eyesight. 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, as well as possess good problem-solving aptitude, shop math skills and exhibit a strong work ethic.

Career Opportunities

The Welding Engineering Technology III Certificate is a good primer for students seeking an entry-level job in manufacturing. This certificate also serves well for those already working, seeking to supplement their career with a basic knowledge of welding, safety, and print reading.

Program Learning Outcomes

- Successfully weld SMAW, GMAW and GTAW in the flat position, on various materials, with or without joint preparation.
- Read, interpret and create blueprints.
- Communicate technical information effectively.
- Identify plant equipment, and potential problems of plant equipment.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Term Offered	Prereq(s)	Options Available
Fall	1	PDV 101	First Year Seminar	1	F, Sp, Su		
	2	MET 205	Welding Metallurgy II	3	F	MET 105	
		WEL 227	GTAW	4	F, Sp	WEL 125	
	3	WEL 222	Fundamentals of Aluminum	4	F, Sp, Su	WEL 125	
	4	MTH 108	Mathematics for Technologies I	4	F, Sp, Su	MTH 052, 052A or Placement	
	5	ENG 161	College Writing	3	F, Sp, Su	ENG 085 or Placement	
Total Program Credits				19			

Course Descriptions

Accounting - ACC 184
Allied Health - ALH 185
American Sign Language - ASL 186
Anthropology (see SOC) .....
Architecture - ARC 185
Art - ART 185
Art Technology - ATT 187
Art Therapy - ATH 186
Astronomy (see EPS) 205
Baking and Pastry - BKP 188
Biology - BIO 187
Business - BUS 188
CADD/CAM (see DFT) 197
Chemistry - CHM 191
Communication Design- GCT 207
Computer Numerical Control - CNC 191
Computer Technology - CPT 191
Construction Management – CMT 191
Cooperative Education - CED 191
Criminal Justice - CRJ 193
Culinary Arts - CUL 194
Cyber Security - CIS 192
Dental Assisting - DAS 197
Dental Hygiene - DAH 195
Diagnostic Medical Sonography - DMS 198
Dietetic Technology - DTT 199
Drafting - DFT 197
Education/Pre-K–Grade 4 - ECE 199
Earth and Planetary Science - EPS 205
Economics - ECN 200
Education - EDU 200
Electrical Mechanical Automation - EMA 203
Electrical Utility Technology - EUT 205
Electronics - ELC 201
Engineering - EGR 201
English - ENG 203
English as a Second Language - ESL 205
Expanded Functions Dental Assisting - DAE 195
Finance - FIN 206
French - FRN 206
Geography - GEO 208
Geology (see EPS) 205
Health and Physical Education - HPE 212
Heating, Ventilation, Air Conditioning and Refrigeration - HAC 209
History - HIS 210
Honors - HON 212
Hotel and Resort Management - HMT, TRV 211, 224
Human Services/Social Work - HMS 256
Humanities - HUM 210
Italian - ITA 212
Machine Technology - MTT 217
Manufacturing Process Technology - MPT 215
Marketing - MKT 214
Mathematics - MTH 216
Medical Assisting - MAS 213
Medical/Healthcare Management - HCM 209
Metallurgy - MET 214
Multimedia and Photography - MED 213
Music - MUS 217
Nursing - NSG 218
Office Technology - OFT 219
Paralegal - LAS 212
Personal Development - PDV 219
Philosophy - PHL 220
Phlebotomy - PHB 220
Physics - PHY 220
Plumbing – PMB 221
Political Science - POL 221
Psychology - PSY 222
Radiology Technology - RAD 222
Real Estate - RLS 223
Religion - REL 223
Restaurant/Culinary Management - FSM 206
Sociology - SOC 224
Spanish - SPA 224
Speech Communication - SPC 224
Web Technology - WEB 224
Welding - WEL 225

Course Descriptions

All academic courses offered by Westmoreland are listed below. Course numbers, titles and descriptions are Westmoreland 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.

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 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. Prerequisite(s): MTH 050, 050A or Placement.

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. Prerequisite(s): MTH 050, 050A or Placement

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—CORPORATE TAXATION 3-0-3

Covers tax reporting for partnerships and S Corporations, as well as taxation of C Corporations and fiduciaries. Also included is an overview of federal estate gift taxes. The use of microcomputers in the preparation of individual tax returns is an integral part of this course.

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 299—INTERNSHIP IN ACCOUNTING 1-12-3

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 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 156

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. Prerequisite: MTH 050, 050A or Placement.

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.

AMT–ADDITIVE MANUFACTURING

AMT 101—INTRODUCTION TO ADDITIVE MANUFACTURING 3-0-3

This course will introduce students to additive manufacturing with discussions ranging from the historical beginning of 3D printing utilized in rapid prototyping through current applications in various precision manufacturing industries. The growing variety of polymer and metal materials along with related three-dimensional printing processes will also be explored. A brief overview of material safety, product design considerations, and post-process procedures will prepare the student for advanced courses in these subject areas.

AMT 102—MATERIAL HANDLING & SAFETY 3-0-3

Students will gain the essential knowledge for proper handling of metal and polymer powders used in the field of additive manufacturing. Topics will detail the storage, documentation, pre-process, post-process, material recovery, and disposal of both metal and polymer powders according to ANSI and UL standards and procedures. An overview of all types of materials currently used in Additive Manufacturing will also be explored. This course must be completed before AMT-201 and 202.

AMT 201—3D PRINTER OPERATION, MAINTENANCE & MANAGEMENT 2-4-4

This course will provide the student with hands-on operating experience of several advanced additive manufacturing 3D printing platforms utilized in industry. Students will convert CADD design files to the appropriate coordinate data necessary for both polymer and metal parts created through a 3D printing process. Maximizing the build environment of a 3D printer will be considered to increase productivity and efficiency of the operation. Pre and post process of printed parts along with operational printer maintenance procedures will be performed. Experience managing and handling both polymer and metal materials according to ANSI and UL standards will be employed. Prerequisites: DFT 105 ro 110, DFT 266, AMT 102

AMT 202—BUILDING MATERIALS & ESTIMATING 2-4-4

3D printing requires an entirely new thought process on the design of molds used in manufacturing. This course will provide students the opportunity to utilize the 3D printing process for the creation of injection and casting molds. Investment casting designs will also be explored. 3D mold design software will be employed to provide the necessary coordinate data for the production of manufacturing molds. Prerequisites: AMT 201. Co-requisites: DFT 208

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.

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 and local building codes 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 and building code requirements. 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. Benchmark 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

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 and 3D parametric modeling software 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 or DFT 258

ART–ART

ART 101-STUDIO SAFETY AND STEWARDSHIP

From measuring with a ruler to operating a miter saw, fundamental, technical skill sets are necessary for all artists whether they work in two-dimensional or three-dimensional mediums. In addition to the proper and safe use of tools, equipment and chemicals, students will develop organized work habits for their own personal work areas as well with a community space, essential to optimize the quality of output. Students will learn basic rules of studio safety including emergency procedures to insure the safe and responsible practice of art making in a community studio workspace.

ART 140—ILLUSTRATION 1-4-3

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 1-4-3

This course is an introduction to and exploration of type design, history and contemporary use. The development of letter formation through calligraphic exploration, letterpress, poster design and digital experimentation will be examined for creative potential, corporate identification and personal exploration. Students incorporate design ideas, conceptual thinking, topographic 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 that explore historic letterpress printing, as well as digital applications including 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 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—WORLD 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, and 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 159—HISTORY OF GRAPHIC DESIGN 3-0-3

This is course spans the first impulses of visual mark-making and symbolic expression to current streams of thought and changes in the graphic design profession. While technology has changed drastically through the years, the basic principles of visual communication are still relevant. The approach is to demonstrate the links between graphic works and the social forces and conditions of their production. Knowing this history gives insights to the reasoning, meaning and critical knowledge to understand the expanding field of graphic professions. This course will be offered online.

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 freestanding 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 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 170—INTRODUCTION TO GRANT WRITING **3-0-3**

This course introduces students to the philanthropic world and the fundamentals of successfully attracting grant funding. Students will become familiar with the vocabulary used in this field and the skills and education needed to pursue a grant-writing career. During the course, students will develop an appreciation of the importance of thorough research and preparation in developing a fundable "ask" and in identifying the best donor match(es) for it. They will be given guidance and asked to build an effective case statement that employs persuasion and critical analytical skills in written discourse.

ART 171—ART LAW – LEGAL ISSUES FOR CREATIVE PROFESSIONALS **3-0-3**

This course provides a broad overview of some of the legal issues that may affect the visual artist as well as other creative professionals. It is not designed to make lawyers of students, but rather to create a heightened awareness of legal issues, which may require that the artist seek the counsel of a legal professional. The course will address the questions "What is art?" and explain various rights of the artist to protect his/her art through copyright and moral rights. Additionally, we will spend time examining the work of artists who have pushed the boundaries of what is acceptable in society and will discuss the attempts to censor work, which may be deemed offensive by certain groups. Students will learn the basics of contract law, review different types of contracts, which they may encounter in their professional life, and learn what might be a "red flag" when negotiating contract language. Finally, the course will cover forms of business entities from self-employment to the incorporation of a business, including nonprofit arts organizations. The course will draw on current issues and cases in the art world and students will be expected to access online resources and to share their thoughts and opinions in online discussion groups.

ART 172—MUSEUM CAREERS **3-0-3**

This course will provide an overview of the possible careers within museums, particularly for students undertaking liberal arts/creative degrees. The course is designed to make students aware of the jobs and career paths available so that they can better utilize their degree offerings in order to streamline and strengthen their skills and education for future employment.

ART 175—ART SPECIAL TOPICS **VARIABLE**

Art Special Topics is developed to cover specific emerging technologies, issues or specialized content not represented in the main curriculum. Special topics courses meet the variable needs of students, businesses and community and will enhance the disciplinary framework where the content of the course changes each time it is offered. The special topics area will be designated in the course outline of record, and must be approved by the Division Dean. Special topics course descriptions are not printed in the college catalog but are included in the class schedule for the semester they will be offered.

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 185—CLAY I-FOUNDATION CERAMICS **1-4-3**

This course introduces students to ideas and methods used in the contemporary field of ceramic object making and provides the basic skills required to creatively express his or her ideas in clay. Projects are designed to have students consider clay for both its fine art and design potential. Students will be introduced to traditional methods of hand building and throwing on the potter's wheel and address idea development. Projects will cover different approaches to clay forming, wheel throwing and finishing techniques. Pinching, coil building and slab construction will be included. Students will become familiar with the firing process and basic glaze and slip surface treatments. Issues in historical and contemporary ceramics will be discussed. (Touchstone location only)

ART 188—TEXTILES I **1-4-3**

An investigation of the cultural and aesthetic development of fibers and textiles from its ancient beginning will explore fabric-dying, batiking, weaving and knotting formation. Pattern designs will include screen and combination. An exploration of new formulations will include recycling materials to create unique yardage.

ART 285—PORTFOLIO I **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.

ART 286—PORTFOLIO II **1-4-3**

This course is designed as a capstone experience for the art student to develop and execute a professional gallery exhibition and/or develop a professional artisan product line. Students are required to develop a timeline task to execute the exhibition, design promotional materials and coordinate with appropriate offices through cultural programming to execute the show, work with the gallery manager to professionally calculate and hang work, design lighting and exhibition cohesion, present a public artist statement and document work.

ATH–ART THERAPY

ATH 175—EXPRESSIVE THERAPIES 1-4-3

This course is designed as a survey of the use of creative expression in the practice of therapy. Creative theories will be examined in relation to learning, problem-solving and psychological health. Students explore various expressive modalities, how those methods engage personal growth and self-expression and the necessity of these qualities in psychological recovery. The expressive arts explore visual art, music, dance, drama, writing and other creative processes to encourage self-expression and healing for personal and community benefit. This course will explore how the arts are used in various setting such as hospitals, community organizations, mental health services as well as educational environments.

ATH 176—INTRODUCTION TO VISUAL ART THERAPY 1-4-3

This course examines the theory, development and practice of art therapy and the role of self-expression in the process of both personal and communal healing. Students will explore the creative process of visual art and its relationship to the psychological and emotional self. Through various visual art methods and materials, students will investigate the role of self-expression toward personal growth. Students will discover sources of imagery and symbolic language from two perspectives: as creator and viewer, and link the benefits of creative expression to psychological health that have implications for specific local communities as well as the overall health of the community at large.

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.

ATT-ART TECHNOLOGY

ATT 150—ART TECHNOLOGY SYSTEMS I 3-2-4

This course is a study of basic electronics circuits, devices and mechanisms associated with animatronic systems. Topics covered will include an introduction to basic circuits, elementary mechanics, sensors and wiring techniques. Essential circuit troubleshooting, soldering and test equipment will be investigated and utilized. Through project-based learning, students will interface simple mechanisms, sensors and actuators with creative explorations and projects.

ATT 151—ART TECHNOLOGY SYSTEMS II 3-2-4

This course is a study of programmable microcontroller systems associated with animatronic systems. Topics covered will include an introduction to microcontrollers, microcontroller programming, and interfacing techniques. Basic system construction and troubleshooting procedures for these systems will be investigated and utilized. Students will learn to program and interface basic mechanisms, sensors and actuators to microcontroller- based creative projects.

BIO–BIOLOGY

BIO 107—HUMAN BIOLOGY 3-0-3

This course explores the basic structure and function of the human body. All organ systems will be studied; including the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems. Selected disorders and the anatomical and physiological relationships to the body will be discussed. Biological terms and meanings of appropriate terms are emphasized along with the relationships between the various organ systems in both health and disease.

BIO 110—INTRODUCTION TO FORENSIC BIOLOGY 4-0-4

A survey of the biological aspects of forensic science, the mechanisms leading to death and the analysis of biological evidence from crime scenes. Includes discussion of topics including the cause and manner of death, body decomposition, assessment of 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 human impact upon the natural world by reviewing a number of current environmental problems. Topics include ozone depletion, the greenhouse effect, habitat destruction and overpopulation. 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 FORENSIC PATHOLOGY 4-0-4

A survey of disease processes of the human body as they relate to biological forensic evidence. The basic mechanisms of infection, cancer, trauma, blood clotting, hemorrhage and related topics will be discussed along with their importance to forensic investigation, crime scene assessment and autopsy findings. Significant disease processes of the heart, lungs, liver, kidneys, brain, muscles, bones, and other organs are explained and analyzed to allow an understanding of their effects on the human body and how they relate to death.

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, evolution, 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 toxicology-related deaths and the biological effects of various substances on the organs of the human body are assessed. 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.

BIO 171—ANATOMY AND PHYSIOLOGY I 3-2-4

This is the first course in a two-semester sequence that explores the structure and function of the human body and mechanisms for maintaining homeostasis within the body. Topics include basic organic chemistry, cells, tissues and the following organ systems: integumentary, skeletal, muscular, nervous and endocrine. Also discussed will be interactions between systems as well as selected diseases and the disorders and their relationship to typical anatomy and physiology. Prerequisite(s): CHM 107, CHM 155, CHM 264 or high school chemistry and ENG 095 or placement.

BIO 172—ANATOMY AND PHYSIOLOGY II 3-2-4

This is a continuation of Anatomy and Physiology I. Students will continue to explore the structure and function of the human body and mechanisms for maintaining homeostasis within the body. Topics include the cardiovascular, respiratory, lymphatic, digestive, urinary and reproductive systems. Also discussed will be interactions between systems as well as selected diseases and disorders and their relationship to typical anatomy and physiology. Prerequisite(s): BIO 171 with a "C" grade or better.

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 non-science majors alike.

BIO 255—MAKING SENSE OF CLASSICAL GENETICS 3-2-4

Classical genetics is the foundation on which all other genetics courses rest. It is concerned primarily with the ways that genetic traits are passed through generations in plants and animals. Traits may be dominant, recessive, intermediate, polygenic, sex-linked or autosomal, and each will be explained in this course. Today, a prime reason for performing classical genetics is for gene discovery- the finding and assembling a set of genes that affects a biological property of interest. In addition, the inheritance of chromosomes, how they produce a functional protein and how we can use DNA to manipulate these traits will be covered. Finally, the course of traits in entire populations will be analyzed, allowing students to predict the futures of endangered species, and perhaps even humans themselves.

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, ENG 085 or placement

BIO 275—BIOCHEMISTRY 3-3-4

This course is a general study of the chemistry of biomolecules. It will present the conformation and function of enzymes and other proteins, carbohydrates and lipids, and cell membranes, channels, pumps, and receptors. The methods of producing and storing energy through glycolysis and gluconeogenesis, the citric acid cycle, photosynthesis, and the metabolism of glycogen, fatty acids and lipids, and nitrogen-containing molecules will be examined. A brief discussion of the chemistry of genes and chromosomes, DNA and RNA metabolism, and regulation of gene expression will conclude the semester. Prerequisite(s): CHM 108 or CHM 250 or CHM 264

BIO 285—MOLECULAR GENETICS 3-3-4

Although the course begins with an introduction to heredity and classical Mendelian genetics, this material will emphasize current ideas in molecular biology including the transfer and expression of genetic information, the interaction and hybridization of genes, and molecular mutagens. The course will focus on the transmission and expression of genetic information, predominantly through eukaryotic molecular genetics. Prokaryotic molecular genetics and the variations from the eukaryotic model will also be discussed. The structure and function of the genetic material at the molecular level, replication and repair of the genetic material, and the regulation and expression of genetic information will be considered. Prerequisite(s): BIO 110, BIO 155, BIO 171 or BIO 210.

BKP–BAKING AND PASTRY

BKP 141—BAKING I 2-4-4

The student learns the fundamentals of baking which involves preparation of yeast rolls, breads, pies, cakes, cookies tarts and doughnuts. The properties of baking ingredients, use and care of commercial bakeshop equipment, and storage and sanitation of baked products are studied. Uniforms and program tool kit are 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 and program tool kit are 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 Artisan and decorative breads. Emphasis is placed on introducing the student to the most up-to-date products and technologies available. Uniforms and program tool kit are 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 and program tool kit are required. Prerequisite(s): BKP 141

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 and program tool kit are required. Prerequisite(s): 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 and program tool kit are 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 and program tool kit are required. Prerequisite(s): BKP 142

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 and program tool kit are 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): MTH 050, 050A or placement

BUS 140—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 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 188—SOCIAL MEDIA IN BUSINESS 3-0-3

This course examines the current trends in social media and how these popular Internet-based social networking sites can be a powerful marketing tool for businesses and organizations. Through a combination of selected readings and hands-on projects, students will learn which prominent social media tools are best suited for various businesses and organizations in order to maintain a current online profile. Upon completion of the course, students will have the knowledge to develop a basic social media-marketing plan for businesses or organization.

BUS 205—BUSINESS LAW 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 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): MTH 052, 052A or placement

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 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 250—CALCULUS FOR BUSINESS 3-0-3

This course is an introduction to the differential and integral calculus used in understanding and solving problems arising in business and economics. Topics include limits, differentiation, integration, Taylor series approximations, optimizing functions and constrained optimization, probability and statistics and the Fundamental Theorem of Calculus. Calculus will be applied to real world business and economic applications. Prerequisite(s): MTH 157

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 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 262—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 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 278—DATA ANALYTICS 3-0-3

Introduce the fundamental concepts necessary for the design and use of a database. The course will provide practical experience in applying these concepts using commercial database management systems. Students will perform identification, analysis and interpretation of volumes of data that are collected from a wide variety of sources. Students will learn to identify patterns and relationships in large data sets, to resolve business questions and make data-driven decisions, and effectively communicate informed tactical and strategic business objectives.

BUS 285—COMPNSATION 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 288—BUSINESS ANALYTICS 3-0-3

Business analytics focuses on decision-making enhanced by electronic spreadsheets. It introduces students to a collection of quantitative tools designed to enhance managerial decision-making. Topics to be covered include financial statement analysis, financial and capital budgeting, forecasting, inventory control models and linear programming. Extensive use of an electronic spreadsheet will be used in this course. This is a capstone course in the Business Administration option AAS degree program. Prerequisite(s): ACC 156 or ACC 165 and FIN 220

BUS 296—BUSINESS STRATEGY 3-0-3

This is a capstone course in business that integrates managerial, financial, marketing and accounting principles in strategic decision-making. The case methods/simulation method of instruction will be used for problem identification, analysis and solution. Prerequisite(s): 45 credits in business courses

BUS 299—BUSINESS 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 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 Career Connections Center.

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 Career Connections Center.

CHM–CHEMISTRY

CHM 102—CAREERS IN LABORATORY TECHNOLOGY 1-0-1

This is a survey course about the career and educational aspects of laboratory technology in the areas of biology, chemistry, forensics and medical applications. Topics included, but not limited to, are employment opportunities, job functions, and case studies of workplace activities. Course will include guest speakers from the various industries using laboratory technicians when available.

CHM 107—INTRODUCTORY CONCEPTS IN CHEMISTRY I 3-2-4

A study of the basic concepts in chemistry. Basic atomic and molecular structure are explored with emphasis on vocabulary, periodic properties, chemical reactions, nomenclature, stoichiometry, solutions and problem solving while stressing the applications of chemistry. No prior knowledge of chemistry is assumed. While this course does not have the mathematical rigor of General Chemistry, it does involve calculations and data handling. Prerequisite(s): MTH 052 or placement

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 120—CHEMISTRY AND LABORATORY SAFETY 2-0-2

The course provides an introduction to the principles of laboratory safety in biological and chemical laboratories. Topics include safe lab practices; regulatory agencies; Safety Data Sheets (SDS); handling, storage, and disposal of chemicals; protective equipment; emergency response; and chemical and biological hazards. This is a required course for students of the various Laboratory Technician programs.

CHM 155—GENERAL CHEMISTRY I 3-2-4

CHM 155 is the first semester of a two-semester general chemistry course that introduces the student to the study of chemistry, focusing on the relationship between the microscopic structure of matter and the chemical and physical properties of matter, including applications to the real world. CHM 155 studies the concepts of atomic structure, chemical periodicity, bonding, naming of molecules and ionic compounds and principles of chemical reactivity. Measurements and problem solving, stoichiometry, solution chemistry, gas laws, thermodynamics and quantum chemistry are presented using a quantitative approach. Conceptual understanding of gases, the structure of solids and liquids and chemical periodicity are also studied. Prerequisite(s): High school chemistry or CHM 107, MTH 052 or 052A

CHM 156—GENERAL CHEMISTRY II 3-2-4

CHM 156 is the second semester of a two-semester general chemistry sequence following CHM 155. CHM 156 uses the same text as CHM 155 and continues to build upon that material. CHM 156 focuses on the following topics: bonding in molecules, ionic compounds, metals and semi-metals, chemical kinetics, equilibrium and thermodynamics. Acid/base equilibria, pH, titrations and electrochemistry are also explored along with an introduction band gap theory and real-world applications. 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 250—ORGANIC CHEMISTRY I 3-4-4

CHM 250 is the first semester of a two-semester Organic Chemistry course. CHM 250 presents the chemistry of carbon containing compounds by laying down the groundwork for a conceptual understanding of the physical and chemical interactions between organic molecules. Structure, charge and resonance are studied in order to explore chemical and physical interactions between organic molecules. Kinetics studies are used where appropriate to verify reaction mechanisms. Classification of organic compounds is presented with an emphasis on naming and reactions of alkanes, alkyl halides, alkenes and alcohols. There is a focus throughout the course on the understanding of reaction mechanisms to work toward a conceptual understanding of the underlying basis of organic reactions. Introduction to gas chromatography and infrared spectroscopy are also covered. Prerequisite(s): CHM 156

CHM 251—ORGANIC CHEMISTRY II 3-4-4

CHM 251 is the second semester of the course and 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 families, focusing on naming and reactions of ethers, conjugated systems, aromatics, ketones, aldehydes, carboxylic acids, amines and amides. There is continuing focus throughout the course on the understanding of reaction mechanisms to work toward a conceptual understanding of the underlying basis of organic reactions. Introduction to nuclear magnetic resonance and mass spectrometry are also covered. Prerequisite(s): CHM 250

CHM 264—CHEMISTRY FOR THE HEALTH SCIENCES 3-2-4

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–CYBER 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.

CIS 209—NETWORK SECURITY FUNDAMENTALS 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. Students will develop an in-depth understanding of network security principles, tools and configurations needed to secure a network.

CIS 210—ADVANCED DIGITAL FORENSICS 3-0-3

This course will focus on the theories, ethics, terminologies and principles of information and protection within a WAN 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): CIS 212 Digital Forensics Fundamentals

CIS 212—DIGITAL FORENSICS FUNDAMENTALS 3-0-3

This course introduces the student to the technical and legal aspects of Digital Forensics, including general forensic processes, imaging, hashing, file recovery, file system basics, identifying mismatched file types, reporting and laws regarding computer evidence.

CIS 255—ETHICAL HACKING & SOFTWARE DEFENSE 3-0-3

This course provides students with the knowledge and skills required to look for weaknesses and vulnerabilities in computer systems and networks with a view to enhance defense against cyber-attacks. The course will also cover the objectives of the EC-Council Certified Ethical Hacker (CEH) certification examination. Prerequisite(s): CIS 168 Principles of Information Security

CMT–CONSTRUCTION MANAGEMENT

CMT 101—RELATED TRADES 2-4-4

This course will help the student develop skills in to perform some of the additional construction tasks approached by the tradesman in the field.

CMT 121—CONTRACTS FOR THE TRADESMAN 2-0-2

This course will help the student develop skills to perform some of the contractual tasks that the contractor encounters in the field. The legal side of a business is fundamental for any contractor to be successful in a service-based business. The course will provide the student the knowledge for the legal contractual aspect of plumber projects, listing specific expectations, and any applicable requirements.

CNC–COMPUTER NUMERICAL CONTROL

CNC 111—COMPUTER NUMERICAL CONTROL I 1-6-4

This is course will introduce students to computer numerical control of machining equipment. Students will be taught manual parts programming using the industrial standard G-code format. Students will operate CNC mills and lathes and create parts using their programs. Corequisite(s): MTH 108

CNC 112—COMPUTER NUMERICAL CONTROL II 1-6-4

This course will introduce students to software programming of CNC equipment. Students will use MasterCAM to develop part geometry, create tooling paths, and verify machining operations and post-process machining G-code. Students will create parts using CNC mills and lathes. Prerequisite(s): CNC 111; Corequisite(s): MTH 109

CNC 213—COMPUTER NUMERICAL CONTROL III 1-6-4

This course will provide students with further training and experience using CNC software and equipment. MasterCAM will be used to produce G-code programs, which will be used to create parts on CNC mills and lathes. Students will be introduced to 4 and 5 axis programming. Prerequisite(s): CNC 112

CNC 214—COMPUTER NUMERICAL CONTROL IV 1-6-4

This course will enable students to develop expertise in programming and operating CNC equipment. Students will work on projects to produce finished parts from raw materials. Production steps will include planning, programming, tooling, fixturing and operations. Prerequisite(s): CNC 213

CPT–COMPUTER TECHNOLOGY

CPT 145—INTRODUCTION TO COMPUTER TECHNOLOGY 3-0-3

This course will survey the field of computer technology and information systems. Students will gain a basic understanding of how computers process information through the integrated use of hardware and software. Students will explore networking computer security, programming, database, e-commerce, decision support systems, mobile computing, ethical issues and other emerging technologies. 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 and various state-of- the-art software applications; word processing, spreadsheet, database and presentation. The overall goal of the course is to guide the student into becoming a proficient microcomputer user.

CPT 156—PROGRAMMING WITH PYTHON 3-0-3

This course introduces students to computer programming using the Python programming language. Procedural programming, algorithm design and language constructs common to most high-level languages are topics emphasized. A brief introduction to Python classes and object-oriented design is included. Upon completion, students should be able to design, code, test and debug Python language programs.

CPT 160—INTRODUCTION TO PROGRAMMING 3-0-3

This course introduces students to programming logic, design and development. 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 3-0-3

This course introduces the Visual Basic programming language through hands-on development of projects of increasing complexity. The course will include forms, controls, menus, programming fundamentals, syntax and file formats. Emphasis will be placed on good program design, event- based programming, error checking and documentation. 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 172—INTRODUCTION TO NETWORKS (CISCO I) 4-0-4

This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.

CPT 180—C++ PROGRAMMING 3-0-3

This course provides an introduction to object-oriented programming and the C++ programming language. Students will create, document, run and debug programs. Major topics include variables, classes, objects, selection, iteration, strings, arrays, pointers and functions. Emphasis will be placed on solving problems using well-written algorithms, producing readable program documentation and creating programs that produce accurate output. Prerequisite(s): CPT 160

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 telecommunications 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 are covered.

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 145

CPT 183—LOCAL AREA NETWORKS 3-0-3

This course is designed to provide the concepts, components, terminology and topologies of Local Area Networks (LANs). Topics include network concepts, network essentials, and maintenance and network administration. Efficient and effective network methodologies are presented to enhance network management fundamentals.

CPT 195—EXCEL FOR WINDOWS 3-0-3

This course is designed to construct spreadsheets that graphically describe business problems and generate charts. Students use statistical, mathematic and financial functions. The course will introduce dynamic linking, macros and importing/exporting data.

CPT 196—ACCESS FOR WINDOWS 3-0-3

Microsoft Access is a relational database management system that allows the user to store and retrieve information from related records. The course focuses on a wide range of activities form the fundamentals of good database design and the database 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

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 CONTENT DEVELOPMENT 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—HTML 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 cascading style sheets (CSS).

CPT 206—JAVASCRIPT 3-0-3

This course introduces students to Web application programming with scripting languages for interactive Web pages and server processing. Students create, test and debug scripts that may be implemented in HTML pages or deployed on a Web server. Prerequisite(s): CPT 203

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 include 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 216—ROUTING AND SWITCHING ESSENTIALS 4-0-4

This course describes the architecture, components and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPng, single-area and multi-area OSPF, virtual LANs and inter-VLAN routing in both IPv4 and IPv6 networks.

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 focuses on network overview, fiber properties, hanging and routing of hardware, 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 devices will be used to insure a wide base of installation knowledge. This course is 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. Topics include repetitive testing of single-mode fiber, multi-mode fiber, repetitive insertion loss tests on multiple links and repetitive testing with Optical Time Domain Reflectometry. Emphasis placed on testing and troubleshooting, measuring signal quality and reflectance testing. This course is a preparation for the Fiber Optic Specialist/Testing certification. Prerequisite(s): CPT 198

CPT 235—DATABASE MANAGEMENT SYSTEMS 3-0-3

This course explores the theory behind data management by using a database management system and emphasizes the importance of good database design. Topics introduced include Data Manipulation Language, Data Definition Language and Data Control Language, controlling redundancy, entity-relationship diagram, normalization and Structured Query Language among others. Prerequisite(s): CPT 196

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 is 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, configuration, upgrading and troubleshooting of the most recent version of UBUNTU Linux. Common Linux utilities and applications will be examined. Emphasis will be placed on the use of Linux as a server operating system. Prerequisite(s): CPT 182

CPT 259—USER SUPPORT OPERATIONS 3-0-3

This course provides those students seeking to become help desk or call center professionals with skills ranging from customer service, troubleshooting software and computer problems, operation of the help desk and creation of manuals. It is expected that students have a prior knowledge of basic computer concepts, word processing, spreadsheet and database applications and Internet experience. Prerequisite(s): CPT 150

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. Prerequisite(s): CPT 182

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—PHP AND SQL 3-0-3

This course provides students with two widely used web development tools; introduction to PHP programming techniques in conjunction with an introduction to the Structured Query Language (SQL) as it is used in a variety of database environments. The course content will include creating and modifying queries, the design of effective queries and query programming within an open source relational database management system. Prerequisite(s): CPT 196

CPT 278—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 and Publisher are introduced. Prerequisite(s): CPT 195, CPT 196, OFT 185 and OFT 190

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.

CRJ–CRIMINAL JUSTICE

CRJ 101—HOMELAND SECURITY 3-0-3

This course provides a broad overview of homeland security and homeland defense as undertaken in the United States since 9/11. The goal is to provide the students with an overview of a generally accepted body of knowledge required of the homeland security professional. The course focuses on the enemy, why they hate us and the threat they pose; the homeland security policies and procedures enacted since 9/11; the key players at the federal and state and local levels. Successful students will receive four certifications from the Federal Emergency Management Administration in Incident Command and the National Incident Management System.

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 and procedural criminal law and how it applies in both practice and theory are introduced. The structure, definitions and most applicable and pertinent sections of criminal statutes are examined. An understanding of the criminal laws as they apply to preservation and protection of life and property will be summarized with an identification of appropriate punishments and punishment philosophies.

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.

CRJ 163—CRIMINAL PROCEDURE 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 social science research sources will be investigated.

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 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.

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 3-0-3
OF ADULTS AND JUVENILES

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 287—MULTICULTURALISM AND THE CRIMINAL JUSTICE SYSTEM 3-0-3

A comprehensive overview of multiculturalism in the American criminal justice system. This course will explore the various issues relating to correctional procedures and practices but also employment strategies for minorities and women. We will examine the philosophy of community partnerships and community policing strategies with the emphasis on police-citizen collaboration in dealing with not only crime

but a host of social issues affecting the community.

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.

CUL–CULINARY ARTS

CUL 121—APPRENTICESHIP I 2-40-2

A supervised and evaluated on-the-job training experience designed to provide practical application of the skills and methodology of the field. Job site must be approved by coordinator. Uniforms required. Prerequisite(s): Must be enrolled in the chef apprenticeship program.

CUL 122—APPRENTICESHIP II 2-40-2

A supervised and evaluated on-the-job training experience designed to provide practical application of the skills and methodology of the field. Uniforms required. Prerequisite(s): CUL 121

CUL 123—APPRENTICESHIP III 2-40-2

A supervised and evaluated on-the-job training experience designed to provide practical application of the skills and methodology of the field. 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 and program tool kit 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 and program tool kit 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. Uniforms and program tool kit required. Prerequisite(s): FSM 105

CUL 224—APPRENTICESHIP IV 2-40-2

A supervised and evaluated on-the-job training experience designed to provide practical application of the skills and methodology of the field. Uniforms required. Prerequisite(s): CUL 123

CUL 232—FOOD SPECIALTIES 1-4-3

Advanced food preparation skills to include regional and ethnic cuisine, food trends and menus. Uniforms and program tool kit 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 Westmoreland 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. Prerequisite(s): BIO 171, CHM 264, PSY 160, SOC 155; Corequisite(s): DAH 102, DAH 104, BIO 172

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. Prerequisite(s): BIO 171, CHM 264, PSY 160, SOC 155; Corequisite(s): BIO 172, DAH 101, DAH 104

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. Corequisite(s): DAH 105, DAH 111, DAH 112, DAH 113, DAH 114

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. Prerequisite(s): BIO 171, CHM 264, PSY 160, SOC 155; Corequisite(s): DAH 101, DAH 102, BIO 172

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; Corequisite(s): DAH 103, DAH 111, DAH 112, DAH 113, DAH 114

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. Prerequisites(s): DAH 103, DAH 105, DAH 111, DAH 112, DAH 113, DAH 114; Corequisite(s): DAH 109, DAH 115, DAH 117

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. Prerequisite(s): DAH 103, DAH 105, DAH 111, DAH 112, DAH 113, DAH 114; Corequisite(s): DAH 106, DAH 115, DAH 117

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 103, DAH 105, DAH 112, DAH 113, DAH 114

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 172; Corequisite(s): DAH 103, DAH 105, DAH 111, DAH 113, DAH 114

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. Corequisite(s): BIO 172, DAH 103, DAH 105, DAH 111, DAH 114

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. Prerequisite(s): DAH 103, DAH 105, DAH 111, DAH 112, DAH 113, DAH 114; Corequisite(s): DAH 106, DAH 109, DAH 117

DAH 117—LOCAL ANESTHESIA 1.5-3-3

This course is designed to provide the didactic and clinical knowledge of safe and effective pain control through the administration of topical and local anesthetic agents. Prerequisite(s): DAH 103, DAH 105, DAH 111, DAH 112, DAH 113, DAH 114; Corequisite(s): DAH 106, DAH 109, DAH 115

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 106, DAH 109, DAH 114, DAH 115, DAH 117

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 106, DAH 109, DAH 114, DAH 115, DAH 117

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. Prerequisite(s) DAH 115; Corequisite(s): DAH 206, BIO 265

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 205, 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. Corequisite(s): DAH 205, DAH 206

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 102, DAS 103, DAS 105, BIO 107

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 102, DAS 103, DAS 105, BIO 107

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. Corequisite(s): DAS 100, DAS 101, DAS 103, DAS 105, BIO 107

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 102, DAS 105, BIO 107

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 101, DAS 102, DAS 103, DAS 105, BIO 107; Corequisite(s): DAS 106. ENG 161, PSY 160

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. Corequisite(s): DAS 100, DAS 101, DAS 102, DAS 103, DAS 105, BIO 107

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 102, DAS 103, DAS 105, BIO 107; Corequisite(s): DAS 104, ENG 161, PSY 160

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 104, DAS 106, ENG 161, PSY 160; Corequisite(s): DAS 109, SPC 156

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. Prerequisite(s): DAS 104, DAS 106, ENG 161, PSY 160; Corequisite(s): DAS 108, SPC 156

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

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.

DFT 199—DRAFTING AND DESIGN INTERNSHIP 1-12-3

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 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 266—3D SOLID MODELING I (Inventor, basics) 2-4-4

This course introduces the student to the operation of a 3-Dimensional feature-based parametric solid modeling computer software. Students will create 3D model parts, detailed engineering drawings of solid model parts and assemblies of solid parts. Creation of sheet metal parts and drawings will also be covered. The latest version of Autodesk Inventor solid modeling software will be the primary training platform for this course for lecture and lab assignments.

DFT-267—3D SOLID MODELING II (INVENTOR ADVANCED, SOLIDWORKS INTRO) 2-4-4

A continuation of DFT 266, 3D Solid Modeling I. This course covers advanced part and assembly modeling. Students will develop advanced skills of model analysis, freeform modeling, embossing, animation, rendering and weldments. The latest version of Autodesk Inventor solid modeling software will be the primary training platform for this course for lecture and lab assignments. Solidworks solid modeling software will also be introduced. Prerequisite: DFT 266

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. Prerequisite(s): ALH 122, BIO 171, BIO 172 Corequisite(s): DMS 105, DMS 204

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, uterus and ovaries. The laboratory component of this course presents abdominal Doppler principles and applications in the clinical setting. Prerequisite(s): ALH 122, BIO 171, BIO 172; Corequisite(s): DMS 103, DMS 204

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. Prerequisite(s): DMS 103, DMS 105, DMS 204. Corequisite(s): DMS 201, DMS 205

DMS 113—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, bio effects quality assurance and safety. Prerequisite(s): DMS 207, DMS 210, PHY 130. Corequisite(s): DMS 206, DMS 208, DMS 211

DMS 114—ACOUSTICAL 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. Prerequisite(s): DMS 206, DMS 208, DMS 211, DMS 213. Corequisite(s): DMS 212

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. Prerequisite(s): DMS 103, DMS 105, DMS 204. Corequisite(s): DMS 106, DMS 205

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. Prerequisite(s): ALH 122, BIO 171, BIO 172 Corequisite(s): DMS 103, DMS 105

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. Prerequisite(s): DMS 103, DMS 105, DMS 204. Corequisite(s): DMS 106, DMS 201

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. Prerequisite(s): DMS 106, DMS 201, DMS 205. Corequisite(s): DMS 208, DMS 211, DMS 213

DMS 207—SMALL PARTS, BREAST & NEURO 2-2-3

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. Prerequisite(s): DMS 106, DMS 201, DMS 205. Corequisite(s): DMS 210

DMS 208—INTRO TO VASCULAR 2-3-3

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. Prerequisite(s): DMS 106, DMS 201, DMS 205. Corequisite(s): DMS 206, DMS 211, DMS 213

DMS 210—CLINICAL I 0-24-3

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 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. Prerequisite(s): DMS 106, DMS 201, DMS 205. Corequisite(s): DMS 207

DMS 211—CLINICAL II 0-24-3

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 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. Prerequisite(s): DMS 207, DMS 210. Corequisite(s): DMS 206, DMS 208, DMS 213

DMS 212—CLINICAL III 0-24-3

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 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. Prerequisite(s): DMS 206, DMS 208, DMS 211, DMS 213. Corequisite(s): DMS 207, DMS 214

DTT–DIETETIC TECHNOLOGY

DTT 111—INTRODUCTION TO DIETARY MANAGEMENT 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 technology students are required to take this course in their first semester. Prerequisite(s) or corequisite(s): FSM 159

DTT 114—MEDICAL NUTRITION THERAPY 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–EDUCATION/PRE-K–GRADE 4

ECE 155—INTRO TO EARLY CHILDHOOD EDUCATION 3-0-3

This course examines the history and models of the field of ECE. The role of the professional early childhood practitioner is explored and best practices in ECE are addressed. This course requires observations at a licensed child- care center or educational institution.

ECE 156—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, infant and toddler development. The course also deals with specific issues related to infancy, including infant programs and curriculum, working parents and public policy. This course requires observations at a licensed child-care center.

ECE 157—CHILD GROWTH AND DEVELOPMENT 3-0-3

This course provides a comprehensive study of child development from ages 3 to 9 years. Theories of child development are examined including: psychoanalytic, psychosocial, cognitive, behavioral and social learning. The areas of development to be studied are motor, cognitive, language and literacy, social, multiple intelligences, emotional, personality, and moral development. The child will be viewed within the context of their social world including family and school. This course requires observations at a licensed child-care center or educational institution.

ECE 165—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, childcare and school, and stress. This course requires observations with families and in the community.

ECE 166—EARLY CHILDHOOD LANGUAGE AND LITERACY 3-0-3

This course examines theories, research and developmentally appropriate practices in language and literacy education. Strategies to promote speaking, listening, reading and writing are a major focus. Materials to foster language and literacy development for children birth to age 9 are featured. This course requires observations at a licensed child-care center or educational institution.

ECE 167—CREATIVE EXPERIENCES 3-0-3

This course focuses on the important role of creativity in ECE. The content of the course addresses the importance and development of a developmentally appropriate curriculum in art, fine art, play, technology, music, creative dramatics and early literacy in the 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 course requires observations at a licensed child- care center or educational institution.

ECE 168—CHILD CARE MANAGEMENT 3-0-3

This course provides an orientation to 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 170—CHILD HEALTH, SAFETY, AND NUTRITION 3-0-3

The course is designed for early childhood educators and parents and covers the components of child health, safety and nutrition. The course identifies risks to children's health and safety and also examines health promotion, disease prevention and basic care of the child at each developmental stage.

ECE 255—EARLY CHILDHOOD EDUCATION CURRICULUM 3-0-3

This course is designed to provide a comprehensive study of how to plan developmentally appropriate activities for children ages 3 to 9 years using the PA Educational Standards in the areas of science, social studies, math, anti-bias and multicultural curriculum. PA standards will be used to develop lesson plans. This course requires observations at a licensed child-care center or educational institution.

ECE 256—ASSESSMENT AND OBSERVATION-YOUNG CHILDREN 3-0-3

This course highlights principles and techniques for observing children ages birth to 9 years to document their development and to link observation with program planning. Various assessment tools used by teachers are explored. This course requires observations at a licensed child-care center or educational institution. This course is a prerequisite to ECE 284.

ECE 257—INTRODUCTION TO EXCEPTIONAL DEVELOPMENT 3-0-3

This course examines the growth and development of exceptional persons, concentrating on the years from birth through early adulthood. The following exceptionalities are explored: 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 requires observations at a licensed child-care center or educational institution.

ECE 265—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 with attention given to legal aspects and inclusion. Family-based practices and Division for Early Childhood recommended base practices for early intervention are addressed. Prerequisite(s): ECE 188

ECE 284—EARLY CHILDHOOD EDUCATION PRACTICUM 2-10-4

This course offers an in-depth examination of the early childhood classroom that builds upon the basic principles of ECE 191 with special attention placed on authentic assessment, curriculum development and unit design. Professional development is emphasized and the course requires the completion of 150 hours of practicum experience. Prerequisite(s): Minimum 2.0 GPA, ECE 191, Observation Verification Logs that document at least 40 hours of completed course observations. Students must verify the prerequisites with the program director to register for this course.

ECN–ECONOMICS

ECN 158—ELEMENTS OF ECONOMICS 3-0-3

This course provides an introduction to economic principles and problems. In examining economic decision making, the course will explore the topics of supply and demand, foundations of the macroeconomic, financial institutions and the Federal Reserve, fiscal and monetary policy, theories of the firm, production, competition and market structures, factor markets and international economics.

ECN 255-MACROECONOMICS 3-0-3

Introduces the principles of macroeconomics with an emphasis on the United States economic system. In examining aggregate economic performance, the course will explore the topics of scarcity and choice, unemployment, inflation, aggregate supply and aggregate demand, money and banks, monetary and fiscal policy, policy debates and international economics. Prerequisite(s): MTH 052, 052A or placements

ECN 256-MICROECONOMICS 3-0-3

Introduces the principles of microeconomics with an emphasis on individual decision-making. In examining competition and theories of the firm, the course will explore the topics of scarcity and choice, markets and price determination, market structures, labor and financial markets, public goods, regulation/deregulation, and international economics. Prerequisite(s): MTH 052, 052A or placements

ECN 260—MONEY AND BANKING 3-0-3

The nature and functions of financial markets, institutions and monetary policy will be studied. Topics include an overview of the financial system with an emphasis on money, interest rates, the stock market; economic analysis of banking, central banks and the Federal Reserve System; and the tools, strategies, and tactics of monetary policy. The primary objective is to provide students with the knowledge of the structures

and practical operations of major financial markets and the underlying forces, which unify them. Prerequisite(s): ECN 255

EDU–EDUCATION

EDU 156—INTRODUCTION TO MIDDLE AND SECONDARY EDUCATION 3-0-3

This is an overview course introducing many topics that will be examined in depth in the future, more specialized courses for middle and secondary education. Course objectives and performance assessments reflect the 10 standards for beginning teachers' licensing and development produced by the Interstate New Teacher Assessment and Support Consortium. Also, there will be a focus on the National Middle School Standards as well as the Pennsylvania Department of Education state standards for both the middle and secondary schools. Students will begin preparing for the praxis I exam and will also complete 40 hours of field experience/observations. Prerequisite(s): Current Act 34, Act 151 and Act 114 clearances

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.

EDU 250—TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES 3-0-3

This course examines methods of language instruction, providing prospective teachers with tools for teaching child, adolescent and adult English Language Learners. Language acquisition theory, assessment, cultural and linguistic context, and Pennsylvania ELL standards for PreK-12 will be addressed.

EDU 257—INTRO 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.

EGR–ENGINEERING TECHNOLOGY

EGR 101—INTRODUCTION TO ENGINEERING 2-2-3

Provides an inspirational exploration of a variety of introductory mathematics, science, engineering and other quantitative topics. Emphasizes units of measure and/or dimensional analysis in all calculations. Introduces problem-solving techniques that involve coordinate systems and vectors; linear, log-log, and semi-log graphs of data; linear interpolation; analytical (algebraic and trigonometric) and numerical methods; computer/calculator programming; and use of the HP-50g calculator (or equivalent), Excel, Working Model, and MATLAB to perform engineering calculations and simulations. Corequisites: MTH 100, MTH 100A, MTH 108, MTH 157 or Placement.

EGR 104—ENGINEERING MATERIALS 3-0-3

Studies metallic, polymeric, ceramic, and composite engineering materials from the atomic, micro- and macroscopic viewpoints, and the effect of structures, strengthening mechanisms, and heat treatments on mechanical, electrical, thermal, and optical properties. Topics include imperfections, diffusion, equilibrium phase diagrams and transformations, failure mechanisms, material testing techniques, and applications and processes. Corequisite(s): MTH-109 or MTH-158.

EGR 110—DESCRIPTIVE GEOMETRY 2-2-3

Provides an in-depth study of the principles of orthographic projection of 3D objects by using and/or constructing front, horizontal (top), profile (side), and primary and secondary auxiliary views with the help of "skip-a-view," revolution, and other techniques. Topics include the analysis of lines (true length, bearing, grade and slope), planes (true size and shape, edge views, intersection of and true angle between and among planes and lines); piercing points (of lines through planes); parallelism; and perpendicularity.

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 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 statistical process control (SPC) and continuous improvement of products, processes and systems. Topics include lean manufacturing and six-sigma; product liability issues; SPC diagrams, charts, and techniques; fundamentals of probability and statistics; control charts for both variables and attributes; and an introduction to reliability. Corequisite: MTH-172

EGR 221—STATICS AND STRENGTH OF MATERIALS 3-2-4

Topics covered include concurrent force systems in equilibrium found in trusses, frames, and machines; free-body diagrams; equilibrium of rigid and deformable bodies with non-concurrent point, distributed, torsional, and frictional loads; moments, couples, and equivalent force systems; centroids, center of mass, and second moment of areas; normal and shear stress, strain, and deformation; shear force, bending moment, and deflection calculations and diagrams for beams. Graphical, analytical and numerical techniques are used to solve problems with the help of a vector-capable engineering calculator. Corequisite(s): PHY-107 or PHY-155.

EGR 227—KINEMATICS 2-2-3

Includes the in-depth study of two-dimensional motion of mechanisms and machine elements to determine linear and angular position, velocity, and acceleration of joints and points of interest on the mechanism. Analysis techniques include graphical, analytical, and numerical methods such as relative velocity and acceleration, instant centers, and vector loop. Students are required to do a semester-long project that includes a detailed analysis of all kinematic aspects of a two-dimensional mechanism of their choice. Corequisite: MTH-172 Prerequisite(s): PHY-107 or PHY-155

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 106

ELC 106—CIRCUIT ANALYSIS I 3-2-4

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 or 052A

ELC 107—CIRCUIT ANALYSIS II 3-2-4

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 multi-vibrators, 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 191—BASIC PRINCIPLES OF INDUSTRIAL ELECTRICITY 3-2-4

This course is an introduction to single-phase and three-phase circuits as well as industrial electrical equipment. Detailed explanations of machine construction, principles of their operation, and their connections are operated. Safety is strongly emphasized and special attention is given to explaining all electrical formulas and calculations clearly. Consistent, easy- to-understand explanations and examples are used to explain how each type of machine might be used. A blend of theory, formulas and historical information stimulates interest in the study of industrial electric circuits, symbols and drawings. Hands-on use of equipment occurs in the lab setting.

ELC 192—INDUSTRIAL ELECTRICAL EQUIPMENT 3-2-4

This course is a continuation in the study and practical application of industrial electrical equipment. This course includes a more in-depth study of industrial electrical devices. During this course, the student will learn how to operate and troubleshoot various types of industrial electrical equipment. Control and power circuit wiring is performed in the lab. Drawings are made and power distribution panels and connections are completed. Prerequisite(s): ELC 191 or EMA 110

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 106

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

ELC 221—INDUSTRIAL MOTOR CONTROLS 3-2-4

This course will review up-to-date information on basic relay control systems and solid-state devices commonly found in an industrial setting. Essential information for controlling industrial motors, along with commonly used devices in contemporary industrial settings will be reviewed. Students will gain a fundamental understanding of the operation of non-reversing motor starters, reduced voltage starters, reversing motor starters, and other applications that employ electrical devices. The essential information for controlling industrial motors and other commonly used devices in contemporary industrial settings are covered. Students will learn the concepts and applications of motor and motor control design, application, installation and maintenance, protection and control logic. Motor maintenance practices and smart motor control centers will be discussed. Prerequisite(s): ELC 192

ELC 222—ADVANCED INDUSTRIAL MOTOR CONTROLS 3-2-4

Students will learn the proper application of maintenance practices to eliminate unplanned motor failure. AC and DC drives will be reviewed. PLCs will be discussed in detail. The trouble shooting techniques will be discussed as they relate to preventative maintenance and motor operations. The essential information for controlling industrial motors and other commonly used devices in contemporary industrial settings are covered. Students will learn the concepts and applications of motor and motor control design, application, installation and maintenance, protection and control logic. Motor maintenance practices and smart motor control centers will be discussed. A final lab project will be developed as a capstone experience. Prerequisite(s): ELC 221

ELC 223—POWER DISTRIBUTION AND TRANSMISSION 3-2-4

This course is designed to develop a comprehensive understanding of the activities associated with electric utility line work, specifically; sub-transmission circuits, distribution substations, primary feeders, distribution transformers, secondary power systems, and customer connections. Students will engage in classroom and laboratory activities to develop the basic technical skills necessary to obtain a working knowledge and understanding of power distribution and transmission systems. Safety is strongly emphasized and special attention is given to explaining relevant electrical formulas and calculations. Consistent, easy-to-understand explanations and examples are used to explain the operation of each system. A blend of theory, formulas, lab work and historical information stimulates interest in the continuing study of electric utility line work. Hands-on use of equipment occurs in a lab setting. Prerequisite(s): ELC 106, ELC 107, ELC 191, EUT 101, EUT 102

ENG–ENGLISH

ENG 085—COLLEGE LITERACY I 4-0-4

College Literacy I develops proficiency in integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies and recognition and composition of well-developed, coherent and unified texts. Students will also cover the fundamentals of study strategies, grammar, punctuation, mechanics, and sentence and paragraph structure. Upon completion, students should be able to demonstrate and apply those skills toward an understanding of a variety of complex academic and career texts while also composing texts, incorporating relevant, valid evidence. Students who pass ENG 085 with a B or C may register for ENG 095/ENG 161. The criteria for exempting from ENG 095 are as follows: A in the course overall, A on the final assessment and a score of 1300 or higher on the Lexile Locator. Prerequisite(s): Appropriate scores on the Placement Test.

ENG 095—COLLEGE LITERACY II 3-0-3

College Literacy II develops proficiency in integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent and unified texts. The skills taught include but are not limited to thesis statement, supporting details, critical reading, documentation and vocabulary development. Upon completion, students should be able to demonstrate and apply those skills toward understanding a variety of complex academic and career texts and composing texts, incorporating relevant, valid evidence. To be considered to have met their developmental requirements, students must complete ENG 095 with a C or better. ENG 095 is taken in conjunction with ENG 161.

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 ones 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 085 or placement. Corequisite(s): ENG 095

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—HUMAN SERVICES WRITING 3-0-3

Course stresses skills necessary for human services writing. In addition to stressing writing skills, course provides direction and practice in the generation of specific documents student is likely to produce in his/ her field. Special attention is given to writing characterized by accuracy, objectivity and clarity. Course includes training in job-related forms and human services reports such as social histories, case notes, court reports, summary reports, records, interviewing and observations, social histories, memos and letters. Students will learn elements of content and the structure of records used in the human services field. Special emphasis is placed on separating factual information and interpretive analysis.

ENG 168—POLICE REPORT WRITING 3-0-3

Course stresses skills necessary for criminal justice writing. In addition to stressing writing skills, course focuses on the practical application skills central to all types of communications criminal justice personnel are called upon to use in their daily work. The course includes training in job-related forms and the reports, such as narrative reports, search warrants, affidavits of probable cause, and reports for tracking and logging of evidence. Course stresses proofreading and editing, research methods, reading in the field, development of listening skills, and interacting in discussion and problem-solving groups. Special emphasis is placed on separating factual information and interpretive analysis. Prerequisite(s): ENG 161

ENG 225—HIP HOP STUDIES 3-0-3

This course identifies and examines the theoretical, cultural and socio-historical foundations of Hip Hop. This course will analyze the conceptual roots and principles of Hip Hop particularly examining both the urban American origins of Hip Hop and its wider socio-political implications and influence. This course will also examine the role of the Hip Hop imagination on America and the world.

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.

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 and examples from fiction and poetry will allow students to explore different options in creatively expressing themselves in writing and in presenting work publicly. Using techniques of poetry and fiction established in ENG 165, students will compose longer works: small collections of poetry, longer short stories, themed collections or chapters from a novel. Imagination, creativity and discipline in creating a writing life will be stressed. Prerequisite(s): ENG 165 (ENG 256 is also recommended)

ENG 250—TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES 3-0-3

This course examines methods of language instruction, providing prospective teachers with tools for teaching child, adolescent and adult English Language Learners. Language acquisition theory, assessment, cultural and linguistic context and Pennsylvania ELL standards for PreK-12 will be addressed.

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 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 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 I 3-0-3

This course examines the masterpieces of English literature from 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 Anglo Saxon times through the Middle Ages, with emphasis on Geoffrey Chaucer's Canterbury Tales. The course also includes the Renaissance with a focus on the life and works of William Shakespeare.

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-pesent) 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 279—WOMEN'S 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 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

This is an introductory course for non-science majors. It provides a broad introduction to Astronomy including basic observing skills and scientific reasoning; the historical development of the subject; basic physics of motion, gravity, light and atoms; telescopes and other instrumentation; planets, moons, and other objects in our solar system; extrasolar planets; the Sun and other stars; the evolution of stars; the Milky Way galaxy and other galaxies; distant quasars and other active galaxies; the expending universe; cosmology based on the Big Bang theory; and life in the universe. The goal of this course is to cover most of the areas of modern astronomy at a level, which requires only basic algebra and mathematics. Prerequisite(s): Successful completion of MTH 052, 052A or placements

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, landforms 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. Prerequisite: First language other than English

EUT-ELECTRIC UTILITY TECHNOLOGY

EUT 101—OVERHEAD LINE TECHNOLOGY I 1-16-5

This course provides the student with the basic essentials for powerline workers, including but not limited to personal safety and accident prevention; managing risk factors and hazards in the field; selecting the proper climbing apparatus; working with poles, towers and vaults; and working with conductors and cable, both overhead and underground. A review of electrical power systems, electrical units, alternating current, series and parallel circuits and three phase circuits will also be addressed.

EUT 102—OVERHEAD LINE TECHNOLOGY II 1-16-5

This course emphasizes the skills required to perform work on secondary voltage circuits. Emphasis will be given to the installation of services, street lighting and secondary circuits, bucket truck familiarization and bucket rescue. Overview of distribution electrical systems and Occupational Safety and Health Administration (OSHA) rules are also included. Based on the Commercial Driver's License (CDL) training schedule in EUT-101, students may elect to complete training and obtain a Class "S" CDL as part of EUT-102. Safety topics also presented include work zone traffic control; minimum approach distances; rubber protective equipment; and knowledge of UD excavation/trenching/shoring. Prerequisite(s): EUT 101

EUT 201—OVERHEAD LINE TECHNOLOGY III 1-16-5

This course emphasizes the skills required to identify, install and maintain primary underground residential distribution (URD) equipment, including various methods of troubleshooting URD primary and secondary circuits. Grounding distribution circuits will also be presented in detail. Students will develop the knowledge and skill to safely perform rubber-gloving assignments utilizing the "insulate and isolate" techniques, and will perform various task while working on an energized three-phase circuit under controlled conditions. Safely topics include: fire extinguisher safety, temporary protective grounds, stored energy devices and utilities protective services. Prerequisite(s): EUT 102

EUT 202—OVERHEAD LINE TECHNOLOGY IV 1-16-5

Supervised practical applications of electrical overhead line worker job duties in a setting under direct supervision of FirstEnergy personnel. Emphasis on line equipment, hot line tools, power industrial trucks and transmission (including wood pole, steel pole, ladder and tower climbing). Bucket, pole top and self-rescue will also be reviewed. Safety topics include spill response, live line tools, hazardous communications and accident prevention handbook review. Prerequisite(s): EUT 201

FIN-FINANCE

FIN 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.

FIN 220—BUSINESS FINANCE 3-0-3

This course examines the organization and financial management of a firm with an emphasis on risk and return. Topics include financial statement and cash flow analysis, time value of money, valuation of stocks and bonds, capital budgeting and financing decisions. Prerequisite(s): ACC 155 or ACC 165

FIN 246—PRINCIPLES OF INSURANCE 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.

FIN 266—FINANCIAL STATEMENT ANALYSIS 3-0-3

This course emphasizes the use of financial and accounting information. This course helps students develop a systematic approach to analyzing reported data and understanding the underlying risks and possible inconsistencies across companies. Topics will center on ratio analysis, financial projections, working capital management, capital budgeting, the cost of capital, capital structure and planning and divided policy. Prerequisite(s): FIN 220

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. The certificate received for successful completion of the ServSafe exam is recognized by the Pennsylvania Department of Agriculture for food employee certification. Student must pass the exam to successfully complete the course.

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 and the cost of the required etiquette event are 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 and program tool kit 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. Student assumes various positions such as manager, cook, baker, etc. in lab periods and operating student-run cafe. Uniforms and program tool kit 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. Students are responsible for the cost of the required secret diner experience.

FSM 117—WAIT STAFF/DINING ROOM TRAINING 1-0-1

Emphasizes techniques, procedures and styles of proper food and beverage service. The responsibilities, qualifications and conduct of wait staff 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 wait staff 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 foodborne illnesses and their origins as well as the precautionary measures that must be taken to prevent these illnesses. Providing the consumer with wholesome, safe food that conforms to the standards of the regulatory agencies is stressed. Upon completion of the course, a final certification exam furnished and corrected by the Educational Foundation of the National Restaurant Association will be administered. The certificate received for successful completion of the ServSafe exam is recognized by the Pennsylvania Department of Agriculture for food employee certification. Students must pass the exam with a minimum score of 75% to successfully complete the course.

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 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 and program tool kit 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 3-0-3
DEFINING CUISINE THROUGH RELIGION AND CULTURE

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 and program tool kit required. Prerequisite(s): FSM 105 and FSM 112

FSM 215—PURCHASING AND OPERATIONS 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, costing, financial controls and menu development and management. Computer application is included in the course.

FSM 218—HOSPITALITY MARKETING 3-0-3

The Hospitality Marketing course introduces students to marketing techniques associated with hotel, restaurant and travel fields with an emphasis on identifying and satisfying needs of customers. Topics include target marketing, and marketing segmentation, marketing research, marketing strategies, marketing plans, promotion, public relations, advertising and menu planning.

FSM 219—HOSPITALITY INTERNSHIP 1-12-3

A supervised and evaluated on-the-job training experience in a hospitality setting. Students will 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.

GCT–COMMUNICATION DESIGN

GCT 100—DESIGN TECHNOLOGY I 1-0-1

This fundamental course explores the essential concepts of the iOS mobile platform, creating, editing, presenting layouts, and vector and pixel-based graphics, while managing content across devices, the desktop and the web. Students explore communicating and sharing resources with peers/ team members and printing directly from devices.

GCT 115—DESIGN & LAYOUT I 3-0-3

This fundamental course in two-dimensional communication design exposes students to Adobe design software and scanning techniques, explores layout and design principles, color decisions, typography choices and working with vector and pixel-based imagery. Students explore the influence of modern/contemporary and postmodern movements and associated cultural tendencies.

GCT 125—EMERGING TECHNOLOGY I 3-0-3

An introductory course exploring Adobe Animate for creating interactive web-based content: start screens, interfaces, animations, cartoons and banner ads with integrated audio; with all of the asset design and coding right inside the app. Reach target audiences on desktop, mobile, and TV by exporting animations to multiple platforms, including HTML5 Canvas, WebGL, Flash/Adobe AIR and custom platforms like SVG.

GCT 131—TYPE & PUBLISHING I 3-0-3

Introduction to typography, core features and tools of page layout design using Adobe InDesign, master pages, fundamental typographic theories, process and spot color, integrating vector graphics and raster imagery into a series of compositions, and how to package, print and export your finished project.

GCT 151—ART & ILLUSTRATION I 3-0-3

An introductory course exploring Adobe Illustrator's art and illustration environment for creating and delivering visually compelling, scalable vector artwork for use in projects for both print and the web. Students will apply their art and design skills to create attention-getting images for creative entertainment, advertising and branding, and design elements for web and mobile content.

GCT 155—ENVIRONMENTAL GRAPHIC DESIGN I 3-0-3

Continued study of Adobe Illustrator, layout and design, spot color and environmental typography as the primary design form for producing basic custom apparel imagery, auto restyling artwork, indoor/outdoor graphics and label and signage solutions incorporating commercial art techniques and vinyl print/cut technologies. Corequisite(s): GCT 151

GCT 161—CREATIVE IMAGING I 3-0-3

An introductory course exploring how to use Adobe Photoshop efficiently and effectively. The course covers nondestructive editing techniques using layers, masking, adjustment layers, blend modes and Smart Objects, as well as how to achieve creative effects with filters, layer effects and illustrative type for creating panoramas and composites.

GCT 163—EMERGING TECHNOLOGY II 3-0-3

An introductory course exploring the constantly changing landscape of web design: going from concept to prototype to UX/UI solutions for websites and mobile apps. This course also explores creating and optimizing web graphics, GiF animations and image sprites using Adobe Illustrator and Photoshop and the integration with mobile apps. Prerequisite(s): GCT 151, 161

GCT 180—2-D ANIMATION 3-0-3

Current desktop animation software lets you design and create web-based interactive vector and bitmap animations, expressive characters integrating audio for cartoons, banner ads, games, apps and the web that can quickly publish to multiple platforms and reach viewers on desktop, mobile and TV.

GCT 200—DESIGN TECHNOLOGY II 3-0-3

This course is designed to introduce students to emerging technology as it becomes available. Adobe's desktop and mobile apps are the backbone of today's design "anytime, anywhere" social, cultural practice. This course meets the changing needs of students and businesses as developing desktop and web-based technologies that are not within the curriculum are explored before they become mainstream.

GCT 215—DESIGN & LAYOUT II 3-0-3

Continued study in two-dimensional communication design and the influence of modern and contemporary/postmodern art. Students explore the iconic logo design process and the visual approaches and various creative techniques employed to develop a well-crafted visual identity utilizing scanning techniques and Adobe design software. Prerequisite(s): GCT 115

GCT 231—TYPE & PUBLISHING II 3-0-3

Continued study of typography, page layout and design for preparing files for print and commercial printing press checks, exploring basic package design and converting InDesign files into EPUBs for reading on multiple devices. Prerequisite(s): GCT 131

GCT 251—ART & ILLUSTRATION II 3-0-3

Advanced study of Adobe Illustrator and exploration of information graphics: charts, graphs and diagrams; surface design: patterns for products, interiors and architecture; and user experience (UX): wireframes, mock-ups and user interface. Prerequisite(s): GCT 151

GCT 255—ENVIRONMENTAL GRAPHIC DESIGN II 3-0-3

Intermediate study of Adobe Illustrator, layout and design, environmental typography, spot and process color, as well as vector graphics and pixel-based images for designing and producing effective signage, identity graphics, and a basic wayfinding/environmental graphics system incorporating graphic arts techniques and vinyl print/cut technologies. Prerequisite(s): GCT 155

GCT 261—CREATIVE IMAGING II 3-0-3

Advanced study of Adobe Photoshop, alpha channels and refine mask, painting tools and techniques, color adjustment and correction, and creating 3D type and graphics for entertainment, advertising and marketing design usage. This is a capstone course, satisfactory demonstration of outcomes for competency profile of the Graphic Design AFA degree is required, as well as, a showcase portfolio of student's best, most recent work for professional gallery exhibition. Prerequisite(s): GCT 161

GCT 287—EMERGING TECHNOLOGY III 3-0-3

An intermediate study of page design and layout, tools and widgets for creating and publishing responsive websites without writing code. Adobe Muse was made specifically for designers, so they can create as freely as they do in InDesign, Photoshop and Illustrator, and their final design appears how they want it on different screens. Code is automatically generated that meets the evolving standards for modern browsers, platforms and devices. Prerequisite(s): GCT 263

GCT 290—DESIGN WORKS 3-0-3

Under faculty supervision, students prepare materials such as cover letters, leave-behinds, resumes, applications for employment and prepare a showcase portfolio with emphasis on organization and presentation utilizing Mac OS/iOS devices and Adobe desktop and mobile apps for Android and iOS. Under the management of the Career Connections Center, students are involved in on-campus pre-internship experience to develop appropriate attitudes, soft skills, and workplace habits in preparation for interviewing for an off-campus internship in communication design. Prerequisite(s): Completion of 24 credits within GCT program

GCT 295—EMERGING TECHNOLOGY IV 3-0-3

Students explore Adobe's design, prototype and sharing software in learning the fastest way to design any user experience with intuitive tools and integration with many of the Adobe apps. Students convert wireframes into interactive prototypes with voice interactions and animation, and then share user experiences from websites to mobile apps with team and developers for feedback and deployment to production on both Mac and Windows. Prerequisite: GCT 163

GCT 299—DESIGN INTERNSHIP 0-12-3

Students gain experience involving production art techniques, technical support, customer service or sales responsibilities that broaden their understanding of the graphic communications profession through supervised and evaluated on-the-job experience in design studios, marketing and advertising agencies and print and digital publishing environments. Transportation to off-campus site is the responsibility of individual student. Prerequisite(s): GCT Program Director recommendation

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 landforms. 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—INTRODUCTION TO REFRIGERATION/ AIR CONDITIONING 2-4-4

This course is designed to introduce students to refrigeration and air-conditioning systems. Individual components and controls found in refrigeration and air-conditioning are evaluated and tested in the classroom and the HVAC lab. Students will learn to use and apply meters, gauges, hand tools and power tools to troubleshoot and repair refrigeration equipment.

HAC 105-BLUEPRINT READING FOR HVAC TECHNICIANS 1-2-2

This course will develop skills reading the different blueprints used in the industry. The student will read residential and commercial prints used in the industry. The student will read an architectural scale, understand architectural drawings, plumbing drawings and symbols, electrical drawings and symbols, and mechanical drawings and symbols.

HAC 150—ACCA MANUAL J AND MANUAL D LOAD ESTIMATING 2-4-4

The class and lab experiences in the HAC 150 ACC Manual J and Manual D Load Estimating will teach the student HVACR equipment sizing and selection using ACCA manuals and the study of the properties of air, measurement of air and its effects upon human comfort. Advanced control terminology, electronic control circuits and pneumatic control circuits are discussed in detail.

HAC 170—HVACR CONTROL SYSTEMS 1-2-2

Provides a fundamental understanding of electrical and mechanical 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 covered.

HAC 175-DIRECT DIGITAL CONTROLS 1-2-2

The class and lab experiences in HAC 175 Direct Digital Controls will help the student develop skills in utilizing advanced digital and pneumatic controls to repair building automation systems. Electronic and pneumatic control circuits, the control loop and knowledge in control terminology are stressed.

HAC 199—HVAC INTERNSHIP 1-12-3

Students will obtain real world on the job experience working for an HVAC contractor or as a maintenance person working on HVAC equipment. This course takes previously learned classroom knowledge and allows a student to apply these skills to the jobsite. Students will be supervised by their job boss who will issue progress reports detailing the student's job progress.

HAC 240—HVAC DUCT FABRICATION 1-2-2

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 fitting, identification and fabrication are covered. Venting systems and combustion air inlet fabrication and installation are also examined.

HAC 250—GAS AND OIL HEATING TECHNOLOGY 2-4-4

In residential and commercial gas and oil heating; 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 HVACR technicians. Lab skills offer students hands-on experience on real residential and light commercial equipment.

HAC 255—AIR CONDITIONING/HEAT PUMPS 2-4-4

This course covers the operation, troubleshooting, repair of reverse cycle air source and ground source air conditioners and heat pump systems and their individual components. Heat pump control check out, replacement or repair will be demonstrated by the students in lab.

HAC 256—GEOTHERMAL AND SOLAR TECHNOLOGY 1-4-3

The class and lab experiences in the HAC 256 Geothermal and Solar Technology course will help the student develop skills through multi-media training software, lecture and lab experiences to accompany geothermal trainers and geothermal heat pumps.

HAC 257—COMMERCIAL REFRIGERATION 2-4-4

This course covers the operation, troubleshooting, and repair of commercial refrigeration equipment and their individual components. Equipment control check out, replacement and repair will be demonstrated by the students in lecture and lab experiences.

HAC 260—HYDRONICS 2-4-4

This class covers gas, oil and electric boilers and water heaters used in residential and light commercial systems. Steam boiler theory is covered in class. Piping material selection, preparation and installation are demonstrated in labs. Hydronic equipment controls and accessories are tested by using meters and gauges in lab.

HAC 280—RESIDENTIAL WIRING 1-4-3

This course provides the HVAC student a basic understanding of residential electrical wiring techniques. Areas to be discussed are electrical safety, electrical load requirements, electrical equipment and wiring selection. Students will demonstrate proper connection of switches, receptacles, breakers and fuses to electrical boxes and loads.

Installation, troubleshooting and repair of electrical accessories are also taught in this class and lab.

HAC 290—EPA REFRIGERANT EXAM PREPARATION 3-0-3

This course is designed to prepare HVAC students to take and pass the EPA Refrigerant Certification Examination. Students will learn and demonstrate proper refrigerant handling techniques that include recovery, recycling and storage. Students will use refrigeration gauges, vacuum pumps, recovery machines and recovery cylinders to properly charge and recover refrigerants. EPA regulations, refrigerant chemistry, refrigerant lubricants, transportation and disposal are presented in this course.

HCM-MEDICAL/HEALTHCARE MANAGEMENT

HCM 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 that most often occur within the body system (pathophysiology). Prerequisite(s): BIO 107 or BIO 171 & 172

HCM 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 as using up-to-date medical coding.

HCM 150—INTRODUCTION TO HEALTH INFORMATION 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.

HCM 155—INTRODUCTION TO ELECTRONIC HEALTH RECORD 3-0-3

This course introduces students to the functional knowledge about the Electronic Health Record (EHR): What it is, how it benefits the health care industry and workplace, what is required to implement it in the provider office and what its basic structural components are, and how its content is determined.

HCM 165—LAW & ETHICS FOR HEALTHCARE 3-0-3

This course introduces students to complex legal, moral and ethical issues. Students use Law & Ethics for Healthcare as a guide to help resolve the many legal and ethical questions that they will be confronted with daily. Upon completion of this course, students will have a foundation of law and ethics, legal issues for health care professionals and also deal with social and interpersonal health care issues.

HCM 199—MEDICAL INTERNSHIP 1-12-3

A coordinated period of 180 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): HCM 145, HCM 250 or HCM 260; QPA of 2.0 overall in major

HCM 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, 10th Revisions, Clinical Modification (ICD-10-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): BIO 107

HCM 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): BIO 107

HCM 270—HOSPITAL BILLING AND CODING 3-0-3

This course is a comprehensive look at the hospital and facility coding and billing. The student will have the opportunity to work with the entire workflow, from patient intake through the billing process for both the inpatient and outpatient facility. The student will have chapter exercise as well as extensive billing (UB-04 completion) and coding exercises (including the assignment of DRGs or APCs). This course cannot be applied to the Health Information Technology degree. Prerequisite(s): BIO 107, HCM 130, HCM 250, HCM 260

HCM 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): HCM 145, HCM 250, HCM 260 and 20 hours of HCM courses

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.

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 that 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. Transportation to off-campus locations is the responsibility of the student.

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.

HPE–HEALTH AND PHYSICAL EDUCATION

HPE 156—HEALTH AND PHYSICAL EDUCATION 3-0-3

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. 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.

HUM–HUMANITIES

HUM 140—SOCIAL MEDIA: SOCIETY AND CITIZENSHIP 3-0-3

This course is designed to enable students to make safe and legal use of the Internet by identifying best practices, tools and methods that also respect free expression. It develops the critical thinking skills necessary to understand the challenges, risks and opportunities regarding current computer-mediated communication technologies. Topics include rights and responsibilities of the digital citizen, Internet safety, social networking, privacy and creative content creation. Legal, technical, psychological and social dynamics will be addressed with an emphasis on practical application. The course builds a foundation by looking at the technical aspects of social media and exploring the tools and skills necessary to enhance students' online potential by building a culture of responsible online behavior. The second half of the course will focus on the more complex dynamics of collaboration, privacy, content creation and economic and political societal participation.

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. Relationships among 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 4-0-4

Beginning Italian I introduces the Italian language with an emphasis on basic grammar and communication. Students will build vocabulary through practical exercises that stress problem solving for travel and/or living in Italy. They will also spend a minimum of two hours a week involved in an interactive language lab that provides written, oral and

visual exercises. 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 Italian life.

ITA 156—BEGINNING ITALIAN II 4-0-4

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. They will also spend a minimum of two hours a week involved in an interactive language lab that provides written, oral and visual exercises. Students will also be exposed to the Italian culture in area 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 estate 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 200—CONSTITUTIONAL POWERS AND CIVIL LIBERTIES 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.

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 3-0-3

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 105, MAS 110

MED–MULTIMEDIA & PHOTOGRAPHY

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 150—EDITING AND VIDEO TECHNIQUES/ 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 DV digital video or DSLR camera and external hard drive. Emerging technology will also be explored.

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 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 using the Digital Single Lens Reflex Camera. Students will learn basic camera operation and use of nonlinear editing. Basic lighting procedures and fundamental scripting/ storyboarding will be presented. This course also covers basic video field production techniques. Emerging technology will also be explored. Students must have a DSLR camera and removable hard drive.

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/PHOTOSHOP 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. Basic studio lighting as it applies to digital photography is also explored. Emerging technology will also be explored. Students must have a DSLR camera.

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 170, MED 271

MED 240—AUDIO TECHNIQUES 3-0-3

This introductory level course introduces students to Adobe Audition software. It incorporates the fundamental use of basic digital sound creation for use in DVD's digital presentations and nonlinear video.

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.

MED 257—TELEVISION PRODUCTION 2-2-3

This course introduces multi-camera studio digital video production. Students will learn basic camera operation and principles of studio-based, live-switched productions. Studio lighting procedures along with editing, scripting and storyboarding will be presented. Emerging technology will also be explored. Prerequisite(s): MED 159

MED 260—INTERACTIVE MULTIMEDIA 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. Prerequisite(s): MED 150 recommended but not required.

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 271

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. Emerging technology will also be explored. Prerequisite(s): MED 160

MED 266—STUDIO/LOCATION PHOTOGRAPHY 3-0-3

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, MED 271

MED 270—ADVANCED EDITING AND VIDEO TECHNIQUES/PREMIERE PRO 3-0-3

A continuation of MED 150, emphasis is on nonlinear Adobe Premiere Pro video editing software. Advanced effect techniques are used to animate, change speeds, green screen and apply color corrections.

Compositing and advanced camera techniques are also explored. Emerging technology will also be explored. Student must have a DV Digital Video or DSLR camera and external hard drive. Prerequisite(s): MED 150

MED 271—ADVANCED DIGITAL PHOTOGRAPHY/PHOTOSHOP 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. Emerging technology will also be explored. Prerequisite(s): MED 170

MED 290—VIDEO SPECIAL 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 150

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 3-0-3

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.

MET 205—WELDING METALLURGY II 3-0-3

A study of the manufacturing of Nonferrous Metals and alloys emphasizing their properties and weldability. Study of microstructure and the relationship of physical characteristics vs. alloy content and heat treatment as well as failures. Prerequisite(s): MET 105

MKT–MARKETING

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.

MKT 299—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

MPT–MANUFACTURING PROCESS TECHNOLOGY

MPT 109—INTRODUCTION TO SCADA 1-1-1

A study of Supervisory Control and Data Acquisition Systems (SCADA). This course is an introduction to basic automation with focus on SCADA and Remote Terminal Units (RTUs). Students will learn the basics of analog and digital output modules and will discuss system availability and reliability. The components and configuration of SCADA control systems will be explored. Applications of SCADA in the industry will be identified. Students will program a basic SCADA by installing parameters to simulate this type of automation in industry.

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 211—MATERIAL, SAFETY AND EQUIPMENT OVERVIEW FOR NANOTECHNOLOGY 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 NANOTECHNOLOGY 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—MATERIALS IN NANOTECHNOLOGY 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 dialectics (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—PATTERNING FOR NANOTECHNOLOGY 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 FOR NANOTECHNOLOGY APPLICATIONS 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—TESTING OF NANOTECHNOLOGY STRUCTURES AND MATERIALS 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 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.

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 and integers; ratios; proportions; and elementary algebra. Word problems are strategically placed throughout the course to both motivate and reinforce learning. Developmental courses may not be used to fulfill degree requirements. Prerequisite(s): Placement

MTH 050A-BASIC MATHEMATICS EMPORIUM 3-0-3

This course is designed for students who need to develop the basic mathematic skills that are essential for 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 to both motivate and reinforce learning. Developmental courses may not be used to fulfill degree requirements.

This course is taught in a self-paced environment. Motivated students may be able to complete the requirements for MTH 050A and MTH 052A in a single semester.

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, factoring, solving 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): MTH 050, MTH 050A or Placement

MTH 052A—FOUNDATIONS OF ALGEBRA EMPORIUM 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, solutions of first and second-degree equations and word problems. Designated for students with little or no algebra background. Developmental courses may not be used to fulfill graduation requirements. Prerequisite(s): MTH 050 or Placement

This course is taught in a self-paced environment. Motivated students may be able to complete the requirements for MTH 052A and MTH 100A in a single semester.

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, and word problems. Prerequisite(s): MTH 052, MTH 052A or Placement

MTH 100A—INTERMEDIATE ALGEBRA EMPORIUM 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, MTH 052A or Placement Test This course is taught in a self-paced environment. Motivated students may be able to complete the requirements for MTH 100A and MTH 157 in a single semester.

MTH 108—MATHEMATICS FOR THE TECHNOLOGIES I 4-0-4

A course for technologies majors emphasizing application and problem solving. Topics include review of fundamental algebra; formula transformation; dimensions and units; basic geometry; radicals; systems of linear equations, graphing of data, equations and functions; right triangle trigonometry; and quadratic equations and functions. Prerequisite(s): MTH 052, MTH 052A or Placement

MTH 109—MATHEMATICS FOR THE TECHNOLOGIES II 4-0-4

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 with a "C" grade or better or Placement

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; polynomial division and synthetic division; and piece-wise functions. Prerequisite(s): MTH 100, MTH 100A with a "C" grade or better or Placement

MTH 158—PRECALCULUS MATHEMATICS 3-0-3

Designed to prepare students for calculus. Topics covered include exponential, logarithmic and trigonometric functions and their graphs; identities, applications, calculator usage, logarithmic, exponential and trigonometric equation and problem solving. Prerequisite(s): MTH 157 with a "C" grade or better or Placement

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, and measures of dispersion, statistical inference, testing of hypotheses, confidence Intervals, regression and correlations. Elementary research designs are included. It is advised that students have a background in algebra. Prerequisite(s): MTH 052, 052A or Placement

MTH 161—MODERN COLLEGE MATHEMATICS 3-0-3

This course is intended to satisfy the mathematics general education requirements for students who are non-science majors, as well as students preparing for the pre-nursing examination. Rather than focusing on one particular topic, this course gives an overview of topics from a variety of areas and fields in mathematics. Topics may include propositional logic, algebraic modeling, Euclidean geometry, graph theory, probability, statistics and/or consumer math. Prerequisite(s): MTH 052, 052A or Placement

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 with a "C" grade or better or Placement

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 with a "C" grade or better

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, and percent, ratio and proportion, and algebra basics. Prerequisite(s): MTH 052 or Placement.

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 with a "C" grade or better

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 with a "C" grade or better

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. Laplace transforms. Prerequisite(s): MTH 271 with a "C" grade or better

MTH 275—LINEAR ALGEBRA 3-0-3

An introductory course in matrix algebra and vector spaces. Topics include systems of linear equations, matrices, determinants, general vector spaces, inner product spaces, eigenvectors and eigenvalues, and linear transformations. Prerequisite(s): MTH 172 with a "C" grade or better

MTH 277—DISCRETE MATHEMATICS 3-0-3

An introduction to discrete mathematical structures for students studying mathematics and computer science. Topics include logic, set theory, elementary number theory, methods of proofs and proof writing (direct, indirect and math induction), combinatorics, probability, relations and functions, and graph theory. Prerequisite(s): MTH 172 with a "C" grade or better

MTT–MACHINE TECHNOLOGY

MTT 101—BLUEPRINTS 3-2-4

This course will introduce students to the basic principles, terminology and symbology used on machining blueprints. The course will include instruction in both conventional dimensioning and geometric dimensioning and tolerancing. Machining prints will be examined and interpreted.

MTT 111—MACHINING I 1-6-4

This course will introduce students to manual shop machining. Topics will include safety, measurement, benchwork, layout, hand tools, cutoff machines, offhand grinding, holemaking, workholding, drill press, mills, lathes, grinders, and feeds and speeds. Corequisite(s): MTH 108

MTT 112—MACHINING II 1-6-4

This course will introduce students to basic milling, lathe and grinding operations. Topics include machine parts, machine operations, toolholding, holemaking, chucks, cutting tools, facing, turning, knurling, threading, endmills, cutters, abrasives and surface grinding. Prerequisite(s): MTT 111; Corequisite(s): MTH 109

MTT 201—INSPECTION 1-4-3

This course will introduce the students to the principles and procedures used to inspect machined parts, using both mechanical and electronic inspection equipment. The students will conduct hands-on inspections to determine part acceptability. Quality control will also be discussed. Prerequisite(s): MTT 101

MTT 202— MAINTENANCE 1-4-3

This course will introduce students to the basic principles and procedures used to maintain machine shop equipment. Both preventative maintenance and machinery repair will covered. The students will spend time disassembling, repairing and reassembling machine shop equipment. Prerequisite(s): MTT 111

MTT 207—TOOL DESIGN 1-4-3

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): MTT 111

MTT 213—MACHINING III 1-6-4

This course will provide students with further training and experience using mills, lathes and grinders. Topics will include squaring, angular machining, rotary tables, indexing heads, grooving, slotting, radii, pocketing, taper turning, sine chucks, cylindrical grinding and EDM. Prerequisite MTT 112

MTT 214—MACHINING IV 1-6-4

This course will enable students to develop expertise in manual shop machining. Students will work on projects to produce finished parts from raw materials. Production steps will include planning, layout, sawing, tooling, fixturing, milling, turning, grinding and inspection. Prerequisite MTT 213

MUS-MUSIC

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 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.

NSG–NURSING

NSG 112—INTRODUCTION TO PROFESSIONAL NURSING AND HEALTH PROMOTION ACROSS THE LIFESPAN 2.16-2.52-3

The five critical elements of the Westmoreland nursing program - caring, competency, communication, critical thinking and commitment - serve as a framework of the course. The course focuses on the profession of nursing, health care environment and health promotion/disease prevention. Broad course content includes the fundamental knowledge, skills and behaviors necessary to assimilate values, concepts and ethical standards central to nursing practice. Emphasis is placed on strategies to promote health and prevent disease for individuals and families across the lifespan in community settings. Prerequisite(s): BIO 171, CPT 150; Corequisite(s): BIO 172, NSG 114

NSG 114—HEALTH AND PHYSICAL ASSESSMENT THROUGHOUT THE LIFESPAN 2.33-2.10-3

The five critical elements of the Westmoreland nursing program - caring, competency, communication, critical thinking and commitment - serve as the framework of the course. This course provides the basic knowledge needed to assess the health status of individuals from infancy through old age, including physical, developmental, psychological, cultural and spiritual dimensions. The laboratory experience, focused on the adult individual provides students the opportunities for skill acquisition in history taking, assessment skills and documentation of findings. Prerequisite(s): BIO 171, CPT 150; Corequisite(s): BIO 172, NSG 112, NSG 116

NSG 116—FOUNDATIONS OF NURSING CARE 3-12-7

This course presents the basic concepts and practices skills that are fundamental to providing nursing care across the lifespan 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 concepts and practice skills occurs in various health care settings. Prerequisite(s): BIO 171, CPT 150; Corequisite(s): BIO 172, NSG 114

NSG 124—MEDICAL-SURGICAL NURSING CARE OF THE ADULT 4.5-13.5-9

This course emphasizes the role of the nurse as provider and manager of care for adults, with common health problems who have alterations in physiologic, safety, esteem and self-actualization human needs. In addition, an emphasis is placed on health promotion, risk reduction, disease prevention and treatment to prevent health problems from occurring or reoccurring. Mental health concepts and management principles are introduced in this course to provide a basis for care of adult patients in the acute care setting. The opportunity to develop and practice selected skills is provided in the campus laboratory and in the acute care clinical setting. Prerequisite(s): BIO 171, BIO 172, CPT 150, NSG 112, NSG 114, NSG 116; Corequisite(s): ALH 120, PSY 160

NSG 200—LPN TRANSITION INTO ASSOCIATE DEGREE NURSING 2.5-.5-3

Designed specifically for the LPN who meets the criteria for advanced placement in the ADN program. 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 therapeutic communication skills. Students will demonstrate application of these concepts and technical skills/math skills in the campus lab and clinical lab segment of the course. Prerequisite(s): Level I ADN support courses, must be an LPN and accepted into the ADN program Corequisite(s): None

NSG 225—NURSING CARE OF THE CHILDBEARING FAMILY, INFANT AND CHILD 3-3-4

The five critical elements of the WCCC nursing program - caring, competency, communication, critical thinking and commitment - serve as the framework for this course. This course introduces the student to the role of the professional nurse as provider of care when working with childbearing individuals, the newborn, infant, child and family. Emphasis is placed on identifying alteration 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. Health promotion, disease prevention and care of the infant and child with common health problems are studied. Opportunities for practice of related skills are provided in campus laboratory and a variety of clinical and community settings to provide the student with opportunities to apply concepts. Prerequisite(s): All Level ADN nursing and support courses; Corequisite(s): Level II ADN nursing and support courses in assigned sequence semester.

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. Prerequisite(s): Level I ADN nursing and support courses Corequisite(s): Level II nursing and support courses

NSG 255—ADVANCED MEDICAL SURGICAL CARE OF THE AGING ADULT WITH MULTIPLE CHRONIC HEALTH PROBLEMS 1.5-4.5-3

This course emphasizes the role of the nurse in providing and managing complex care for the individual with alterations in basic human physiological needs of activity, rest, safety and security. The course focus is on the aging adult with common multiple chronic health problems. Campus laboratory provides the opportunity to develop and practice skills in providing nursing care for this vulnerable population. Clinical laboratory experiences are provided in a variety of settings including acute care, long-term care and community. Prerequisite(s): All Level I ADN nursing and support courses; Corequisite(s): Level II ADN nursing and support courses in assigned sequence semester.

NSG 260—ADVANCED MEDICAL SURGICAL NURSING CARE OF THE CHRONICALLY ILL 1.5-4.5-3

This course emphasizes the utilization of the nursing process in the care of adults with alterations in basic human needs. This course focuses on common health problems related to immunity, hypersensitivities, blood disorders, genetics and cancer using evidence based research and practices Campus laboratory will provide the opportunity to practice psychomotor and critical thinking skills related to patient care and symptom management. The opportunity to develop and practice selected skills is provided in the acute care and home health/hospice clinical settings. Prerequisite(s): All Level I ADN Nursing and Support courses Corequisite(s): Level II ADN nursing and support courses in assigned sequence semester.

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

This course 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 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 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 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 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. Successful completion of this course enables the student to sit for the Microsoft Office Specialist (MOS) certification exam.

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, document templates, macros

and overall document design. Successful completion of this course enables the student to sit for the Microsoft Office Specialist (MOS) certification exam.

OFT 210—OFFICE TECHNOLOGIES 3-0-3

Students will learn how to maintain basic finances by automating financial reporting functions including payroll. The course will address electronic planning, charting and managing small to mid-size projects. Instructors will include the use of the latest software to maximize productivity.

OFT 220—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. Prerequisite(s): OFT 110 with a "C" grade or better

OFT 225—PROOFREADING 3-0-3

This course provides a comprehensive study of proofreading and editing skills in the workplace. Students will learn to read for meaning while they correct errors in grammar, punctuation and sentence structure in various types of documents from the business, medical, legal and education fields. Upon completion of the course, students will have the knowledge to edit documents so that they are clear, concise and complete.

OFT 235—CUSTOMER SERVICE 3-0-3

This course is designed to teach quality customer service by examining the attitudes, knowledge and skills that are needed to work effectively in any job that has contact with clients, customers or patients. Topics include improving customer loyalty, customer service, handling complaints and customer relations.

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 299—OFFICE INTERNSHIP 1-12-3

A coordinated period of 180 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.

PDV–PERSONAL DEVELOPMENT

PDV 100—SUCCESSFUL COLLEGE TRANSITIONS 1-0-1

This course allows high school students with disabilities to gain an understanding of the transition from high school to college and to learn about college culture and expectations. Disability laws as they apply to post- secondary education and the workplace will be examined, with emphasis on self-advocacy and knowing the process for requesting accommodations. Students will learn about the available assistive technology as well as the college's other resources, services and policies to enhance learning. They will gain knowledge that will facilitate their decision making regarding their educational goals beyond high school.

PDV 101—FIRST YEAR SEMINAR 1-0-1

This course provides strategies for adjusting to college culture and understanding college expectation. Students will learn about the college's resources, services, policies and educational technology. Students will develop skills in educational planning, goal setting and time management, and will refine their learning strategies for academic success. Social responsibility, cultural competence and integrity will be discussed and practiced as necessary components for success in college and beyond.

PDV 101A—FIRST YEAR SEMINAR WITH FOUNDATIONS 2-0-2

This course provides strategies for adjusting to college culture and understanding college expectations. Students will assess their current level of academic understanding and functioning and will refine their learning strategies for academic success. Students will learn about the college's resources, services, policies and educational/assistive technology. Students will develop skills in educational planning, goal setting and time management. This two credit course will provide students with a semester-long supportive environment in which they can develop their skills for success in the college classroom.

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.

PDV 171—CAREER PATHWAY EXPLORATION 3-0-3

This course provides students with the opportunity for exploration and interactions with a variety of career clusters. Students will learn about career opportunities within different fields, and the academic pathways that build towards careers. Students will engage in interactive and hands-on experiences to build understanding of the skills and knowledge involved, and will be able to assess their individual interests and aptitudes. Students will also develop skills in educational planning, goal setting and time management; they will refine their learning strategies for college success.

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. Infection prevention, patient identification, labeling of specimens, quality assurance and proper specimen handling are stressed. Professionalism, ethics, confidentiality, protected health information and safety are also stressed. Course is scheduled during first 8 weeks of semester. Co-requisite(s): ALH 122, PHB 105 (if applicable)

PHB 105—SPECIMEN PROCESSING 3-3-4

This course covers the principles of specimen handling and processing. National standards in clinical laboratory science are presented including quality control, laboratory math, safety, basic laboratory equipment operations, accreditation/certification requirements, professionalism and ethics. Students perform such tasks as data entry and specimen accessioning. Students centrifuge and aliquot samples as well as learn different methods of sample collection. Course is scheduled during the first 8 weeks of semester. Co-requisite(s): ALH 122, PHB 101 (if applicable)

PHB 110—SPECIMEN PROCESSING PRACTICUM 0-15-4

This practicum requires 224 hours of close and directed supervision for the phlebotomist and specimen processor to apply skills. Practicum is divided into phlebotomy and specimen processing hours. Duties include collection of blood specimens using standard precautions, receiving specimens, distributing samples to appropriate lab areas, data entry and lab instrument operations along with other assigned duties. Infection prevention, patient identification, labeling of specimens, quality assurance, confidentiality and proper specimen handling are stressed. Practicum is scheduled during second 8 weeks of semester. Schedules are arranged by clinical site availability, usually four 8-hour days per week, Prerequisite(s): Successful completion of PHB 101 and PHB 105 during first 8 weeks of semester.

PHB 111—PHLEBOTOMY PRACTICUM 0-15-4

This practicum requires 224 hours of close and directed supervision for the phlebotomist and specimen processor to apply skills. Duties include collection of blood specimens using standard precautions along with

other assigned duties. Infection prevention, patient identification, labeling of specimens, quality assurance, confidentiality and proper specimen handling are stressed. Practicum is scheduled during second 8 weeks of semester. Schedules are arranged by clinical site availability, usually four 8-hour days per week. Prerequisite(s): Successful completion of PHB 101 during first 8 weeks of semester.

PHL–PHILOSOPHY

PHL 155—INTRODUCTION TO LOGIC 3-0-3

Principles of correct thinking, deductive and inductive 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

Introduction to Philosophy examines the major philosophical problems of philosophy as discussed by classical, medieval and modern philosophers.

PHL 161—INTRODUCTION TO ETHICS 3-0-3

This course provides an overview of the main questions in ethics: What is a good life? Does morality depend upon religion? What makes an action right or wrong? Are morals relative or absolute? Students will examine these and other questions using a variety of ethical theories. These theories will also be applied to concrete issues like animal rights and euthanasia. Satisfies the humanities area of the general education requirement.

PHY–PHYSICS

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 or MTH 100A

PHY 110—FUNDAMENTALS OF PHYSICS 2.5-1-3

This course is designed to prepare students with no physics background for College Physics or Physics for Radiography. 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, MTH 052A or placement

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 110 Corequisite(s): RAD 141, RAD 146

PHY 130—PHYSICS FOR SONOGRAPHY 3-0-3

This course is a study of the fundamental principles of physics as they pertain to the production of sonographic images. Topics covered include sound wave mechanics, sound generation and reception using transducers, and electrical concepts as they apply to pulse-echo instrumentation. Prerequisite(s): PHY 110 or high school physics

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. Prerequisite(s): MTH 052, MTH 052A or placement.

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 PHY 110 or 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): PHY 110 or High school physics. 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, nuclear structure and solid state physics.

PHY 259—THERMODYNAMICS AND FLUID MECHANICS 2-2-3

A third in a three-semester sequence of calculus-based introductory physics. Topics include fluid mechanics and thermodynamics. Laboratory exercises emphasize data analysis and preparation of laboratory reports.

PMB–PLUMBING

PMB 101—PLUMBING I 2-4-4

The Plumbing program provides students the basic skills to work in an entry-level position in the plumbing field. This course will help the student develop skills in to perform introductory tasks in the plumbing field.

PMB 121—ESTIMATING FOR THE PLUMBER 1-2-2

This course will help the student develop skills in to perform some of the estimating tasks and potential contractual obligations that the plumber encounters in the plumbing field. Estimating is fundamental for any plumbing business to be successful in a service based business as potential clients will almost certainly request a quote from you prior to awarding a project. The course will provide the student the knowledge for estimating each aspect of plumber projects, listing specific expectations, requirements and plumber contract agreement information.

PMB 200—PLUMBING CODE 3-0-3

This course will help the student develop a working knowledge of Residential and Commercial Plumbing Code. The curriculum is designed to prepare students to understand the use of the plumbing code standard book (ICC), references standards, the reading and use of

charts and tables, and preparation for the journeyman's certification and the cross-connection control certification test.

PMB 250—ADVANCED PLUMBING TECHNIQUES 2-4-4

This course will help the student develop skills in to perform introductory tasks in the plumbing field.

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—CONSTITUTIONAL POWERS AND CIVIL LIBERTIES 3-0-3

A study of the development of the American 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 220—RESEARCH METHODS IN THE SOCIAL SCIENCES 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 social sciences methods of research sources will be investigated. Prerequisite(s): CPT 150

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 250—RESEARCH METHODS IN PSYCHOLOGY 3-0-3

This course examines the methods used to explore research issues in psychology. Emphasis is placed on observational, correlational and experimental techniques used by social scientists. Students will learn how descriptive and inferential statistical procedures are used to answer research questions. Team-oriented activities are utilized to help students understand all the phases of scientific research: hypothesis formation, design, data collection, analysis and interpretation. Prerequisite(s): PSY 160, MTH 160

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 GENDER 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 269—HUMAN MEMORY AND COGNITION 3-0-3

This course provides an overview of research on human memory. Topics covered include the major theories of memory and the critical data that have been gathered to develop, test and challenge these theories. The research reviewed will cover both the classic work and the current work done by memory researchers on a number of core issues. The information covered in this course will focus on both experimental research and application to everyday use of memory.

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

PSY 275—HUMAN SEXUALITY 3-0-3

Human Sexuality will provide a brief biological review of the human sexual anatomy and the human reproductive system. The focus of this course is on the psychological aspects of human sexual behaviors, differences in male and female sexuality and human diversity. The course will include a broad-spectrum understanding of sexual behavior and loving relationships. Prerequisite: PSY 160

RAD–RADIOLOGY TECHNOLOGY

RAD 111—RADIOGRAPHIC PROCEDURES AND PATIENT CARE 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 and basic radiation. Appropriate radiographer conduct and communication skills in the clinic setting will be discussed along with radiographic anatomy and procedural considerations, patient care, safety and emergency procedures. In the lab, students will learn positioning terminology, equipment manipulation and 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. 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—DIGITAL IMAGE ACQUISITION AND DISPLAY 3-0-3

Content imparts an understanding of the components, principles and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display archiving and retrieval are discussed. Principles of digital system quality assurance and maintenance are presented. Prerequisite(s): RAD 111, RAD 121 Corequisite(s): MTH 157, PHY 125, RAD 141, RAD 146

RAD 141—RADIOGRAPHIC PROCEDURES AND PATIENT CARE II 3-2-4

This course is a continuation of RAD 111 including anatomy and procedural considerations for the axial skeleton and trauma, mobile and pediatric imaging. Patient care topics include pharmacology, ethics and law, and information management. In the lab, students will learn positioning terminology, equipment manipulation and the proper positioning of the axial skeleton. 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): PHY 125, RAD 131, RAD 141

RAD 211—RADIATION BIOLOGY AND PROTECTION AND RADIOGRAPHIC PROCEDURES III 3-2-4

This three-part course provides students with comprehensive information on the biological effects of radiation and radiation protection practices for the radiographer and patients. In the first half of the course, the final set of imaging procedures that include the use of contrast media are also reviewed. In the second half, equipment quality control procedures are reviewed. In the lab, students will learn the positioning and set-up of non- skeletal examinations including fluoroscopy, myelography, arthrography and c-arm studies. Students will also learn basic phlebotomy skills including blood collection methods and techniques, and specimen procession and handling. 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): RAD 146

RAD 216—CLINICAL EDUCATION IV 0-16-4

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 255; Corequisite(s): RAD 211

RAD 221—RADIOGRAPHIC PATHOLOGY AND CAREER PREPARATION 3-0-3

This course will provide students with a comprehensive examination of the etiology of disease and the pathophysiologic disorders of disease that compromise healthy systems. Emphasis will be placed upon the radiographic appearance processes. In addition, students will prepare a professional resume packet and learn job search and interview strategies. Prerequisite(s): RAD 211, RAD 216; Corequisite(s): RAD 226, RAD 231

RAD 226—CLINICAL EDUCATION V 0-20-5

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 211, RAD 216; Corequisite(s): RAD 221, RAD 231

RAD 231—RADIOLOGY TECHNOLOGY CAPSTONE 1-0-1

This course is a review of all material from Radiology Technology with emphasis on the ARRT examination preparation. Prerequisite(s): RAD 211, RAD 216; Corequisite(s): RAD 221, RAD 226

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 215

RBT–ROBOTICS

RBT 111—ELECTRICAL COMPONENTS 3-2-4

This course is a study of the basic electrical components in a manufacturing system. Topics covered will include basic functions and physical properties of electrical components; the systematic flow of energy and measurement of components; troubleshooting techniques and strategies to identify, localize and correct malfunctions; and systematic preventive maintenance and electrical component safety. Technical documentation such as data sheets, schematics, timing diagrams and system specifications will also be covered.

RBT 121—MECHANICAL COMPONENTS AND ELECTRIC MOTORS 3-2-4

This course is a study of the basic mechanical components and electrical drives in a manufacturing system. Topics covered will include basic functions and physical properties of mechanical components and electrical AC and DC drives; materials lubrication requirements and surface properties; troubleshooting techniques and strategies to identify, localize and correct malfunctions; and systematic preventative maintenance and electrical component safety. Technical documentation such as data sheets and specifications of mechanical elements and electrical drives will also be covered.

RBT 130—ELECTRO-PNEUMATIC AND HYDRAULIC CONTROL CIRCUITS 3-2-4

This course covers the basics of pneumatic, electro pneumatic and hydraulic control circuits in a complex manufacturing system. Students will learn the functions and properties of control elements based upon physical principles and the roles they play within the system. Technical documentation such as data sheets, circuit diagrams, displacement step diagrams and function charts will also be covered. By understanding and performing measurements on the pneumatic and hydraulic control circuits, students will learn and apply troubleshooting strategies to identify, localize and correct malfunctions. Preventive maintenance of (electro) pneumatic and hydraulic components as well as safety issues within the system will be discussed.

RBT 135—INDUSTRIAL ROBOTICS

This course is an introduction to industrial robotic systems. Topics covered will include safety considerations, operation and basic programming of industrial robotics. System maintenance and troubleshooting topics are emphasized.

RBT 140—DIGITAL FUNDAMENTALS AND PROGRAMMABLE LOGIC CONTROLLERS 3-2-4

This course is a study of basic digital logic and programmable logic controllers (PLCs) in a manufacturing system using the automation system. Topics covered will basic PLC functions and testing; identification of malfunctioning PLCs; and troubleshooting techniques and strategies to identify and localize PLC hardware generated problems. Emphasis is on writing small programs and problem-solving using computer simulations. Corequisite(s): RBT 111

RBT 221—PROCESS CONTROL TECHNOLOGY 3-2-4

This course is a study of the Process Control technologies associated with a complex manufacturing system. Topics covered will include the Closed Loop Control; interaction between controllers, sensors and actuators; controller operating parameters; PID controllers; ON/OFF and PID controller; and the differences between controllers typically used in manufacturing systems. The analysis of plant documentation and manuals, the creation and interpretation of charts with diagrams for time-based changes of measured values will also be covered. Prerequisite(s): RBT 111

RBT 225—INDUSTRIAL ELECTRONICS IN ADVANCED MANUFACTURING 3-2-4

Industrial Electronics in Advanced Manufacturing is concerned with devices, applications, instruments and control techniques use in modern industrial automated systems. Industrial instruments and sensors are identified and their characteristics described. Industrial automated control systems are classified, investigated and manipulated. AC and DC motors are studied and applied to automated drive systems. Process control variables and control techniques are described and investigated. Analysis and troubleshooting techniques are studied and applied to components and systems relevant to industrial electronics and automated control systems. Prerequisite(s): RBT 111

RBT 230—AUTOMATED SYSTEMS 3-2-4

This course is a study of the automation systems utilized with a manufacturing system. Topics covered will include Metal Cutting, Modal Analysis, CNC, CAD, CAM, programming and microcontrollers that are used in modern manufacturing technologies. Prerequisite(s): RBT 140

RBT 240—MOTOR CONTROL 3-2-4

This course covers the principles of AC and DC motors, motor control and general machine operations in a complex manufacturing system. Students will learn the functions and properties of machine control elements and the roles they play within the system. Topics covered will include general machine operations and motor control techniques; mechanical components and electric drives; motor sensors, braking and loads; motor efficiency and power; preventive measures; and troubleshooting techniques, Technical documentation such as data sheets, circuit diagrams, schematics, displacement step diagrams and function charts will also be covered. By understanding and performing measurements on motors and motor control circuits, students will learn and apply troubleshooting strategies to identify, localize and correct malfunctions. Safety issues within the system will also be discussed; Prerequisite(s): RBT 111 and RBT 121

RBT 245—ROBOTICS CONTROL SYSTEMS

This course is designed to provide the student with an intermediate level understanding of automated controls used in robotics systems. The course includes topics that will enable the student to understand, analyze, and develop these systems with a focus on automated robotic system control techniques. Prerequisites: RBT 111 and RBT 140

RBT 250—MECHANICAL COMPONENTS AND SYSTEMS 3-2-4

This course is a study of the mechanical components that are included in a complex manufacturing system. Topics covered will include an overview of statics and kinetics with a focus on force system analysis, study of equilibrium, frames and machines, friction and the effects of forces on the motion of objects. Fundamentals and classification of machine elements to include calculations involving force, stress and wear analysis will also be covered. Prerequisite(s): RBT 121

RBT 265—ROBOTICS AND AUTOMATION 3-2-4

This course is designed to provide the student with an advanced level understanding of industrial robotics functions and their application to automated control systems. The course includes topics that will enable the student to understand, analyze, and develop these systems with a focus on automated robotic system control techniques. A major part of the course involves a robotics system project. Prerequisites: PBT 135 and RBT 245.

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 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

This course is an introduction to the law of real property. The course examines the historical concept of property ownership along with transference and rights of ownership. The course will review an in depth examination of the residential real estate transaction and necessary documentation from start to finish. Items discussed include an examination of surveys and descriptions, financing, zoning and other restrictions on land use, the title examination and closings.

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 161—THE SOCIOLOGY OF THE 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 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.

SWK–SOCIAL WORK

SWK—INTRODUCTION TO SOCIAL WORK 3-0-3

Introduction to Human Services and Social Work 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. It will also provide an overview of the history of the helping profession and how social policy influences the profession. Students will become familiar with the service providers in the local area. Additionally, students will examine their personal feelings and motivations related to becoming a helper.

SWK 157—INTERVIEWING AND RECORDKEEPING SKILLS 3-0-3

As the follow-up course to HMS 155 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 155

SWK 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 155, HMS 157

SWK 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

SWK 163—INTRODUCTION TO SOCIAL WELFARE 3-0-3

An examination of the historical and contemporary social problems, values and the policies of the institution of social welfare. Considers the social, political and economic origins and consequences of societal policies for economic advancement of clients and social services. Investigating current issues and how it impacts the social work field.

SWK 170—RACE & DIVERSITY IN THE U.S. 3-0-3

This is an introductory course for the study minorities in the USA. The course will expose students to the sociological perspectives on race, class and gender. This course will also provide an overview of the history of various minority groups with emphasis on the importance of culture and developing awareness and understanding of self and others. Through readings and discussions, the course will focus on prejudice and discrimination and the importance of understanding their role in a multicultural society.

SWK 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.

SWK 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.

SWK 258—SOCIAL WORK 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

SWK 259—SOCIAL WORK 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.

STM–SCIENCE, TECHNOLOGY, ENGINEERING AND TECHNOLOGY

STM 296—STEM SEMINAR 1-0-1

This course will provide students in STEM programs the opportunity to use the knowledge and skills they have acquired to explore, critically assess, synthesize, discuss and present current research. This course will also allow students to explore with STEM faculty educational next steps, including BS and graduate programs, and career planning in an interdisciplinary community of STEM learners.

TRV–HOTEL/RESORT 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 110—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 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 188—SOCIAL MEDIA 3-0-3

This course examines the current trends in social media and how these internet-based social networking sites can be powerful marketing tools for businesses and organizations. Through a combination of selected readings and hands-on projects, students will students will learn which social media tools are best suited for various businesses and organizations to maintain a current online profile. Upon completion of the course, students will have the knowledge to develop a basic social media marketing plan for a business or organization.

WEB 199—WEB INTERNSHIP 1-12-3

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.

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.

WEB 260—SEARCH ENGINE OPTIMIZATION BASICS 3-0-3

Introduces fundamental search engine techniques and concepts used to optimize searching for web pages. Addresses the creation of a Search Engine Optimization (SEO) strategy, including on-page and off-page search engine optimization, meta-data research and analysis, traffic generation, online tools and SEO software.

WEB 277—ELECTRONIC COMMERCE TECHNOLOGY 3-0-3

This capstone course focuses on 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.

WEL–WELDING

WEL 125—INTRODUCTION TO WELDING 2-6-4

Theory in oxyfuel principles, basic arc welding and power source operation. Demonstrations by instructor and practice by students in basic oxyacetylene cutting and arc welding. Theory, safe and correct methods of assembly and operation of welding equipment. Use of power tools, Practice in SMAW, GMAW and GTAW in flat position. Emphasis on lab techniques and safety.

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 209—INDUSTRIAL MAINTENANCE 2-2-3

Troubleshooting, maintenance and operation of welding and plant equipment. Use of troubleshooting and repair equipment, theory of equipment and maintenance principles.

WEL 210—MAINTENANCE AND TROUBLESHOOTING FOR INDUSTRY II 2-4-4

This course will expand upon the knowledge and skills obtained in WEL 209, Introduction to Maintenance and Troubleshooting. Students will advance their knowledge of electromechanical concepts, hydraulics, pneumatics and motors. Installation and troubleshooting skills learned in WEL 209 will be applied to more advanced industrial concepts, developing an advanced technical and mechanical skill set. Students should be prepared to perform mathematical calculations and engage in problem solving activities. Knowledge and skills gained in this course are utilized in industries including, but no limited to: Agriculture, Communications, Gas and Oil, Government, Health Care, Logistics, Maintenance, Manufacturing, Mining, Retail, Service and Utilities. Prerequisite(s): WEL 209; Corequisite(s): ELC 106

WEL 220—WELDING CODES 3-0-3

Instruction, practice and application of reading, writing and interpreting ASME, AWS and API specifications and codes for structural steel, pressure vessel and pipe welding.

WEL 221—METAL FABRICATION 2-4-4

Provides students with an understanding of metal fabrication. Emphasis is placed working from blueprints, proper joint selection, 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, brake press, ironworker and metal rollers. Prerequisite(s): DFT 110, WEL 125

WEL 222—FUNDAMENTALS OF ALUMINUM 2-4-4

Aluminum is gaining popularity in modern manufacturing processes due to its lightweight, 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. Prerequisite(s): WEL 125

WEL 224—NDT AND DT 2-2-3

This course includes visual, dye penetrant, x-ray, ultrasonic, magnetic particle and destructive testing techniques. Lab practice is included. Prerequisite(s): MET 105

WEL 225—ADVANCED FABRICATION 1-4-3

The course provides students with an understanding of advanced 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. This course builds on what was learned in WEL 221 with more complex projects and in-depth theory. Prerequisite(s): WEL 221

WEL 226—GMAW 2-4-4

Includes the theory, application and skill development of advanced GMAW, FCAW, PAC and CAC-A processes. Practice in flat and out-of-position welding. Practice for FCAW 3G AWS Certification Test. Prerequisite(s): WEL 125

WEL 227—GTAW **2-4-4**

Theory and practical use of advanced GTAW and open-root welding. Root- face and side-bend tests will be passed by the student in the vertical and overhead positions. ASME, AWS and API code procedures are followed. Practice AWS Certification Test. Prerequisite(s): WEL 125

WEL 228—SMAW **2-4-4**

Theory and advanced SMAW, production of metals and application of metallurgical principles. Demonstrations and practice of vertical, overhead and advanced SMAW techniques. Practice for Open-Root SMAW AWS Certification Test. Prerequisite(s): WEL 125

WEL 230—PIPE WELDING **1-4-3**

Open-root pipe welding. Root-face and side-bend tests will be prepared by the student in their choice of positions. ASME, AWS and/or API code procedures are followed. Practice for AWS Certification Test. Prerequisite: WEL 227

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The Westmoreland County Community College Educational Foundation, Inc. provides an opportunity for individuals, organizations, businesses and industries to contribute financially to the college. The foundation strives to help meet the critical needs facing the college so that a high- quality, low-cost education is available to all. The work of the foundation helps the college by establishing student scholarships and raising funds for current and long-range goals, including improvements to the campus and support facilities. The foundation is an IRS-501(c)3 charitable, nonprofit organization governed by its own board of directors. All donations are tax deductible.

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BA, Clarion University of Pennsylvania

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BS, Westminster College; MBA, Salisbury University

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BS, Carnegie Mellon University;
MS, University of Pittsburgh

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Assistant Professor (English)*
BA, Wasbask College; MA, Simmons College

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Assistant Professor (Biology)
BS, University of Pittsburgh;
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BA, BFA, Seton Hill College;
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Assistant Professor (Philosophy)
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MA, PhD, University of South Florida

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MEd, California University of Pennsylvania

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Denotes full-time temporary faculty

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DAVE BRUCE (d.)
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Majors

Associate of Arts Degree — AA

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

BUS	Business Administration
CRJ	Criminal Justice
LIB	Liberal Arts
PSY	Psychology

Associate of Science — AS

BIO	Biology
CHM	Chemistry
CPS	Computer Science
HLS	Health Science
MTH	Mathematics
PHY	Physics

Associate of Fine Arts Degree — AFA

ART	Visual Art
ATH	Art Therapy
GRA	Graphic Design

Associate of Applied Science Degree (AAS), 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
ACCTG	General Accounting — Certificate

ADDITIVE MANUFACTURING

ADM	Degree
ADMF	Diploma
ADMFG	Certificate

ADVANCED MANUFACTURING AND ROBOTICS

AMR	Degree
BMANS	Basic Manufacturing Systems — Certificate
AMRT1	Advanced Manufacturing and Robotics Technician I — Certificate
AMRT2	Advanced Manufacturing and Robotics Technician II - Certificate

APPLIED INDUSTRIAL TECHNOLOGY

AIT	Degree

ARCHITECTURAL DRAFTING AND DESIGN

ADD	Degree

ART

ARTBS	Art Business – Certificate
ARTTC	Art Technology - Certificate

BAKING & PASTRY

BAA	Apprenticeship - Degree
BAN	Non-Apprenticeship - Degree
BAPA	Non-Apprenticeship - Diploma
BPAA	Apprenticeship - Diploma
BAKPA	Non-Apprenticeship - Certificate

BUSINESS

FIN	Finance - Degree
BUS	Management - Degree
HRM	Human Resource Management - Degree
MKM	Marketing - Degree
SBM	Entrepreneurship — Degree
BUSG	Business - Diploma
FINMG	Finance - Certificate
BUSMG	Management - Certificate
HRMGT	Human Resource Management - Certificate
MKTMG	Marketing - Certificate
RESMG	Real Estate - Certificate
SMBMG	Entrepreneurship - Certificate

COMMUNICATION DESIGN

CMD	Degree
GRAPB	Graphic & Publishing — Certificate
WEBMD	WEB & Mobile Design — Certificate

COMPUTER TECHNOLOGY

CON	Networking - Degree
CPE	Programming - Degree
CTS	Technical Support — Degree
WEP	Web Publishing - Degree
COTE	Diploma
COTEC	Microcomputer Support - Certificate
CONET	Networking - Certificate
COREP	PC Repair/A+ - Certificate
COPRG	Programming - Certificate
COWED	Web Development - Certificate
WEPUB	Web Applications - Certificate

CRIMINAL JUSTICE

CJU	Degree
CJS	Information Security - Degree
CJUCO	Corrections Officer - Certificate
CJUSP	Security Professional - Certificate

CULINARY ARTS

CUA	Apprenticeship - Degree
CUN	Non-Apprenticeship - Degree
CUAA	Apprenticeship - Diploma
CUNA	Non-Apprenticeship - Diploma

CYBER SECURITY

CYB	Degree
COIFS	Cyber Security Certificate

*DENTAL ASSISTING

DEAS	Diploma

*DENTAL HYGIENE

DEH	Degree

*DIAGNOSTIC MEDICAL SONOGRAPHY

DMS	Degree

DIETETIC TECHNICIAN/NUTRITIONAL SERVICES MANAGEMENT

NSM	Degree

DINING ROOM MANAGEMENT

DINRM	Certificate

Majors

DRAFTING & DESIGN TECHNOLOGY
DDC CADD/CAM - Degree
DDM Mechanical Drafting - Degree

EDUCATION/PRE-K–GRADE 4
EDU Degree
EDUC Diploma
EDPRK Certificate

ELECTRICAL UTILITY TECHNOLOGY
EUT Degree

ELECTRONICS ENGINEERING TECHNOLOGY
EET Electronics - Degree

ENGINEERING TECHNOLOGY
ENT Degree

EXPANDED FUNCTIONS DENTAL ASSISTING
EFD Degree
EXFDA Certificate

FORENSIC SCIENCE
STF Forensic Science - Degree
FORSC Forensic Science - Certificate

HEATING, VENTILATION, AIR-CONDITIONING & REFRIGERATION
HVA Degree
HVAC Heating, Ventilation Air Conditioning-Diploma
HVAC1 HVAC Mechanic I - Certificate
HVAC2 HVAC Mechanic II - Certificate

HOSPITALITY MANAGEMENT
HOSTM Certificate

HOTEL/RESORT MANAGEMENT
TTO Degree
HTRS Diploma
HTRSM Certificate

INDUSTRIAL TECHNOLOGY
INDT Diploma

JOURNEYMAN MACHINING TECHNOLOGY
JRM Degree
JOUR Diploma
JOURN Certificate
JRNT2 Certificate
JRNT3 Certificate
JRNT4 Certificate

MANUFACTURING TECHNOLOGY
MAP Degree

***MEDICAL ASSISTING**
MEAS Diploma

MEDICAL/HEALTHCARE MANAGEMENT
HCM Degree
HCMG Diploma
HCMGT Certificate

MULTIMEDIA & PHOTOGRAPHY
MMT Multimedia Technology - Degree
PHO Photography - Degree
ADOBE Adobe Video Studio - Certificate
VIDTE Video/Television - Certificate

NANOTECHNOLOGY
NNT Degree

***NURSING**
NUR Degree

OFFICE TECHNOLOGY
OTA Office Administration - Degree
OADM Office Administration - Diploma
OADMN Office Administration - Certificate
OTCSV Customer Service - Certificate

PARALEGAL
LEA Degree
LEAS Diploma

***PHLEBOTOMY**
PHBSP Phlebotomy/Specimen Processing - Certificate
PHLEB Phlebotomy - Certificate

PLUMBING
PMB Degree
PLMB Diploma
PLUMB Certificate

***RADIOLOGY TECHNOLOGY**
RAD Degree

RESTAURANT/CULINARY MANAGEMENT
RSC Degree
RSCM Diploma
RSCMG Certificate

ROBOTICS
ROB Degree
ROBOT Basic Systems - Certificate
ROBT1 Technician I - Certificate
ROBT2 Technician II - Certificate

SOCIAL WORK
SWK Degree
SOCWK Certificate

WELDING ENGINEERING TECHNOLOGY
WET Degree
WELD Diploma
WELD1 Certificate I
WELD2 Certificate II
WELD3 Certificate III

Programs with an asterisk (*) also require students to complete the Allied Health Programs Application.

Locations

Westmoreland County Community College
Youngwood Campus
145 Pavilion aLane
Youngwood, PA 15697
724-925-4000

Westmoreland-Advanced Technology Center
1001 Technology Drive, Suite 1009
Mt. Pleasant, PA 15666
724-925-4269

Westmoreland-Fayette County
140 North Beeson Boulevard, Suite 304
Uniontown, PA 15401
724-437-3512

Westmoreland-Indiana County
45 Airport Road
Indiana, PA 15701
724-357-1404

Westmoreland-Latrobe
130 Depot Street
Latrobe, PA 15650
724-925-8473

Westmoreland-Murrysville
6707 Mellon Road
Export, PA 15632
724-327-8090

Westmoreland-New Kensington
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Westmoreland-Public Safety Training Center
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WESTMORELAND COUNTY COMMUNITY COLLEGE 50
CELEBRATING FIFTY AMBITIOUS YEARS
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