WESTMORELAND COUNTY COMMUNITY COLLEGE

Students First!

2026 - 27 COLLEGE CATALOG

Westmoreland County Community College

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Catalog Disclosure

This catalog is published for informational purposes and reflects the programs, courses, policies, and fees in effect at the time of publication. Westmoreland County Community College makes every effort to ensure that course descriptions and prerequisites are accurate and that all information complies with Pennsylvania regulations and federal consumer information and misrepresentation requirements.

The catalog is not a contract between students and the College. The College may modify programs, courses, policies, schedules, or fees when educational, operational, or legal considerations require. Whenever possible, changes will be announced in advance and posted on the College's official website. Students are responsible for reviewing the website and staying informed of updates.

Required consumer information—such as costs, financial aid, policies, and student outcomes—is available on the College's website. The online version of the catalog and any subsequent official notices supersede earlier printed or PDF versions.

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 (Kimberly Robertson) at 724-925-4079 or in Room 250, Westmoreland County Community College, Student Achievement Center, Youngwood, PA 15697.

Accreditation

Westmoreland County Community College is accredited by the Middle States Commission on Higher Education (MSCHE), 1007 North Orange Street, 4th Floor, MB #166, Wilmington, DE 19801, 267-284-5011. 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 Culinary Arts, AAS and Pastry Arts, AAS programs (Apprenticeship and Non-Apprenticeship) are accredited by the Accrediting Commission of the American Culinary Federation Education Foundation (ACFEF). These programs have been identified by the ACFEF as "Exemplary" and have received a Grant of Accreditation and Exemplary status through December 31, 2027.

- 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 Associate of Science in Surgical Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA) 9355 – 113th St. N, #7709 Seminole, FL 33775, 727-210-2350).

- 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 approved by the Pennsylvania State Board of Nursing. The Nursing AAS program is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326; 404-975-5000; www.acenursing.org.

- The Practical Nursing Program is approved by the Pennsylvania State Board of Nursing.

Westmoreland Profile

Founded: 1970

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

Phone: 724-925-4000

Online: www.westmoreland.edu

Programs/Degrees: Westmoreland offers the associate of arts degree (AA), the associate in engineering (AE), the associate of fine arts degree (AFA), the associate of applied science degree (AAS), the associate of science degree (AS), diploma and certificate programs. More information can be found at https://westmoreland.edu/academics/programs/index.html

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, Health and Culinary Center, and 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, Enrollment Center, Tutoring and Learning Services, 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.

General Institutional Information: For General Institutional Information, please visit the College Navigator website. This federal Department of Education website allows students to view information that colleges are required to report and allows you to compare colleges on factors such as size, student body characteristics, academic programs, tuition and other costs, athletics, and other factors.

Mission, Vision, Values

WESTMORELAND'S MISSION

Driving student success, developing a skilled workforce and strengthening communities through education.

WESTMORELAND'S VISION

We envision a future where our students lead and uplift the communities of Southwestern Pennsylvania - driving regional growth, resilience, and opportunity through education.

WESTMORELAND'S VALUES

Academic and Professional Excellence: We strive to offer high-quality purposeful education; rigorous programs; and promote critical thinking, intellectual curiosity, and lifelong learning.

Community Engagement: We are committed to providing opportunities for all individuals and organizations in our communities to participate in educational, social, and civic initiatives.

Innovation and Adaptability: We foster an environment where innovation, creativity, and a willingness to adapt to changing needs and technologies are embraced.

Student Success and Support: We are dedicated to providing resources, guidance, and support to help all students with their academic, personal, and professional growth.

Integrity and Accountability: We pursue the highest ethical standards in all our actions and hold ourselves accountable for our decisions and behaviors.

Priorities

WESTMORELAND'S PRIORITIES

1. Become more student focused.
2. Improve our systems and processes to achieve operational excellence.
3. Align our culture with our values by empowering our employees and by providing the systems they need.
4. Place Westmoreland County Community College on a firm financial footing to deliver on the long-term promise of our mission.

Enrollment Services

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.

Admissions

Requirements for Admissions

1. If you are interested in becoming a new student, submit the online Application for Admission at westmoreland.edu.
2. Upon receipt of the Application for Admission, the Admissions Office will send information on placement assessment and registration.
3. Submit official transcripts to transcripts@westmoreland.edu. This includes:
    A. High school transcripts for first-time college students (includes home school)
    B. GED / HiSet scores
    C. Transcripts from any post-secondary institution previously attended
    D. Advance Placement (AP) scores
4. Complete an Educational Planning session and register for classes.

For more information on enrollment and admission, visit the website here: Become a Westmoreland Student

Readmission

Former students who wish to return after a cross into a new catalog year (excluding Summer) must submit a new Application for Admissions. 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 transcripts@westmoreland.edu. The readmitted student's catalog year will be moved to their returning year based on when they take their first course after returning.

Students who have not taken classes for two or more consecutive semesters (excluding summer and winter semesters) must reapply.

International Student Admissions

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.

For additional information, please refer to the International Student page on the WCCC website: https://westmoreland.edu/admissions_aid/apply/international-students.html.

If you are an international (F-1) student in the United States and you wish to transfer to Westmoreland, please complete the Student Transfer Status Report and call our Admissions Office at 724-925-4000. For more information, please visit https://westmoreland.edu/admissions_aid/apply/international-students.html.

Selective Admission 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 course work; however, they must finish the selective process. Students readmitted to selective admission programs will have their program year changed to the catalog year corresponding to the cohort they rejoined.

Course Registration

Registration

Registration for fall sessions begins the previous spring. Registration for winter, spring, and summer begins the previous fall. Check the school website for specific dates and class schedules. New students who have completed the Application for Admission will receive communication 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 year.

Priority Registration for Veteran Students

Under Act 46 of 2014, Pennsylvania colleges must give veteran students preference in course scheduling. Non-compliance can be reported to the PA Department of Education via the Higher Education Student Complaint form at www.education.state.pa.us.

To qualify as a veteran student, you must:

- Have served in the U.S. Armed Forces (including Reserves or National Guard) and been discharged under conditions other than dishonorable.
- Be admitted to Westmoreland County Community College (WCCC).
- Reside in Pennsylvania while attending Westmoreland.
- Verification: Submit your DD-214 or NGB-22 (one time only) to the VA Certifying Official at militarybenefits@westmoreland.edu.

Students can view the Academic Calendar for priority registration dates.

Full and Part-time Student Status

Full-time students register for 12 or more credits a semester (no more than 19); part-time students register for fewer than 12 credits a semester.

Request to Carry Over 19 Credits

Students who wish to take more than 19 credits must submit a Request to Carry Over 19 Credits form prior to registration.

Enrollment Services

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. To find out if you're eligible for College Now! Program, visit our website.

- *Early College*

  This program is designed for motivated high school 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. For more information, please visit our website.

- *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 Westmoreland college courses into a busy schedule while taking classes in a familiar environment. Interested students must be a sophomore, junior or senior with a 2.5 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. For more information, visit our website.

Transferring Credits to Westmoreland

Transfer of Credits from Another Institution

Credits earned at other institutions 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. The consideration of transfer credits or recognition of degrees will not be determined exclusively on the basis of the accreditation of the sending institution or the mode of delivery but, rather, will consider course equivalencies, including expected learning outcomes, with those of the College's curricula and standards. Evaluation and acceptance of credits completed 10 years prior to the transfer request date shall be made at the discretion of the college.

There is no limit on the number of transfer hours that can be accepted; however, students must earn at least 30 credits of degree or 15 credits of diploma 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 or portfolio.

Before transfer credit is entered on the permanent record, a student must provide the college with an official transcript issued by the institution granting the credit.

Students may appeal transfer credit evaluation decisions as follows:

- Complete the Transfer Credit Appeals form located in the Student Portal. The Registrar will communicate with the appropriate academic Dean for further guidance and communicate the final decision to the student in writing within 10 working days. All decisions are final.
- Appeals must be submitted no later than 4 months after the completion of the initial evaluation.

Credit for Career and Technology Center Courses

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

- *Local Career and Technology Center Agreements*

  Students who have completed their program of study at a CTC with a minimum 2.5 cumulative grade point average are eligible for college credit 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 Program of Study (POS) paperwork.

- *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 at a CTC with a minimum 2.75 cumulative grade point average are eligible for college credit for up to three years after graduating from high school. Students or graduates in these programs should submit the required documentation to the college to receive credits. View the college website for details.

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 comprising 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.

Cambridge Advanced

The Cambridge AICE (Advanced International Certificate of Education) program is an international, advanced secondary curriculum and assessment program equivalent to the British system of "A-Levels." To qualify for college credit, students must earn an appropriate passing score on the nationally administered exam.

Credit for Prior Learning

Students may earn academic credit for prior learning. Prior learning is experience-based learning obtained outside of an accredited college or university. Credit for Prior Learning may be awarded for learning acquired from either Departmental Examinations or Portfolio Assessment.

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 for which a grade has been previously issued (A, B, C, D, F, I)
3. A course which is a prerequisite for a course previously completed
4. A course currently registered

Students must complete the Petition for Credit by Examination form to apply. A fee is charged for each exam. See Tuition & Course Fees for current costs.

Portfolio Assessment

Portfolio assessment allows students to present prior learning experiences in portfolio format. Students must complete the Portfolio Assessment Approval form. Please visit the website to learn more. A fee is charged for portfolio assessment. See Tuition & Course Fees for current costs.

Industry Credentials

Enrolled students who have current industry credentials that are not addressed by the ACE guidelines may request credit by certification. The student will need to supply documentation of any valid industry certification awarded, and time limits may apply for certain programs of study. Determination of equivalent Westmoreland course credit, if any, will be at the discretion of Westmoreland subject matter experts and the division Dean. To request credit, contact the division Dean of the course.

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.

Transfer Information

Transfer to Four-Year Colleges and Universities

Westmoreland County Community College offers courses that parallel those offered at other colleges and universities. Students can take those courses and then transfer the credits to a transfer school of their choice. Westmoreland's transfer counselor can help students develop a course plan to follow that will make the transfer process seamless.

Westmoreland County Community College offers the AA, AE, AS, and 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 AAS programs, even though some courses may be acceptable as electives at a transfer institution.

Transfer Agreements

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 degree in the same field as their associate degree.

Articulation Agreements

Westmoreland County Community College maintains transfer articulation agreements with many four-year colleges and universities in the region. The agreements denote program requirements and courses that can be applied toward a degree or certificate at a transfer school. In consultation with a counselor, students can use the agreements as guides to plan a program of study most appropriate for transfer to their school of choice. Westmoreland maintains a multitude of transfer agreements that span many disciplines.

- *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.

- *Program-to-Program Agreements*

  Statewide Program-to-Program (P2P) Articulation Agreements allow students at PA TRAC colleges to transition seamlessly from an associate degree to a bachelor's degree in similar programs of study. These program agreements provide direct pathways into popular majors at four-year PA TRAC colleges.

  Two-and four-year PA TRAC colleges use Statewide P2P Agreements to align certain associate degrees with the first 60 credits of bachelor's degrees in popular programs of study.

  Associate-to-Bachelor's degree pathways are established for these popular programs of study:

  - ❖ Business Administration, AA
  - ❖ Criminal Justice, AA
  - ❖ English, AA
  - ❖ Elementary Education PreK-4, AA
  - ❖ History, AA
  - ❖ Psychology, AA
  - ❖ Biology, AS
  - ❖ Chemistry, AS
  - ❖ Computer Science, AS
  - ❖ Mathematics, AS
  - ❖ Physics, AS
  - ❖ Visual Arts, AFA

  Statewide P2P Agreements do not guarantee admission to a PA TRAC college or the intended major. The admissions and transfer credit policies for each PA TRAC college can be found on each College Profile. Contact your advisor to discuss specific transfer options and to see if a Statewide P2P Agreement may benefit you.

Reverse Transfer

The reverse transfer agreement is designed to support students who earned college-level credits while enrolled at Westmoreland, but did not earn enough credits to complete their community college program of study.

Reverse transfer agreements streamline the process of transferring credits earned by students at another school back to Westmoreland to be evaluated for credit toward completion of certificate, diploma or associate degree.

Dual Admissions Agreements

The dual admissions program provides an opportunity for Westmoreland students to gain early admission to transfer schools with which we have dual admission agreements. Students in the program are automatically admitted into their transfer schools as juniors after they finish their associate degree, provided they maintain the requirements of the agreement. Dual admission students also may have access to benefits at the transfer school, such as campus housing and access to campus facilities and resources, while they are enrolled at Westmoreland. For more information, visit the Dual Admissions webpage.

Tuition Costs and Financial Aid

Tuition and Course Fees

Visit our website to view the most up-to-date information regarding tuition, credit course lab fees, payment plan information, and other costs. Please note that tuition and fees are subject to change by the Board of Trustees. The college reserves the right to change tuition and fees without prior notification before the beginning of any academic session.

Tuition Reduction for Older Adults

If you are a Pennsylvania resident age 60 or older you are eligible for a 50% 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 Information Center at 724-925-4000.

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 enrollment 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.

Credit Refund Policy

Westmoreland County Community College, in alignment with PA State Code 22.35.30, shall refund 100% of tuition and fees to students taking certificate, diploma, and degree programs that are measured in credit hours until at least 20% of a term has passed.

Residency Policy

Residency requirements are established for the purposes of assessing tuition 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.

Documents to verify residency may include: 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, or documentation from employers.

- *Commonwealth of Pennsylvania Residency*

  To establish residency in the state of Pennsylvania, you must demonstrate continuous residence for twelve 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. Additional exceptions can be made whose status indicates that they are in or transitioning out of child welfare or juvenile justice systems.

- *Residency for 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 and is using VA educational benefits to pay for their educational expenses. For more information, please visit our Services for Veteran and Military Students webpage.

- *County Corporate Sponsorship Residency*

  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 a letter on company's letterhead and tuition payment plan.

Tuition Payment Plan

The tuition monthly payment plan allows students to pay for tuition and fees over a period of six, five, four, three, or two payments depending on the term and time of enrollment with TouchNet. The amount contracted is only for tuition and fees. Books will not be included in this total. Only accepted/finalized financial aid amounts will be deducted from the amount shown in TouchNet.

Tuition payment plans are offered by Westmoreland County Community College in conjunction with TouchNet. Automatic payments are required and will come out on the scheduled payment dates. Payment dates are determined by the

payment plan chosen. Payments will post to the student's Westmoreland County Community College account immediately when payment is received.

Payment plans will automatically cancel when the student account with Westmoreland County Community College is paid in full. Students should not stop paying on the payment plan without first contacting the Accounting Department.

Enrollment in the TouchNet Payment Plan must be finalized by the payment due date indicated on the Tuition Payment Plan which is outlined on the website.

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.

The types of financial aid available at Westmoreland County Community College include Grants, Student Employment, Loans and Scholarships. Grants are typically awarded based on need and generally do not have to be repaid. For more information on financial aid options, please visit the Financial Aid webpage.

Federal Aid

To apply for financial aid, complete the FAFSA online at www.studentaid.gov as soon as possible after October. Include Westmoreland's school code - 010176 - on your application. To determine aid eligibility, please visit How Aid Works.

To be eligible, students cannot be in a default or overpayment status on any type of federal financial aid.

State Aid

The Pennsylvania State Grant Program is a financial assistance program administered by PHEAA. For more information regarding the PA State Grant and other Special Programs, visit Types of Financial Aid.

Rights and Responsibilities of Aid Recipients

Please review the rights and responsibilities of financial aid recipients at this link.

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 program completion and are not computed into a student's grade point average (GPA). This policy may impact a student's Title IV financial aid eligibility.

Repeated Coursework Policy

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.

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. (CFR 34 668.34). The Satisfactory Academic Progress Policy can be found here.

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 enrollment drops below full-time, the financial aid award will be adjusted accordingly, and if the student has already received financial aid, the student may have to repay a proportional amount of the funds applied to the student's account.

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. For more information, please visit Return of Title IV Funds and Refund Process.

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. Any overpayment will be returned to PHEAA, and students are responsible for any balance(s) that is due to the school.

Scholarships

A scholarship is financial aid awarded primarily on the basis of scholastic achievement. Information about scholarships available and the application process can be found here: Scholarships

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

Title 38 United States Code Section 3679(e) School Compliance

Under the Veterans Benefits and Transition Act of 2018, WCCC allows "covered individuals" (students using Chapter 31 or Chapter 33 GI Bill® benefits) to attend classes once they submit the required VA documentation. This eligibility lasts until:

- The VA pays the College, or 90 days after the College certifies tuition and fees.

WCCC will not:

- Impose late fees, deny access to classes/facilities, or require additional loans due to VA payment delays.

Students must:

- Submit a Certificate of Eligibility (COE) or Statement of Benefits by the first day of class.
- Submit a Certification Request Form each term.
- Provide any additional info needed for certification.
- Pay any remaining balance not covered by VA funds by the payment deadline.
- Late fees may apply if the required documents are not submitted on time.
- VA Chapter 30 students follow standard payment deadlines.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government website (https://www.benefits.va.gov/gibill/).

Academic Information

Grading

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. The amount of faculty instruction time and out of class student work per week will increase for courses that meet less than 15 weeks.

Grading System

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:

Evaluative Symbols (Included in GPA)

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

Evaluative Symbols (NOT Included in GPA)

Grade	Academic Achievement	Grade Points
P	Pass (at least satisfactory)	2.0
NP	No Pass	0.0
TA	Transfer in A	4.0
TB	Transfer in B	3.0
TC	Transfer in C	2.0
TD	Transfer in D	0.0
CR	Credit Awarded	
D**	Academic Forgiveness	
F**	Academic Forgiveness	
AU	Course Audit	0.0
WF	Withdrawn Failure	0.0

Non-Evaluative Symbols

Grade	Academic Achievement	Grade Points
I	Incomplete	
I^	Incomplete for P/NP Courses	
RD	Report Delayed	
W	Withdrawal	0.0
M	Military Withdrawal	0.0
MW	Medical Withdrawal	0.0

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

Repeating Courses

Students may repeat a course once without permission. Third and subsequent attempts require the written approval of a dean or department chair. Programs may adopt a stricter limit as needed. The most recent evaluative grade will count towards credential progress. Non-evaluative symbols (see above) will not count towards GPA.

Incomplete Grades

"Incomplete" is appropriate when the student has completed most of the course requirements, is passing based on work completed, and has contracted to make up the remaining or outstanding work. The faculty member must submit an Incomplete Form to their Academic Dean so the form can be attached to the student's record. 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 and the incomplete (I^) automatically changes to an NP grade if the work is not completed by the date specified by the instructor, not to exceed 120 days after term end.

Auditing Courses

Auditing a class allows students to attend courses without earning credit, taking exams, or receiving a grade, resulting in an "AU" symbol on transcripts. Students may audit a course with the approval of the instructor. The Course Audit Request for this purpose is available in the MyWestmoreland Student Portal 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."

Students completing the Certificate of Integrated Studies through the RISE program may opt to audit their general elective courses. In this instance, the audit will count towards the certificate requirements as long as the following requirements are met: Attend and participate in class sessions, participate in weekly meetings with an academic coach to go over course assignments and objectives, meet with the course instructor 3 times per semester to discuss academic progress, and attend the study lounge for academic support a minimum of 3 hours per week.

Academic Information

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.

I/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.

R —- Course that has been replaced.

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 within the published withdrawal period for the course enrollment term. No grade points.

WF — Withdrawn Failure. Grades are administratively assigned at the end of each semester to courses for unofficial withdrawals.

Grade Appeal

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

Academic Forgiveness

Students returning to Westmoreland County Community College after a four-year absence may petition that the credits with D and F grades earned during their previous enrollment at the college be removed from the computation of the cumulative grade point average. This petition may be made only after completion of 12 additional college-level credits after the student returns 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.

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 and can be requested at https://tsorder.studentclearinghouse.org. All financial obligations to the college must be paid before a transcript is issued.

Schedule and Program Changes

Participation Verification

Students enrolled in a course must complete a course activity by the posted Last Day to Participate date or risk removal for "non-participation." Students removed for non-participation may not be added back to the course. A reduction in credits may result in the return of part or all of a student's financial aid. The student is responsible for any balance due to the college that is not covered by aid.

Unregister from a Course

Unregistering is the process of un-enrolling in one or more course(s) after students have completed their registration. This can occur from the point of registration up to the 20% point in the course. No record of the course will appear on the transcript.

Withdrawal Policy

The withdrawal period for any College course begins after the 20% point of the session and runs until the 75% point of the session. The specific dates are set by the length of the session and students may withdraw from the course by following the withdrawal process as specified in the Student Handbook and completing the Student Withdrawal Request Form.

Students wishing to withdraw after the 75% period of the session may request to do so for extenuating circumstances and with appropriate documentation.

- *Medical Withdrawal*

  Students who wish to withdraw from all classes due to medical reasons should complete the Request for Medical Withdrawal. Requests are reviewed by a committee and all decisions are final; there is no appeals process. Refer to the policy manual for full information.

- *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 of 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.

Change of Schedule

Students are fully responsible for completing schedule changes 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 with their assigned advisor 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/Program Version

Students who wish to change their program must complete a Request for Change of Program Version, which can be found under Request Forms in the MyWestmoreland portal.

Students changing programs must do so no later than one week prior to session start. Change of program will only be processed for future sessions. Students wishing to change programs within a session will need to wait until the next session for the change.

Course Substitutions

Students should complete the requirements listed in the plan as published in the catalog year the student started in or was accepted into for selective admissions programs. Course substitution permits a student to substitute an equivalent course for a required course in the student's curriculum. To maintain the integrity of the degree, course substitutions should only be used for extraordinary circumstances, for institutional error, or for students who completed coursework at a previous institution.

Guidelines:

1. The student must be currently enrolled at the college and in the program for substitution.
2. The course substitution must meet the spirit/content of the substituted course in the student's program, including specified course, program, and institutional outcomes.
3. Course substitutions should not be used to circumvent a course that is part of the student's normal curriculum.
4. A student who fails or withdraws from a required course must repeat that course and may not substitute another in its place. This does not apply to electives.
5. Course substitutions are specific to each program and catalog year and may not transfer from one to the other.
6. Course substitutions cannot be used for Transfer and Articulation Oversight Committee (TAOC) programs with the exception of course substitutions that are approved for transfer by our transfer counselor.
7. No more than 20% of the credential (12 credits for a 60-credit degree) can be substituted, and only 2 courses in the major field of the credential can be substituted.
8. Courses are substituted on a one to one basis. Courses cannot be combined to satisfy a course requirement.

Course Information

Course Delivery Methods

Westmoreland offers several course delivery methods that offer flexible scheduling. Before registering for any course, students are encouraged to speak with an academic advisor to learn about the various course delivery methods and requirements.

Currently, Westmoreland uses the learning management system D2L by Brightspace and the web-conference software Zoom to assist in the delivery of course materials.

Face-to-Face → F2F

Courses meet in a face-to-face setting at a scheduled location, date, and time. Although instruction is conducted in person, an online course page in D2L may still be used for course materials and activities.

Online → ONL

Courses are delivered online using D2L. Students must have access to a desktop computer or laptop to participate in and complete online coursework. Students interact with their instructor and classmates via online discussions, assignments, and group projects, and adhere to deadlines set within D2L.

Blended → BLE

Instruction is delivered as scheduled face-to-face and blended with online activities in D2L. No more than 50 percent of the coursework shall occur outside of the classroom.

Remote → REM

Instruction is delivered as scheduled via Zoom. Students interact with their instructor and classmates via Zoom and other D2L-assigned activities.

Blended Remote → REB

Instruction is delivered as scheduled via Zoom, with learning activities split between D2L. No more than 50 percent of the coursework shall occur outside of the classroom. Students interact with their instructor and classmates via Zoom and other D2L-assigned activities.

Mixed Modality → MIX

Courses meet as scheduled, in person, remotely, or online at the instructor's discretion. Students interact with their instructor and classmates in person, via Zoom, and through other D2L-assigned activities.

Independent Study

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

Academic Information

National Council for State Authorization Reciprocity Agreements (NC-SARA)

Westmoreland County Community College has been approved to participate in the National Council for State Authorization Reciprocity Agreements (NC-SARA). SARA is a voluntary agreement among member states, districts, and territories in the United States that provides a framework to regulate postsecondary distance education uniformly, particularly for students taking online courses across state lines.

"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).

Consumer Protection under SARA

SARA ensures that students enrolled in distance education programs offered by SARA-participating institutions have a clear process for filing consumer protection complaints. The agreement primarily covers complaints related to institutional misrepresentation, fraud, or other deceptive practices. Examples of consumer protection complaints include, but are not limited to:

- Veracity of recruitment and marketing materials;
- Accuracy of job placement data;
- Accuracy of information about tuition, fees, and financial aid;
- Complete and accurate admission requirements for courses and programs;
- Accuracy of information about the institution's accreditation and/or any programmatic/specialized accreditation held by the institution's programs;
- Accuracy of information about whether coursework meets any relevant professional licensing requirements or the requirements of specialized accrediting bodies;
- Accuracy of information about whether the institution's course work will transfer to other institutions; and
- Operation of distance education programs consistent with practices expected by our institutional accreditors (Middle States Commission on Higher Education) and, if applicable, programmatic/specialized accreditors.

For more information about how NC-SARA protects students, review the Consumer Protections.

Student Complaint Process

Westmoreland seeks to ensure that all student complaints are addressed fairly and equitably. Students with a complaint relating to grades or the academic process are advised to follow the procedures listed in the Student Handbook.

PA Resident Student Complaint Contact Information

For Pennsylvania residents seeking to file a complaint against a higher education institution, follow the appropriate procedures to ensure your concerns are addressed effectively.

1. Attempt Resolution at the Institutional Level: Complaints relating to grades or the academic process are advised to follow the procedures listed in the Student Handbook.
2. Submit Higher Education Complaint to Pennsylvania Department of Education: If your complaint isn't resolved satisfactorily at the institutional level, you can complete and submit a Higher Education Complaint Form to:

   Pennsylvania Department of Education
   Division of Higher Education, Access, and Equity
   607 South Drive, Floor 3E
   Harrisburg, PA 17120
   ra-highereducation@pa.gov (for submission of form or questions)

SARA and Out-of-State Distance Education Students

Westmoreland County Community College operates its distance education programs under the approval of NC-SARA (National Council for State Authorization Reciprocity Agreements). Students residing outside of Pennsylvania who are enrolled in Westmoreland's distance education programs have specific consumer protection rights. NC-SARA consumer protection provisions require the institution's home state, through its SARA State Portal Entity, to investigate and resolve allegations of dishonesty or fraudulent activity by the state's SARA-participating institutions. Per NC-SARA guidelines, "Student complaints relating to consumer protection laws offered under the terms and conditions of the State Authorization Reciprocity Agreement (SARA), must first be filed with the institution to seek resolution."

For more information on the process, review NC-SARA Student Complaint Process.

Steps for filing a complaint (non-PA Residents)

1. Attempt Resolution at the Institutional Level: Complaints relating to grades or the academic process are advised to follow the procedures listed in the Student Handbook.
2. Submit Higher Education Complaint to Pennsylvania Department of Education: If all institutional procedures have been followed, all avenues of appeal exhausted, and documentation provided that such procedures have been exhausted and the matter remains unresolved, then students have the right to submit a complaint to the Pennsylvania Department of Education.

   Pennsylvania SARA Portal Entities

   Jennifer Stone - Higher Education Associate II
   717-783-6786
   jennstone@pa.gov

   Gina Wetten - Higher Education Associate II
   717-265-7723
   giwetten@pa.gov

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 employer. Students must identify their interest in Act 48 by completing the Continuing Education Verification Request (Act 48) prior to the start of classes.

Developmental Education

All students enrolled in a degree or transfer program at Westmoreland are required to complete the ALEKS placement assessment and schedule an Educational Planning Session with an advisor to determine appropriate course placement and finalize first-semester registration. Placement results may require enrollment in developmental courses. 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. Grades in developmental courses are not calculated in the grade point average (GPA), and these courses are not applied to program requirements.

The developmental Mathematics courses are:
- MTH 050 - Basic Mathematics
- MTH 052 - Foundations of Algebra

The developmental English courses are:
- ENG 085 - College Literacy I
- ENG 095 - College Literacy II

First Year Seminar Course

Most programs require a personal development course as part of the curriculum. Students who have transferred 12 or more credits into Westmoreland from another institution are exempt from this requirement.

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 (ILOs) 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 Distinctions

This section outlines the academic distinctions students may earn in recognition of exceptional achievement, leadership, and scholarly excellence. These honors reflect a commitment to academic rigor and serve to formally acknowledge outstanding performance and dedication.

Honors 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
- 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

For more information and to apply to the Honors College, click here: Admission to the Honors College

President's List/Dean's List

At the end of each winter, spring, summer, and fall semester, students who achieved a semester grade point average (GPA) of 4.0 are named to the President's List; students who obtain a semester GPA between 3.50-3.99, are named to the Dean's List. Developmental courses are not included in the calculation of the GPA.

Graduation Honors

Graduation honors recognize exceptional academic achievement and are denoted on a student's transcript.

- Summa Cum Laude - graduates who have earned an overall grade point average of 4.0
- Magna Cum Laude - graduates who have earned an overall grade point average of between 3.75 and 3.99
- Cum Laude - graduates who have earned an overall grade point average of between 3.50 and 3.74

Civics Distinction

The Civics distinction provides students with a broad understanding of democratic institutions, civic responsibility, and community engagement while also satisfying general education elective requirements. Designed to complement any degree program, this interdisciplinary concentration combines political science, history, ethics, and community-based learning to build practical civic skills and foster participatory citizenship. For more information, visit the Civics Distinction page of our website.

Industry Recognized Credentials

Students may earn industry-recognized credentials as part of their academic programs. These credentials validate specialized skills and competencies that align with workforce standards and enhance career readiness. Examples include ServSafe Food Handler Certification, Microsoft Office Specialist Excel Associate and Expert, and Radiation Health and Safety (RHS) Certification.

Graduation Requirements

To be eligible for graduation, all students must:

- Apply to graduate by completing the Graduation application located in the Student Portal
- 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.
- Earn at least 30 credits of degree requirements or 15 credits of diploma 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, and credit by exam or portfolio.
- Achieve a cumulative grade point average of 2.0 or higher in all course work.
- Fulfill all financial obligations to the College.

Note that developmental courses (course numbers below 100) may not be used to meet graduation requirements and will not transfer to all senior institutions.

Additional Degrees

A second associate degree is awarded only when all the program requirements for the second associate degree have been met and when students have successfully completed 15 additional credits that are not duplicated in the first associate degree program. A second diploma is awarded only when all the program requirements for the second diploma have been met and when students have successfully completed 9 additional credits that are not duplicated in the first diploma program. A second certificate is awarded only when all the program requirements for the second certificate have been met and when students have successfully completed 6 additional credits that are not duplicated in the first certificate program. Appeals for exceptions must be made in writing to the Vice President of Academic Affairs.

Academic Services

Library Services

Westmoreland's library includes over 25,000 books, 30 databases, and hundreds of instructional videos and popular films to support students throughout their academic journey. Physical materials can be accessed at the Youngwood campus or sent to any of the college's education centers, while digital resources are available anywhere through the MyWestmoreland portal. An outstanding professional staff is also ready to assist students in whatever they need to be successful at Westmoreland. They can be reached at 724-925-4100 or library@westmoreland.edu.

Additionally, the College participates in the Westmoreland County Academic Reciprocal Borrowing Program, which allows Westmoreland students to borrow materials using a valid Westmoreland ID from the following libraries:

- Saint Vincent College
- Seton Hill University
- The University of Pittsburgh at Greensburg

Tutoring & Learning Services

Tutoring & Learning Services offers Westmoreland students tutoring and other educational services that are essential to academic success.

Tutoring

Tutorial services for credit courses are available through the college 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 and for all other subjects may not be available. Please check with our office to find out what subjects can be supported.

Westmoreland students also have access to a FREE online tutoring service through Brainfuse. To find a tutor, log into your D2L course, click on College Resources at the top of the page, and select Brainfuse Tutoring.

Tutors can 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

Testing services for make-up exams or approved test accommodations are offered through the Tutoring & Learning Services area. A valid Westmoreland student ID card is required to take an exam. All personal items must be placed within an unsecured cupboard. Personal property cannot be left in the area. 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 staff. Students who have been found responsible for violating the policy may not be permitted to use the service for the remainder of the academic school year.

Testing services are also available at the education centers. Contact the center to find out what their procedures are. For more information, please visit our Testing Services website page.

Information Technology

Computer Resource Center

The Computer Resource Center (CRC), located in SAC is equipped with several computers updated with the latest software, two printers, and a scanner. The center maintains an open atmosphere and quiet work areas where students can come to collaborate, study, print class materials, and get technical assistance.

The CRC is home to a walk-up IT Help Desk, which is staffed Monday through Friday from 8am to 5pm. They can help with any technical issues, address problems with logging into accounts, retrieve printed items from the lab computers, or scan documents for students.

MyWestmoreland Portal

The MyWestmoreland portal (https://mywccc.sharepoint.com) offers access to a variety of online services, including email, class registration, tuition payment, access to grades and transcripts, access to online coursework, and campus announcements and student life/athletics information.

Wireless Internet

Westmoreland has free Wi-Fi access available at all college locations. Students may connect devices via the student network by accessing the "Westmoreland-Student" SSID and using their college username and password. Guests of the college can access free Wi-Fi via the "Westmoreland-Guest Wi-Fi" SSID. After agreeing to the Terms of Service, guests will then be connected to the internet. Assistance can be obtained from the Information Technology Helpdesk or by emailing helpdesk@westmoreland.edu.

Ethical Statement for Student Computer and Data Communications Network Use

Westmoreland County Community College's data communications network and the systems by which it is interconnected and accessed exists to support the research and instructional needs of the college. Access to this system is a privilege granted to students, and this privilege can be revoked for inappropriate conduct. While the right of free speech applies to communication in all forms, the college encourages civil and respectful discourse.

Some prohibited forms of communication include:

- Obscenity
- Defamation
- Threats
- Disruption of the academic environment
- Harassment based on sex, race, disability or other protected status
- Anonymous or repeated messages designed to annoy, abuse or torment

Some prohibited forms of behavior include:

- Creating excessive noise or other actions that interfere with the work of others in the computer lab

- Using the computer system's capabilities to represent another person's work as your own; this action is considered a form of plagiarism
- Using another student's ID to gain access to the data communications network or allowing others to use your network ID
- Malicious attempts to harm or destroy another person's data, including uploading or creating computer viruses
- Attempting to gain unauthorized access to data, software or systems
- Using the data communications network for personal or private business

All ethical principles that apply to everyday college life also apply to using the data communication network. The use of this network is encouraged for scholarly communications within the constraints of the Westmoreland County Community College Student Code of Conduct and this ethical statement.

Student E-Mail Policy

Westmoreland County Community College (Westmoreland) provides e-mail resources to support an environment conducive to teaching and learning; specifically, to assist students in their educational endeavors, to encourage communication and engagement with peers, faculty, and staff, and to provide a primary mode of communication to the Westmoreland community.

A student's Westmoreland e-mail account will serve as the official e-mail account through which the College will communicate when communicating via e-mail.

The following policy is in place to ensure the proper use of Westmoreland student e-mail accounts. Policy violations will be investigated by designated Westmoreland officials, and may result in actions including the loss of computer privileges, or appropriate legal action if acts constitute a civil or criminal offense.

This policy encompasses all use of student e-mail regardless of the platform.

Access

Students are provided with a Westmoreland email account and allotted five gigabytes (5 GB) of storage space after acceptance to the College. Access is discontinued after graduation, an absence of six consecutive semesters (two years), or upon disciplinary determinations.

Use

Students are expected to use email appropriately in accordance with the Student Code of Conduct; otherwise the student's improper use of student email could result in a violation of the Code of Student Conduct.

Misuse

Access to Westmoreland email may be revoked if misused in ways that could harm the College community.

Examples of misuse include, but are not limited to:

- Transmitting or storing filed documents that include forgery, plagiarism, or violations of copyright laws; emails or files that are obscene, abusive, threatening, or otherwise harassing; or messages that contain viruses, worms, spyware, or any form of malware.
- Violating laws or regulations or encouraging illegal activity.
- Interfering with others' ability to conduct institutional business.
- Incurring costs to the institution for commercial or personal financial gain.
- Providing a third-party with email addresses obtained from the institution without written consent.

Programs of Study

Programs of Study

Programs with an asterisk (*) also require students to complete the Health Professions Application. The application can be found at MyWestmoreland (access given after submitting Westmoreland application).

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 – VIII (at least 21 credits).

I. English, Speech, PDV (10 credits)	II. Humanities (min. 6 credits)	III. Social Science (9 credits)	IV. Mathematics (min. 3 credits)	V. Natural Science w/Lab (min. 4 credits)	VI. Tech Literacy (3 credits)	VII. Additional Electives (min. 21 credits)	VIII. Natural Science/Foreign Language (min. 4 credits)
ENG 161	ART 140	ECN 158	MTH 157	BIO 145	BUS 145	ACC 155	ASL 101
ENG 164	ART 155	ECN 255	MTH 160	BIO 155	CPT 145	ACC 156	ASL 102
SPC 155 or	ART 156	ECN 256	MTH 161	BIO 156	CPT 150	ACC 219	ASL 201
SPC 156	ART 157	GEO 155	MTH 167	BIO 171	CPT 160	ACC 222	BIO 107
PDV 101	ART 158	HIS 155	MTH 170	BIO 172	EDU 200	ACC 230	BIO 120
	ART 160	HIS 156	MTH 172	BIO 210	GCT 126	ACC 234	BIO 145
	ART 162	HIS 249	MTH 173	BIO 255	GCT 161	ACC 250	BIO 155
	ART 165	HIS 250	MTH 180	BIO 265	GCT 164	ACC 251	BIO 156
	ASL 101	HIS 255	MTH 185	BIO 285	GCT 296	ACC 255	BIO 171
	ASL 102	HIS 256	MTH 271	CHM 107	PHL 104	ACC 256	BIO 172
	ASL 105	HIS 257	MTH 275	CHM 108	VPP 110	BIO 107	BIO 210
	ASL 201	HIS 262	MTH 276	CHM 150/151	VPP 160	BIO 120	BIO 255
	ENG 165	POL 155	MTH 277	CHM 160/161		BUS 140	BIO 265
	ENG 225	POL 156		CHM 225		BUS 158	BIO 285
	ENG 240	POL 200		CHM 260/261		BUS 205	CHM 107
	ENG 255	POL 210		CHM 270/271		BUS 241	CHM 108
	ENG 258	POL 255		CHM 275		BUS 244	CHM 150/151
	ENG 260	POL 256		EPS 150		BUS 245	CHM 160/161
	ENG 270	PSY 160		EPS 163		BUS 249	CHM 225
	ENG 276	PSY 161		GEO 160		BUS 250	CHM 260/261
	ENG 290	PSY 163		PHY 107		BUS 275	CHM 270/271
	FRN 155	PSY 165		PHY 155		BUS 288	CHM 275
	FRN 156	PSY 167		PHY 156		CPT 163	EPS 150
	FRN 255	PSY 230		PHY 255		CPT 180	EPS 160
	FRN 256	PSY 260		PHY 256		CPT 182	EPS 163
	GER 155	PSY 265		PHY 259		CPT 213	FRN 155
	GER 156	PSY 267				CPT 286	FRN 156
	HUM 120	PSY 268				CRJ 155	FRN 255
	MUS 155	PSY 269					FRN 256
	MUS 255	PSY 270					GEO 160
	PHL 101	PSY 275					GER 155
	PHL 102	SOC 155					GER 156
	PHL 103	SOC 161					PHY 107
	PHL 202	SOC 170					PHY 110
	PHL 203	SOC 210					PHY 153
	PHL 204	SOC 255					PHY 155
	PHL 210						PHY 156
	REL 171						PHY 255
	REL 181						PHY 256
	SPA 155						PHY 258
	SPA 156						PHY 259
	SPA 255						SPA 155
	SPA 256						SPA 156
	SPC 165						SPA 255
	VPP 160						SPA 256

VII. Additional Electives (min. 21 credits)
CRJ 160
CRJ 162
CRJ 163
CRJ 180
CRJ 220
CRJ 255
CRJ 277
CRJ 283
CRJ 287
CRJ 290
ECE 155
ECE 257
ENG 163
ENG 250
EPS 160
FIN 155
FIN 220
FSM 159
HPE 156
PHY 153
PHY 258
SPC 155
SPC 156
SWK 155
SWK 157
SWK 170
SWK 171

Students who intend to transfer are strongly encouraged to select courses in consultation with their assigned advisor or transfer counselor and an academic official from the four-year institution to which they plan to transfer.

Note that courses may not be counted toward graduation requirements more than once, even if the course is listed in multiple categories.

Liberal Arts, AA

School of Art, Humanities, Social Sciences and Public Service

Program Description

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

Program Learning Outcomes

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

- 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	Elective	Humanities Elective	3	Varies	Page 21 Column II
	4	Elective	Tech Literacy Elective	3	Varies	Page 21 Column VI
	5	Elective	Social Science Elective	3	Varies	Page 21 Column III
1st Spring	6	ENG 164	Advanced Composition	3	ENG 161	
	7	SPC 155	Effective Speech	3		SPC 156
	8	Elective	Mathematics Elective	3	Varies	Page 21 Column IV
	9	Elective	Natural Science with Lab Elective	4	Varies	Page 21 Column V
	10	Elective	General Elective	3	Varies	Page 21
2nd Fall	11	Elective	Social Science Elective	3	Varies	Page 21 Column III
	12	Elective	Natural Science Elective or Foreign Language Elective	4	Varies	Page 21 Column V or Column VIII
	13	Elective	Humanities Elective	3	Varies	Page 21 Column II
	14	Elective	General Elective	3	Varies	Page 21
	15	Elective	General Elective	3	Varies	Page 21
2nd Spring	16	Elective	Social Science Elective	3	Varies	Page 21 Column III
	17	Elective	General Elective	3	Varies	Page 21
	18	Elective	General Elective	3	Varies	Page 21
	19	Elective	General Elective	3	Varies	Page 21
	20	Elective	General Elective	3	Varies	Page 21
Minimum Program Credits				60		LIB

Business Administration, AA
School of Business

Program Description

The Business Administration AA 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:

- 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	BUS 145*	Excel for Business Environment	3		
	3	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	4	MTH 157	College Algebra	3	MTH 100 or Placement	
	5	ACC 155	Accounting I	3	MTH 050 or Placement	
	6	PHL 102	Critical Thinking	3		
1st Spring	7	BUS 158	Principles of Management	3		
	8	ACC 156	Accounting II	3	ACC 155	
	9	ENG 164	Advanced Composition	3	ENG 161	
	10	BUS 205	Business Law	3		
	11	Elective	Natural Science with Lab Elective	4	Varies	Page 21 Column V
2nd Fall	12	BUS 245	Principles of Marketing	3		
	13	FIN 220	Business Finance	3	ACC 155 or ACC 165	
	14	BUS 244	Business Statistics	3	BUS 120 (C or better) or MTH 052	
	15	BUS 250*	Calculus for Business	3	MTH 157	
	16	ECN 255	Macroeconomics	3	BUS 120 (C or better) or MTH 052	
	17	Elective	Social Science Elective	3	Varies	Page 21 Column III
2nd Spring	18	SPC 155	Effective Speech	3		SPC 156
	19	BUS 278	Data Analytics	3	BUS 244	
	20	ECN 256	Microeconomics	3	BUS 120 (C or better) or MTH 052	
	21	Elective	Humanities Elective	3	Varies	Page 21 Column II
	22	Elective	Natural Science with Lab Elective	4	Varies	Page 21 Column V
Minimum Program Credits				66		BUS

*CPT 150 may be required instead of BUS 145. Check with your assigned advisor.
*MTH 172 may be required instead of BUS 250. Check with your assigned advisor.

Criminal Justice, AA

School of Art, Humanities, Social Sciences and Public Service

Program Description

The Criminal Justice AA 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 and 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 justice system.

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CPT 150	Microcomputer Concepts	3	Varies	Page 21 Column VI
	3	CRJ 155	Introduction to Criminal Justice	3		
	4	CRJ 163	Criminal Procedure	3		
	5	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	6	PSY 160	General Psychology	3		
1st Spring	7	CRJ 162	Police Administration I	3		
	8	ENG 164	Advanced Composition	3	ENG 161	
	9	SOC 155	Principles of Sociology	3		
	10	SPC 155	Effective Speech	3		SPC 156
	11	MTH 161	Modern College Mathematics	3	MTH 052 or Placement	MTH 160
2nd Fall	12	CRJ 277	Ethics and The Criminal Justice System	3		
	13	CRJ 290	Principles of Criminology	3		
	14	ENG 255	Introduction to Literature	3		
	15	PHL 101	Introduction to Philosophy	3		MUS 155 or ART 155
	16	Elective	Natural Science with Lab Elective	4	Varies	Page 21 Column V
2nd Spring	17	CRJ 180	Corrections	3		
	18	CRJ 255	Juvenile Delinquency	3		
	19	MTH 157	College Algebra	3	MTH 100 or Placement	
	20	Elective	Natural Science with Lab Elective	4	Varies	Page 21 Column V
	21	POL 155	American National Government	3		
Minimum Program Credits				63		CRJ

English, AA

School of Art, Humanities, Social Sciences and Public Service

Program Description

The English AA degree is designed for students whose goals are to transfer to a Pennsylvania Transfer and Articulation Committee (TAOC) institution as a major in English composition, creative writing, or literature. Students completing an AA and eventual four-year degree may enter fields of education, research, creative writing, technical writing, journalism, public relations, publishing, or other fields requiring a writing and/or humanities experience.

Program Learning Outcomes

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

- Understand the application of English studies (writing, literature) as influenced by and contributing to other disciplines.
- Construct researched and well-written essays in a variety of modes and formats.
- Demonstrate analytical skills in research, personal writing, and literary texts.
- Apply critical philosophies and interpretation to literary text.

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	Elective	Technical Literacy	3	Varies	Page 21 Column VI
	4	PSY 160	General Psychology	3		
	5	SPC 155	Effective Speech	3		
1st Spring	6	ENG 164	Advanced Composition	3	ENG 161	
	7	PHL 101	Introduction to Philosophy	3		
	8	Elective	Math Elective	3	Varies	MTH 157, MTH 160
	9	HIS 156	Modern Western Civilization	3		
	10	ART 155	Introduction to Art	3		MUS 155
2nd Fall	11	ENG 255	Introduction to Literature	3		
	12	SOC 155	Principles of Sociology	3		
	13	ENG 200	Writing About Literature	3		
	14	Elective	Foreign Language Elective	4	Varies	Page 21, Column II, any 4-credit SPA, FRN, or GER
	15	ENG 270	English Literature	3		
2nd Spring	16	ENG 258	World Literature	3		
	17	ENG 260	American Literature	3		
	18	Elective	Natural Science with Lab	4	Varies	Page 21, Column V, any 4-credit BIO, CHM, or PHY
	19	Elective	Social Science Elective	3	Varies	Page 21, Column III, any 3-credit SOC, PSY, or HIS
	20	PHL 103	Ethics	3		
Minimum Program Credits				60		ENG

Elementary Education PreK-4, AA

School of Art, Humanities, Social Sciences and Public Service

Program Description

This program reflects the standards established by the National Association for Education of Young Children (NAEYC) and the PA Department of Education for students preparing for transfer to teacher certification programs. Students should work with the transfer counselor to choose their 4-year institution as early as possible so electives can be chosen accordingly. The Elementary Education PreK-4 AA program provides a foundation for developing preservice dispositions that emphasize research-based practices. Developmentally appropriate practices, cultural responsiveness, and inclusiveness are emphasized as skills necessary for graduates. Field experience is required at approved PreK-4 sites. This program is available in online and lecture formats.

Career Opportunities

Graduates of this program are prepared to transfer to a 4-year institution and apply for teacher certification in grades Prek-4 after completing the baccalaureate program. Transfer to 4-year institutions requires a minimum GPA and score on the PAPA or PRAXIS CORE exam.

Graduates of this program are also prepared to enter the early childhood workforce on Level B of OCDEL'S Career Pathway. Graduates are qualified for positions as: program director, preschool teacher, lead teacher, assistant teacher, home visitor, service coordinator, family childcare provider, and public school aide.

Program Learning Outcomes

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

- NAEYC 1: Promote child development and learning in context.
- NAEYC 2: Build family-teacher partnerships and community relationships.
- NAEYC 3: Observe, document, and assess to support young children and families.
- NAEYC 4: Use developmentally, culturally, and linguistically appropriate teaching practices.
- NAEYC 5: Demonstrate skill in the knowledge, application, and integration of academic content in the early childhood curriculum.
- NAEYC 6: Demonstrate professionalism as an early childhood educator.

Program Requirements

Students must maintain a 2.8 GPA and achieve a grade of C in all ECE courses to remain in this program. If the GPA drops below 2.8, students should retake program coursework to improve GPA. Students are required to complete all clearances and requirements per field experience sites.

This program is eligible for full funding through the Early Care and Education PDO at PASSHE scholarship and the PA TEACH scholarship.

Continue to the next page…

Elementary Education PreK-4, AA

School of Art, Humanities, Social Sciences and Public Service

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ECE 155	Introduction to Early Childhood Education	3		
	3	ECE 157	Child Growth and Development	3		
	4	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	5	MTH 180	Elements of Mathematics I	3	MTH 052 or Placement	
	6	Elective	Social Science Elective	3	Varies	PSY 160, PSY 161, PSY 165, SOC 155, SOC 255
1st Spring	7	Elective	Restricted Elective	3	Varies	See List
	8	ECE 256	Assessment and Observation of Young Children	3		
	9	ECE 166	Early Childhood Language and Literacy	3	ECE 155	
	10	MTH 185	Elements of Mathematics II	3	MTH 180 (C or better)	
	11	Elective	Humanities Elective	3	Varies	ART 155, ART 162, ART 165, FRN 155, FRN 156, MUS 155, PHL 101, PHL 103, SPA 155, SPA 156
2nd Fall	12	Elective	Natural Science with Lab Elective	4	Varies	BIO 155, BIO 156, BIO 171, BIO 172, CHM 107, CHM 108, CHM 150, CHM 160, EPS 150, EPS 163, PHY 155, PHY 156, PHY 255, PHY 256
	13	ECE 257	Introduction to Exceptional Development	3		
	14	ECE 255	Early Childhood Education Curriculum	3	ECE 155	
	15	ECE 165	Family and Society	3		
	16	ENG 255	Introduction to Literature	3		
2nd Spring	17	ENG 250	Teaching English to Speakers of Other Languages	3		
	18	ECE 167	Creative Experiences	3		
	19	ECE 284	Early Childhood Education Practicum	4	Minimum 2.0 GPA, ECE 166 & ECE 255 + Completed interest form, site agreement, and liability insurance. Students must verify the prerequisites with the program director to register.	
	20	Elective	History Elective	3		HIS 155, HIS 156, HIS 249, HIS 255, HIS 256, HIS 257, HIS 262
	21	Elective	Restricted Elective	3	Varies	See List
Minimum Program Credits				63		ECE

Restricted Electives: ASL 101; ASL 102; ASL 201; Any Tech Literacy Course Column VI AA; ECE 156; ECE 168; ECE 170; ECE 176; ECE 177; ECE 178; ECE 265; MUS 156; PSY 165; EDU 200

History, AA

School of Art, Humanities, Social Sciences and Public Service

Program Description

The History AA degree is designed for students who are interested in transferring to a Pennsylvania Transfer and Articulation Committee (TAOC) four-year institution to major in history, social studies education, political science, prelaw, or social sciences. The degree is applicable to students seeking positions in federal, state, and local governments, historical sites, and those interested in pursuing bachelor degrees in social sciences and social studies education.

Program Learning Outcomes

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

- Identify the religious traditions, political systems and theories, social structures, economic patterns, and cultural institutions that underlie the understanding of history.
- Develop methodologies to research and analyze primary and secondary source materials.
- Demonstrate critical thinking and communication skills.
- Analyze and compare historiographical schools of thought.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CPT 150	Microcomputer Concepts	3	Varies	Page 21, Column VI
	3	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	4	HIS 155	Early Western Civilization	3		
	5	MTH 160	Introduction to Statistics	3	MTH 052 or Placement	
	6	SPC 155	Effective Speech	3		
1st Spring	7	ENG 164	Advanced Composition	3	ENG 161	
	8	HIS 255	Early US History	3		
	9	Elective	Natural Science with Lab Elective	4	Varies	Page 21, Column V
	10	Elective	Foreign Language Elective	4	Varies	Page 21, Column II, any 4-credit SPA, FRN, or GER
	11	Elective	History Elective	3		Page 21, Column III, any HIS
2nd Fall	12	HIS 156	Modern Western Civilization	3		
	13	Elective	Social Science Elective (Excluding HIS)	3	Varies	Page 21, Column III
	14	Elective	Foreign Language Elective	4	Varies	Page 21, Column II, any 4-credit SPA, FRN, or GER
	15	Elective	Political Science Elective	3	Varies	Page 21, Column III, any POL
2nd Spring	16	HIS 256	Modern US History	3		
	17	Elective	Sociology Elective	3	Varies	Page 21, Column III, any SOC
	18	Elective	Psychology Elective	3	Varies	Page 21, Column III, any PSY
	19	Elective	Natural Science with Lab Elective	4	Varies	Page 21, Column V
	20	Elective	Social Science Elective (Excluding HIS)	3	Varies	Page 21, Column III
Minimum Program Credits				62		HIS

Psychology, AA

School of Art, Humanities, Social Sciences and Public Service

Program Description

The Psychology AA 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	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CPT 150	Microcomputer Concepts	3	Varies	Page 21 Column VI
	3	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	4	MTH 157	College Algebra	3	MTH 100 or Placement	
	5	PSY 160	General Psychology	3		
	6	SPC 155	Effective Speech	3		
1st Spring	7	ENG 164	Advanced Composition	3	ENG 161	
	8	MTH 160	Introduction to Statistics	3	MTH 052 or Placement	
	9	PSY 161	Human Growth and Development	3	PSY 160	
	10	PHL 103	Ethics	3		
	11	Elective	PSY 163, PSY 260 or PSY 270	3	PSY 160	
2nd Fall	12	SOC 155	Principles of Sociology	3		
	13	BIO 155	General Biology I	4		
	14	PSY 250	Research Methods in Psychology	3	PSY 160; Co: MTH 160	
	15	Elective	General Elective	3	Varies	Page 21
	16	ENG 255	Introduction to Literature	3	Varies	Page 21 Column II
2nd Spring	17	Elective	General Elective	3	Varies	Page 21
	18	Elective	PSY Course (Except PSY 165)	3	Varies	Page 21 Column III
	19	Elective	Social Science Elective (Except PSY Courses)	3	Varies	Page 21 Column III
	20	Elective	PSY Course (Except PSY 165)	3	Varies	Page 21 Column III
	21	Elective	Natural Science with Lab Elective	4	Varies	Page 21 Column V
Minimum Program Credits				63		PSY

Engineering Science, AE

School of Math, Science and Engineering

Program Description

The Engineering Science AE is designed to prepare students for a rigorous four-year engineering program in most major branches of engineering, such as mechanical, electrical, chemical, civil, aerospace, and nuclear engineering to name only a few. This program focuses on the study of the mathematics, science, and engineering principles and practices from both analysis and design perspectives to ensure students will be successful in four-year engineering programs and prepared to eventually sit for the professional exams they must pass to practice as professional engineers.

Career Opportunities

The Engineering Science AE is designed to prepare students for transfer to a rigorous four-year engineering program in any major branch of engineering, such as mechanical, electrical, chemical, civil, aerospace, and nuclear engineering.

Program Learning Outcomes

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

- Tackle and complete projects using strong analytical, problem-solving, organizational, communication, and team skills.
- Apply concepts of physics, chemistry, mathematics, and engineering to the design and analysis of mechanical, electrical, chemical, thermal-fluid, and other systems.
- Appreciate the importance of ethics in all aspects of the engineering profession.
- Communicate technical details effectively to others.
- Work independently as well as in team environments

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
1st Fall	1	EGX 101	Foundations of Engineering Analysis and Design*	4	MTH 100 or Placement Co: MTH 157 or higher	
	2	MTH 172	Analytical Geometry and Calculus I	4	MTH 109, MTH 167, or MTH 170 (C or better) or Placement	
	3	EGX 105	Engineering Computing and Professional Communication* or Engineering Science Elective	3-4	MTH 157 & MTH 167 or MTH 170 or Placement Co: MTH 172	
	4	CHM 150	General Chemistry I Lecture	3	HS Chemistry (C or better) or CHM 107. MTH 052 or Placement also required	
	5	CHM 151	General Chemistry I Lab*	1	Co: CHM 151	
1st Spring	6	MTH 173	Analytical Geometry and Calculus II	4	MTH 172 (C or better)	
	7	PHY 255	Engineering Physics I*	5	PHY 110 or HS Physics (C or better) Co: MTH 172	
	8	EGX 109	Materials Structure & Properties* or Engineering Science Elective	3-4	CHM 150, CHM 151, and MTH 172 Co: PHY 255	
	9	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
2nd Fall	10	MTH 271	Analytical Geometry and Calculus III	4	MTH 173 (C or better)	
	11	PHY 256	Engineering Physics II*	5	PHY 255	
	12	EGX 201	Statics and Mechanics of Materials* or Engineering Science Elective	3-4	EGX 101, MTH 172 or higher, and PHY 255 Co: MTH 173 or Permission of Instructor	
	13	Elective	Humanities Elective	3-4	Varies	Page 21 Column II or ENG 164 or SPC 155
2nd Spring	14	MTH 276	Ordinary and Partial Differential Equations	4	MTH 173 (C or better) Co: MTH 271	
	15	EGX 205	Dynamic Systems and Rigid-Body Dynamics* or Engineering Science Elective	3-4	EGX 201 and MTH 271 Co: MTH 276	
	16	Elective	Social Science Elective or Engineering Elective	3-4	Varies	Page 21 Column III or ENG 164 or SPC 155
	17	Elective	Engineering Science Elective	3-4	Varies	
	18	Elective	Social Science Elective	3-4	Varies	Page 21 Column III or ENG 164 or SPC 155
Minimum Program Credits				61-69		EGX

Engineering Science, AE

School of Math, Science and Engineering

** denotes that the course has an associated two- to four-hour lab*

Engineering Science (EGX) Electives:

CHM 160: General Chemistry II Lecture (3 cr/Pre: CHM 150 & CHM 151)
CHM 161: General Chemistry II Lab (1 cr/Co: CHM 150 & CHM 151)*
CHM 260: Organic Chemistry I Lecture (3 cr/Pre: CHM 160 & CHM 161)
CHM 261: Organic Chemistry I Lab (1 cr/Co: CHM 260)*
CHM 270: Organic Chemistry II Lecture (3 cr/Pre: CHM 260 & CHM 261)
CHM 271: Organic Chemistry II Lab (1 cr/Co: CHM 270)*
CPT 145: Introduction to Computer Technology (3 cr)
CPT 160: Introduction to Programming (3 cr)
CPT 163: Java Programming I (3 cr/Pre: CPT 160)
CPT 213: Java Programming II (3 cr/Pre: CPT 163)
CPT 156: Programming with Python (3 cr)
CPT 180: C++ Programming (3 cr/Pre: CPT 160)
CPT 182: Operating Systems (3 cr/Pre: CPT 145)
DFT 105: Technical Drafting I(4 cr)*
*DFT 106: Technical Drafting II * 4 cr/Pre: DFT 105)*
DFT 258: AutoCAD (4 cr)*
DFT 266: 3D Solid Modeling I: Inventor, Basics (4 cr)*
DFT 267: 3D Solid Modeling II: Inventor Advanced, Solidworks Intro (4 cr/Pre: DFT 266)*
EGX 209: Engineering Thermodynamics (3 cr/Pre: MTH 173 & PHY 255 & EGX 101 & EGX 105/Co: MTH 276)
ELC 106: Electrical Circuits I (4 cr/Co: MTH 104)*
ELC 107: Electrical Circuits II (4 cr/Pre: ELC 106)*
MTH 275: Linear Algebra (3 cr/Pre: MTH 172)
MTH 277: Discrete Mathematics (3 cr/Pre: MTH 172)
PHY 259: Thermodynamics and Fluid Mechanics (3 cr/Pre:PHY 255))*
PHY 258: Modern Physics (3 cr/Pre: PHY 256)

Biology, AS

School of Math, Science and Engineering

Program Description

The Biology AS degree 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 171	Career Pathway Exploration	3		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	MTH 167	College Trigonometry	3-4	MTH 157 or Placement	MTH 170
	4	BIO 155	General Biology I	4		
	5	CHM 151	General Chemistry I Lab	1	Co: CHM 150	
	6	CHM 150	General Chemistry I Lecture	3	HS chemistry (C or better) or CHM 107, MTH 052 or Placement	
1st Spring	7	MTH 172	Analytical Geometry and Calculus I	4	MTH 109, MTH 167, or MTH 170 (C or better) or Placement	
	8	BIO 156	General Biology II	4	BIO 155	
	9	CHM 160	General Chemistry II Lecture	3	CHM 150	
	10	CHM 161	General Chemistry II Lab	1	Co: CHM 160	
	11	Elective	Humanities Elective	3	Varies	Page 21 Column II
2nd Fall	12	CHM 260	Organic Chemistry I Lecture	3	CHM 160/161	
	13	CHM 261	Organic Chemistry I Lab	1	Co: CHM 260	
	14	Elective	BIO Elective	3-4	Varies	BIO 120, BIO 145, BIO 255, BIO 265, BIO 285
	15	SPC 155	Effective Speech	3		
	16	Elective	Social Science Elective	3	Varies	Page 21 Column III
2nd Spring	17	CHM 270	Organic Chemistry II Lecture	3	CHM 260/261	
	18	CHM 271	Organic Chemistry II Lab	1	Co: CHM 270	
	19	Elective	BIO Elective	3-4	Varies	BIO 120, BIO 145, BIO 255, BIO 265, BIO 285
	20	STM 296	STEM Seminar	1	9 credits of Natural Science and/or Math with at least one of these courses at the 200-level	
	21	Elective	Humanities Elective	3	Varies	Page 21 Column II
	22	Elective	Social Science Elective	3	Varies	Page 21 Column III
Minimum Program Credits				60-62		BIO

Biology, Pre-Pharmacy, AS

School of Math, Science and Engineering

Program Description

The Biology, Pre-Pharmacy, AS degree is designed to prepare students for the rigorous Doctor of Pharmacy programs at a number of prestigious Pharmacy schools in Pennsylvania and across the United States. Because of the variations in Pre-Pharmacy program requirements, it is highly recommended that students choose their preferred Pharmacy school and use its specific requirements to tailor this degree. Working with our transfer counselor to choose the appropriate electives for your chosen destination Pharmacy program is also highly recommended. This program focuses on the study of principles of biology and chemistry, problem-solving, critical thinking, laboratory skills, and technical communication.

Program Learning Outcomes

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

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

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	CHM 150	General Chemistry I Lecture	3	HS Chemistry (C or better) or CHM 107, MTH 052 or Placement	
	2	CHM 151	General Chemistry I Lab	1	Co: CHM 150	
	3	BIO 155	General Biology I	4		
	4	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	5	Restricted Elective	HUM/SOC Elective 1	3-4	Varies	ASL, SPA, FRN, HIS 155 or HIS 156, or Page 21 Column II or III
	6	Restricted Elective	HUM/SOC Elective 2	3	Varies	REL 171 or REL 181 or Page 21 Column II or III
1st Spring	7	CHM 160	General Chemistry II Lecture	3	CHM 150/151	
	8	CHM 161	General Chemistry II Lab	1	Co: CHM 160	
	9	Restricted Elective	BIO Elective 1	4	Varies	BIO 156 or 171
	10	Restricted Elective	MTH Elective	3-4	Varies	MTH 157, MTH 167, MTH 160, MTH 170, or MTH 172
	11	Elective	Restricted Elective	3	Varies	ECN 158, ECN 255, ECN 256, ENG 163, ENG 164, PHL 101, 103, PSY 160, SOC 155 or SPC 155
2nd Fall	12	CHM 260	Organic Chemistry I Lecture	3	CHM 160/161	
	13	CHM 261	Organic Chemistry I Lab	1	Co: CHM 260	
	14	Restricted Elective	BIO Elective 2	4	Varies	BIO 156, BIO 171, BIO 172, or BIO 265
	15	Restricted Elective	BIO Elective 3	4	Varies	BIO 156, BIO 171, BIO 172, BIO 255, BIO 265, or BIO 285
	16	Elective	Restricted Elective	3	Varies	ECN 158, 255, 256, ENG 163, 164, PHL 101, 103, PSY 160, SOC 155 or SPC 155
2nd Spring	17	CHM 270	Organic Chemistry II Lecture	3	CHM 260/261	
	18	CHM 271	Organic Chemistry II Lab	1	Co: CHM 270	
	19	Restricted Elective	BIO/CHM/PHY Elective	4	Varies	BIO 156, 172, 265, CHM 275, PHY 155 or PHY 255
	20	Restricted Elective	MTH/PHY Elective	3-4	Varies	MTH 157, 167, 160, 170, 172, PHY 155 or 255
	21	Elective	Restricted Elective	3	Varies	ECN 158, 255, 256, ENG 163, 164, PHL 101, 103, PSY 160, SOC 155 or SPC 155
	22	Elective	Restricted Elective	3	Varies	ECN 158, 255, 256, ENG 163, 164, PHL 101, 103, PSY 160, SOC 155 or SPC 155
Minimum Program Credits				63-66		BPP

Chemistry, AS

School of Math, Science and Engineering

Program Description

The Chemistry AS degree 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.It is designed to be the first two years of a bachelor's degree in Chemistry, but may also serve as preparation for other programs and some entry-level positions in STEM-related fields.

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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 171	Career Pathway Exploration	3		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	CHM 150	General Chemistry I Lecture	3	HS chemistry (C or better) or CHM 107, MTH 052 or Placement	
	4	CHM 151	General Chemistry I Lab	1	Co: CHM 150	
	5	MTH 172	Analytical Geometry & Calculus I	4	MTH 109, MTH 167 or MTH 170 (C or better) or Placement	
1st Spring	6	PHY 255	Engineering Physics I	5	PHY 110 or HS Physics (C or better) & Co: MTH 172	
	7	MTH 173	Analytical Geometry & Calculus II	4	MTH 172 (C or better)	
	8	Elective	Humanities Elective	3	Varies	Page 21 Column II Recommendation: ENG 164
	9	CHM 160	General Chemistry II Lecture	3	CHM 150/151	
	10	CHM 161	General Chemistry II Lab	1	Co: CHM 160	
2nd Fall	11	PHY 256	Engineering Physics II	5	PHY 255	
	12	CHM 260	Organic Chemistry I Lecture	3	CHM 160/161	
	13	CHM 261	Organic Chemistry I Lab	1	Co: CHM 260	
	14	MTH 271	Analytical Geometry & Calculus III	4	MTH 173 (C or better)	
	15	SPC 155	Effective Speech	3		
2nd Spring	16	CHM 270	Organic Chemistry II Lecture	3	CHM 260/261	
	17	CHM 271	Organic Chemistry II Lab	1	Co: CHM 270	
	18	PHY 259	Thermodynamics & Fluid Mechanics	3	PHY 255	
	19	STM 296	STEM Seminar	1	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	Varies	Page 21 Column III
	21	BIO 155 or CPT 160	General Biology I or Introduction to Programming	3-4	Varies	
Minimum Program Credits				60-61		CHM

Computer Science, AS
School of Technology

Program Description

Students interested in pursuing a career in the computer field and planning to complete a bachelor's degree at a four-year college 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 Oversight 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	CPT 150	Microcomputer Concepts	3		
	4	Elective	Restricted Elective	3	Varies	ART 155, ART 162, ENG 255, MUS 155, PHL 101, PHL 103 or SPA 155
	5	CPT 160	Introduction to Programming	3		
	6	MTH 167	College Trigonometry	3-4	MTH 157 or Placement	MTH 170
1st Spring	7	ENG 164	Advanced Composition	3	ENG 161	
	8	MTH 172	Analytical Geometry and Calculus I	4	MTH 109, MTH 167 or MTH 170 (C or better) or Placement	
	9	PHL 202	Logic	3	ENG 161	
	10	CPT 145	Introduction to Computer Technology	3		
	11	ART 155 or MUS 155	Introduction to Art History or Music Listening: A Survey	3		
2nd Fall	12	MTH 160	Introduction to Statistics	3	MTH 052 or Placement	
	13	CHM 150/151 or PHY 155	General Chemistry I Lecture and Lab or College Physics I	4	HS chemistry (C or better) or CHM 107, MTH 052 or Placement or PHY 110 or HS Physics & MTH 108, MTH 100, or Placement	
	14	CPT 163	Java Programming I	3	CPT 160	
	15	SOC 155	Principles of Sociology	3		HIS 156
	16	SPC 155	Effective Speech	3		
2nd Spring	17	MTH 277	Discrete Mathematics	3	MTH 172 (C or better)	
	18	CHM 160/161 or PHY 156	General Chemistry II Lecture and Lab or College Physics II	4	CHM 150/151 or PHY 155	
	19	PSY 160	General Psychology	3		HIS 156
	20	CPT 213	Java Programming II	3	CPT 163	
	21	CPT 182	Operating Systems	3	CPT 145	
Minimum Program Credits				64-65		CPS

Health Science, AS

School of Math, Science and Engineering

Program Description

The Health Science AS degree 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	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	BIO 171	Anatomy & Physiology I	4	CHM 107, CHM 150/151, CHM 225, HS chemistry (C or better)and ENG 095 or Placement	
	4	PSY 160	General Psychology	3		
	5	SOC 155	Principles of Sociology	3		
	6	PHL 102	Critical Thinking	3		
1st Spring	7	ENG 164	Advanced Composition	3	ENG 161	
	8	BIO 172	Anatomy Physiology II	4	BIO 171 (C or better)	
	9	ALH 122	Medical Terminology	3		
	10	CPT 150	Microcomputer Concepts	3		
	11	MTH 157	College Algebra	3	MTH 100 or Placement	
2nd Fall	12	BIO 265	Microbiology	4	BIO 155 or BIO 171 and CHM 107, CHM 150/151, CHM 225 or HS chemistry (C or better), ENG 095 or Placement	
	13	ALH 120	Pharmacology	3	MTH 050 or Placement	
	14	PSY 161	Human Growth and Development	3	PSY 160	
	15	Elective	Humanities Elective	3	Varies	Page 21 Column II
	16	CHM 150	General Chemistry I Lecture	3	HS chemistry (C or better) or CHM 107, MTH 052 or Placement	
	17	CHM 151	General Chemistry I Lab	1	Co: CHM 150	
2nd Spring	18	CHM 160	General Chemistry II Lecture	3	CHM 150/151	
	19	CHM 161	General Chemistry II Lab	1	Co: CHM 160	
	20	SPC 155	Effective Speech	3		
	21	FSM 159	Nutrition	3		
	22	MTH 160	Introduction to Statistics	3	MTH 052 or Placement	
Minimum Program Credits				63		HLS

Mathematics, AS

School of Math, Science and Engineering

Program Description

The Mathematics AS degree 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 Oversight Committee (TAOC) four-year institution. It is designed to be the first two years of a bachelor's degree in Mathematics, but may also serve as preparation for other programs and some entry-level positions in STEM-related fields.

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.

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 171	Career Pathway Exploration	3		
	2	MTH 172	Analytical Geometry and Calculus I	4	MTH 109, MTH 167 or MTH 170 (C or better) or Placement	
	3	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	4	CPT 160	Introduction to Programming	3		
	5	Elective	Humanities Elective	3	Varies	Page 21 Column II Recommendation: PHL 155 or FRN 155
1st Spring	6	CPT 180 or CPT 156	C++ Programming or Programming with Python	3	CPT 160 or None	
	7	PHY 255	Engineering Physics I	5	PHY 110 or HS Physics (C or better) & Co: MTH 172	
	8	MTH 173	Analytical Geometry and Calculus II	4	MTH 172 (C or better)	
	9	Elective	Social Science Elective	3	Varies	Page 21 Column III See Recommendations**
2nd Fall	10	SPC 155	Effective Speech	3		
	11	MTH 271	Analytical Geometry and Calculus III	4	MTH 173 (C or better)	
	12	Elective	General Elective	3		Page 21
	13	Elective	Natural Science with Lab Elective	4-5	Varies	BIO 155, BIO 171, BIO 210, CHM 107, CHM 150/151, PHY 256, EPS 150
2nd Spring	14	MTH 277	Discrete Mathematics	3	MTH 172 (C or better)	
	15	MTH 275 or MTH 276	Linear Algebra or Ordinary and Partial Differential Equations	3-4	MTH 172 (C or better), MTH 173 (C or better) Co: MTH 271	
	16	Elective	Humanities Elective	3	Varies	Page 21 Column II Recommendation: PHL 202 or FRN 155
	17	STM 296	STEM Seminar	1	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	Varies	Page 21 Column III See Recommendations**
	19	Elective	General Elective	3	Varies	Page 21
Minimum Program Credits				61-63		MTH

**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

Program Description

The Physics AS degree 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. It is designed to be the first two years of a bachelor's degree in Physics, but may also serve as preparation for other programs and some entry-level positions in STEM-related fields.

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.
- Communicate technical details effectively with others.
- Work independently as well as in team environments.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 171	Career Pathway Exploration	3		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	CHM 150	General Chemistry I Lecture	3	HS chemistry (C or better) or CHM 107, MTH 052 or Placement	
	4	CHM 151	General Chemistry I Lab	1	Co: CHM 150	
	5	MTH 172	Analytical Geometry and Calculus I	4	MTH 109, MTH 167 or MTH 170 (C or better) or Placement	
1st Spring	6	PHY 255	Engineering Physics I	5	PHY 110 or HS Physics (C or better); Co: MTH 172	
	7	MTH 173	Analytical Geometry and Calculus II	4	MTH 172 (C or better)	
	8	Elective	Humanities Elective	3	Varies	Page 21 Column II
	9	CHM 160	General Chemistry II Lecture	3	CHM 150/151	
	10	CHM 161	General Chemistry II Lab	1	Co: CHM 160	
2nd Fall	11	PHY 256	Engineering Physics II	5	PHY 255	
	12	Elective	Social Science Elective	3	Varies	Page 21 Column III
	13	SPC 155	Effective Speech	3		
	14	MTH 271	Analytical Geometry and Calculus III	4	MTH 173 (C or better)	
2nd Spring	15	Elective	Social Science Elective	3	Varies	Page 21 Column III
	16	PHY 258	Modern Physics	3	PHY 256	
	17	STM 296	STEM Seminar	1	9 credits of Natural Science and/or Math with at least one of these courses at the 200-level	
	18	MTH 276	Ordinary and Partial Differential Equations	4	MTH 173 (C or better); Co: MTH 271	
	19	PHY 259	Thermodynamics and Fluid Mechanics	3	PHY 255	
	20	Elective	Humanities Elective	3	Varies	Page 21 Column II
Minimum Program Credits				62		PHY

Art Therapy, AFA

School of Art, Humanities, Social Sciences and Public Service

Program Description

The Art Therapy AFA degree program 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 degree 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. Students will be 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	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ART 155	Introduction to Art History	3		
	3	ART 162	Drawing I	3		
	4	ATH 175	Expressive Therapies	3		
	5	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	6	MTH 161	Modern College Mathematics	3	Varies	Page 21 Column IV
1st Spring	7	ART 160	2-D Design	3		
	8	ASL 101	American Sign Language I	3		
	9	ART 165	Painting I	3	ART 162	
	10	ENG 164	Advanced Composition	3	ENG 161	
	11	PSY 160	General Psychology	3		
2nd Fall	12	ART 163	Drawing II	3	ART 162	
	13	ART 285	Creative Practice I	3		
	14	ART 156	World Art Survey	3		ART 158
	15	GCT 161	Creative Imaging I	3		VPP 170 (Spring semester)
	16	BIO 155	General Biology I	4	Varies	Page 21 Column V
2nd Spring	17	ASL 102	American Sign Language II	3		
	18	ATH 176	Introduction to Visual Art Therapy	3	ART 162	
	19	ART 161	3-D Design	3	ART 160	
	20	PSY 265	Child Psychology	3	PSY 160	
	21	PSY 270	Abnormal Psychology	3	PSY 160	
Minimum Program Credits				62		ATH

Graphic Design, AFA

School of Art, Humanities, Social Sciences and Public Service

Program Description

The Graphic Design AFA degree 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 with foundational learning experience before moving to a senior institution. Students completing the AFA in Graphic Design 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 an AAS in Communication Design 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.

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ART 160	2-D Design	3		
	3	ART 162	Drawing I	3		
	4	GCT 100	Design Technology I	1		
	5	GCT 115	Design & Layout I	3		
	6	GCT 151	Art & Illustration I	3		
	7	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
1st Spring	8	ART 142	Typography	3		
	9	GCT 126	Motion Graphics	3		
	10	GCT 131	Type & Publishing I	3		
	11	GCT 156	Graphics Production	3	GCT 151	
	12	GCT 161	Creative Imaging I	3		
2nd Fall	13	ART 143	Printmaking	3		ART 140
	14	ENG 164	Advanced Composition	3	ENG 161	ENG 165
	15	GCT 164	Interactive Design	3	GCT 126	
	16	GCT 200	Design Technology II	3	GCT 100	
	17	MTH 161	Modern College Mathematics	3	MTH 052 or Placement	MTH 157
2nd Spring	18	ART 159	History of Graphic Design	3		
	19	GCT 296	UI/UX Design	3	GCT 164	
	20	Elective	Natural Science Elective	4	Varies	Page 21 Column V
	21	Elective	Restricted Elective	3	Varies	See List
	22	SOC 255	Cultural Anthropology	3	Varies	Page 21 Column III

Minimum Program Credits 63 GRA

Restricted Electives: ART 180; GCT 290; VPP 170

Visual Arts, AFA

School of Art, Humanities, Social Sciences and Public Service

Program Description

The Visual Arts AFA degree 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 in Visual Arts are prepared for a range of higher education options, such as professional art practice, art education, art management or museum related careers. The program is designed to develop technical skills and conceptual awareness. It focuses on critical thinking, which lays the groundwork for specialized academic study, self-employment, or careers in creative industries. Students will complete a three-semester series of professional development courses, culminating in a gallery art exhibition. The components of this program develop a strong foundation in visual literacy, which will equip students with a 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	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ART 101	Foundations of Creative Practice	3		
	3	ART 155	Intro to Art History	3		
	4	ART 160	2-D Design	3		
	5	ART 162	Drawing I	3		
	6	MTH 161	Modern College Mathematics	3	Varies	Page 21 Column IV
1st Spring	7	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	8	ART 161	3-D Design	3	ART 160	ART 163
	9	ART 165	Painting I	3	ART 162	
	10	SPC 155	Effective Speech	3		
	11	Elective	Restricted Elective	3	Varies	See List
2nd Fall	12	GCT 161	Creative Imaging I	3		
	13	ART 285	Creative Practice I	3		
	14	ART 156	World Art Survey	3		ART 158
	15	ART 180	Creative Business Basics	3		BUS 188
	16	Elective	Restricted Elective	3	Varies	See List
2nd Spring	17	Elective	Restricted Elective	3	Varies	See List
	18	Elective	Social Science Elective	3	Varies	Page 21 Column III
	19	Elective	Natural Science Elective	4	Varies	Page 21 Column V
	20	ART 286	Creative Practice II	3	ART 285	
	21	ENG 164	Advanced Composition	3	ENG 161	

Minimum Program Credits 62 ART

Restricted Electives: ART 140; ART 142; ART 143; ART 159; ART 166; ART 175-179; ART 183; ART 185; VPP 170

Associate of Applied Science Degree (AAS)

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, Speech, PDV (6 credits)	II. Humanities (0-4 credits)	III. Social Science (3 credits)	IV. Mathematics (3-4 credits)	V. Natural Science (0-4 credits)	VI. Tech Literacy (3 credits)
ENG 161	ART 140	ECN 158	BUS 120	BIO 107	ARC 210
ENG 162	ART 155	ECN 255	BUS 244	BIO 120	BUS 145
ENG 163	ART 156	ECN 256	MTH 100	BIO 145	CPT 145
ENG 164	ART 157	ECN 260	MTH 104	BIO 155	CPT 150
SPC 155	ART 158	GEO 155	MTH 108	BIO 156	CPT 160
SPC 156	ART 159	HIS 155	MTH 109	BIO 171	DFT 258
PDV 101	ART 160	HIS 156	MTH 157	BIO 172	DFT 266
	ART 162	HIS 249	MTH 160	BIO 210	EDU 200
	ART 165	HIS 250	MTH 161	BIO 255	GCT 126
	ASL 101	HIS 255	MTH 167	BIO 265	GCT 161
	ASL 102	HIS 256	MTH 170	BIO 285	GCT 164
	ASL 105	HIS 257	MTH 172	CHM 107	GCT 296
	ASL 201	HIS 262	MTH 173	CHM 108	PHL 104
	ENG 165	POL 155	MTH 180	CHM 150/151	VPP 110
	ENG 225	POL 156	MTH 185	CHM 160/161	VPP 160
	ENG 240	POL 200	MTH 271	CHM 225	
	ENG 255	POL 210	MTH 275	CHM 260/261	
	ENG 258	POL 255	MTH 276	CHM 270/271	
	ENG 260	POL 256	MTH 277	CHM 275	
	ENG 270	PSY 160		EPS 150	
	ENG 275	PSY 161		EPS 160	
	ENG 276	PSY 163		EPS 163	
	FRN 155	PSY 165		FOR 110	
	FRN 156	PSY 167		FOR 130	
	FRN 255	PSY 230		FOR 160	
	FRN 256	PSY 260		GEO 160	
	GER 155	PSY 265		PHY 107	
	GER 156	PSY 267		PHY 153	
	HUM 120	PSY 268		PHY 155	
	MUS 155	PSY 269		PHY 156	
	MUS 255	PSY 270		PHY 255	
	PHL 101	PSY 275		PHY 256	
	PHL 102	SOC 155		PHY 259	
	PHL 103	SOC 161			
	PHL 202	SOC 210			
	PHL 203	SOC 255			
	PHL 204				
	PHL 210				
	REL 171				
	REL 181				
	SPA 155				
	SPA 156				
	SPA 255				
	SPA 256				
	SPC 165				
	VPP 160				

Accounting, AAS
School of Business

Program Description

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.

The Accounting AAS program is designed to prepare students without prior experience in accounting for a variety of entry-level positions in business, industry and government. Accounting programs 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 AAS 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	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	BUS 145	Excel of Business Environment	3		
	4	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	5	ACC 155	Accounting I	3	MTH 050 or Placement	
	6	SPC 155	Effective Speech	3		SPC 156
1st Spring	7	ACC 156	Accounting II	3	ACC 155	
	8	ENG 163	Business Communication	3	ENG 161	ENG 164
	9	BUS 158	Principles of Management	3		
	10	ACC 234	Payroll and Database Software	3		
	11	ACC 250	Principles of Taxation	3		
2nd Fall	12	ECN 255	Macroeconomics	3	BUS 120 (C or better) or MTH 052	
	13	ACC 219	Managerial Accounting	3	ACC 156	
	14	ACC 255	Intermediate Accounting I	3	ACC 156	
	15	FIN 220	Business Finance	3	ACC 155 or ACC 165	
	16	ACC 251	Corporate Taxation	3	Varies	BUS 244, ECN 256 or ECN 260
2nd Spring	17	ACC 230	Integrated Accounting Software	3		
	18	ACC 222	Principles of Auditing	3	ACC 156	
	19	FIN 266	Financial Statement Analysis	3	FIN 220	
	20	BUS 288	Business Analytics	3	ACC 156 or ACC 165 and FIN 220	
	21	ACC 256	Intermediate Accounting II	3	ACC 156	
Minimum Program Credits				61		ACT

Accounting, Certificate

COMPUTER ACCOUNTING & TAX SPECIALIST

School of Business

Program Description

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	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	ACC 155	Accounting I	3	MTH 050 or Placement	
	3	ACC 234	Payroll and Database Software	3		
	4	ACC 251	Corporate Taxation	3	Varies	BUS 244, ECN 256, ECN 260
Spring	5	ACC 156	Accounting II	3	ACC 155	
	6	ACC 230	Integrated Accounting Software	3		
	7	ACC 250	Principles of Taxation	3		
Minimum Program Credits				19		ACCTS

Accounting, Certificate

GENERAL ACCOUNTING

School of Business

Program Description

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	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	3	BUS 145	Excel for Business Environment	3		
	4	ACC 155	Accounting I	3	MTH 050 or Placement	
Spring	5	ACC 156	Accounting II	3	ACC 155	
	6	ACC 230	Integrated Accounting Software	3		
	7	ACC 250	Principles of Taxation	3		
Minimum Program Credits				19		ACCTG

Additive Manufacturing, AAS

School of Technology

Program Description

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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	MTH 104	Introduction to Applied Mathematics	4	MTH 050 or Placement	
	3	EGR 101	Introduction to Engineering I	3	Co: MTH 104 or MTH 157	
	4	DFT 105	Technical Drafting I	4		
	5	DFT 112	Introduction to Design, Materials, and Processing	3		
	6	AMT 101	Introduction to Additive Manufacturing	3		
1st Spring	7	DFT 266	3D Solid Modeling I	4		
	8	EGR 104	Engineering Materials	3	EGR 101	
	9	AMT 102	Material Handling & Safety	3	AMT 101	
	10	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	11	MTH 108	Mathematics for the Technologies I	4	MTH 104 (C or better) or Placement	
2nd Fall	12	EGR 221	Statics and Strength of Materials	4	EGR 101	
	13	AMT 201	3D Printer Operation, Maintenance, and Management	4	DFT 105, DFT 266, AMT 102	
	14	PHY 107	Applied Physics	4	MTH 100 or MTH 108	
	15	Elective	Social Science Elective	3	Varies	Page 42 Column III
2nd Spring	16	DFT 208	Product Design	3	EGR 101 or DFT 112	
	17	DFT 267	3D Solid Modeling II	4	DFT 266	
	18	AMT 202	Additive Manufacturing Mold Design	4	AMT 201; Co: DFT 208	
	19	ENG 162	Technical Communication	3	ENG 161	
Minimum Program Credits				64		ADM

Additive Manufacturing, Diploma
School of Technology

Program Description

The Additive Manufacturing Diploma 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	MTH 104	Introduction to Applied Mathematics	4	MTH 050 or Placement	
	3	EGR 101	Introduction to Engineering I	3	Co: MTH 104 or MTH 157	
	4	DFT 105	Technical Drafting I	4		
	5	DFT 112	Introduction to Design, Materials, and Processing	3		
	6	AMT 101	Introduction to Additive Manufacturing	3		
1st Spring	7	DFT 266	3D Solid Modeling I	4		
	8	EGR 104	Engineering Materials	3	EGR 101	
	9	AMT 102	Material Handling & Safety	3	AMT 101	
	10	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	11	MTH 108	Mathematics for Technologies I	4	MTH 104 (C or better) or Placement	
Minimum Program Credits				35		ADMF

Applied Engineering Technology, Certificate
School of Technology

Program Description

Students in the Applied Engineering Technology Certificate learn basic engineering principles and technical skills to solve technical problems in various types of industry. Designed to be flexible, the program allows students to choose from a range of fields including welding and drafting among others that are developed as industry trends demand. With this combination of classes, students will develop problem solving as well as lab and technical based skills needed for entry-level jobs as maintenance technicians. Successful completion of the program leads to the Applied Engineering Technology Certificate.

Career Opportunities

The Applied Engineering Technology Certificate is a good primer for students seeking an entry-level job in a wide range of positions in research and development, manufacturing, sales, design, inspection, or maintenance. This certificate also serves well for those already working, seeking to supplement their career with more in-depth knowledge of engineering, drafting, and welding.

Program Learning Outcomes

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

- Communicate technical information effectively
- Demonstrate scientific observation skills
- Operate equipment and/or relevant software
- Promote safety and quality in the workplace

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
1st Fall	1	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	2	MTH 104	Introduction to Applied Mathematics	3-4	MTH 050 or Placement	*MTH 157 (3 credits)
	3	DFT 105	Technical Drafting I	4		
	4	EGR 101	Introduction to Engineering	3	Co: MTH 104 or MTH 157	
1st Spring	5	ENG 162	Technical Communication	3	ENG 161	ENG 163
	6	MTH 108	Math for Technologies	4	MTH 104 (C or better) or Placement	*MTH 167 (3 credits)
	7	EGR 210	Quality Control	3	EGR 101 or Permission of Instructor; MTH 172 or Permission of Instructor	
	8	MET 105	Welding Metallurgy	3	Varies	DFT 112 *EGR Advisor for AAS option
	9	WEL 224	NDT and DT	3	MET 105	*EGR Advisor for AAS option
Minimum Program Credits				29-30		APENT

*If MTH 157 is selected, the second math course must be MTH 167

Applied Industrial Technology, AAS

School of Technology

Program Description

Industry in the Southwestern Pennsylvania region is dynamic and employees who have a broad educational background in industrial technology are valuable to their employers. 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, autocad 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. This program is ideal for students who want to combine technical coursework and/or certificates to complete an associate degree.

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

Program Learning Outcomes
This curriculum is designed to prepare students 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.	Prereq/Coreq(Co)	Options Available
Fall or Spring	1	Elective	Restricted Program Electives	43		
	2	PDV 101	First Year Seminar	1		
	3	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	4	DFT 258	AutoCAD	4		
	5	ENG 162	Technical Communication	3	ENG 161	
	6	MTH 104	Introduction to Applied Mathematics	4	MTH 050 or Placement	
	7	PSY 160	General Psychology	3		
Minimum Program Credits				61		AIT

Restricted Program Electives: Choose courses from these disciplines to complete program requirements: AMT, ARC, CNC, DFT, ELC, EGR, HAC, MET, MTT, PMB, RBT, WEL. Students must consult with their advisor for appropriate completion.

Architectural Drafting and Design, AAS

School of Technology

Program Description

Students in the Architectural Drafting and Design AAS 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ARC 101	Building Materials & Estimating	3		
	3	ARC 105	Architectural Drafting I	4		
	4	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	5	MTH 104	Introduction to Applied Mathematics	4	MTH 050 or Placement	
1st Spring	6	ARC 102	Contracts and Specifications	3		
	7	ARC 106	Architectural Drafting II	4	ARC 105	
	8	ARC 210	Architectural AutoCAD I	4		
	9	ENG 162	Technical Communication	3	ENG 161	
	10	MTH 108	Mathematics for Technologies I	4	MTH 104 (C or better) or Placement	
2nd Fall	11	ARC 119	Introduction to Surveying	3	MTH 104	
	12	ARC 211	Architectural AutoCAD II	4	ARC 210	
	13	EGR 221	Statics and Strength of Materials	4	EGR 101 or Permission of Instructor	
	14	PHY 107	Applied Physics	4	MTH 108, MTH 100	
2nd Spring	15	ARC 215	Architectural Presentation	4	ARC 210	
	16	ARC 262	Piping, Structuring Detailing and Electromechanical Drafting	4	ARC 210 or DFT 258	
	17	Elective	Restricted Elective	3-4	Varies	See List
	18	Elective	Social Science Elective	3	Varies	Page 42 Column III
Minimum Program Credits				62-63		ADD

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

Art Business, Certificate

School of Art, Humanities, Social Sciences and Public Service

Program Description

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 houses, 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. In addition to small business options, the certificate will explore careers in nonprofit organizations, museums, and galleries. The program will help students cultivate connections with local art organizations and businesses.

Program Learning Outcomes

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

- Demonstrate knowledge about the structure of the art world and the interplay between the commercial and non-profit sectors.
- Identify employment opportunities in commercial art, museum professions, and other creative industries.
- Demonstrate knowledge about the range of careers within a museum.
- Employ transferable skills such as grant writing, collections management, and a marketing plan to sell artwork.
- Seek out and develop networking opportunities with regional art world professionals.
- Utilize current research resources for art law and art business.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
Fall	1	BUS 262	Entrepreneurship	3		
	2	ART 180	Creative Business Basics	3		BUS 188
	3	ART 171	Art Law Legal Issues for Creative Professionals	3		
Spring	4	ART 170	Introduction to Grant Writing	3		
	5	ART 172	Museum Careers	3		
	6	Elective	Restricted Elective	3	Varies	See List
Minimum Program Credits				18		ARTBS

Restricted Electives: ART 156; ART 157; ART 286; BUS 188; BUS 299

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 23). 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 31-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 in 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 entrepreneurship. 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

Program Description

The Business Entrepreneurship AAS program 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 Business Entrepreneurship AAS program 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	BUS 145	Excel for Business Environment	3		
	4	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	5	BUS 140	Introduction to Business	3		
	6	FIN 155	Personal Finance	3		
1st Spring	7	ENG 163	Business Communication	3	ENG 161	ENG 164
	8	ACC 165	Accounting for Managers	3	MTH 050 or Placement	ACC 155
	9	ECN 256	Microeconomics	3	BUS 120 (C or better) or MTH 052	
	10	BUS 158	Principles of Management	3		
	11	BUS 205	Business Law	3		
2nd Fall	12	ACC 120	QuickBooks	1		
	13	BUS 188	Social Media in Business	3		
	14	BUS 245	Principles of Marketing	3		
	15	BUS 244	Business Statistics	3	BUS 120 (C or better) or MTH 052	
	16	FIN 220	Business Finance	3	ACC 155 or ACC 165	
	17	SPC 155	Effective Speech	3		SPC 156
2nd Spring	18	BUS 240	Techniques of Selling	3		
	19	BUS 262	Entrepreneurship	3		
	20	FIN 266	Financial Statement Analysis	3	FIN 220	
	21	BUS 278	Data Analytics	3	BUS 244	
	22	BUS 296	Business Strategy	3	45 Credits in Business AAS	
Minimum Program Credits				62		SBM

Business, AAS

FINANCE

School of Business

Program Description

The Business Finance AAS program 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	BUS 145	Excel for Business Environment	3		
	4	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	5	ACC 155	Accounting I	3	MTH 050 or Placement	
	6	BUS 140	Introduction to Business	3		
1st Spring	7	ENG 163	Business Communication	3	ENG 161	ENG 164
	8	ACC 156	Accounting II	3	ACC 155	
	9	ECN 256	Microeconomics	3	BUS 120 (C or better) or MTH 052	
	10	BUS 158	Principles of Management	3		
	11	FIN 155	Personal Finance	3		
2nd Fall	12	SPC 155	Effective Speech	3		SPC 156
	13	BUS 244	Business Statistics	3	BUS 120 (C or better) or MTH 052	
	14	ECN 255	Macroeconomics	3	BUS 120 (C or better) or MTH 052	
	15	FIN 220	Business Finance	3	ACC 155 or ACC 165	
	16	ECN 260	Money and Banking	3	ECN 255 or ECN 256	
2nd Spring	17	BUS 245	Principles of Marketing	3		
	18	BUS 278	Data Analytics	3	BUS 244	
	19	FIN 266	Financial Statement Analysis	3	FIN 220	
	20	BUS 288	Business Analytics	3	ACC 156 or ACC 165 and FIN 220	
	21	BUS 296	Business Strategy	3	45 Credits in Business AAS	
Minimum Program Credits				61		FIN

Business, AAS

HUMAN RESOURCE MANAGEMENT

School of Business

Program Description

The Business Human Resource Management AAS program 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 Business Human Resource Management AAS program 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	BUS 145	Excel for Business Environment	3		
	4	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	5	BUS 140	Introduction to Business	3		
	6	SPC 155	Effective Speech	3		SPC 156
1st Spring	7	ENG 163	Business Communication	3	ENG 161	ENG 164
	8	ACC 165	Accounting for Managers	3	MTH 050 or Placement	ACC 155
	9	ECN 256	Microeconomics	3	BUS 120 (C or better) or MTH 052	
	10	BUS 158	Principles of Management	3		
	11	BUS 205	Business Law	3		
2nd Fall	12	ECN 255	Macroeconomics	3	BUS 120 (C or better) or MTH 052	
	13	BUS 244	Business Statistics	3	BUS 120 (C or better) or MTH 052	
	14	BUS 249	Labor Relations	3		
	15	FIN 220	Business Finance	3	ACC 155 or ACC 165	
	16	BUS 241	Human Resource Management	3		
2nd Spring	17	BUS 275	Organizational Behavior	3		
	18	ACC 234	Payroll and Database Software	3		
	19	BUS 285	Compensation Management	3		
	20	BUS 278	Data Analytics	3	BUS 244	
	21	BUS 296	Business Strategy	3	45 Credits in Business AAS	

Minimum Program Credits 61 HRM

Business, AAS

MANAGEMENT

School of Business

Program Description

The Business Management AAS program 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 Business Management AAS program 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	BUS 145	Excel for Business Environment	3		
	4	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	5	BUS 140	Introduction to Business	3		
	6	SPC 155	Effective Speech	3		SPC 156
1st Spring	7	ENG 163	Business Communication	3	ENG 161	ENG 164
	8	ACC 165	Accounting for Managers	3	MTH 050 or Placement	ACC 155
	9	ECN 256	Microeconomics	3	BUS 120 (C or better) or MTH 052	
	10	BUS 158	Principles of Management	3		
	11	BUS 205	Business Law	3		
2nd Fall	12	BUS 241	Human Resource Management	3		
	13	BUS 244	Business Statistics	3	BUS 120 (C or better) or MTH 052	
	14	BUS 249	Labor Relations	3		
	15	FIN 220	Business Finance	3	ACC 155 or ACC 165	
	16	ECN 255	Macroeconomics	3	BUS 120 (C or better) or MTH 052	
2nd Spring	17	BUS 245	Principles of Marketing	3		
	18	BUS 278	Data Analytics	3	BUS 244	
	19	BUS 275	Organizational Behavior	3		
	20	BUS 288	Business Analytics	3	ACC 156 or ACC 165 and FIN 220	
	21	BUS 296	Business Strategy	3	45 Credits in Business AAS	
Minimum Program Credits				61		BUS

Business, AAS

MARKETING

School of Business

Program Description

The Business Marketing AAS program 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 Business Marketing AAS program 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	BUS 145	Excel for Business Environment	3		
	4	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	5	BUS 140	Introduction to Business	3		
	6	SPC 155	Effective Speech	3		SPC 156
1st Spring	7	ENG 163	Business Communication	3	ENG 161	ENG 164
	8	ACC 165	Accounting for Managers	3	MTH 050 or Placement	ACC 155
	9	BUS 188	Social Media in Business	3		
	10	BUS 158	Principles of Management	3		
	11	BUS 205	Business Law	3		
2nd Fall	12	ECN 255	Macroeconomics	3	BUS 120 (C or better) or MTH 052	
	13	BUS 244	Business Statistics	3	BUS 120 (C or better) or MTH 052	
	14	BUS 245	Principles of Marketing	3		
	15	FIN 220	Business Finance	3	ACC 155 or ACC 165	
	16	MKT 252	Public Relations	3		
2nd Spring	17	BUS 240	Techniques of Selling	3		
	18	BUS 278	Data Analytics	3	BUS 244	
	19	MKT 251	Consumer Behavior	3		
	20	MKT 254	Advertising and Promotion	3		
	21	BUS 296	Business Strategy	3	45 Credits in Business AAS	
Minimum Program Credits				61		MKM

Business, Diploma
School of Business

Program Description

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.	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	BUS 145	Excel for Business Environment	3		
	3	BUS 140	Introduction to Business	3		
	4	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	5	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	6	BUS 158	Principles of Management	3		
Spring	7	ECN 255	Macroeconomics	3	BUS 120 (C or better) or MTH 052	
	8	BUS 245	Principles of Marketing	3		
	9	ACC 165	Accounting for Managers	3	MTH 050 or Placement	ACC 155
	10	BUS 205	Business Law	3		
	11	FIN 220	Business Finance	3	ACC 155 or ACC 165	
Minimum Program Credits				31		BUSG

Business, Certificate

ENTREPRENEURSHIP

School of Business

Program Description

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 – Entrepreneurship AAS program.

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.	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	BUS 188	Social Media in Business	3		
	3	BUS 244	Business Statistics	3	BUS 120 (C or better) or MTH 052	
	4	FIN 155	Personal Finance	3		
Spring	5	BUS 240	Techniques of Selling	3		
	6	BUS 262	Entrepreneurship	3		
	7	ACC 165	Accounting for Managers	3	MTH 050 or Placement	ACC 155
Minimum Program Credits				19		SMBMG

Business, Certificate

FINANCE

School of Business

Program Description

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

Career Opportunities

Graduates of the Business Finance Certificate 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 of 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.	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	ACC 155	Accounting I	3	MTH 050 or Placement	
	3	ECN 256	Microeconomics	3	BUS 120 (C or better) or MTH 052	
Spring	4	FIN 220	Business Finance	3	ACC 155 or ACC 165	
	5	BUS 244	Business Statistics	3	BUS 120 (C or better) or MTH 052	
	6	ECN 260	Money and Banking	3	ECN 255 or ECN 256	
Minimum Program Credits				16		FINMG

Business, Certificate

HUMAN RESOURCE MANAGEMENT

School of Business

Program Description

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.	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	BUS 241	Human Resource Management	3		
	3	BUS 244	Business Statistics	3	BUS 120 (C or better) or MTH 052	
	4	BUS 249	Labor Relations	3		
Spring	5	BUS 275	Organizational Behavior	3		
	6	BUS 285	Compensation Management	3		
	7	BUS 278	Data Analytics	3	BUS 244	
Minimum Program Credits				19		HRMGT

Business, Certificate

MANAGEMENT

School of Business

Program Description

The Business 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 Business 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	Prereq/Coreq(Co)	Options Available
Fall or Spring	1	PDV 101	First Year Seminar	1		
	2	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	3	BUS 140	Introduction to Business	3		
	4	ACC 165	Accounting for Managers	3	MTH 050 or Placement	
Fall or Spring	5	BUS 158	Principles of Management	3		
	6	BUS 245	Principles of Marketing	3		
	7	FIN 220	Business Finance	3	ACC 155 or ACC 165	
Minimum Program Credits				19		BUSMG

Business, Certificate

MARKETING

School of Business

Program Description

The Business 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 Marketing AAS program.

Career Opportunities

Graduates of the Business Marketing Certificate program 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.	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	BUS 245	Principles of Marketing	3		
	3	BUS 244	Business Statistics	3	BUS 120 (C or better) or MTH 052	
	4	BUS 188	Social Media in Business	3		
Spring	5	MKT 254	Advertising and Promotion	3		
	6	MKT 251	Consumer Behavior	3		
	7	BUS 278	Data Analytics	3	BUS 244	
Minimum Program Credits				19		MKTMG

Business, Certificate

REAL ESTATE

School of Business

Program Description

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

Career Opportunities

Graduates of the Business Real Estate Certificate program 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 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.

*In order to qualify to be a real estate agent in Pennsylvania, you must meet the following requirements: Be at least 18 years old and be a high school graduate or equivalent.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
Spring	1	PDV 101	First Year Seminar	1		
	2	BUS 240	Techniques of Selling	3		
	3	RLS 101	Fundamentals of Real Estate	2		
	4	RLS 104	Real Estate Practices	3		
Fall	5	RLS 205	Property Management	3		
	6	RLS 209	Real Estate Finance	3		
	7	RLS 210	Law of Real Estate	3		
Minimum Program Credits				18		RESMG

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.

Communication Design, AAS

School of Art, Humanities, Social Sciences and Public Service

Program Description

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 the 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

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	GCT 100	Design Technology I	1		
	4	GCT 115	Design & Layout I	3		
	5	GCT 151	Art & Illustration I	3		
	6	Elective	Restricted Elective	3		
	7	PSY 160	General Psychology	3	Varies	Page 42, Column III
1st Spring	8	ENG 162	Technical Communication	3	ENG 161	ENG 165
	9	GCT 126	Motion Graphics	3		
	10	GCT 131	Type & Publishing I	3		
	11	GCT 156	Graphics Production	3	GCT 151	
	12	GCT 161	Creative Imaging I	3		
2nd Fall	13	GCT 164	Interactive Design	3	GCT 126	
	14	GCT 200	Design Technology II	3	GCT 100	
	15	GCT 290	Design Studio	3		
	16	Elective	Restricted Elective	3		
	17	MTH 161	Modern College Mathematics	3	MTH 052 or Placement	MTH 157
2nd Spring	18	CPT 203	HTML and CSS	3		
	19	GCT 296	UI/UX Design	3	GCT 164	
	20	GCT 299	Design Internship	3	GCT Program Director Recommendation	
	21	Elective	Restricted Elective	3		
	22	SPC 155	Effective Speech	3		SPC 156
Minimum Program Credits				62		CMD

Restricted Electives: BUS 188; BUS 262; VPP 100; VPP 150; VPP 160; VPP 170; VPP 290

Communication Design, Certificate

GRAPHICS AND PUBLISHING

School of Art, Humanities, Social Sciences and Public Service

Program Description

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.	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	GCT 100	Design Technology I	1		
	3	GCT 115	Design & Layout I	3		
	4	GCT 151	Art & Illustration I	3		
Spring	5	GCT 131	Type & Publishing I	3		
	6	GCT 156	Graphics Production	3	GCT 151	
	7	GCT 161	Creative Imaging I	3		
Minimum Program Credits				17		GRAPB

Communication Design, Certificate

WEB AND MOBILE

School of Art, Humanities, Social Sciences and Public Service

Program Description

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.

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.	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	GCT 100	Design Technology I	1		
	3	GCT 115	Design & Layout I	3		
	4	GCT 126	Motion Graphics	3		
Spring	5	GCT 164	Interactive Design	3	GCT 126	
	6	GCT 151	Art & Illustration I	3		
Fall	7	GCT 296	UI/UX Design	3	GCT 164	
Minimum Program Credits				17		WEBMD

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 three options: programming, networking, and technical support. 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 three options: programming, networking, and technical support. Each of these areas of concentration were 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

Program Description

The Computer Technology, Networking AAS program 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 Computer Technology, Networking AAS program 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CPT 145	Introduction to Computer Technology	3		
	3	CPT 150	Microcomputer Concepts	3		
	4	CPT 172	Introduction to Networks (Cisco I)	4		
	5	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	6	MTH 157	College Algebra	3	MTH 100 or Placement	Page 42 Column IV
1st Spring	7	CIS 209	Network Security Fundamentals	3		
	8	CPT 182	Operating Systems	3	CPT 145	
	9	CPT 216	Routing and Switching Essentials (Cisco II)	4	CPT 172	
	10	CPT 161	Introduction to Cloud Computing	3		
	11	ENG 162	Technical Communication	3	ENG 161	ENG 163
2nd Fall	12	SOC 155	Principles of Sociology	3	Varies	Page 42 Column III
	13	CPT 214	Wireless Communication	3	CPT 172 or CPT 183	
	14	SPC 155	Effective Speech	3		SPC 156
	15	CPT 248	PC Hardware	3		
	16	CPT 262	Windows Client Server	3	CPT 182	
2nd Spring	17	CPT 256	Linux Desktop	3		
	18	CPT 249	PC Troubleshooting	3	CPT 248	
	19	CIS 265	Penetration Testing	3		
	20	CPT 264	Windows Server Management	3	CPT 262	
	21	CPT 286	System Analysis and Design	3		
Minimum Program Credits				63		CON

Computer Technology, AAS

PROGRAMMING

School of Technology

Program Description

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 Computer Technology, Programming AAS program 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, Programming AAS program 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CPT 145	Introduction to Computer Technology	3		
	3	CPT 150	Microcomputer Concepts	3		
	4	CPT 156	Programming with Python	3		
	5	CPT 160	Introduction to Programming	3		
	6	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
1st Spring	7	MTH 157	College Algebra	3	MTH 100 or Placement	Page 42 Column IV
	8	OFT 100	Basic Keyboarding	1		
	9	CPT 182	Operating Systems	3	CPT 145	
	10	CPT 180	C++ Programming	3	CPT 160	
	11	CPT 196	Access for Windows	3		
	12	ENG 162	Technical Communication	3	ENG 161	ENG 163
2nd Fall	13	CPT 235	Database Management Systems	3	CPT 196	
	14	CPT 163	Java Programming I	3	CPT 160	
	15	CPT 201	Web Content Development	3		
	16	CPT 203	HTML and CSS	3		
	17	CPT 271	PHP and SQL	3	CPT 196	
2nd Spring	18	CPT 206	JavaScript	3	CPT 203	
	19	CPT 213	Java Programming II	3	CPT 163	
	20	SOC 155	Principles of Sociology	3	Varies	Page 42 Column III
	21	CPT 286	System Analysis and Design	3		
	22	SPC 155	Effective Speech	3		SPC 156
Minimum Program Credits				62		CPE

Computer Technology, AAS

TECHNICAL SUPPORT

School of Technology

Program Description

The Computer Technology, Technical Support AAS program provides students with a strong foundation in microcomputer applications, including operating systems, PC hardware, productivity applications, and networking. Emphasis will be placed on the installation, configuration, operation, maintenance, and troubleshooting of microcomputer hardware systems, operating systems, websites and application software. Students are prepared to take the Microsoft Office Specialist (MOS) certification exams.

Career Opportunities

Graduates of the Computer Technology, Technical Support AAS program may find employment as technical support technicians, network technicians, junior systems analysts, technical sales representatives, customer service technicians, help-desk analysts, 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CPT 145	Introduction to Computer Technology	3		
	3	CPT 150	Microcomputer Concepts	3		
	4	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	5	MTH 157	College Algebra	3	MTH 100 or Placement	Page 42 Column IV
	6	SOC 155	Principles of Sociology	3	Varies	Page 42 Column III
1st Spring	7	CPT 182	Operating Systems	3	CPT 145	
	8	CPT 183	Local Area Networks	3		
	9	CPT 195	Excel for Windows	3		
	10	OFT 190	Word for Windows	3		
	11	OFT 235	Customer Service	3		
2nd Fall	12	CPT 196	Access for Windows	3		
	13	CPT 201	Web Content Development	3		
	14	CPT 248	PC Hardware	3		
	15	ENG 162	Technical Communication	3	ENG 161	ENG 163
	16	OFT 185	PowerPoint	1		
	17	CPT 161	Introduction to Cloud Computing	3		
2nd Spring	18	CPT 249	PC Troubleshooting	3	CPT 248	
	19	CPT 199 or CPT 259	Internship or User Support Operations	3	Permission of Instructor or CPT 150	
	20	CPT 256	Linux Desktop	3		
	21	CPT 278	Integrated Office Applications	3	CPT 195 or BUS 145, CPT 196 and OFT 185	
	22	SPC 155	Effective Speech	3		SPC 156
Minimum Program Credits				62		CTS

Computer Technology, Diploma
School of Technology

Program Description

Students develop skills in functional applications of the computer to a business environment. The Computer Technology 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	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	CPT 150	Microcomputer Concepts	3		
	3	CPT 145	Introduction to Computer Technology	3		
	4	CPT 248	PC Hardware	3		
	5	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	6	MTH 157	College Algebra	3	MTH 100 or Placement	Page 42 Column IV
Spring	7	CPT 182	Operating Systems	3	CPT 145	
	8	CPT 161	Introduction to Cloud Computing	3		
	9	CPT 249	PC Troubleshooting	3	CPT 248	
	10	ENG 162	Technical Communication	3	ENG 161	ENG 163
	11	BUS 188	Social Media in Business	3		
Minimum Program Credits				31		COTE

Criminal Justice, AAS

School of Art, Humanities, Social Sciences and Public Service

Program Description

The Criminal Justice AAS program 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 AAS 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CRJ 155	Introduction to Criminal Justice	3		
	3	CPT 150	Microcomputer Concepts	3		
	4	CRJ 160	Criminal Law I	3		
	5	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	6	PSY 160	General Psychology	3		
1st Spring	7	CRJ 163	Criminal Procedure	3		
	8	CRJ 172	Substance Abuse and Crime	3		SWK 172
	9	POL 255	American State & Local Government	3		SOC 155, POL 155
	10	Elective	Restricted Elective	3	Varies	See List
	11	PHL 102	Critical Thinking	3		
2nd Fall	12	MTH 161	Modern College Mathematics	3	MTH 052 or Placement	Page 42 Column IV
	13	CRJ 255	Juvenile Delinquency	3		
	14	CRJ 296	Introduction to Criminalistics	3		CRJ 263
	15	CRJ 290	Principles of Criminology	3		
	16	ENG 164	Advanced Composition	3	ENG 161	ENG 162, ENG 163, ENG 168
2nd Spring	17	Elective	Restricted Elective	3	Varies	See List
	18	CRJ 162	Police Administration I	3		
	19	CRJ 287	Multiculturalism and The Criminal Justice System	3		
	20	SPC 155	Effective Speech	3		
	21	Elective	Restricted Elective	3	Varies	See List

Minimum Program Credits 61 CJU

Restricted Electives: CRJ 195; CRJ 180; CRJ 220; CRJ 225; CRJ 261; CRJ 262; CRJ 263; CRJ 265; CRJ 276; CRJ 277; CRJ 283; CRJ 296; POL 155; PSY 270

Criminal Justice, AAS

CYBER SECURITY

School of Art, Humanities, Social Sciences and Public Service

Program Description

The Criminal Justice Cyber Security AAS program provides students with extensive hands-on instruction in all facets of information security, network security, and PC security. Students will be exposed to the tools and techniques of security and law enforcement professionals. Topics covered include computer forensics, intrusion detection, anti-virus software, firewalls, criminal law, evidence gathering and investigation techniques.

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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CIS 168	Principles of Information Security	3		
	3	CPT 150	Microcomputer Concepts	3		
	4	CPT 181	Introduction to Telecommunications	3		
	5	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	6	CRJ 101	Introduction to Homeland Security	3		CRJ 155
1st Spring	7	CIS 212	Digital Forensics Fundamentals	3		
	8	CPT 182	Operating Systems	3	CPT 145	
	9	CPT 183	Local Area Networks	3		
	10	CRJ 163	Criminal Procedure	3		
	11	ENG 162	Technical Communication	3	ENG 161	ENG 163
	12	MTH 161	Modern College Mathematics	3	MTH 052 or Placement	Page 42 Column IV
2nd Fall	13	CPT 161	Introduction to Cloud Computing	3		
	14	CPT 214	Wireless Communication	3	CPT 172 or CPT 183	
	15	CRJ 296	Introduction to Criminalistics	3		CRJ 263
	16	SPC 155	Effective Speech	3		SPC 156
2nd Spring	17	CIS 209	Network Security Fundamentals	3		
	18	CPT 256	Linux Desktop	3	CPT 182	
	19	CIS 255	Ethical Hacking and Software Defense	3	CIS 168	
	20	CRJ 195	Introduction to Private Security	3		CRJ 225
	21	CRJ 265	White Collar Crime	3		CRJ 277
	22	SOC 155	Principles of Sociology	3	Varies	Page 42 Column III
Minimum Program Credits				64		CJS

*CRJ 195 offered every other spring semester

*CRJ 265 offered every other spring semester

Criminal Justice, Certificate

CORRECTIONS OFFICER

School of Art, Humanities, Social Sciences and Public Service

Program Description

The Criminal Justice 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.	Prereq/Coreq(Co)	Options Available
Fall, Spring, Summer	1	PDV 101	First Year Seminar	1		
	2	CRJ 155	Introduction to Criminal Justice	3		
	3	CRJ 180	Corrections	3		
	4	CRJ 255	Juvenile Delinquency	3		
	5	CRJ 283	Institutional Treatment of Adults and Juveniles	3		
	6	CRJ 290	Principles of Criminology	3		
	7	CRJ 172	Substance Abuse and Crime	3		SWK 172
Minimum Program Credits				19		CJUCO

Criminal Justice, Certificate

SECURITY PROFESSIONAL

School of Art, Humanities, Social Sciences and Public Service

Program Description

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

Career Opportunities

The Criminal Justice Security Professional 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.	Prereq/Coreq(Co)	Options Available
Fall, Spring, Summer	1	PDV 101	First Year Seminar	1		
	2	CRJ 101	Introduction to Homeland Security	3		CRJ 155
	3	CRJ 195	Introduction to Private Security	3		CRJ 225
	4	CRJ 262	Crime Prevention	3		
	5	CRJ 296	Introduction to Criminalistics	3		
	6	CRJ 287	Multiculturalism and The Criminal Justice System	3		
Minimum Program Credits				16		CJUSP

Culinary Arts, AAS

APPRENTICESHIP

School of Culinary Arts/Pastry Arts/Hospitality Management

Program Description

The Culinary Arts Apprenticeship AAS Program, sponsored by The American Culinary Federation Laurel Highlands Chapter (ACFLHC) and Westmoreland, is accredited by the American Culinary Federation Education Foundation Accrediting Commission (ACFEFAC). A cooperative program, it combines academic coursework with 4,000 hours of supervised on-the-job learning in a participating bakery, club, hotel, or resort for an associate degree. Classes are scheduled so that students have a sufficient block of time to complete their 40-hour week. Academic work and the 4,000 hours can be completed over a period of two to three years.

Students enrolled in this program will be registered with the Pennsylvania Department of Labor and Industry and the American Culinary Federation as apprentices once required registration and membership fees are paid during the first weeks of class.

Students are required to adhere to the department policies and procedures as stated in the School of Culinary Arts/Pastry Arts/Hospitality Management Student Handbook and the Apprenticeship Handbook.

Requirements for the program include but are not limited to:

- Laboratory Uniform
- Tool Kit
- Business Attire
- Special attire may be required at the apprenticeship site
- Transportation to the apprenticeship site

Employment must be secured at an approved apprenticeship facility that will provide full-time employment. The Culinary Arts Apprenticeship may be completed through a partnership with Nemacolin Resort, Seven Springs Mountain Resort or other approved apprenticeship sites. For a current list of approved apprenticeship sites, contact the School of Culinary Arts/Pastry Arts/Hospitality Management.

At the completion of the apprenticeship program, students are eligible to test for certification as a Certified Sous Chef with the American Culinary Federation.

Career Opportunities

Graduates of the Culinary Arts Apprenticeship AAS Program may accept positions with the following titles: cook, station chef, working chef, sous chef, personal chef, executive chef, culinary educator, sales representative, 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, prepare and serve meals and buffets.
- 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, and garniture display.
- Utilize technology to maintain systems of operation.
- Research and adhere to sound practices for sanitation and safety.
- Develop basic practical mathematical skills.

Culinary Arts, AAS

APPRENTICESHIP

School of Culinary Arts/Pastry Arts/Hospitality Management

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CUL 104	Foundations of Cooking and Baking	3		
	3	FSM 103	Introduction to the Hospitality Industry	3		FSM 113
	4	FSM 170	Food Culture and Religion	3		
	5	FSM 118	Sanitation	2		
	6	CUL 132	Garde Manger	3		
	7	CUL 121	Apprenticeship I	1		
1st Spring	8	BKP 141	Baking I	4	CUL 104	
	9	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	10	CUL 105	Foods I	4	CUL104	
	11	FSM 117	Waitstaff/Dining Room Training	1		
	12	FSM 119	Beverage Management	1		FSM 120
	13	CUL 122	Apprenticeship II	1	CUL 121	
	14	Elective	Social Science Elective	3	Varies	Page 42 Column III
1st Summer	15	CUL 123	Apprenticeship III	1	CUL 122	
	16	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
2nd Fall	17	CUL 220	Culinary Bistro	4	CUL 105	
	18	CUL 112	Foods II	4	CUL 105	
	19	CUL 243	Nutritional Cooking and Baking	3	BKP 141 or CUL 105	FSM 159
	20	FSM 215	Purchasing and Operations	3		
	21	CPT 150	Micro Computer Concepts	3		
	22	CUL 224	Apprenticeship IV	1	CUL 123	
2nd Spring	23	FSM 213	A la Carte Kitchens	4	CUL 105 and CUL 112	
	24	FSM 235	Supervision and Training	3		
	25	CUL 232	Food Specialties	4	CUL 105	
	26	ENG 163	Business Communication	3	ENG 161	ENG 164
	27	CUL 251	Apprenticeship V	1	CUL 224	
2nd Summer	28	CUL 253	Apprenticeship VI	1	CUL 251	
Minimum Program Credits				71		CUA2

Culinary Arts, AAS

School of Culinary Arts/Pastry Arts/Hospitality Management

Program Description

The Culinary Arts AAS Degree program is one of the programs comprising the college's School of Culinary Arts/Pastry Arts/Hospitality Management. This curriculum is planned to meet the increasing employment needs of the 21st century for trained culinary experts. The program includes classroom and laboratory experiences and requires students to complete a capstone internship. Students are responsible for securing an internship site which meets the program requirements. This program accommodates both part-time and full-time students.

Students are required to adhere to the department policies and procedures as stated in the School of Culinary Arts/Pastry Arts/Hospitality Management Student Handbook.

Requirements for the program include but are not limited to:

- Laboratory Uniform
- Tool Kit
- Business Attire.

Students, who are current members of the American Culinary Federation at the completion of this program, may apply for certification as a Certified Culinarian with the American Culinary Federation

Career Opportunities

Graduates of the culinary arts program may accept positions with the following titles: cook, station chef, working chef, sous chef, personal chef, sales representative, 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, prepare and serve meals and buffets.
- 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CUL 104	Foundations of Cooking and Baking	3		
	3	FSM 103	Introduction to the Hospitality Industry	3		FSM 113
	4	FSM 170	Food Culture and Religion	3		
	5	FSM 118	Sanitation	2		
	6	CUL 132	Garde Manger	3		
1st Spring	7	BKP 141	Baking I	4	CUL 104	
	8	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	9	CUL 105	Foods I	4	CUL 104	
	10	FSM 117	Waitstaff/Dining Room Training	1		
	11	FSM 119	Beverage Management	1		FSM 120
	12	Elective	Social Science Elective	3		
1st Summer	13	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
2nd Fall	14	CUL 112	Foods II	4	CUL 105	
	15	CUL 243	Nutritional Cooking/Baking	3	BKP 141 or CUL 105	FSM 159
	16	FSM 215	Purchasing and Operations	3		
	17	CPT 150	Microcomputer Concepts	3		
	18	CUL 220	Culinary Bistro	4	CUL 105	
2nd Spring	19	FSM 235	Supervision and Training	3		
	20	CUL 232	Food Specialties	4	CUL 105	
	21	FSM 213	A la Carte Kitchens	4	CUL 105 and CUL 112	
	22	FSM 219	Hospitality Internship	3	Permission of Instructor	
	23	ENG 163	Business Communication	3	ENG 161	ENG 164
Minimum Program Credits				68		CUL2

Culinary Arts, Diploma

APPRENTICESHIP

School of Culinary Arts/Pastry Arts/Hospitality Management

Program Description

The Culinary Arts Apprenticeship Program, sponsored by The American Culinary Federation Laurel Highlands Chapter (ACFLHC) and Westmoreland, is accredited by the American Culinary Federation Education Foundation Accrediting Commission (ACFEFAC). A cooperative program, it combines academic coursework with 4,000 hours of supervised on-the-job learning in a participating bakery, club, hotel, or resort for an associate degree. Classes are scheduled so that students have a sufficient block of time to complete their 40-hour week. Academic work and the 4,000 hours can be completed over a period of two to three years.

Students enrolled in this program will be registered with the Pennsylvania Department of Labor and Industry and the American Culinary Federation as apprentices once required registration and membership fees are paid during the first weeks of class.

Students are required to adhere to the department policies and procedures as stated in the School of Culinary Arts/Pastry Arts/Hospitality Management Student Handbook and the Apprenticeship Handbook.

Requirements for the program include but are not limited to:

- Laboratory Uniform
- Tool Kit
- Business Attire
- Transportation to the Apprenticeship Site

Employment must be secured at an approved apprenticeship facility that will provide full-time employment. The Culinary Arts Apprenticeship may be completed through approved apprenticeship sites. For a current list of approved apprenticeship sites, contact the School of Culinary Arts/Pastry Arts/Hospitality Management.

At the completion of the apprenticeship program, students are eligible to test for certification as a Certified Sous Chef with the American Culinary Federation.

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, prepare and serve meals and buffets.
- 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.

Career Opportunities

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

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Culinary Arts, Diploma

APPRENTICESHIP

School of Culinary Arts/Pastry Arts/Hospitality Management

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CUL 104	Foundations of Cooking and Baking	3		
	3	FSM 103	Introduction to the Hospitality Industry	3		FSM 113
	4	FSM 118	Sanitation	2		
	5	CUL 132	Garde Manger	3		
	6	CUL 121	Apprenticeship I	1		
1st Spring	7	BKP 141	Baking I	4	CUL 104	
	8	CUL 105	Foods I	4	CUL 104	
	9	FSM 117	Waitstaff/Dining Room Training	1		
	10	FSM 119	Beverage Management	1		FSM 120
	11	CUL 122	Apprenticeship II	1	CUL 121	
1st Summer	12	CUL 123	Apprenticeship III	1	CUL 122	
2nd Fall	13	CUL 220	Culinary Bistro	4	CUL 105	
	14	CUL 112	Foods II	4	CUL 105	
	15	CUL 243	Nutritional Cooking and Baking	3	BKP 141 or CUL 105	FSM 159
	16	FSM 215	Purchasing and Operations	3		
	17	CUL 224	Apprenticeship IV	1	CUL 123	
2nd Spring	18	FSM 213	A la Carte Kitchens	4	CUL 105 and CUL 112	
	19	FSM 235	Supervision and Training	3		
	20	CUL 232	Food Specialties	4	CUL 105	
	21	CUL 251	Apprenticeship V	1	CUL 224	
2nd Summer	22	CUL 253	Apprenticeship VI	1	CUL 251	
Minimum Program Credits				53		CUAA2

Culinary Arts, Diploma

School of Culinary Arts/Pastry Arts/ Hospitality Management

Program Description

The Culinary Arts Diploma Program is one of the programs comprising the college's School of Culinary Arts/Pastry Arts/Hospitality Management. This curriculum is planned to meet the increasing employment needs of the 21st century for trained culinary experts. This program accommodates both part-time and full-time students.

Students are required to adhere to the department policies and procedures as stated in the School of Culinary Arts/Pastry Arts/Hospitality Management Student Handbook.

Requirements for the program include but are not limited to:

- Laboratory Uniform
- Tool Kit
- Business Attire

Career Opportunities

Graduates of the culinary arts program may accept positions with the following titles: cook, station chef, working chef, sous chef, personal chef, sales representative, 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, prepare and serve meals and buffets.
- 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	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CUL 104	Foundations of Cooking and Baking	3		
	3	FSM 103	Introduction to the Hospitality Industry	3		FSM 113
	4	FSM 118	Sanitation	2		
	5	CUL 132	Garde Manger	3		
1st Spring	6	BKP 141	Baking I	4	CUL 104	
	7	CUL 105	Foods I	4	CUL 104	
	8	FSM 117	Waitstaff/Dining Room Training	1		
	9	FSM 119	Beverage Management	1		FSM 120
2nd Fall	10	CUL 220	Culinary Bistro	4	CUL 105	
	11	CUL 112	Foods II	4	CUL 105	
	12	CUL 243	Nutritional Cooking/Baking	3	BKP 141 or CUL 105	FSM 159
	13	FSM 215	Purchasing and Operations	3		
2nd Spring	14	FSM 235	Supervision and Training	3		
	15	CUL 232	Food Specialties	4	CUL 105	
	16	FSM 213	A la Carte Kitchens	4	CUL 105 and CUL 112	
Minimum Program Credits				47		CULI2

Culinary Arts, Certificate

School of Culinary Arts/Pastry Arts/Hospitality Management

Program Description

The Culinary Arts Certificate Program is planned to meet the increasing employment needs of the 21st century for trained culinary workers. The program includes classroom and food laboratory experiences.

Students are required to adhere to the department policies and procedures as stated in the School of Culinary Arts/Pastry Arts/Hospitality Management Student Handbook.

Requirements for the program include but are not limited to:

- Laboratory Uniform and
- Tool Kit
- Business Attire

Career Opportunities

Graduates of the Culinary Arts Certificate Program may accept jobs with the following titles: cook and food production worker.

Program Learning Outcomes

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

- Prepare, season and cook according to a recipe.
- Prepare set-up and serve meals and buffets.
- Discuss food production and requisitions within an established food and labor budget.
- Recognize quality standards in fresh and prepared foods
- Demonstrate interpersonal skills within a food service team.
- Demonstrate foundational skills in garde manger.
- Utilize technology systems.
- Adhere to sound practices for sanitation and safety.
- Develop basic practical mathematical skills.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	CUL 104	Foundations of Cooking and Baking	3		
	3	FSM 118	Sanitation	2		
Spring	4	CUL 105	Foods I	4	CUL 104	
	5	CUL 132	Garde Manger	3		
	6	FSM 103	Introduction to the Hospitality Industry	3		FSM 113
Minimum Program Credits				16		CULIN2

Cyber Security, AAS
School of Technology

Program Description

The Cyber Security AAS 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CPT 145	Introduction to Computer Technology	3		
	3	CPT 150	Microcomputer Concepts	3		
	4	CIS 168	Principles of Information Security	3		
	5	MTH 157	College Algebra	3	MTH 100 or Placement	Page 42 Column IV
1st Spring	6	CIS 212	Digital Forensics Fundamentals	3		
	7	CPT 182	Operating Systems	3	CPT 145	
	8	CPT 183	Local Area Networks	3		
	9	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	10	SOC 155	Principles of Sociology	3	Varies	Page 42 Column III
	11	CPT 161	Introduction to Cloud Computing	3		
2nd Fall	12	CIS 255	Ethical Hacking and Software Defense	3	CIS 168	
	13	CPT 214	Wireless Communication	3	CPT 172 or CPT 183	
	14	CPT 248	PC Hardware	3		
	15	CPT 156	Programming with Python	3		
	16	CPT 262	Windows Client Server	3	CPT 182	
2nd Spring	17	CIS 209	Network Security Fundamentals	3		
	18	CIS 265	Penetration Testing	3		
	19	ENG 162	Technical Communication	3	ENG 161	ENG 163
	20	CPT 256	Linux Desktop	3		
	21	SPC 155	Effective Speech	3		SPC 156
Minimum Program Credits				61		CYB

Cyber Security, Certificate
School of Technology

Program Description

The Cyber Security Certificate program provides 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	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CPT 145	Introduction to Computer Technology	3		
	3	CPT 150	Microcomputer Concepts	3		
	4	CIS 168	Principles of Information Security	3		
1st Spring	5	CPT 182	Operating Systems	3	CPT 145	
	6	CPT 183	Local Area Networks	3		
	7	CPT161	Introduction to Cloud Computing	3		
	8	CIS 212	Digital Forensics Fundamentals	3		
Minimum Program Credits				22		CYBER

Dental Assisting, Diploma
School of Health Professions

Program Description

The Dental Assisting Diploma 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.

This is a selective admission program. See the college website for details.

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.	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	DAS 100	Intro to Dental Assisting	4	Co: DAS 101, DAS 102, DAS 103, DAS 105, BIO 107	
	3	DAS 101	Oral Anatomy	2	Co: DAS 100, DAS 102, DAS 103, DAS 105, BIO 107	
	4	DAS 102	Dental Material for Dental Assisting	2	Co: DAS 100, DAS 101, DAS 103, DAS 105, BIO 107	
	5	DAS 103	Dental Assisting Lab	4	Co: DAS 100, DAS 101, DAS 102, DAS 105, BIO 107	
	6	DAS 105	Dental Rad for Dental Assisting	3	Co: DAS 100, DAS 101, DAS 102, DAS 103, BIO 107	
	7	BIO 107	Human Biology	3	Varies	BIO 171 or BIO 172
Spring	8	DAS 104	Dental Science	4	DAS 100, DAS 101, DAS 102, DAS 103, DAS 105, BIO 107 or BIO 171 or BIO 172; Co: DAS 106, ENG 161, PSY 160	
	9	DAS 106	CLN Dental Assisting I	5	DAS 100, DAS 101, DAS 102, DAS 103, DAS 105, BIO 107 or BIO 171 or BIO 172; Co: DAS 104, ENG 161, PSY 160	
	10	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	11	PSY 160	General Psychology	3		
Summer	12	DAS 108	Clinical Dental Assisting II	4	DAS 104, DAS 106, ENG 161, PSY 160; Co: DAS 109, SPC 156	
	13	DAS 109	Practice Management	2	DAS 104, DAS 106, ENG 161, PSY 160; Co: DAS 108, SPC 156	
	14	SPC 156	Interpersonal Communication	3		
Minimum Program Credits				43		DEAS

Dental Hygiene, AAS
School of Health Professions

Program Description

The Dental Hygiene AAS 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.

This is a selective admission program. Please see the college website for details.

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 special needs patient.
- Prepare the dental hygiene process of care that includes comprehensive collection of patient data, analysis of assessment, establishment of a dental hygiene care plan, provision of comprehensive patient-centered treatment, measurement of goals, and accurate recording of documentation.
- Provide dental hygiene care for all types of classifications of periodontal diseases including patients who exhibit moderate to severe periodontal disease.
- Demonstrate interprofessional communication, collaboration and interaction with other members of the health care team to support comprehensive patient care.
- Recognize the oral health needs of community-based programs by planning an oral health program to include health promotion and disease prevention activities, implementing the planned program, and evaluating the effectiveness of the implemented program.
- Provide appropriate life-support measures for medical emergencies that may be encountered in dental hygiene practice.
- Apply ethical reasoning, ethical decision making and legal and regulatory concepts to the provision and/or support of oral health care services
- Identify self-assessment skills to prepare for life-long learning.
- Implement the use of current scientific literature
- Apply problem solving strategies related to comprehensive patient care and management of patients.

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Dental Hygiene, AAS
School of Health Professions

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Summer	1	BIO 171	Anatomy and Physiology I	4	CHM 107, CHM 150/151, CHM 225 or HS Chemistry (C or better) and ENG 095 or Placement	
	2	CHM 225	Chemistry for the Health Sciences	4	One year of HS Chemistry (C or better), CHM 107 or CHM 150/151	
	3	SOC 155	Principles of Sociology	3		
	4	PSY 160	General Psychology	3		
1st Fall	5	DAH 101	Introduction to Dentistry	3	BIO 171, CHM 225, PSY 160, SOC 155; Co: DAH 102, DAH 104, BIO 172	DAS 100
	6	DAH 102	Dental Materials	2	BIO 171, CHM 225, PSY 160, SOC 155; Co: BIO 172, DAH 101, DAH 104	
	7	DAH 104	Head, Neck and Dental Anatomy	4	BIO 171, CHM 225, PSY 160, SOC 155; Co: DAH 101, DAH 102, BIO 172	
	8	BIO 172	Anatomy and Physiology II	4	BIO 171 (C or better)	
	9	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	10	DAH 103	Medical Emergencies	2	BIO 171, CHM 225, PSY 160, SOC 155; Co: DAH101, DAH 102, DAH 104, BIO 172	
1st Spring	11	DAH 105	Dental Radiology	3	DAH 101, DAH 102, DAH 104, BIO 172; Co: DAH 103, DAH 111, DAH 112, DAH 113, DAH 114	
	12	DAH 111	Dental Hygiene Lecture	3	Co: DAH 103, DAH 105, DAH 112, DAH 113, DAH 114	
	13	DAH 112	Dental Hygiene Lab	4	BIO 172; Co: DAH 103, DAH 105, DAH 111, DAH 113, DAH 114	
	14	DAH 113	Oral Histology/Embryology	2	DAH 104; Co: BIO 172, DAH 103, DAH 105, DAH 111, DAH 114	
	15	DAH 114	Periodontics I	3	Co: DAH 103, DAH 105, DAH 111, DAH 112, DAH 113	
2nd Summer	16	DAH 106	Nutritional Biochemistry	2	DAH 103, DAH 105, DAH 111, DAH 112, DAH 113, DAH 114; Co: DAH 109, DAH 115, DAH 117	
	17	DAH 109	Oral Pathology	2	DAH 103, DAH 105, DAH 111, DAH 112, DAH 113, DAH 114; Co: DAH 106, DAH 115, DAH 117	
	18	DAH 115	Clinical Dental Hygiene I	5	DAH 103, DAH 105, DAH 111, DAH 112, DAH 113, DAH 114; Co: DAH 106, DAH 109, DAH 117	
	19	DAH 117	Local Anesthesia	3	DAH 103, DAH 105, DAH 111, DAH 112, DAH 113, DAH 114; Co: DAH 106, DAH 109, DAH 115	
	20	CPT 150	Microcomputer Concepts	3		
2nd Fall	21	BIO 265	Microbiology	4	BIO 155 or BIO 171 and CHM 107, CHM 150/151, CHM 225 or HS chemistry (C or better), ENG 095 or Placement	
	22	DAH 205	Periodontics II	1	DAH 106, DAH 109, DAH 114, DAH 115, DAH 117; Co: DAH 206, DAH 207, DAH 209	
	23	DAH 206	Clinical Dental Hygiene II	6	DAH 106, DAH 109, DAH 114, DAH 115, and DAH 117; Co: DAH 205, DAH 207, DAH 209	
	24	DAH 207	Pharmacology	2	DAH 106, DAH 109, DAH 115, DAH 117; Co: DAH 205, DAH 206, BIO 265	
	25	DAH 209	Community Dental Health	3	DAH 106, DAH 109, DAH 115, DAH 117Co: DAH 205, DAH 206, DAH 107	
2nd Spring	26	DAH 208	Clinical Dental Hygiene III	6	DAH 205, DAH 206, DAH 207, DAH 209	
	27	ENG 163	Business Communication	3	ENG 161	
	28	BUS 120	Mathematics of Business	3	MTH 050 or Placement	ACC 155
	29	SPC 156	Interpersonal Communications	3		
Minimum Program Credits				93		DEH

Drafting and Design Technology, AAS
School of Technology

Program Description

The Drafting and Design Technology, AAS *"Computer Aided Drafting & Design (CADD)/Computer Aided Manufacturing (CAM)"* 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	DFT 105	Technical Drafting I	4		
	3	DFT 112	Introduction to Design, Materials and Processing	3		
	4	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	5	MTH 104	Introduction to Applied Mathematics	4	MTH 050 or Placement	
	6	Elective	Social Science Elective	3	Varies	Page 42 Column III
1st Spring	7	CNC 111	Computer Numerical Control I	4		
	8	DFT 106	Technical Drafting II	4	DFT 105	
	9	ENG 162	Technical Communication	3	ENG 161	
	10	MTH 108	Mathematics for Technologies I	4	MTH 104 (C or better) or Placement	
2nd Fall	11	CNC 112	Computer Numerical Control II	4	CNC 111; MTH 104	
	12	DFT 266	3D Solid Modeling I	4		
	13	EGR 221	Statics and Strength of Materials	4	EGR 101 or Permission of Instructor	
	14	DFT 258	AutoCAD	4		
2nd Spring	15	ARC 262	Piping, Structural Detailing and Electromechanical Drafting	4	ARC 210 or DFT 258	
	16	MTT 111	Machining I	4		
	17	DFT 267	3D Solid Modeling II	4	DFT 266	
	18	PHY 107	Applied Physics	4	MTH 100 or MTH 108	
Minimum Program Credits				65		DDC

Drafting and Design Technology, AAS

MECHANICAL DRAFTING DESIGN

School of Technology

Program Description

Students in the Drafting and Design Technology, AAS - *"Mechanical Drafting Design"* 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	DFT 105	Technical Drafting I	4		
	3	DFT 112	Introduction to Design, Materials, and Processing	3		
	4	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	5	MTH 104	Introduction to Applied Mathematics	4	MTH 050 or Placement	
1st Spring	6	DFT 106	Technical Drafting II	4	DFT 105	
	7	DFT 258	AutoCAD	4		
	8	ENG 162	Technical Communication	3	ENG 161	
	9	MTH 108	Mathematics for Technologies I	4	MTH 104 (C or better) or Placement	
	10	Elective	Social Science Elective	3	Varies	Page 42 Column III
2nd Fall	11	EGR 101	Introduction to Engineering	3	Pre/Co: MTH 104 or MTH 157	
	12	DFT 266	3D Solid Modeling I	4		
	13	EGR 110	Descriptive Geometry	3		
	14	EGR 221	Statics and Strength of Materials	4	EGR 101 or Permission of Instructor	
2nd Spring	15	ARC 262	Piping, Structural Detailing and Electromechanical Drafting	4	ARC 210 or DFT 258	
	16	DFT 208	Product Design	3	EGR 101 or DFT 112	
	17	DFT 267	3D Solid Modeling II	4	DFT 266	
	18	PHY 107	Applied Physics	4	MTH 100 or MTH 108	
Minimum Program Credits				62		DDM

Early Childhood Education, AAS

School of Art, Humanities, Social Sciences and Public Service

Program Description

This program reflects the standards established by the National Association for Education of Young Children (NAEYC) and PA Office of Child Development and Early Learning (OCDEL) for students in the field of early childhood education (ECE). The program provides a foundation for working in childcare settings with children from infancy through nine years while developing dispositions that center research-based practices. Developmentally appropriate practices, cultural responsiveness, and inclusiveness are emphasized as skills necessary for effective graduates. Supervised observational field experience is required and can be completed at approved early childcare sites. This program is available in online and lecture formats.

Career Opportunities

Graduates of this program are prepared to enter the early childhood workforce on Level B of OCDEL'S Career Pathway. Graduates are qualified for positions as: program director, preschool teacher, lead teacher, assistant teacher, home visitor, service coordinator, family childcare provider, and public school aide.

Program Learning Outcomes

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

- NAEYC 1: Promote child development and learning in context.
- NAEYC 2: Build family-teacher partnerships and community relationships.
- NAEYC 3: Observe, document, and assess to support young children and families.
- NAEYC 4: Use developmentally, culturally, and linguistically appropriate teaching practices.
- NAEYC 5: Demonstrate skill in the knowledge, application, and integration in the early childhood curriculum.
- NAEYC 6: Demonstrate professionalism as an early childhood educator.

Program Requirements

Students must achieve a grade of C in all ECE courses to complete this program. Students are required to complete all clearances and requirements per field experience sites. This program is eligible for full funding through the Early Care and Education PDO at PASSHE scholarship and the PA TEACH scholarship.

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Early Childhood Education, AAS

School of Art, Humanities, Social Sciences and Public Service

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ECE 155	Introduction to Early Childhood Education	3		
	3	MUS 156	Early Childhood Music	3		
	4	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	5	ECE 157	Child Growth and Development	3		
	6	Elective	Social Science Elective	3	Varies	Page 42 Column III
1st Spring	7	Elective	Tech Literacy Elective	3	Varies	Page 42 Column VI
	8	ECE 156	Infant & Toddler Development	3		
	9	ECE 257	Introduction to Exceptional Development	3		
	10	ENG 162	Technical Communication	3	ENG 161	ENG 163, ENG 164
	11	ECE 166	Early Childhood Language and Literacy	3	ECE 155	
2nd Fall	12	ECE 165	Family and Society	3		
	13	ECE 283	Infant & Toddler Practicum	1	Completed interest form, site agreement, and liability insurance. Verify prerequisites with the program director to register for this course; Co: ECE 156	
	14	ECE 255	Early Childhood Education Curriculum	3	ECE155	
	15	Elective	Math Elective	3	Varies	Page 42 Column IV
	16	ECE 256	Assessment and Observation of Young Children	3		
2nd Spring	17	ENG 250	Teaching English to Speakers of Other Languages	3		
	18	ECE 170	Child Health, Safety, and Nutrition	3		
	19	ECE 284	Early Childhood Education Practicum	4	Minimum 2.0 GPA, ECE 166 & ECE 255 + Completed interest form, site agreement, and liability insurance. Students must verify the prerequisites with the program director to register for this course.	
	20	ECE 167	Creative Experiences	3		
	21	Elective	Restricted Elective	3	Varies	See List
Minimum Program Credits				60		ERC

Restricted Electives: ASL 101; ECE 168; ECE 176; ECE 177; ECE 178; ECE 265; EDU 200

Early Childhood Education, Certificate

School of Art, Humanities, Social Sciences and Public Service

Program Description

This program reflects the standards established by the National Association for Education of Young Children (NAEYC) and PA Office of Child Development and Early Learning (OCDEL) for students in the field of early childhood education (ECE). The program provides an introduction to working in childcare settings with children from infancy through nine years while developing dispositions that center research based practices. Developmentally appropriate practices, cultural responsiveness, and inclusiveness are emphasized as skills necessary for effective graduates. Supervised field experience is required and can be completed at approved early childcare sites. Credits earned in this program can be applied toward the requirements of the Diploma, AA, and AAS degrees. This program is available in online and lecture formats.

Career Opportunities

Program completers will be eligible for entry-level positions in ECE and are prepared to enter the early childhood workforce on Level A of OCDEL'S Career Pathway. Graduates are qualified for positions as: support staff, teaching staff with support in birt-prek settings, and out-of-school care.

Program Learning Outcomes

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

- NAEYC 1: Promote child development and learning in context.
- NAEYC 2: Build family-teacher partnerships and community relationships.
- NAEYC 6: Demonstrate professionalism as an early childhood educator.

Program Requirements

Students must achieve a grade of "C" in all ECE courses to complete this program. Students are required to complete all clearances and requirements per field experience sites.

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ECE 155	Introduction to Early Childhood Education	3		
	3	ECE 257	Introduction to Exceptional Development	3		
1st Spring	4	ECE 165	Family and Society	3		
	5	ECE 167	Creative Experiences	3		
2nd Fall	6	ECE 156	Infant & Toddler Development	3		
	7	ECE 283	Infant & Toddler Practicum	1	Completed interest form, site agreement, and liability insurance. Verify prerequisites with the program director to register; Co: ECE 156	
2nd Spring	8	ECE 157	Child Growth and Development	3		
Minimum Program Credits				20		ERCCT

Early Childhood Education, Certificate

CHILD DEVELOPMENT ASSOCIATE

School of Art, Humanities, Social Sciences and Public Service

Program Description

Those who wish to further their career and professional development can complete the educational requirements for the nationally recognized CDA for the center-based infant/toddler or preschool credentials. This program provides the educational requirements aligned with the 8 CDA subject areas. After completing the course series, students will have completed all requirements for the Professional Portfolio and will be advised on how to complete the additional requirements for the Verification Visit and CDA Exam. This program is available in online and lecture formats.

Career Opportunities

Program completers will be eligible for entry-level positions in ECE and are prepared to enter the early childhood workforce on Level A of OCDEL'S Career Pathway. Graduates are qualified for positions as: support staff, teaching staff with support in birth-pre-k settings, and out-of-school care.

Program Learning Outcomes

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

- CDA 1: Plan a safe and healthy learning environment.
- CDA 2 & 3: Advance children's physical, intellectual, and social and emotional development.
- CDA 4: Build productive relationships with families.
- CDA 5: Manage an effective program.
- CDA 6: Maintain a commitment to professionalism.
- CDA 7: Observe and record children's behavior.
- CDA 8: Understand principles of child development and learning.

Program Requirements

Students must achieve a grade of C in all ECE courses to complete this program. Students are required to complete all clearances and requirements per field experience sites.

This program is eligible for funding through the Early Care and Education PDO at PASSHE scholarship.

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	ECE 156	Infant & Toddler Development	3		ECE 157
	3	ECE 176	CDA Portfolio I	1		
Spring	4	ECE 170	Child Health, Safety, and Nutrition	3		
	5	ECE 177	CDA Portfolio II	1	ECE 176	
	6	Elective	Restricted Elective	3	Varies	See List
Summer	7	ECE 256	Assessment and Observation of Young Children	3		
	8	ECE 178	CDA Portfolio III	1	ECE 177	
Minimum Program Credits				16		ECEDC

Restricted Electives: ECE 155; ECE 157; ECE 165; ECE 166; ECE 167; ECE 168; ECE 255; ENG 250; ECE 257

Early Childhood Education

DIRECTOR CREDENTIAL- Awarded by Office of Child Development and Early Learning (OCDEL)

School of Art, Humanities, Social Sciences and Public Service

Credential Description

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

Note: Once coursework is completed, students apply for the PA Director Credential through the PA Key Website.

Westmoreland does not award the Director Credential.

Credential Requirements

Students must achieve a grade of "C" in all courses to be accepted for the Director Credential. This program is eligible for funding through the Rising Stars Tuition Assistance Program.

Sugg. Term	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
Fall or Spring	ECE 155	Introduction to Early Childhood Education	3		
	ECE 156	Infant & Toddler Development	3		
	ECE 157	Child Growth and Development	3		
	ECE 165	Family and Society	3		
	ECE 166	Early Childhood Language and Literacy	3	ECE 155	
	ECE 167	Creative Experiences	3		
	ECE 168	Childcare Management	3		
	ECE 170	Child Health, Safety, and Nutrition	3		
	ECE 255	Early Childhood Education Curriculum	3	ECE 155	
	ECE 256	Assessment and Observation of Young Children	3		
	ECE 257	Introduction to Exceptional Development	3		
	ECE 265	Education of Young Children with Special Needs	3	ECE 257	
	ENG 250	Teaching English to Speakers of Other Languages	3		
	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	BUS 140	Introduction to Business	3		
	BUS 145	Excel for Business Environment	3		
	BUS 158	Principles of Management	3		
	BUS 188	Social Media in Business	3		
	BUS 241	Human Resources Management	3		
	BUS 245	Principles of Marketing	3		
	MUS 156	Early Childhood Music	3		
Minimum Program Credits			63		

Electronics Engineering Technology, AAS
School of Technology

Program Description

The Electronics Engineering Technology AAS Program 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	ELC 106	Circuit Analysis I	4	Co: MTH 104	
	4	MTH 104	Introduction to Applied Mathematics	4	MTH 050 or Placement	
	5	Elective	Social Science Elective	3	Varies	Page 42 Column III
1st Spring	6	ELC 102	Electronic Devices	4	ELC 106	
	7	ELC 107	Circuit Analysis II	4	ELC 106	
	8	ELC 114	Digital Techniques	4	ELC 106	
	9	MTH 108	Mathematics for Technologies I	4	MTH 104	
2nd Fall	10	ELC 202	Linear Electronics	4	ELC 102 & ELC 107	
	11	ELC 206	Microprocessors	4	ELC 114	
	12	ENG 162	Technical Communication	3	ENG 161	ENG 163 or ENG 164
	13	PHY 155	College Physics I	4	MTH 100 or MTH 108 and PHY 110 or HS Physics	
2nd Spring	14	DFT 258	AutoCAD	4		
	15	PHY 156	College Physics II	4	PHY 155	
	16	ELC 213	Microprocessor Applications	4	ELC 206	
	17	Elective	Restricted Elective	4	Varies	See List
Minimum Program Credits				62		EET

Restricted Electives: RBT 140; RBT 230; RBT 240; RBT 245

Engineering Technology, AAS
School of Technology

Program Description

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® 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	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	DFT 105	Technical Drafting I	4		
	3	MTH 157	College Algebra	3	MTH 100 or Placement	MTH 170
	4	EGR 101	Introduction to Engineering I	3	Co: MTH 104 or MTH 157	
	5	EGR 110	Descriptive Geometry	3		
	6	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
1st Spring	7	DFT 112	Introduction to Design, Materials and Processing	3		
	8	MTH 167	College Trigonometry	3	MTH 157 or Placement	MTH 170
	9	DFT 266	3D Solid Modeling I	4		
	10	EGR 104	Engineering Materials	3	EGR 101	
	11	ENG 162	Technical Communication	3	ENG 161	ENG 163 or ENG 164
2nd Fall	12	MTH 172	Analytical Geometry & Calculus I	4	MTH 109, MTH 167 or MTH 170 (C or better) or Placement	
	13	PHY 155	College Physics I	4	MTH 100 or MTH 108 and PHY 110 or HS Physics	
	14	DFT 258	AutoCAD	4		
	15	EGR 221	Statics & Strength of Materials	4	EGR 101	
2nd Spring	16	PHY 156	College Physics II	4	PHY 155	
	17	EGR 210	Quality Control	3	EGR 101 or Permission of Instructor; Co: MTH 172 or Permission of Instructor	
	18	EGR 227	Kinematics	3	EGR 101	
	19	Elective	Social Science	3	Varies	Page 42 Column III
Minimum Program Credits				62		ENT

Expanded Functions Dental Assisting, AAS

School of Health Professions

Program Description

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.

This is a selective admission program. Please see the college website for details.

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	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	DAS 100	Intro to Dental Assisting	4	Co: DAS 101, DAS 102, DAS 103, DAS 105, BIO 107	
	3	DAS 101	Oral Anatomy	2	Co: DAS 100, DAS 102, DAS 103, DAS 105, BIO 107	
	4	DAS 102	Dental Material for Dental Assisting	2	Co: DAS 100, DAS 101, DAS 103, DAS 105, BIO 107	
	5	DAS 103	Dental Assisting Lab	4	Co: DAS 100, DAS 101, DAS 102, DAS 105, BIO 107	
	6	DAS 105	Dental Rad for Dental Assisting	3	Co: DAS 100, DAS 101, DAS 102, DAS 103, BIO 107	
	7	BIO 107	Human Biology	3	Varies	BIO 171 or BIO 172
1st Spring	8	DAS 104	Dental Science	4	DAS 100, DAS 101, DAS 102, DAS 103, DAS 105, BIO 107; Co: DAS 106, ENG 161, PSY 160	
	9	DAS 106	CLN Dental Assisting I	5	DAS 100, DAS 101, DAS 102, DAS 103, DAS 105, BIO 107; Co: DAS 104, ENG 161, PSY 160	
	10	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	11	PSY 160	General Psychology	3		
1st Summer	12	DAS 108	Clinical Dental Assisting II	4	DAS 104, DAS 106, ENG 161, PSY 160; Co: DAS 109, SPC 156	
	13	DAS 109	Practice Management	2	DAS 104, DAS 106, ENG 161, PSY 160; Co: DAS 108, SPC 156	
	14	SPC 156	Interpersonal Communication	3		
2nd Fall	15	DAE 101	EFDA I	6	Co: DAE 100	
	16	CPT 150	Microcomputer Concepts	3		
	17	ENG 163	Business Communication	3	ENG 161	
2nd Spring	18	DAE 102	EFDA II	3	DAE 100, DAE 101	
	19	BUS 120	Mathematics of Business	3	MTH 050 or Placement	MTH 157 or MTH 161
Minimum Program Credits				61		EFD

Expanded Functions Dental Assisting, Certificate

School of Health Professions

Program Description

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.

This is a selective admission program. Please see the college website for details.

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.	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	DAE 100	Dental Anatomy	2	Co: DAE 101	DAS 101 or DAH 104
	3	DAE 101	EFDA I	6	Co: DAE 100	
	4	SPC 156	Interpersonal Communication	3		
Spring	5	DAE 102	EFDA II	3	DAE 100, DAE 101	
	6	CPT 150	Microcomputer Concepts	3		
Minimum Program Credits				18		EXFDA

Spring Start

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
Spring	1	PDV 101	First Year Seminar	1		
	2	DAE 100	Dental Anatomy	2		DAS 101 or DAH 104
	3	DAE 101	EFDA I	6	Co: DAE 100	
	4	SPC 156	Interpersonal Communication	3		
Summer	5	DAE 102	EFDA II	3	DAE 100, DAE 101	
	6	CPT 150	Microcomputer Concepts	3		
Minimum Program Credits				18		EXFDA

Forensic Science, AAS

School of Math, Science, and Engineering

Program Description

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.

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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 171	Career Pathway Exploration	3		
	2	FOR 110	Introduction to Forensic Biology	4		
	3	MTH 157	College Algebra	3	MTH 100 or Placement	
	4	CPT 150	Microcomputer Concepts	3		
	5	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
1st Spring	6	CHM 120	Chemical Lab and Safety	2		
	7	ALH 122	Medical Terminology	3		
	8	FOR 160	Introduction to Forensic Toxicology	4		
	9	BIO 171	Anatomy & Physiology I	4	CHM 107, CHM 150/151 or CHM 225 or HS Chemistry & ENG 095 or Placement	
	10	ENG 162	Technical Communication	3	ENG 161	
2nd Fall	11	MTH 160	Introduction to Statistics	3	MTH 052 or Placement	
	12	FOR 130	Introduction to Pathology	4		
	13	BIO 172	Anatomy & Physiology II	4	BIO 171 (C or better)	
	14	CRJ 155	Introduction to Criminal Justice	3		
	15	CRJ 163	Criminal Procedure	3		
2nd Spring	16	BIO 265	Microbiology	4	BIO 155 or BIO 171 and CHM 107, CHM 150/151, CHM 225 or HS chemistry (C or better), ENG 095 or Placement	
	17	CHM 199	Chemistry Internship I	3		
	18	CHM 225	Chemistry for the Health Sciences	4	Varies	CHM108
	19	CRJ 296	Introduction to Criminalistics	3		
	20	PHL 103	Ethics	3		
Minimum Program Credits				66		STF

Forensic Science, Certificate

School of Math, Science, and Engineering

Program Description

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.

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.	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	FOR 110	Introduction to Forensic Biology	4		
	3	FOR 130	Introduction to Pathology	4		
	4	CRJ 155	Introduction to Criminal Justice	3		
Spring	5	FOR 160	Introduction to Forensic Toxicology	4		
	6	CRJ 163	Criminal Procedure	3		
	7	CRJ 296	Introduction to Criminalistics	3		
Minimum Program Credits				22		FORSC

Health Professions, AAS
School of Health Professions

Program Description

The Health Professions AAS Degree is designed for students who are interested in a career in Nursing or Allied Health. Students will choose one of three tracks to fine-tune their studies. Completing the degree will give students a diploma in either Medical Assisting or Dental Assisting.

Program Learning Outcomes

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

- Demonstrate effective communication skills in writing, speaking, and listening.
- Demonstrate information processing through basic computer skills.
- Demonstrate problem-solving through interpreting, analyzing, summarizing, and/or integrating various materials.
- Apply knowledge of the professional role in academic, personal, and public situations.
- Think creatively to develop new ideas, processes, or products.

Continue to the next page(s) to view available tracks…

Track 1: Nursing, Surgical Technology
Track 2: Radiology
Track 3: Dental Professions

Health Professions, AAS

School of Health Professions

Track 1: Nursing, Surgical Technology

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ALH 122	Medical Terminology	3		
	3	BIO 171	Anatomy and Physiology I	4	CHM 107, CHM 150/151, CHM 225 or HS Chemistry (C or better) & ENG 095 or Placement	
	4	PHB 101	Clinical Phlebotomy	4		
1st Spring	5	BIO 172	Anatomy and Physiology II	4	BIO 171 (C or better)	
	6	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	7	CPT 150	Microcomputer Concepts	3		
	8	PSY 160	General Psychology	3		
	9	MTH Elec.	Restricted Math Elective	3-4	Varies	See List
Apply to the Medical Assisting Program						
2nd Fall	10	BIO 265	Microbiology	4	BIO 155 or BIO 171 and CHM 107, CHM 150/151, CHM 225 or HS Chemistry (C or better), ENG 095 or Placement	
	11	OFT 110	Document Processing	3	OFT 100 or Satisfactory Skills Test	
	12	MAS 100	Introduction to Medical Assisting	4		
	13	ENG 164	Advanced Composition	3	ENG 161	
2nd Spring	14	HCM 145	Medical Office Procedures	3		
	15	MAS 105	Administrative Procedures	3	MAS 100	
	16	MAS 110	Clinical Procedures	4	MAS 100	
	17	HCM 155	Introduction to Electronic Health Record	3		
2nd Summer	18	OFT 235	Customer Service	3		
	19	MAS 120	Practicum	3	MAS 105, MAS 110	
Minimum Program Credits				61-62		HPR

Math Electives (Consult with your Advisor for the best option)

Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Program
MTH 104	Introduction to Applied Mathematics	3	MTH 050 or Placement	Surgical Technology
MTH 157	College Algebra	3	MTH 100 (C or better) or Placement	Nursing
MTH 160	Introduction to Statistics	3	MTH 052 (C or better) or Placement	Nursing

Track 2: Radiology

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ALH 122	Medical Terminology	3		
	3	PHY 110	Fundamentals of Physics	3	MTH 052 or Placement	
	4	BIO 171	Anatomy and Physiology I	4	CHM 107, CHM 150/151, CHM 225 or HS Chemistry (C or better) & ENG 095 or Placement	
	5	CPT 150	Microcomputer Concepts	3		
1st Spring	6	BIO 172	Anatomy and Physiology II	4	BIO 171 (C or better)	
	7	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	8	PHB 101	Clinical Phlebotomy	4		
	9	MTH 157	College Algebra	3	MTH 100 (C or better) or Placement	
Apply to the Medical Assisting Program						
2nd Fall	10	PSY 160	General Psychology	3		
	11	OFT 110	Document Processing	3	OFT 100 or Satisfactory Skills Test	
	12	MAS 100	Introduction to Medical Assisting	4		
	13	ENG 162	Technical Communication	3	ENG 161	
2nd Spring	14	HCM 145	Medical Office Procedures	3		
	15	MAS 105	Administrative Procedures	3	MAS 100	
	16	MAS 110	Clinical Procedures	4	MAS 100	
	17	HCM 155	Introduction to Electronic Health Record	3		
2nd Summer	18	OFT 235	Customer Service	3		
	19	MAS 120	Practicum	3	MAS 105, MAS 110	
Minimum Program Credits				60		HPR

Track 3: Dental Professions

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ALH 122	Medical Terminology	3		
	3	BIO 171	Anatomy and Physiology I	4	CHM 107, CHM 150/151, CHM 225 or HS Chemistry (C or better) & ENG 095 or Placement	
	4	CHM 225	Chemistry for the Health Sciences	4	One year of HS chemistry (C or better), CHM 107 or CHM 150	
1st Spring	5	BIO 172	Anatomy and Physiology II	4	BIO 171 (C or better)	
	6	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	7	CPT 150	Microcomputer Concepts	3		
	8	PSY 160	General Psychology	3		
	9	SOC 155	Principles of Sociology	3		
Apply to the Dental Assisting Program						
2nd Fall	10	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	11	DAS 100	Introduction to Dental Assisting	4	Co: DAS 101, DAS 102, DAS 103, DAS 105, BIO 107	
	12	DAS 101	Oral Anatomy	2	Co: DAS 100, DAS 102, DAS 103, DAS 105, BIO 107	
	13	DAS 102	Dental Materials for Dental Assistants	2	Co: DAS 100, DAS 101, DAS 103, DAS 105, BIO 107	
	14	DAS 103	Dental Assistant Lab	4	Co: DAS 100, DAS 101, DAS 102, DAS 105, BIO 107	
	15	DAS 105	Dental Radiology for Dental Assistants	3	Co: DAS 100, DAS 101, DAS 102, DAS 103, BIO 107	
2nd Spring	16	DAS 104	Dental Science	4	DAS 100, DAS 101, DAS 102, DAS 103, DAS 105, BIO 107; Co: DAS 106, ENG 161, PSY 160	
	17	DAS 106	Clinical Dental Assisting I	5	DAS 100, DAS 101, DAS 102, DAS 103, DAS 105, BIO 107; Co: DAS 104, ENG 161, PSY 160	
	18	SPC 156	Interpersonal Communication	3		
2nd Summer	19	DAS 108	Clinical Dental Assisting II	4	DAS 104, DAS 106, ENG 161, PSY 160; Co: DAS 109, SPC 156	
	20	DAS 109	Practice Management	2	DAS 104, DAS 106, ENG 161, PSY 160; Co: DAS 108, SPC 156	
Minimum Program Credits				64		HPR

Healthcare Management, AAS

School of Technology

Program Description

The Healthcare Management AAS program 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 from the Healthcare Management AAS program 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:

- Analyze and record billing transactions and insurance claims using a computerized medical program.
- Apply correct coding techniques in billing and preparing insurance claims.
- Demonstrate electronic processing skills using computer software.
- Demonstrate proficiency with implementing medical insurance and electronic health regulations by using various software programs.
- Demonstrate proficiency in word processing, written communication, medical terminology, medical billing, coding, and reimbursement.

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		PDV 120
	2	BIO 107	Human Biology	3	Varies	BIO 171 & BIO 172
	3	CPT 150	Microcomputer Concepts	3		
	4	HCM 145	Medical Office Procedures	3		
	5	HCM 150	Introduction to Health Information	3		
	6	HCM 155	Introduction to Electronic Health Record	3		
1st Spring	7	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	8	HCM 130	A&P for Medical Office	3	BIO 107 or BIO 171 & BIO 172	
	9	HCM 165	Law & Ethics for Healthcare	3		
	10	HCM 250	Diagnostic Medical Coding	3	BIO 107 or BIO 171 & BIO 172	
	11	HCM 260	Procedural Medical Coding	3	BIO 107 or BIO 171 & BIO 172	
2nd Fall	12	BUS 140	Introduction to Business	3		BUS 158
	13	CIS 168	Principles of Information Security	3		
	14	HCM 270	Hospital Billing and Coding	3	BIO 107, HCM 130, HCM 250, HCM 260	
	15	HCM 285	Advanced Medical Coding	3	HCM 145, HCM 250, HCM 260 and 20 credit hours of HCM courses	
	16	HCM 299	Virtual Capstone	3	BIO 107 or BIO 171 and BIO 172, HCM 145, HCM 150, HCM 155, HCM 165, HCM 250, and HCM 260	BUS 241
2nd Spring	17	BUS 120	Mathematics of Business	3	MTH 050 or Placement	MTH 157 or MTH 161
	18	HCM 230	Revenue Cycle for Healthcare	3	HCM 145	
	19	ENG 163	Business Communication	3	ENG 161	ENG 162 or ENG 164
	20	Elective	Social Science	3	Varies	Page 42 Column III
	21	SPC 156	Interpersonal Communication	3		SPC 155
Minimum Program Credits				61		HCM2

Healthcare Management, Diploma
School of Technology

Program Description

The Healthcare Management Diploma program 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 Healthcare Management AAS program.

Career Opportunities

Graduates of the 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 using various software programs.
- Demonstrate proficiency using practice management and electronic health record software.
- 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	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		PDV 120
	2	BIO 107	Human Biology	3	Varies	BIO 171 & BIO 172
	3	CPT 150	Microcomputer Concepts	3		
	4	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	5	HCM 145	Medical Office Procedures	3		
	6	HCM 150	Introduction to Health Information	3		
Spring	7	BUS 120	Mathematics of Business	3	MTH 050 or Placement	MTH 157 or MTH 161
	8	HCM 230	Revenue Cycle for Healthcare	3	HCM 145	
	9	HCM 130	A&P for Medical Office	3	BIO 107 or BIO 171 & BIO 172	
	10	HCM 155	Introduction to Electronic Health Record	3		
	11	SPC 156	Interpersonal Communication	3		SPC 155
Minimum Program Credits				31		HCMG2

Healthcare Management, Certificate

School of Technology

Program Description

The 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 Healthcare Management Diploma and AAS.

Career Opportunities

Graduates from the Healthcare Management Certificate program 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 using various software programs.
- Demonstrate proficiency with implementing medical insurance and electronic health regulations by using various software programs.

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
Fall or Spring	1	PDV 101	First Year Seminar	1		PDV 120
	2	CPT 150	Microcomputer Concepts	3		
	3	CIS 168	Principles of Information Security	3		
	4	HCM 145	Medical Office Procedures	3		
	5	HCM 230	Revenue Cycle for Healthcare	3	HCM 145	
	6	HCM 150	Introduction to Health Information	3		
	7	HCM 155	Introduction to Electronic Health Record	3		
Minimum Program Credits				19		HCMGT2

Healthcare Management, Certificate

ADVANCED STANDING MEDICAL CODING

School of Technology

Program Description

The Healthcare Management, Advanced Standing Medical Coding Certificate is designed for current up-to-date licensed LPN, RN, BSN, MSN or other current up-to-date licensed personnel who are interested in medical coding. Course work combines current license, medical terminology and anatomy, international classification of disease (ICD-10-CM), current procedural coding (CPT-4), hospital billing/coding and advanced coding alongside either medical office procedures or electronic health records. Courses in this certificate may be applied toward the Healthcare Management Certificate, Diploma and AAS.

Career Opportunities

Graduates with the Healthcare Management, Advanced Standing Medical Coding Certificate may find employment as entry-level coders, case managers, and appeals processors with doctors' offices, outpatient facilities, inpatient facilities and insurance companies.

Program Learning Outcomes

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

- Apply correct coding techniques for ICD-10-CM, ICD-10-PCS, CPT-4 and HCPCS for medical charting and billing.
- Demonstrate skills in electronic processing and claims processing.
- Demonstrate proficiency and implement medical insurance and electronic health regulations by using various programs.

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
Fall	1	HCM 130	A&P for Medical Office	3	Adv Standing	
	2	HCM 145	Medical Office Procedures	3	Adv Standing	
	3	HCM 250	Diagnostic Medical Coding	3	Adv Standing	
	4	HCM 260	Procedural Medical Coding	3	Adv Standing	
Spring	5	HCM 270	Hospital Billing and Coding	3	BIO 107, HCM 130, HCM 250, HCM 260	
	6	HCM 285	Advanced Medical Coding	3	HCM 145, HCM 250, HCM 260 and 20 credit hours of HCM courses	
Minimum Program Credits				18		HCMCO2

Heating, Ventilation, Air Conditioning and Refrigeration, AAS

School of Technology

Program Description

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 learn 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.

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, salespersons, 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	HAC 257	Commercial Refrigeration	4		
	3	HAC 101	Introduction to Refrigeration/Air Conditioning	4		
	4	HAC 240	HVAC Duct Fabrication	2		
	5	HAC 175	Direct Digital Controls	2		
	6	HAC 280	Residential Wiring	3		
1st Spring	7	HAC 105	Blueprint Reading for HVAC Technicians	2		
	8	HAC 170	HVACR Control Systems	2		
	9	HAC 255	Air Conditioning/Heat Pumps	4		
	10	HAC 150	ACCA Manual J and Manual D Load Estimating	4		
	11	HAC 290	EPA Refrigerant Exam Preparation	3		
2nd Fall	12	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	13	HAC 250	Gas and Oil Heating Technology	4		
	14	HAC 256	Geothermal and Solar Technology	3		
	15	MTH 104	Introduction to Applied Mathematics	4	MTH 050 or Placement	
	16	Elective	Drafting (DFT courses)	3-4		
2nd Spring	17	DFT 258	AutoCAD	4		
	18	ENG 162	Technical Communication	3	ENG 161	ENG 163 or ENG 164
	19	HAC 260	Hydronics	4		
	20	Science	Science Elective	3-4	Varies	Page 42 Column V
	21	Elective	Social Science Elective	3	Varies	Page 42 Column III
Minimum Program Credits				65-67		HVA

Heating, Ventilation and Air Conditioning, Diploma
School of Technology

Program Description

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 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, salespersons, 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	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	HAC 101	Introduction to Refrigeration/Air Conditioning	4		
	3	HAC 240	HVAC Duct Fabrication	2		
	4	HAC 175	Direct Digital Controls	2		
	5	HAC 250	Gas and Oil Heating Technology	4		
	6	HAC 256	Geothermal and Solar Technology	3		
1st Spring	7	HAC 105	Blueprint Reading for HVAC Technicians	2		
	8	HAC 170	HVACR Control Systems	2		
	9	HAC 255	Air Conditioning/Heat Pumps	4		
	10	HAC 260	Hydronics	4		
	11	HAC 290	EPA Refrigerant Exam Preparation	3		
Minimum Program Credits				31		HVAC

Hospitality Management, AAS

School of Culinary Arts/Pastry Arts/Hospitality Management

Program Description

The Hospitality Management AAS Degree Program is planned to meet the industry needs of various levels of management positions in commercial food service operations such as restaurants, hotels, and resorts and non-commercial food service operations such as long-term care, retirement centers, nutrition programs for children and elderly, hospitals, and food service management companies. The program includes classroom and laboratory experiences and requires students to complete a capstone internship. Students are responsible for securing an internship site that meets the program requirements. This program accommodates both part-time and full-time students. Students are required to adhere to the department policies and procedures as stated in the School of Culinary Arts/Pastry Arts/Hospitality Management Student Handbook.

Requirements for the program include but are not limited to:

- Laboratory Uniform
- Tool Kit
- Business Attire
- Special attire may be required at the internship site
- Transportation to the internship site is required.

Graduates of this program are eligible to become members of the Association of Food and Nutrition Professionals and to complete the certification examination to become a Certified Dietary Manager (CDM) if they take the FSM 159 Nutrition or CUL 243 Nutritional Cooking and Baking course.

Career Opportunities

Graduates of the Hospitality Management Associate Degree program have accepted jobs with the following titles: general operations manager, catering manager, restaurant sales representative, restaurant manager, food purchasing agent, training and development specialist, front of the house manager, food service manager/supervisor, lodging operations manager, lodging assistant manager, concierge representatives, special event coordinator, sales manager, school food service manager and nutritional services manager/supervisor.

Program Learning Outcomes

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

- Apply organizational and communication skills in supervising food production.
- Implement cost control procedures applying mathematical concepts of profit and loss.
- Enforce and adhere to sanitation and safety standards.
- Write job descriptions, specifications and work schedules for employees.
- Design menus, analyze specialized meal patterns and write standardized recipes.
- Demonstrate the ability to work as part of a team.
- Evaluate food quality and meal acceptance.
- Utilize interpersonal skills to supervise staff and to communicate with the team.
- Procure and receive supplies and equipment.
- Retrieve and manage information using the latest technology.
- Utilize technology to plan, organize and document information.
- Utilize basic practical mathematical skills.
- Assist in the organization, development, implementation and evaluation systems.
- Practice the technical skills needed for successful daily operations.
- Analyze and apply marketing objectives and sales strategies to the operation necessary for the management of the facility.
- Analyze records, financial data, and systems of operation
- Identify and satisfy diverse customer expectations.

Continue to the next page…

Hospitality Management, AAS

School of Culinary Arts/Pastry Arts/Hospitality Management

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CUL 104	Foundations of Cooking and Baking	3		
	3	FSM 103	Introduction to the Hospitality Industry	3		
	4	FSM 170	Food Culture and Religion	3		
	5	FSM 118	Sanitation	2		
	6	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
1st Spring	7	FSM 215	Purchasing and Operations	3		
	8	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	9	CUL 105	Foods I	4	CUL 104	
	10	BUS 140	Intro to Business	3		
	11	FSM 113	Customer Service	3		
2nd Fall	12	CUL 220	Culinary Bistro	4	CUL 105	
	13	FSM 120	Wine Appreciation and Service	1		
	14	HMT 266	Event Management	3	FSM 103	
	15	FSM 117	Waitstaff/Dining Room Training	1		
	16	FSM 119	Beverage Management	1		
	17	HMT 262	Lodging and Property Management	3		CUL 243, FSM 159
	18	CPT 150	Microcomputer Concepts	3		
2nd Spring	19	BUS 188	Social Media in Business	3		
	20	FSM 235	Supervision and Training	3		
	21	FSM 219	Hospitality Internship	3	Permission of Instructor	
	22	ENG 163	Business Communication	3	ENG 161	ENG 164
	23	Elective	Social Science Elective	3	Varies	Page 42 Column III
Minimum Program Credits				62		HOS

Hospitality Management, Diploma

School of Culinary Arts/Pastry Arts/Hospitality Management

Program Description

The Hospitality Management Diploma program is designed to prepare students for mid-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, and management. Business attire may be required for some classes.

Career Opportunities

Graduates of the hospitality management diploma program may accept positions as restaurant industry shift manager, food production manager, lodging industry supervisor, and dietary supervisor.

Program Learning Outcomes

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

- Identify procedures and responsibilities of departmental teams with a hospitality operation.
- Identify and satisfy diverse customer expectations.
- Demonstrate sound practices of sanitation and safety.
- Utilize technology to maintain systems of operation.
- Evaluate and write menus, purchase orders and inventories.
- Coordinate a hospitality team.
- Identify foods and prepare according to recipe.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CUL 104	Foundations of Cooking and Baking	3		
	3	FSM 103	Introduction to the Hospitality Industry	3		
	4	FSM 118	Sanitation	2		
	5	CPT 150	Microcomputer Concepts	3		
1st Spring	6	FSM 215	Purchasing and Operations	3		
	7	FSM 113	Customer Service	3		
	8	CUL 105	Foods I	4	CUL 104	
	9	FSM 235	Supervision and Training	3		
2nd Fall	10	CUL 220	Culinary Bistro	4	CUL 105	
	11	HMT 266	Event Management	3	FSM 103	
	12	FSM 117	Waitstaff/Dining Room Training	1		
	13	FSM 119	Beverage Management	1		FSM 120
Minimum Program Credits				34		HOSP

Hospitality Management, Certificate

School of Culinary Arts/Pastry Arts/Hospitality Management

Program Description

The Hospitality Management Certificate Program is designed to prepare students for entry-levels of supervisory positions in the hospitality industry. Emphasis is given to the development of hospitality knowledge and skills in essential areas such as sanitation, customer service, and management. Business attire may be required for some classes.

Career Opportunities

Graduates of the hospitality management certificate program may accept positions as restaurant industry shift supervisor, dining room manager, lodging industry shift supervisor, and dietary shift supervisor.

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 in systems of operation.
- Evaluate menus to maintain purchase orders and inventories.
- Assist with coordination of a hospitality team.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	FSM 103	Introduction to the Hospitality Industry	3		
	3	FSM 118	Sanitation	2		
	4	FSM 117	Waitstaff/Dining Room Training	1		
Spring	5	FSM 113	Customer Service	3		
	6	FSM 215	Purchasing and Operations	3		
	7	FSM 235	Supervision and Training	3		
Minimum Program Credits				16		HOSTM2

Integrated Studies, Certificate

School of Art, Humanities, Social Sciences and Public Service

Program Description

The Integrated Studies Certificate is a vocation-focused program that equips students with entry-level knowledge and career readiness skills to be successful in employment in the technical pathway of their choice. Students in this program study a balanced curriculum of technical training courses in the pathway they choose, personal development courses focused on career readiness, and general education courses to make them well-rounded candidates for employment. Graduates of this program will be prepared to enter competitive employment in entry-level positions and/or move on to complete additional education.

Career Opportunities

Graduates of this program may accept jobs in entry-level positions in pastry arts; culinary arts; early childhood education; heating, ventilation, air conditioning, and refrigeration; office administration; plumbing; security professional; or social work.

Special Admission Requirements

The Integrated Students certificate is a special admission program. Students interested in pursuing the Integrated Studies certificate must apply and be accepted into the RISE program. For more information about the admission process, go to https://westmoreland.edu/academics/academic-services/rise-program.html.

Program Learning Outcomes

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

- Demonstrate basic skills and knowledge in the technical training pathway of their choice.
- Effectively use written and oral communication skills.
- Employ skills necessary to work with a team.
- Utilize technology to effectively complete tasks.
- Exhibit critical thinking skills, responsible decision-making, and personal accountability.
- Demonstrate effective time management, problem-solving, and other soft skills necessary for employment success.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101A	First Year Seminar with Foundations	2		
	2		Technical Pathway Course*	Varies		
	3	Restricted Elective	Restricted Elective*	3		
1st Spring	4	PDV 120	Career Development	1		
	5		Technical Pathway Course*	Varies		
	6	Restricted Elective	Restricted Elective*	3		
2nd Fall	7	PDV 130	Workforce Readiness	1		
	8		Technical Pathway Course*	Varies		
	9	Restricted Elective	Restricted Elective*	3		
2nd Spring	10	PDV 140	Work-Based Learning	2	Permission of Instructor	
	11		Technical Pathway Course*	Varies		
	12	Restricted Elective	Restricted Elective*	3		
Minimum Program Credits				30-33		INTST

Restricted Elective* use the next page to select eligible courses.

Technical Pathway Course* use the next page to select a Technical Pathway. Students will need to select one of the technical pathways and complete all courses for that pathway in the sequence in which they are listed.

RISE Integrated Studies Program participants, regardless of courses or certificate, will be assessed a non-lab fee of $6,500 per semester.

Restricted Electives:

ART 140 Inventive Drawing
ART 142 Typography
ART 143 Printmaking
ART 160 2D Design
ART 162 Drawing I
ART 163 Drawing II
ART 165 Painting I
ASL 101 ASL I
ASL 102 ASL II
BIO 120 Environmental Issues
BIO 210 Zoology
BUS 140 Introduction to Business
BUS 188 Social Media in Business
BUS 240 Techniques of Selling
BUS 262 Entrepreneurship
CPT 145 Introduction to Computer Technology
CPT 150 Microcomputer Concepts
CRJ 155 Introduction to Criminal Justice
CUL 104 Found of Cooking and Baking
ECE 156 Infant & Toddler Development
ECE 157 Child Growth and Development
ECE 170 Child Health, Safety, and Nutrition
ENG 165 Creative Writing
ENG 255 Introduction to Literature
GCT 115 Design & Layout I
GCT 126 Motion Graphics
GCT 131 Type & Publishing I
GCT 161 Creative Imaging I
HIS 155 Early Western Civilization
HIS 156 Modern Western Civilization
HIS 255 Early US History
HIS 256 Modern US History
OFT 110 Document Processing
PHL 101 Introduction to Philosophy
PHL 102 Critical Thinking
PHL 103 Ethics
POL 155 American National Government
PSY 160 General Psychology
PSY 161 Human Growth and Development
SOC 155 Principles of Sociology
SPC 155 Effective Speech
SPC 156 Interpersonal Communication
VPP 100 Basic Video
VPP 120 History of Cinema
VPP 150 Video Editing
VPP 160 Basic Photography
VPP 170 Digital Compositing and Photography
VPP 240 Sound Design

Technical Pathways:

Students will select one of the technical pathways and complete all courses for that pathway in the sequence in which they are listed below.

Pastry Arts Pathway: 12
FSM 118 Sanitation - 2
CUL 104 Foundations of Cooking and Baking - 3
BKP 141 Baking I - 4
BKP 245 Decorating Techniques - 3

Culinary Pathway: 12
FSM 118 Sanitation - 2
CUL 104 Foundations of Cooking and Baking - 3
CUL 105 Foods I - 4
CUL 132 Garde Manger - 3

Early Childhood Education Pathway: 12
ECE 170 Child Safety, Health, and Nutrition - 3
ECE 165 Family and Society - 3
ECE 156 Infant and Toddler Development - 3
ECE 157 Child Growth and Development - 3

Heating, Ventilation, Air Conditioning and Refrigeration: 15
HAC 101 Introduction to Refrigeration/Air Conditioning - 4
HAC 255 Air Conditioning/Heat Pumps - 4
HAC 250 Gas and Oil Heating Technology - 4
HAC 290 EPA Refrigerant Exam Preparation - 3

Office Administration Pathway: 12
OFT 110 Document Processing - 3
BUS 140 Introduction to Business - 3
CPT 150 Microcomputer Concepts - 3
OFT 235 Customer Service - 3

Plumbing Pathway: 14
PMB 101 Plumbing I - 4
CMT 101 Related Trades - 4
CMT 121 Contracts for the Tradesman - 2
PMB 250 Advanced Plumbing Techniques - 4

Security Professional Pathway: 12
CRJ 155 Introduction to Criminal Justice - 3
CRJ 263 Investigative Concepts - 3
CRJ 296 Criminalistics - 3
CRJ 287 Multiculturalism and the CRJ System - 3

Social Work Pathway:
SWK 155 Introduction to Social Work - 3
SWK 157 Interviewing and Record-Keeping - 3
SWK 160 Group Process - 3
SWK 170 Race and Diversity or SWK 171 Gerontology or SWK 172 Drug and Alcohol Dependency - 3

Journeyman Machining Technology, AAS

School of Technology

Program Description

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	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CNC 111	Computer Numerical Control I	4		
	3	MTT 101	Blueprints	4		
	4	MTT 111	Machining I	4		
	5	MTH 104	Introduction to Applied Mathematics	4	MTH 050 or Placement	
1st Spring	6	CNC 112	Computer Numerical Control II	4	CNC 111; Co: MTH 104	
	7	DFT 258	AutoCAD	4		
	8	MTT 112	Machining II	4	MTT 111; Co: MTH 104	
	9	MTH 108	Mathematics for Technologies I	4	MTH 104 or Placement	
2nd Fall	10	CNC 213	Computer Numerical Control III	4	CNC 112	
	11	MTT 207	Tool Design	3	MTT 111 and CNC 111	
	12	MTT 201	Inspection	3	MTT 101	
	13	Elective	Restricted Elective	4	Varies	See List
	14	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
2nd Spring	15	ENG 162	Technical Communication	3	ENG 161	
	16	DFT 112	Introduction to Design, Materials, and Processing	3		
	17	MTT 202	Maintenance	3	MTT 111	
	18	Elective	Restricted Elective	4	Varies	See List
	19	Elective	Social Science Elective	3	Varies	Page 42 Column III
Minimum Program Credits				66		JRM

Restricted Electives: CNC 214; DFT 266; MTT 213; MTT 214; WEL 125;
Courses with Prefix: DFT, RBT, ELC, EGR, HAC, MET, PHY, WEL (Prefix courses must be approved and meet credit requirements.)

Journeyman Machining Technology, Diploma
School of Technology

Program Description

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 set up 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CNC 111	Computer Numerical Control I	4		
	3	MTT 101	Blueprints	4		
	4	MTT 111	Machining I	4		
	5	MTH 104	Introduction to Applied Mathematics	4	MTH 050 or Placement	
1st Spring	6	CNC 112	Computer Numerical Control II	4	CNC 111; Co: MTH 104	
	7	MTT 207	Tool Design	3	MTT 111 and CNC 111	
	8	MTT 202	Maintenance	3	MTT 111	
	9	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	10	DFT 112	Introduction to Design, Materials, and Processing	3		
Minimum Program Credits				33		JOUR

Legal Studies/Paralegal, AAS

School of Art, Humanities, Social Sciences and Public Service

Program Description

The Legal Studies/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	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	CPT 150	Microcomputer Concepts	3		
	4	LAS 101	The Legal Assistant	3		
	5	LAS 111	Legal Analysis	3		
	6	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
1st Spring	7	ENG 163	Business Communication	3	ENG 161	
	8	PHL 102	Critical Thinking	3		
	9	LAS 115	Torts	3	LAS 101 & LAS 111	
	10	LAS 125	Litigation I	3	LAS 101 & LAS 111	
	11	LAS 210	Legal Writing	3	ENG 161 & LAS 111	
Summer	12	LAS 140	Domestic Relations	3	LAS 101 & LAS 111	
2nd Fall	13	LAS 120	Estates and Trusts	3	LAS 101 & LAS 111	
	14	LAS 215	Legal Research	3	LAS 210	
	15	CRJ 160	Criminal Law I	3		
	16	RLS 210	Laws of Real Estate	3		
	17	Elective	Social Science Elective	3	Varies	Page 42 Column III
2nd Spring	18	Elective	Restricted Elective	3	Varies	See List
	19	LAS 200	Constitutional Law	3		
	20	LAS 293	Internship	3	Permission of Instructor	
	21	Elective	Restricted Elective	3	Varies	See List
Minimum Program Credits				61		LEA

Restricted Electives: ACC 155; BUS 205; BUS 249; CRJ 163; CRJ 261; CRJ 263; OFT 110

Legal Studies/Paralegal, Diploma

School of Art, Humanities, Social Sciences and Public Service

Program Description

The Legal Studies/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.	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	RLS 210	Laws of Real Estate	3		
	4	LAS 101	The Legal Assistant	3		
	5	LAS 111	Legal Analysis	3		
Spring	6	LAS 210	Legal Writing	3	ENG 161 & LAS 111	
	7	LAS 125	Litigation I	3	LAS 101 & LAS 111	
	8	Elective	Social Science Elective	3	Varies	Page 42 Column III
	9	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
Fall	10	LAS 215	Legal Research	3	LAS 210	
	11	CPT 150	Microcomputer Concepts	3		
	12	Elective	Restricted Elective	3	Varies	See List
Minimum Program Credits				34		LEAS

Restricted Electives: ACC 155; BUS 205; BUS 249; CRJ 163; CRJ 255; CRJ 263; OFT 110

Medical Assisting, Diploma
School of Health Professions

Program Description

The Medical Assisting Diploma program is designed to prepare medical assistants who are competent in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains to enter the professions. The Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB). The Medical Assisting program prepares you to assist healthcare providers with the care and treatment of patients in administrative, clinical and laboratory procedures. Graduates are eligible to apply to national certification examinations including the Certified Clinical Medical Assistant (CCMA), Certified Medical Assistant (CMA), Registered Medical Assistant (RMA) and Registered Phlebotomy Technician (RPT) credentials.

This is a selective admission program. Please see the college website for details.

Program Learning Outcomes

Upon successful completion of 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 physicians 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	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	HCM 155	Electronic Health Records	3		
	3	BIO 107	Human Biology	3	Varies	BIO 171 & BIO 172
	4	CPT 150	Microcomputer Concepts	3		
	5	MAS 100	Introduction to Medical Assisting	4		
Spring	6	ALH 122	Medical Terminology	3		
	7	PSY 160	General Psychology	3		
	8	HCM 145	Medical Office Procedures	3		
	9	MAS 105	Administrative Procedures	3	MAS 100	
	10	MAS 110	Clinical Procedures	4	MAS 100	
Summer	11	OFT 235	Customer Service	3		
	12	MAS 120	Practicum	3	MAS 105, MAS 110	
Minimum Program Credits				36		MEAS

Nanotechnology, AAS

School of Math, Science and Engineering

Program Description

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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 171	Career Pathway Exploration	3		
	2	MPT 101	Introduction to Nanotechnology	1		
	3	MTH 157	College Algebra	3-4	MTH 100 or Placement	MTH 167, MTH 172, MTH 173, MTH 271, MTH 272, MTH 275, MTH 277, MTH 108, or MTH 109
	4	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	5	CHM 107	Intro. Concepts in Chemistry I	4	MTH 052 or Placement	CHM 108, CHM 150/151, CHM 160/161, or CHM 225
1st Spring	6	ENG 162	Technical Communication	3	ENG 161	ENG 164
	7	CPT 145	Introduction to Computer Technology	3	Varies	CPT 150, CPT 160, DFT 258, or DFT 266
	8	PHY 107	Applied Physics	4	MTH 100, MTH 108, or Placement	PHY 155, PHY 156, PHY 255, or PHY 256
	9	Elective	Restricted Program Elective	3-4		
	10	Elective	Restricted Program Elective	3-4		
2nd Fall	11	SOC 155	Principles of Sociology	3	Varies	PSY 160, ECN 255, ECN 256, or GEO 155
	12	PHL 202	Logic	3	ENG 161	PHL 103, SPC 155, or SPC 156
	13	Elective	Restricted Program Elective	3-4		
	14	Elective	Restricted Program Elective	3-4		
2nd Spring	15	MPT 211	Material Safety & Equipment Overview	3	MTH 157 & ENG 161	
	16	MPT 212	Basic Nanotechnology Processes	3	MTH 157 & ENG 161	
	17	MPT 213	Materials in Nanotechnology	3	MTH 157 & ENG 161	
	18	MPT 214	Patterning For Nanotechnology	3	MTH 157 & ENG 161	
	19	MPT 215	Materials Modification for Nano Applications	3	MTH 157 & ENG 161	
	20	MPT 216	Testing of Nano Structures and Materials	3	MTH 157 & ENG 161	

Minimum Program Credits 60-65* NNT

*This program requires at least 60 credits. Courses taken to fulfill Restricted Program Electives may not also be used to fulfill other course requirements within the program. Restricted Program Electives: ALH 122; BIO 107; BIO 145; BIO 155; BIO 156; BIO 171; BIO 172; BIO 210; BIO 255; BIO 265; BIO 285; BUS 158; BUS 262; CHM 107; CHM 108; CHM 150/151; CHM 160/161; CHM 260/261; CHM 270/271; CHM 225; CHM 275; CPT 145; CPT 150; CPT 160; CPT 163; CPT 180; CPT 182; CPT 213; DFT 112; EGR 104; EGR 210; EGR 221; EGR 227; ELC 102; ELC 106; ELC 107; ELC 114; ELC 202; ELC 206; ELC 213; MTH 160; PHY 107; PHY 155; PHY 156; PHY 255; PHY 256; PHY 258; PHY 259;

Nuclear Medicine Technology, AAS
School of Health Professions

Program Description

The Nuclear Medicine Technology AAS Program trains individuals to become professionals skilled in using radioactive materials and specialized equipment to diagnose and treat diseases. The program prepares students for a career as a nuclear medicine technologist, focusing on the safe handling of radioactive substances, operating advanced imaging equipment, and working closely with patients and healthcare teams.

Career Opportunities

Graduates of a Nuclear Medicine Technology Program typically find roles in hospitals, diagnostic imaging centers, research institutions, and outpatient care facilities. The programs equip students with the technical, medical, and interpersonal skills needed to succeed in a high-demand healthcare field.

This is a selective admission program. Please see the college website for details.

Program Learning Outcomes

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

1. Foundational Knowledge:
   - Understand the principles of nuclear physics, radiation, and radiopharmaceutical chemistry.
   - Explain human anatomy, physiology, and pathology as they relate to nuclear medicine procedures.
   - Understand the biological effects of radiation on human tissue.

2. Technical Proficiency:
   - Operate and maintain nuclear medicine equipment, including gamma cameras, PET/CT scanners, and dose calibrators.
   - Accurately prepare, handle, and administer radiopharmaceuticals.
   - Perform imaging and non-imaging procedures, such as PET scans, SPECT scans, and organ function tests.

3. Safety and Compliance:
   - Apply radiation safety principles to protect patients, staff, and the public from unnecessary exposure.
   - Comply with federal, state, and institutional regulations regarding the use of radioactive materials.
   - Safely manage the storage and disposal of radioactive substances.

4. Patient Care and Communication:
   - Provide compassionate and culturally competent care to diverse patient populations.
   - Communicate effectively with patients to explain procedures, address concerns, and ensure cooperation.
   - Monitor patients for adverse reactions and respond appropriately to emergencies.

5. Analytical and Problem-Solving Skills:
   - Evaluate diagnostic images and data for quality and accuracy.
   - Collaborate with healthcare teams to analyze results and contribute to patient diagnoses and treatment plans.
   - Troubleshoot technical issues with equipment and procedures.

6. Professionalism and Ethics:
   - Demonstrate ethical decision-making and maintain patient confidentiality.
   - Exhibit professionalism in interactions with patients, colleagues, and other healthcare professionals.
   - Commit to lifelong learning and staying current with advancements in nuclear medicine technology.

7. Clinical Competence:
   - Perform clinical procedures independently under supervision during internships or practicums.
   - Document patient and procedure data accurately and efficiently.
   - Adhere to best practices and protocols to ensure high-quality outcomes.

8. Certification and Career Readiness
   - Prepare for national certification exams such as the NMTCB (Nuclear Medicine Technology Certification Board) or ARRT (American Registry of Radiologic Technologists).
   - Develop the skills necessary for employment in hospitals, diagnostic imaging centers, or research facilities.

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Nuclear Medicine Technology, AAS
School of Health Professions

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
Prior to Program Start	1	BIO 171	Anatomy and Physiology I	4	CHM 107, CHM 150/151, CHM 225 or HS Chemistry & ENG 095 or Placement	
1st Fall	2	NMT 100	Introduction to Nuclear Medicine	1	Admission to Program, BIO 171(C or better)	
	3	ALH 122	Medical Terminology	3		
	4	BIO 172	Anatomy and Physiology II	4	BIO 171 (C or better)	
	5	NMT 102	Applied Nuclear Medicine - PET Technology I	4	Admission to Program, BIO 171 (C or better)	
	6	NMT 104	Nuclear Medicine - PET Instrumentation I	3	Admission to Program	
1st Spring	7	NMT 150	Nuclear Medicine - PET Physics	3	NMT 100, HS Physics (C or better), or PHY 107(C or better), or PHY 110 (C or better)	
	8	MTH 157	College Algebra	3	MTH100 or Placement	
	9	NMT 154	Nuclear Medicine - PET Instrumentation II	3	NMT 104	
	10	NMT 152	Applied Nuclear Medicine - PET Technology II	4	NMT 102; Co: NMT 150	
	11	NMT 165	Clinical Nuclear Medicine Education I	4	Co: NMT 152	
1st Summer	12	NMT 175	Clinical Nuclear Medicine Education II	3	NMT 165	
	13	NMT 185	Clinical Nuclear Medicine Education III	3	NMT 175	
2nd Fall	14	CPT 150	Microcomputer Concepts	3		
	15	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	16	PSY 160	General Psychology	3		
	17	NMT 202	Applied Nuclear Medicine - PET Technology III	4	NMT 152	
	18	NMT 215	Clinical Nuclear Medicine Education IV	4	NMT 185	
2nd Spring	19	PHL 203	Biomedical Ethics	3		
	20	RAD 221	Radiographic Pathology	3	RAD 211, RAD 216	
	21	NMT 265	Clinical Nuclear Medicine Education V	5	NMT 215	
	22	RAD 231	Nuclear Medicine Technology - PET Capstone	1	RAD 211, RAD 216; Co: RAD 221, RAD 226	
	23	SPC 156	Interpersonal Communication	3		
Minimum Program Credits				74		NMT

Nuclear Medicine Technology, Diploma
School of Health Professions

Program Description

The Nuclear Medicine Technology Diploma Program trains individuals to become professionals skilled in using radioactive materials and specialized equipment to diagnose and treat diseases. The program prepares students for a career as a nuclear medicine technologist, focusing on the safe handling of radioactive substances, operating advanced imaging equipment, and working closely with patients and healthcare teams.

Career Opportunities

Graduates of the Nuclear Medicine Technology Program typically find roles in Hospitals, Diagnostic imaging centers, Research institutions, and Outpatient care facilities. The programs equip students with the technical, medical, and interpersonal skills needed to succeed in a high-demand healthcare field.

This is a selective admission program. Please see the college website for details.

Program Learning Outcomes

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

1. Foundational Knowledge:
   - Understand the principles of nuclear physics, radiation, and radiopharmaceutical chemistry.
   - Explain human anatomy, physiology, and pathology as they relate to nuclear medicine procedures.
   - Understand the biological effects of radiation on human tissue.

2. Technical Proficiency
   - Operate and maintain nuclear medicine equipment, including gamma cameras, PET/CT scanners, and dose calibrators.
   - Accurately prepare, handle, and administer radiopharmaceuticals.
   - Perform imaging and non-imaging procedures, such as PET scans, SPECT scans, and organ function tests.

3. Safety and Compliance:
   - Apply radiation safety principles to protect patients, staff, and the public from unnecessary exposure.
   - Comply with federal, state, and institutional regulations regarding the use of radioactive materials.
   - Safely manage the storage and disposal of radioactive substances.

4. Patient Care and Communication:
   - Provide compassionate and culturally competent care to diverse patient populations.
   - Communicate effectively with patients to explain procedures, address concerns, and ensure cooperation.
   - Monitor patients for adverse reactions and respond appropriately to emergencies.

5. Analytical and Problem-Solving Skills:
   - Evaluate diagnostic images and data for quality and accuracy.
   - Collaborate with healthcare teams to analyze results and contribute to patient diagnoses and treatment plans.
   - Troubleshoot technical issues with equipment and procedures.

6. Professionalism and Ethics:
   - Demonstrate ethical decision-making and maintain patient confidentiality.
   - Exhibit professionalism in interactions with patients, colleagues, and other healthcare professionals.
   - Commit to lifelong learning and staying current with advancements in nuclear medicine technology.

7. Clinical Competence:
   - Perform clinical procedures independently under supervision during internships or practicums.
   - Document patient and procedure data accurately and efficiently.
   - Adhere to best practices and protocols to ensure high-quality outcomes.

8. Certification and Career Readiness
   - Prepare for national certification exams such as the NMTCB (Nuclear Medicine Technology Certification Board) or ARRT (American Registry of Radiologic Technologists).
   - Develop the skills necessary for employment in hospitals, diagnostic imaging centers, or research facilities.

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Nuclear Medicine Technology, Diploma
School of Health Professions

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
Prior to Program Start	1	Certification in Radiography, Radiation Therapy or Nursing. Bachelor's degree in Science or Mathematics				
1st Fall	2	NMT 102	Applied Nuclear Medicine - PET Technology I	4	Admission to Program, BIO 171 (C or better)	
	3	ALH 122	Medical Terminology	3		
	4	NMT 150	Nuclear Medicine - PET Physics	3	NMT 100, HS Physics (C or better), or PHY 107 (C or better), or PHY 110 (C or better)	
	5	NMT 104	Nuclear Medicine - PET Instrumentation I	3	Admission to Program	
	6	NMT 165	Clinical Nuclear Medicine Education I	4	Co: NMT 152	
1st Spring	7	NMT 152	Applied Nuclear Medicine - PET Technology II	3	NMT 102; Co: NMT 150	
	8	NMT 154	Nuclear Medicine - PET Instrumentation II	4	NMT 104	
	9	RAD 211	Radiation Biology and Protection, Radiologic Procedures III, and Career Prep	4	RAD 215, RAD 255	
	10	NMT 175	Clinical Nuclear Medicine Education II	3	NMT 165	
1st Summer	11	NMT 185	Clinical Nuclear Medicine Education III	3	NMT 175	
	12	NMT 215	Clinical Nuclear Medicine Education IV	4	NMT 185	

Minimum Program Credits 38 NUMT

Nurse Aide, Certificate
School of Health Professions

Program Description

The Nurse Aide Certificate Program prepares students with the essential skills and knowledge needed to provide direct patient care in a variety of healthcare settings, including hospitals, nursing homes, and home health agencies. This program includes classroom instruction, laboratory practice, and supervised clinical experiences to ensure students are well-prepared for real-world patient care.

Career Opportunities

A Nurse Aide (NA) has a variety of career opportunities in the healthcare field, often depending on their interests, additional certifications, and willingness to pursue further education. Here are some common opportunities in areas such as Hospitals, Long-Term Care Facilities, Home Healthcare, and Clinics.

Program Learning Outcomes

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

1. Assist patients with daily living activities such as bathing, dressing, and feeding.
2. Take and record vital signs, including blood pressure, pulse, and temperature.
3. Demonstrate proper infection control and safety procedures.
4. Communicate effectively with patients, families, and healthcare teams.
5. Provide compassionate and professional patient care under the supervision of a licensed nurse.
6. Qualify to take the state certification exam for Nurse Aides (CNA).

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
ANY	1	NAA 100	Nursing Assistant Skills I	7	Acceptance into Nurse Aide Program	
	2	ALH 122	Medical Terminology	3		
	3	PHB 101	Clinical Phlebotomy	4	Co: ALH 122	
	4	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
Minimum Program Credits				17		CNADE

Nursing, Practical Nursing Diploma
School of Health Professions

Program Description

Westmoreland County Community College Practical Nursing program provides the academic and clinical preparation necessary to start a career in entry-level nursing positions. Upon completion of the practical nurse diploma program, graduates meet the first step in eligibility to sit for the National Council Licensure Examination (NCLEX-PN) leading to the licensure to practice nursing as a licensed practical nurse (LPN). Nursing students are equipped with the basic skills needed to assess clinical scenarios, navigate patient interactions and work collaboratively with other healthcare professionals to improve patient outcomes. Enrollment is limited by the clinical placement necessary to complete the nursing course requirements.

The Practical Nursing Program is approved by the Pennsylvania State Board of Nursing. State Board of Nursing P.O. Box 2649 Harrisburg, PA 17105-2649, phone: 1-833-DOS-BPOA, ST-NURSE@pa.gov

The Practical Nursing program utilizes Standardized Testing to benchmark student performance.

This is a selective admission program. Please see the college website for details.

Program Learning Outcomes

The graduate of the Practical Nursing Diploma Program is prepared to assume the role of the practical nurse in various environments. The program is designed to prepare the graduate to:
Caring (QSEN: Patient Centered Care)
1. Provide safe, quality, evidenced-based, patient-centered care with respect for diversity across the lifespan.
Competency (QSEN: Safety)
2. Implement technical aspects of care by following standards of safe, professional practice.
Communication (QSEN: Teamwork and Collaboration)
3. Implement therapeutic and professional communication when participating in the collaborative care of patients and their families.
Clinical Judgement (QSEN: Evidence Based Practice and Informatics)
4. Use the nursing process, critical thinking, and clinical reasoning to manage patient care.
5. Use information technologies to coordinate safe care for individuals and their families.
Commitment (QSEN: Quality Improvement)
6. Incorporate nursing actions within the legal and ethical framework of nursing practice by conducting self in a civil and professional manner.

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
Spring	1	NPN 101	Practical Nursing I	9	HS Level BIO and CHM with Labs; or Equivalent with a C or better. Co: BIO 171, CPT 150	
	2	BIO 171	Anatomy & Physiology I	4	CHM 107, CHM 150/151, CHM 225 or HS Chemistry (C or better) and ENG 095 or Placement	
	3	CPT 150	Microcomputer Concepts	3		
Summer	4	NPN 151	Practical Nursing II	9	NPN 101; Co: PSY 160, BIO 172	
	5	BIO 172	Anatomy & Physiology II	4	BIO 171 (C or better)	
	6	PSY 160	General Psychology	3		
Fall	7	NPN 201	Practical Nursing III	12	NPN 151, PSY 160, BIO 172; Co: ENG 161	
	8	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	

Minimum Program Credits 47 NPN

Nursing, AAS
School of Health Professions

Program Description

Westmoreland County Community College Associate Degree Nursing program provides the academic and clinical preparation necessary to start a career in entry-level nursing positions. Upon completion of the associate degree program, graduates meet the first step in eligibility to sit for the National Council Licensure Examination (NCLEX-RN) leading to the licensure to practice nursing as a registered nurse (RN). Nursing students are equipped with the skills needed to assess clinical scenarios, navigate patient interactions and work collaboratively with other healthcare professionals to improve patient outcomes. Enrollment is limited by the clinical placement necessary to complete the nursing course requirements.

The Associate Degree Nursing Program is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta GA 30326; phone 404-975-5000, acenursing.org .The ACEN is responsible for the specialized accreditation of nursing education programs and is nationally recognized as a specialized accrediting agency for both postsecondary and higher degree programs in nursing education. The Associate Degree Nursing Program is approved by the Pennsylvania State Board of Nursing. State Board of Nursing P.O. Box 2649 Harrisburg, PA 17105-2649, phone: 1-833-DOS-BPOA, ST-NURSE@pa.gov

The Nursing program utilizes Standardized Testing to benchmark student performance.

This is a selective admission program. Please see the college website for details.

Program Learning Outcomes

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

Caring (QSEN: Patient Centered Care)

1. Provide safe, quality, evidenced-based, patient centered care with respect for diversity across the lifespan.

Competency (QSEN: Safety)

2. Implement technical aspects of care by following the standards of safe, professional practice.

Communication (QSEN: Teamwork and Collaboration)

3. Implement therapeutic and professional communication when participating in the collaborative care of patients and their families.

Clinical Judgment (QSEN: Evidence-Based Practice and Informatics)

4. Use the nursing process, critical thinking, and clinical reasoning to manage patient care.
5. Use information technologies to coordinate safe care for individuals and their families.

Commitment (QSEN: Quality Improvement)

6. Incorporate nursing actions within the legal and ethical framework of nursing practice by conducting self in a civil and professional manner.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
Required Before Program Start		BIO 171	Anatomy & Physiology I	4	CHM 107, CHM 150/151, CHM 225 or HS Chemistry and ENG 095 or Placement	
		CPT 150	Microcomputer Concepts	3		
1st Fall	1	BIO 172	Anatomy & Physiology II	4	BIO 171 (C or better)	
	2	NSG 112	Introduction to Professional Nursing and Health Promotion Across The Lifespan	3	BIO 171, CPT 150; Co: BIO 172, NSG 114, NSG 116	
	3	NSG 114	Health and Physical Assessment	3	BIO 171, CPT 150; Co: BIO 172	
	4	NSG 116	Foundations of Nursing Care	7	BIO 171, CPT 150; Co: BIO 172, NSG 112, NSG 114	
1st Spring	5	NSG 124	Medical/Surgical Nursing Care of the Adult	9	BIO 172, NSG 112, NSG 114, NSG 116; Co: PSY 160 and MTH Elective	
	6	PSY 160	General Psychology	3		
	7	MTH 157 or MTH 160	College Algebra or Introduction to Statistics	3	MTH 100 or MTH 052 or Placement	Page 42 Column IV
2nd Fall	8	NSG 212	Specialty Nursing Across the Lifespan	9	NSG 124, PSY 160, MTH Elective; Co: BIO 265, ENG 161	
	9	BIO 265	Microbiology	4	BIO 155 or BIO 171 and CHM 107, CHM 150/151, CHM 225 or HS Chemistry (C or better), ENG 095 or Placement	
	10	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
2nd Spring	11	ENG 164	Advanced Composition	3	ENG 161	
	12	NSG 224	Advanced Medical/Surgical Care of the Adult	7	NSG 212, BIO 265; Co: ENG 164	
	13	NSG 236	Transition to Practice/RN	4	NSG 224; Co: ENG 164	

62 program credits + 7 program prerequisite credits = 69 for AAS

NUR

Nursing, AAS
School of Health Professions

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
Required Before Program Start		BIO 171	Anatomy & Physiology I	4	CHM 107, CHM 150/151, CHM 225 or HS Chemistry and ENG 095 or Placement	
		CPT 150	Microcomputer Concepts	3		
1st Spring	1	BIO 172	Anatomy & Physiology II	4	BIO 171 (Cor better)	
	2	NSG 112	Introduction to Professional Nursing and Health Promotion Across The Lifespan	3	BIO 171, CPT 150; Co: BIO 172, NSG 114, NSG 116	
	3	NSG 114	Health and Physical Assessment	3	BIO 171, CPT 150	
	4	NSG 116	Foundations of Nursing Care	7	BIO 171, CPT 150; Co: NSG 112, NSG 114	
1st Fall	5	NSG 124	Medical/Surgical Nursing Care of the Adult	9	BIO 172, NSG 112, NSG 114, NSG 116	
	6	PSY 160	General Psychology	3		
	7	MTH 157 or MTH 160	College Algebra or Introduction to Statistics	3	MTH 100 or MTH 052 or Placement	Page 42 Column IV
2nd Spring	8	NSG 212	Specialty Nursing Across the Lifespan	9	NSG 124, PSY 160, MTH Elective; Co: BIO 265, ENG 161	
	9	BIO 265	Microbiology	4	BIO 155 or BIO 171 and CHM 107, CHM 150/151, CHM 225 or HS chemistry (C or better), ENG 095 or Placement	
	10	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
2nd Fall	11	ENG 164	Advanced Composition	3	ENG 161	
	12	NSG 224	Advanced Medical/Surgical Care of the Adult	7	NSG 212, BIO 265; Co: ENG 164	
	13	NSG 236	Transition to Practice/RN	4	NSG 224; Co: ENG 164	

62 program credits + 7 program prerequisite credits = 69 for AAS

NUR

Nursing, AAS
School of Health Professions

Advanced Standing: Transition to Associate Degree Nursing All Level I General Education and Science courses must be completed with "C" grade or better and overall GPA of 2.5 prior to NSG 200 (BIO 171, BIO 172, CPT 150, PSY 160, ENG 161, Math Elective = 20 credits)						
Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Summer/ Fall	1	NSG 200	Transition to the Role of the RN	3	BIO 171, BIO 172, CPT 150, PSY 160, ENG 161, Math Elective	
	2	NSG 114	Health and Physical Assessment	3	BIO 171, CPT 150	
Credit for Prior Learning Awarded	3	NSG 112	Introduction to Professional Nursing and Health Promotion Across The Lifespan	3	Credit for Prior Learning Awarded	
	4	NSG 116	Foundations of Nursing Care	7	Credit for Prior Learning Awarded	
	5	NSG 124	Medical/Surgical Nursing Care of the Adult	9	Credit for Prior Learning Awarded	
1st Fall/ Spring	6	NSG 212	Specialty Nursing Across the Lifespan	9	NSG 124, PSY 160, MTH Elective; Co: BIO 265, ENG 161	
	7	BIO 265	Microbiology	4	BIO 155 or BIO 171 and CHM 107, CHM 150/151, CHM 225 or HS chemistry (C or better), ENG 095 or Placement	
1st Spring/ Fall	8	NSG 224	Advanced Medical/Surgical Care of the Adult	7	NSG 212, BIO 265; Co: ENG 164	
	9	NSG 236	Transition to Practice/RN	4	NSG 224; Co: ENG 164	
	10	ENG 164	Advanced Composition	3	ENG 161	

52 program credits + 20 program prerequisite credits = 72 for AAS NUR

Office Administration, AAS

School of Business

Program Description

The Office Administration 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 Administration AAS may find employment as administrative assistants, executive office managers, office managers, executive secretaries, receptionists and personnel clerks. Following provided pathways may also help graduates find employment as medical administrative assistants, medical office personnel, patient access representatives, hospitality administrative assistants, and legal administrative assistants. Opportunities are available in large corporations, small business offices, insurance offices, nonprofit organizations, medical and legal offices, hospitality businesses, and government offices. See Pathway plans.

Program Learning Outcomes

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

- Use advanced keyboarding, document processing and information management skills.
- Effectively use 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.
- Provide ethical service to a diverse customer base.

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	3	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	4	Elective	Social Science Elective	3		
	5	BUS 140	Introduction to Business	3		
	6	OFT 190	Word for Windows	3		
1st Spring	7	Elective	Restrictive Elective	3	Varies	See List
	8	BUS 145	Excel for Business Environment	3		
	9	ENG 163	Business Communication	3	ENG 161	ENG 162
	10	OFT 185	PowerPoint	1		
	11	SPC 156	Interpersonal Communication	3		SPC 155
	12	OFT 110	Document Processing	3	OFT 100 or Satisfactory Skills Test	
2nd Fall	13	ACC 230	Integrated Accounting Software	3		
	14	ACC 234	Payroll and Database Software	3		
	15	OFT 220	Transcription	3	OFT 110	
	16	OFT 235	Customer Service	3		
	17	OFT 102	Acrobat Essentials	1		
	18	Elective	Restricted Elective	3	Varies	See List
2nd Spring	19	CPT 278	Integrated Office Applications	3	CPT 195 or BUS 145, CPT 196, OFT 185	
	20	OFT 225	Proofreading	3		
	21	OFT 280	Office Management	3	OFT 110 and 20 hrs of OFT Courses	OFT 299
	22	BUS 188	Social Media in Business	3		
	23	Elective	Restricted Elective	3	Varies	See List
Minimum Program Credits				63		OTA

Legal Pathway
LAS 101 The Legal Assistant
LAS 111 Legal Analysis
LAS 210 Legal Writing

Business Pathway
BUS 158 Principles of Management
BUS 241 Human Resource Management
BUS 262 Entrepreneurship
BUS 275 Organizational Behavior

Healthcare Pathway
HCM 145 Medical Office Procedures
HCM 150 Introduction to Health Information
HCM 155 Introduction to Electronic Health Record

Hospitality Pathway
FSM 103 Introduction to the Hospitality Industry
HMT 262 Lodging and Property Management
HMT 266 Event Management

Office Administration, Diploma

School of Business

Program Description

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 Administration 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	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	CPT 150	Microcomputer Concepts	3		
	3	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	4	OFT 110	Document Processing	3	OFT 100 or Satisfactory Skills Test	
	5	BUS 140	Introduction to Business	3		
	6	OFT 190	Word for Windows	3		
Spring	7	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	8	BUS 145	Excel for Business Environment	3		
	9	ENG 163	Business Communication	3	ENG 161	
	10	OFT 185	PowerPoint	1		
	11	OFT 235	Customer Service	3		
	12	Elective	Restricted Elective	3	Varies	See List
Minimum Program Credits				32		OADM

Restricted Electives: BUS 158; BUS 241; BUS 262; BUS 275; HCM 150; LAS 101

Office Administration, Certificate

CUSTOMER SERVICE

School of Business

Program Description

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 Administration 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.

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	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	CPT 150	Microcomputer Concepts	3		
	3	OFT 110	Document Processing	3	OFT 100 or Satisfactory Skills Test	
	4	SPC 156	Interpersonal Communication	3		
Spring	5	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	6	BUS 140	Introduction to Business	3		
	7	OFT 235	Customer Service	3		
Minimum Program Credits				19		OTCSV

Office Administration, Certificate

School of Business

Program Description

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 Administration 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	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	OFT 110	Document Processing	3	OFT 100 or Satisfactory Skills Test	
	3	BUS 140	Introduction to Business	3		
	4	OFT 190	Word for Windows	3		
Spring	5	BUS 145	Excel for Business Environment	3		
	6	OFT 185	PowerPoint	1		
	7	OFT 235	Customer Service	3		
Minimum Program Credits				17		OADMN

Pastry Arts, AAS

School of Culinary Arts/Pastry Arts/Hospitality Management

Program Description

The Pastry Arts AAS Program is planned to meet the increasing employment need for trained baking and pastry experts in the 21st century. The program includes classroom and food laboratory experiences and requires students to complete a capstone internship. Students are responsible for securing an internship site which meets the program requirements. This program accommodates both part-time and full-time students.

Requirements for the program include but are not limited to:

- Laboratory Uniform
- Tool Kit
- Business Attire

Students, who are current members of the American Culinary Federation at the completion of this program, may apply for certification as a Certified Pastry Culinarian with the American Culinary Federation.

Career Opportunities

Graduates of the Pastry Arts AAS Program may accept positions with the following titles: pastry cook, pastry chef, baker, baking sales representative, institutional baker/pastry chef, retail baker/pastry chef, wholesale baker/pastry chef, production supervisor, 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 and doughnuts.
- 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.

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Pastry Arts, AAS

School of Culinary Arts/Pastry Arts/Hospitality Management

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CUL 104	Foundations of Cooking and Baking	3		
	3	FSM 103	Introduction to the Hospitality Industry	3		FSM 113
	4	FSM 170	Food Culture and Religion	3		
	5	FSM 118	Sanitation	2		
	6	BKP 245	Decorating Techniques	3		
1st Spring	7	CUL 105	Foods I	4	CUL 104	
	8	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	9	BKP 141	Baking I	4	CUL 104	
	10	FSM 119	Beverage Management	1		FSM 120
	11	Elective	Social Science Elective	3	Varies	Page 42 Column III
1st Summer	12	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
2nd Fall	13	BKP 221	Baking Bistro	4	BKP 141	
	14	BKP 223	Bake II	4	BKP 141	
	15	FSM 215	Purchasing and Operations	3		
	16	CUL 243	Nutritional Cooking and Baking	3	BKP 141 or CUL 105	FSM 159
	17	CPT 150	Microcomputer Concepts	3		
2nd Spring	18	BKP 247	Specialty/Artistic Techniques	4	BKP 223	
	19	FSM 235	Supervision and Training	3		
	20	BKP 249	Advanced Decorating	3	BKP 245	
	21	ENG 163	Business Communications	3	ENG 161	ENG 164
	22	FSM 219	Hospitality Internship	3	Permission of Instructor	
Minimum Program Credits				66		PAR

Pastry Arts, AAS

APPRENTICESHIP

School of Culinary Arts/Pastry Arts/Hospitality Management

Program Description

The Pastry Arts AAS Apprenticeship Program, sponsored by The American Culinary Federation Laurel Highlands Chapter (ACFLHC) and Westmoreland, is accredited by the American Culinary Federation Education Foundation Accrediting Commission (ACFEFAC). A cooperative program, it combines academic coursework with 4,000 hours of supervised on-the-job learning in a participating bakery, club, hotel, or resort. Classes are scheduled so that students have a sufficient block of time to complete their 40-hour week. Academic work and the 4,000 hours can be completed over a period of two to three years.

Students enrolled in this program will be registered with the Pennsylvania Department of Labor and Industry and the American Culinary Federation as apprentices once required registration and membership fees are paid during the first weeks of class.

Students are required to adhere to the department policies and procedures as stated in the School of Culinary Arts/Pastry Arts/Hospitality Management Student Handbook and the Apprenticeship Handbook.

Requirements for the program include but are not limited to:

- Laboratory Uniform
- Tool Kit
- Business Attire
- Special attire may be required at the apprenticeship site
- Transportation to the apprenticeship site

Employment must be secured at an approved apprenticeship facility that will provide full-time employment. The Pastry Arts Apprenticeship may be completed through a partnership with Nemacolin Resort, Seven Springs Mountain Resort or other approved apprenticeship sites. For a current list of approved apprenticeship sites, contact the School of Culinary Arts/Pastry Arts/Hospitality Management.

At the completion of the apprenticeship program, students are eligible to test for certification as a Certified Working Pastry Chef with the American Culinary Federation.

Program Learning Outcomes

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

- Prepare yeast rolls, breads, pies, tarts, cookies and doughnuts.
- 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.

Career Opportunities

Graduates of the Pastry Arts Apprenticeship program may accept positions with the following titles: pastry cook, pastry chef, baker, baking sales representative, institutional baker/pastry chef, retail baker/pastry chef, wholesale baker/pastry chef, production supervisor, operations manager, sales representative or training specialist.

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Pastry Arts, AAS

APPRENTICESHIP

School of Culinary Arts/Pastry Arts/Hospitality Management

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CUL 104	Foundations of Cooking and Baking	3		
	3	FSM 103	Introduction to the Hospitality Industry	3		FSM 113
	4	FSM 170	Food Culture and Religion	3		
	5	FSM 118	Sanitation	2		
	6	BKP 245	Decorating Techniques	3		
	7	CUL 121	Apprenticeship I	1		
1st Spring	8	BKP 141	Baking I	4	CUL 104	
	9	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	10	CUL 105	Foods I	4	CUL 104	
	11	FSM 119	Beverage Management	1		FSM 120
	12	CUL 122	Apprenticeship II	1	CUL 121	
	13	Elective	Social Science Elective	3	Varies	Page 42 Column III
1st Summer	14	CUL 123	Apprenticeship III	1	CUL 122	
	15	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
2nd Fall	16	BKP 221	Baking Bistro	4	BKP 141	
	17	BKP 223	Bake II	4	BKP 141	
	18	FSM 215	Purchasing and Operations	3		
	19	CUL 243	Nutritional Cooking and Baking	3	BKP 141 or CUL 105	FSM 159
	20	CPT 150	Microcomputer Concepts	3		
	21	CUL 224	Apprenticeship IV	1	CUL 123	
2nd Spring	22	BKP 247	Specialty/Artistic Techniques	4	BKP 223	
	23	FSM 235	Supervision and Training	3		
	24	BKP 249	Advanced Decorating	3	BKP 245	
	25	ENG 163	Business Communication	3	ENG 161	ENG 164
	26	CUL 251	Apprenticeship V	1	CUL 224	
2nd Summer	27	CUL 253	Apprenticeship VI	1	CUL 251	
Minimum Program Credits				69		PAA

Pastry Arts, Diploma

APPRENTICESHIP

School of Culinary Arts/Pastry Arts/HospitalityManagement

Program Description

The Pastry Arts Apprenticeship Diploma Program, sponsored by The American Culinary Federation Laurel Highlands Chapter (ACFLHC) and Westmoreland, is accredited by the American Culinary Federation Education Foundation Accrediting Commission (ACFEFAC). A cooperative program, it combines academic coursework with 4,000 hours of supervised on-the-job learning in a participating bakery, club, hotel, or resort. Classes are scheduled so that students have a sufficient block of time to complete their 40-hour week. Academic work and the 4,000 hours can be completed over a period of two to three years.

Students enrolled in this program will be registered with the Pennsylvania Department of Labor and Industry and the American Culinary Federation as apprentices once required registration and membership fees are paid during the first weeks of class.

Students are required to adhere to the department policies and procedures as stated in the School of Culinary Arts/Pastry Arts/Hospitality Management Student Handbook and the Apprenticeship Handbook.

Requirements for the program include but are not limited to:

- Laboratory Uniform
- Tool Kit
- Business Attire
- Special Attire for Apprenticeship Site
- Transportation to the Apprenticeship Site

Employment must be secured at an approved apprenticeship facility that will provide full-time employment. The Pastry Arts Apprenticeship may be completed through a partnership with Nemacolin Resort, Seven Springs Mountain Resort or other approved apprenticeship sites. For a current list of approved apprenticeship sites, contact the School of Culinary Arts/Pastry Arts/Hospitality Management.

At the completion of the apprenticeship program, students are eligible to test for certification as a Certified Working Pastry Chef with the American Culinary Federation.

Program Learning Outcomes

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

- Prepare yeast rolls, breads, pies, tarts, cookies and doughnuts.
- 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.

Career Opportunities

Graduates of the Pastry Arts Apprenticeship Diploma Program may accept positions with the following titles: pastry cook, pastry chef, baker, baking sales representative, institutional baker/ pastry chef, retail baker/pastry chef, wholesale baker/pastry chef, production supervisor, operations manager, sales representative or training specialist.

Pastry Arts, Diploma

APPRENTICESHIP

School of Culinary Arts/Pastry Arts/Hospitality Management

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CUL 104	Foundations of Cooking and Baking	3		
	3	FSM 103	Introduction to the Hospitality Industry	3		FSM 113
	4	FSM 118	Sanitation	2		
	5	BKP 245	Decorating Techniques	3		
	6	CUL 121	Apprenticeship I	1		
1st Spring	7	BKP 141	Baking I	4	CUL 104	
	8	CUL 105	Foods I	4	CUL 104	
	9	FSM 119	Beverage Management	1		FSM 120
	10	CUL 122	Apprenticeship II	1	CUL 121	
1st Summer	11	CUL 123	Apprenticeship III	1	CUL 122	
2nd Fall	12	BKP 221	Baking Bistro	4	BKP 141	
	13	BKP 223	Bake II	4	BKP 141	
	14	FSM 215	Purchasing and Operations	3		
	15	CUL 243	Nutritional Cooking and Baking	3	BKP 141 or CUL 105	FSM 159
	16	CUL 224	Apprenticeship IV	1	CUL 123	
2nd Spring	17	BKP 247	Specialty/Artistic Techniques	4	BKP 223	
	18	FSM 235	Supervision and Training	3		
	19	BKP 249	Advanced Decorating	3	BKP 245	
	20	CUL 251	Apprenticeship V	1	CUL 224	
2nd Summer	21	CUL 253	Apprenticeship VI	1	CUL 251	
Minimum Program Credits				51		PARA

Pastry Arts, Diploma

School of Culinary Arts/Pastry Arts/Hospitality Management

Program Description

The Pastry Arts Diploma Program is planned to meet the increasing employment need for trained baking and pastry experts in the 21st century. The program includes classroom and food laboratory experiences and requires students to complete a capstone internship. Students are responsible for securing an internship site which meets the program requirements. This program accommodates both part-time and full-time students.

Requirements for the program include but are not limited to:

- Laboratory Uniform
- Tool Kit
- Business Attire

Career Opportunities

Graduates of the Pastry Arts Diploma Program may accept positions with the following titles: pastry cook, pastry chef, baker, baking sales representative, institutional baker/ pastry chef, retail baker/pastry chef, wholesale baker/pastry chef, production supervisor, 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 and doughnuts.
- 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	CUL 104	Foundations of Cooking and Baking	3		
	3	FSM 103	Introduction to the Hospitality Industry	3		FSM 113
	4	FSM 118	Sanitation	2		
	5	BKP 245	Decorating Techniques	3		
1st Spring	6	CUL 105	Foods I	4	CUL 104	
	7	BKP 141	Baking I	4	CUL 104	
	8	FSM 119	Beverage Management	1		FSM 120
2nd Fall	9	BKP 221	Baking Bistro	4	BKP 141	
	10	BKP 223	Bake II	4	BKP 141	
	11	FSM 215	Purchasing and Operations	3		
	12	CUL 243	Nutritional Cooking and Baking	3	BKP 141 or CUL 105	FSM 159
2nd Spring	13	BKP 247	Specialty/Artistic Techniques	4	BKP 223	
	14	FSM 235	Supervision and Training	3		
	15	BKP 249	Advanced Decorating	3	BKP 245	
Minimum Program Credits				45		PART

Pastry Arts, Certificate

School of Culinary Arts/Pastry Arts/Hospitality Management

Program Description

The Pastry Arts Certificate Program is designed to meet the increasing employment need for trained culinary workers in the 21st century. The program includes classroom and food laboratory experiences.

Students are required to adhere to the department policies and procedures as stated in the School of Culinary Arts/Pastry Arts/Hospitality Management Student Handbook.

Requirements for the program include but are not limited to:

- Laboratory Uniform
- Tool Kit
- Business Attire.

Career Opportunities

Graduates of the Pastry Arts Certificate Program may accept jobs with the following titles: baker, cake decorator, and bakery production worker.

Program Learning Outcomes

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

- Prepare yeast rolls, breads, pies, tarts, cookies, doughnuts and centerpieces.
- Prepare and decorate cakes and cookies.
- Prepare basic pastry items.
- Make mathematical yield adjustments.
- Collect and identify information regarding quality standards in bakery products.
- Utilize technology within the bakery and pastry industry.
- Demonstrate basic food preparation skills.
- Adhere to sound practices for sanitation and safety.
- Develop basic practical mathematical skills.

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	CUL 104	Foundations of Cooking and Baking	3		
	3	FSM 118	Sanitation	2		
Spring	4	BKP 141	Baking I	4	CUL 104	
	5	BKP 245	Decorating Techniques	3		
	6	FSM 103	Introduction to the Hospitality Industry	3		FSM 113
Minimum Program Credits				16		PARTS

Phlebotomy/Specimen Processing, Certificate

School of Health Professions

Program Description

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 and the Certified Phlebotomy Technician (CPT) examination.

This is a selective admission program. Please see the college website for details.

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 healthcare personnel.
- 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 competency.

Phlebotomy/Specimen Processing Certificate

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
Fall/ Spring	1	PDV 101	First Year Seminar	1		
	2	ALH 122	Medical Terminology	3		
	3	PHB 101	Clinical Phlebotomy	4	ALH 122, PHB 105 (if applicable)	
	4	PHB 105	Specimen Processing	4	Co: ALH 122, PHB 101 (if applicable)	
	5	PHB 110	Specimen Processing Practicum	4	Successful completion of PHB 101 and PHB 105 (If applicable) during first 8 weeks of semester	
Minimum Program Credits				16		PHBSP

Phlebotomy ONLY Certificate

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
Fall/ Spring	1	PDV 101	First Year Seminar	1		
	2	ALH 122	Medical Terminology	3		
	3	PHB 101	Clinical Phlebotomy	4	ALH 122, PHB 105 (if applicable)	
	4	PHB 110	Specimen Processing Practicum	4	Successful completion of PHB 101 and PHB 105 (If applicable) during first 8 weeks of semester	
Minimum Program Credits				12		PHLEB

Plumbing, AAS
School of Technology

Program Description

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, develop 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	PMB 101	Plumbing I	4		
	3	CMT 101	Related Trades	4		
	4	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	5	MTH 104	Introduction to Applied Mathematics	4	MTH 050 or Placement	
1st Spring	6	WEL 125	Introduction to Welding	4		
	7	DFT 258	AutoCAD	4		
	8	CHM 107	Introductory Concepts in Chemistry I	4	MTH 052 or Placement	
	9	PMB 200	Plumbing Code	3		
	10	HAC 105	Blueprint Reading for HVAC Technicians	2		
2nd Fall	11	PMB 121	Estimating for the Plumber	2		
	12	CMT 121	Contracts for the Tradesman	2		
	13	WEL 227	GTAW	4	WEL 125	
	14	ENG 162	Technical Communication	3	ENG 161	
	15	HAC 256	Geothermal and Solar Technology	3		
2nd Spring	16	Elective	Social Science Elective	3	Varies	Page 42 Column III
	17	HAC 260	Hydronics	4		
	18	Elective	Drafting Elective	3-4	Varies	Any 3 or 4 credit DFT Course
	19	WEL 230	Pipe Welding	3	WEL 227	
	20	PMB 250	Advanced Plumbing Techniques	4		

Minimum Program Credits 64-65 PMB

Plumbing, Diploma
School of Technology

Program Description

The Plumbing Diploma 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, create 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 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.
- Develop quality soft skills.
- Study the different related trades that apply to the plumber.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
Fall	1	PDV 101	First Year Seminar	1		
	2	PMB 101	Plumbing I	4		
	3	HAC 256	Geothermal and Solar Technology	3		
	4	PMB 121	Estimating for the Plumber	2		
	5	MTH 104	Introduction to Applied Mathematics	4	MTH 050 or Placement	
Spring	6	CMT 101	Related Trades	4		
	7	PMB 200	Plumbing Code	3		
	8	HAC 105	Blueprint Reading for HVAC Technicians	2		
	9	PMB 250	Advanced Plumbing Technologies	4		
	10	HAC 260	Hydronics	4		
Minimum Program Credits				31		PLMB

Radiology Technology, AAS
School of Health Professions

Program Description

The Radiology Technology AAS 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, and Mammography. 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.

This is a selective admission program. Please see the college website for details.

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

1. By the end of the 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.
2. By the end of the program, students will be able to demonstrate use of the ALARA principle to minimize radiation exposure to the patient, themselves, and the general public.
3. By the end of the program, students will be able to operate various pieces of radiologic equipment safely and effectively to expose, process and evaluate all types of radiographic images.
4. By the end of the program, students will be able to apply computation skills to provide safe medical radiation to patients by developing a thorough understanding of the creation and safe application of medical radiation.
5. By the end of the program, students will be able to use computers and computerized equipment in the process of imaging and caring for patients.
6. By the end of the program, students will be able to demonstrate appropriate practice standards that meet all of the Ethical requirements of the ARRT practice standards as well as maintain all the confidentiality requirements of HIPAA.
7. By the end of the program, students will be able to utilize and demonstrate effective interpersonal skills in treating a diverse population of patients as well as communicating with other members of the health care team.
8. By the end of the program, students will be able to demonstrate proficiency in dealing with life threatening medical emergencies that could occur in the radiology environment as assessed by simulated activities in the lab setting.
9. By the end of the program, students will be able to independently use critical thinking to adjust the radiographic imaging plan based on physiologic condition or recognized disease process.

Program Goals

- To produce graduates prepared for entry into the healthcare 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.	Prereq/Coreq(Co)	Options Available
Prior to Application Deadline	1	BIO 171	Anatomy and Physiology I	4	CHM 107, CHM 150/151, CHM 225 or HS Chemistry and ENG 095 or Placement	
1st Fall	2	PDV 101	First Year Seminar	1		
	3	ALH 122	Medical Terminology	3		
	4	BIO 172	Anatomy and Physiology II	4	BIO 171 (C or better)	
	5	RAD 111	Radiographic Procedures and Patient Care I	4	BIO 171; Co: ALH 122, BIO 172, RAD 121	
	6	RAD 121	Principles of Radiographic Image Capture and Display	3	BIO 171; Co: ALH 122, BIO 172, RAD 111	
1st Spring	7	PHY 125	Physics for Radiology	3	PHY 107 or PHY 110; Co: RAD 131, RAD 141, RAD 146	
	8	MTH 157	College Algebra	3	MTH 100 or Placement	
	9	RAD 131	Digital Image Acquisition and Display	3	RAD 111, RAD 121; Co: MTH 157, PHY 125, RAD 141, RAD 146	
	10	RAD 141	Radiographic Procedures and Patient Care II	4	RAD 111, RAD 121; Co: MTH 157, PHY 125, RAD 131, RAD 146	
	11	RAD 146	Clinical Education I	4	RAD 111, RAD 121; Co: PHY 125, RAD 131, RAD 141	
1st Summer	12	RAD 215	Clinical Education II	3	RAD 131, RAD 141, RAD 146	
	13	RAD 255	Clinical Education III	3	RAD 215	
2nd Fall	14	CPT 150	Microcomputer Concepts	3		
	15	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	16	PSY 160	General Psychology	3		
	17	RAD 211	Radiation Biology and Protection, Radiologic Procedures III, and Career Prep	4	RAD 215, RAD 255	
	18	RAD 216	Clinical Education IV	4	Co: RAD 211	
2nd Spring	19	ENG 162	Technical Communication	3	ENG 161	
	20	RAD 221	Radiographic Pathology	3	RAD 211, RAD 216	
	21	RAD 226	Clinical Education V	6	Co: RAD 221, RAD 231	
	22	RAD 231	Radiology Technology Capstone	1	Co: RAD 221, RAD 226	
	23	SPC 156	Interpersonal Communication	3		
Minimum Program Credits				75		RAD

Robotics, AAS
School of Technology

Program Description

A Robotics AAS 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	MTH 104	Introduction to Applied Mathematics	4	MTH 050 or Placement	
	3	ELC 106	Circuit Analysis I	4	Co: MTH 104	
	4	RBT 121	Mechanical Components & Electric Motors	4	Co: MTH 104	
	5	RBT 135	Industrial Robotics	4		
1st Spring	6	RBT 130	Electro-Pneumatic & Hydraulic Control Circuits	4		
	7	RBT 140	Digital Fund & Programmable Logic Controllers	4	ELC 106	
	8	RBT 225	Industrial Electronics in Advanced Manufacturing	4	ELC 106	
	9	DFT 258	AutoCAD	4		
2nd Fall	10	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	11	RBT 230	Automated Systems	4	RBT 140	
	12	RBT 235	Industrial Robotics II	4	RBT 135	
	13	RBT 240	Motor Control	4	ELC 106 and RBT 121	
2nd Spring	14	ENG 162	Technical Communication	3	ENG 161	
	15	RBT 221	Process Control Technology	4	ELC 106	
	16	RBT 245	Robotics Control Systems	4	ELC 106, RBT 140	
	17	RBT 265	Robotics and Automation	4	RBT 135; Co: RBT 245	
	18	Elective	Social Science Elective	3	Varies	Page 42 Column III
Minimum Program Credits				66		ROB

Social Work, AAS

School Art, Humanities, Social Sciences and Public Service

Program Description

The Social Work AAS degree 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 societal issues and their impact on vulnerable populations and advocate for at-risk populations at the micro, mezzo, and macro level.
- Conduct assessments, identify strengths, create action plans, counsel on an individual and group level, and provide case management for at-risk populations.
- Provide culturally competent services and adhere to the National Association of Social Workers Code of Ethics.
- Use knowledge of the history of the social work profession and analysis of social policy to create change.
- Analyze how political, community, and societal structures affect social service programs and funding.
- Express self-awareness, personal values, and attitudes about self in relation to others and identify self-care strategies.

Sugg. Term	Seq #	Course ID	Course Title	Cr.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	SWK 155	Introduction to Social Work	3		
	3	PSY 160	General Psychology	3		
	4	SOC 155	Principles of Sociology	3		
	5	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	6	Elective	Math Elective	3	Varies	Page 42 Column IV
1st Spring	7	ENG 164	Advanced Composition	3	ENG 161	
	8	SWK 157	Interviewing and Recordkeeping Skills	3	SWK 155	
	9	SWK 165	Human Behavior in the Social Environment	3		
	10	Elective	Tech Literacy Elective	3	Varies	Page 42 Column VI
	11	Elective	Restricted Elective	3	Varies	See List
2nd Fall	12	SWK 160	Group Process	3	SWK 155 and SWK 157	
	13	SWK 161	Solutions-Focused Counseling	3	SWK 155 and SWK 157	
	14	Elective	Restricted Elective	3		
	15	PSY 270	Abnormal Psychology	3	PSY 160	
	16	Elective	Restricted Elective	3	Varies	See List
2nd Spring	17	SWK 170	Race & Diversity in the U.S.	3		
	18	SWK 172	Drug and Alcohol Dependency	3		
	19	Elective	Restricted Elective	3		
	20	Elective	Humanities Elective PHL 101 or PHL 103 Recommended	3	Varies	Page 42 Column II
	21	SWK 163	Introduction to Social Welfare	3		
Minimum Program Credits				61		SWK

Restricted Electives: ASL 101; ASL 102; BIO 155; BUS 158; HIS 155; HIS 156; HIS 255; PHL 101; PHL 103; POL 155; POL 255; PSY 265; PSY 268; SOC 161; SPC 155; SWK 171; SWK 258

Social Work, Certificate

School Art, Humanities, Social Sciences and Public Service

Program Description

The Social Work Certificate program 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	Prereq/Coreq(Co)	Options Available
1st Semester	1	PDV 101	First Year Seminar	1		
	2	Elective	Restricted Elective	3		
	3	SWK 155	Introduction to Social Work	3		
2nd Semester	4	SWK 157	Interviewing and Recordkeeping Skills	3	SWK 155	
	5	SWK 172	Drug and Alcohol Dependency	3		
3rd Semester	6	SWK 160	Group Process	3	SWK 155 and SWK 157	
	7	PSY 160	General Psychology	3		
Minimum Program Credits				19		SOCWK

Restricted Electives: ASL 101; ASL 102; BIO 155; BUS 158; HIS 155; HIS 156; HIS 255; PHL 101; PHL 103; POL 155; POL 255; PSY 265; PSY 268; SOC 161; SPC 155; SWK 163; SWK 259;

Surgical Technology, AAS
School of Health Professions

Program Description

Surgical Technologists are allied health professionals who are an integral part of the team of medical practitioners providing surgical care to patients in a variety of settings such as operating rooms, outpatient clinics or surgery centers. The program prepares competent entry-level surgical technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains. Students who have completed program requirements will sit for the certifying examination offered by the National Board on Certification for Surgical Technology and Surgical Assisting (NBSTSA).

This is a special admission program. Please see the college catalog for details.

Program Learning Outcomes

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

- Communicate effectively.
- Read and listen with comprehension.
- Speak and write clearly using Standard English.
- Interact cooperatively with others using both verbal and non-verbal means.
- Demonstrate information processing through basic computer skills.
- Think critically.
- Make connections in learning across the disciplines and draw logical conclusions.
- Demonstrate problem solving through interpreting, analyzing, summarizing, and/or integrating a variety of materials.
- Use mathematics to organize, analyze, and synthesize data to solve a problem.
- Learn independently.
- Use appropriate search strategies and resources to find, evaluate, and use information.
- Make choices based upon awareness of ethics and differing perspectives/ideas.
- Apply learning in academic, personal and public situations.
- Think creatively to develop new ideas, processes, or products.
- Examine relationships in diverse and complex environments.
- Recognize the relationship of the individual to human heritage and culture.
- Demonstrate an awareness of the relationship of the individual to the biological and physical environment.
- Develop an awareness of self as an individual member of a multicultural global community.
- Correlate the knowledge of anatomy, physiology, pathophysiology, and microbiology to their role as a Surgical Technologist.
- Demonstrate a safe and professional level of practice and knowledge in their role as a Surgical Technologist.
- Explain the ethical, legal, moral, and medical values related to the patient and the surgical team during the perioperative experience.
- Correlate the elements, action, and use of medications and anesthetic agents used during the perioperative experience
- Implement safe practice techniques in regards to perioperative routines, patient transportation, positioning, and emergency procedures.
- Integrate principles of surgical asepsis as part of the perioperative experience.
- Accurately apply knowledge and skills of a professional Surgical Technologist to address the biopsychosocial needs of the surgical patient.
- Perform proficiently and competently as an entry-level surgical technologist in the cognitive, psychomotor, and affective learning domains.
- Demonstrate the professional attributes of the Surgical Technologist.

Surgical Technology, AAS
School of Health Professions

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ALH 122	Medical Terminology	3		
	3	BIO 171	Anatomy and Physiology I	4	CHM 107, CHM 150/151, CHM 225 or HS Chemistry (C or better) and ENG 095 or Placement	
	4	MTH 104	Introduction to Applied Mathematics	4	MTH 050 or Placement	Page 42 Column IV
	5	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
1st Spring	6	BIO 172	Anatomy and Physiology II	4	BIO 171 (C or better)	
	7	ENG 164	Advanced Composition	3	ENG 161	
	8	CPT 150	Microcomputer Concepts	3		
	9	PSY 160	General Psychology	3		
1st Summer	10	ALH 225	Microbiology for the Healthcare Professional	4	BIO 172 (C or better)	BIO 265
2nd Fall	11	SGT 100	Fundamentals of Surgical Technology	12	C or better in ALH 122, BIO 171, BIO 172, ALH 225	
	12	SGT 101	Fundamentals of Surgical Technology Lab	3	C or better in ALH 122, BIO 171, BIO 172, ALH 225	
	13	SGT 110	Surgical Pharmacology Principles	2	C or better in ALH 122, BIO 171, BIO 172, ALH 225	
	14	SGT 115	Surgical Technology Skills Practicum	3	SGT 101	
2nd Spring	15	SGT 200	Advanced Surgical Technology Theory	9	C or better in SGT 100, SGT 110, SGT 115	
	16	SGT 205	Advanced Surgical Technology Practicum	7	C or better in SGT 100, SGT 110, SGT 115	
Minimum Program Credits				68		SGT

Video Production & Photography, AAS

VIDEO PRODUCTION

School of Art, Humanities, Social Sciences and Public Service

Program Description

The Video Production option is designed to prepare students for employment in commercial, industrial and educational settings as audiovisual technicians, video creators, video editors, and artists. Program graduates are prepared to provide for the operation of various equipment and software required to produce multimedia content. Students will acquire production skills in the areas of instructional graphics, video, audio recording, digital photography and interactive multimedia. Under supervision, students complete an internship experience in which they apply theoretical knowledge to workplace situations. Students may, under faculty supervision, create a substantial capstone project that reflects the skills they have learned in the program.

Career Opportunities

Career opportunities exist within in-house corporate audiovisual departments, production crews, educational institutions, and non-profit organizations 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 content creators or 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:

- Design, produce, and analyze media and messages such as presentations, videos, multimedia, graphics/print, photography and interactive multimedia.
- Manage a media production from concept to distribution.
- Communicate effectively and appropriately using vocabulary indicative to the technology.
- Design and create videos and still images for various platforms.
- Edit motion pictures using non-linear editing and motion graphics techniques and software.
- Edit and present still images using industry standard software and equipment.
- Effectively function with associates as a member of a visual communications production team and a production crew.
- Operate various types of standard and well as specialized mediate related equipment and software.
- Practice appropriate safety procedures inherent to the industry.
- Evaluate media production.

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	VPP 150	Video Editing	3		
	4	VPP 100	Basic Video	3		
	5	VPP 170	Digital Compositing and Photography	3		
1st Spring	6	VPP 240	Sound Design	3		
	7	GCT 115	Design & Layout I	3		ART 160
	8	VPP 110	Intro to Multimedia	3		
	9	VPP 120	History of Cinema	3		
	10	PSY 160	General Psychology	3		
2nd Fall	11	SPC 155	Effective Speech	3		
	12	VPP 250	Nonfiction Media Production	3	VPP 100	
	13	Elective	Restricted Elective	3		
	14	ENG 162	Technical Communication	3	ENG 161	ENG 165
	15	VPP 260	Interactive Multimedia	3	VPP 150 Recommended	
	16	VPP 271	Digital Compositing and Photography II	3	VPP 170	
2nd Spring	17	VPP 255	Multi Camera Production and Steaming	3	VPP 100	
	18	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	19	VPP 270	Video II	3	VPP 100 and VPP 150	
	20	VPP 290	Animation and Motion Graphics	3	VPP 100, VPP 150, VPP 170, and Permission of Instructor	
	21	VPP 299 or VPP 280	Internship or Capstone	3	VPP 100, VPP 150, VPP 170, and Permission of Instructor	
Minimum Program Credits				61		VPP

Restricted Electives: ART 140; ART 160; ART 162; ART 171; BUS 140; BUS 188; GCT 115; GCT 151; MKT 252; MKT 254; VPP 160

Video Production & Photography, AAS

PHOTOGRAPHY

School of Art, Humanities, Social Sciences and Public Service

Program Description

The Photography option prepares students to function in entry-level positions within commercial, educational, industrial and non-profit organizational settings. Students will acquire production skills in digital photographic imaging and media production. 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, educational, non-profit, and corporate in-house communications and media production departments. A large portion of individuals working in this field are self-employed persons working on various creative and technical projects. Photography skills give an advantage to content creators and social media influencers.

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.
- Produce photographic imagery appropriate to the subject.
- Communicate effectively and appropriately using vocabulary indicative of the technology.
- Design and produce effective 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 media production equipment and software.
- Practice appropriate safety procedures inherent to the industry.
- Effectively network with others in the art and design field

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
	3	Elective	Restricted Elective	3		
	4	VPP 160	Basic Photography	3		
	5	GCT 115	Design & Layout I	3		ART 160
	6	VPP 170	Digital Compositing and Photography	3		
1st Spring	7	ENG 162	Technical Communication	3	ENG 161	ENG 165
	8	VPP 100	Basic Video	3		
	9	Elective	Restricted Elective	3		
	10	BUS 120	Mathematics of Business	3	MTH 050 or Placement	
	11	SPC 155	Effective Speech	3		
2nd Fall	12	VPP 150	Video Editing	3		
	13	VPP 161	Portrait Photography	3	VPP 160	
	14	VPP 250	Nonfiction Media Production	3	VPP 100	
	15	VPP 260	Interactive Multimedia	3	VPP 150 Recommended	
	16	VPP 271	Digital Compositing and Photography II	3	VPP 170	
2nd Spring	17	VPP 299 or VPP 280	Internship or Capstone	3	VPP 100, VPP 150, VPP 170, and Permission of Instructor	
	18	VPP 200	Portfolio Development	3	VPP 160 & VPP 170	
	19	VPP 263	Documentary Photography	3	VPP 160 & VPP 170	
	20	VPP 266	Photography II	3	VPP 160 & VPP 170	
	21	PSY 160	General Psychology	3		
Minimum Program Credits				61		PHT

Restricted Electives: ART 140; ART 156; ART 160; ART 162; ART 171; BUS 140; BUS 188; GCT 115; GCT 151; MKT 252; MKT 254; VPP 120;

Welding Engineering Technology, AAS
School of Technology

Program Description

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 successfully completing this program, 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	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	WEL 125	Welding I	4		
	3	DFT 110	Blueprint Reading	2		
	4	MTT 111	Machining I	3		
	5	WEL 220	Welding Codes	3		
	6	DFT 258	AutoCAD	4		
1st Spring	7	MET 105	Welding Metallurgy I	3		
	8	WEL 221	Metal Fabrication	4	WEL 125 & DFT 110	
	9	WEL 228	SMAW	4	WEL 125	
	10	WEL 226	GMAW	4	WEL 125	
2nd Fall	11	MET 205	Welding Metallurgy II	3	MET 105	
	12	WEL 227	GTAW	4	WEL 125	
	13	WEL 222	Fundamentals of Aluminum	4	WEL 125	
	14	MTH 104	Introduction to Applied Mathematics	4	MTH 050 or Placement	
	15	ENG 161	College Writing	3	ENG 085 with Permission of Instructor, ENG 095 or Placement	
2nd Spring	16	WEL 224	NDT and DT	3	MET 105	
	17	WEL 225	Advanced Fabrication	3	WEL 221	
	18	WEL 230	Pipe Welding	3	WEL 227	
	19	ENG 162	Technical Communication	3	ENG 161	ENG 163 or ENG 164
	20	Elective	Social Science Elective	3	Varies	Page 42 Column III
Minimum Program Credits				65		WET

Welding Engineering Technology, Diploma
School of Technology

Program Description

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 successfully completing this program, 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.	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	WEL 125	Welding I	4		
	3	DFT 110	Blueprint Reading	2		
	4	MTT 111	Machining I	3		
	5	WEL 220	Welding Codes	3		
	6	DFT 258	AutoCAD	4		
1st Spring	7	MET 105	Welding Metallurgy I	3		
	8	WEL 221	Metal Fabrication	4	WEL 125 & DFT 110	
	9	WEL 228	SMAW	4	WEL 125	
	10	WEL 226	GMAW	4	WEL 125	
Minimum Program Credits				32		WELD

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 course credits per semester.

Example: 3-0-3

3 — lecture hours per week
0 — lab hours per week
3 — course credits per semester

All courses are identified alphabetically by a three-letter program code followed by a three-digit numerical course code (i.e. ACC 120). 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 or 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 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 programs 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 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.

ACC 234—PAYROLL AND DATABASE 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 systems. 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.

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 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*

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(s): Completion of 30 credits in program course requirements.*

ALH–ALLIED HEALTH

ALH 120—PHARMACOLOGY 3-0-3

Introduces the student to current concepts in pharmacology, including basic drug interactions, indications and contraindications for drug therapy, toxicity, side effects and safe therapeutic ranges. *Prerequisite(s): MTH 050 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.

ALH 225–MICROBIOLOGY FOR THE HEALTHCARE PROFESSIONAL 3-2-4

This course focuses on a study of several types of microorganisms, with emphasis on bacteria, protists, and viruses. The principles of microbiology will be examined using topical investigations of their metabolism, genetics, immunology, and uses, considering both medical and non-medical illustrations and their applications. Finally, students will develop a better understanding of the nature of the interaction, both harmful and beneficial, between various microbial species and the human environment. *Prerequisite(s): BIO172 (C or better)*

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 AMT 202. *Prerequisite(s): AMT101*

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. *Prerequisite(s): DFT 105, DFT 266, AMT 102*

AMT 202—ADDITIVE MANUFACTURING MOLD DESIGN 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. *Prerequisite(s): AMT 201; Corequisite(s): DFT 208*

ARC–ARCHITECTURE

ARC 101—BUILDING MATERIALS & ESTIMATING 3-0-3

Surveys building materials and characteristics used in the construction industry. The 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 104*

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, references and paper space applications are covered. (Most current versions 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 versions 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-FOUNDATIONS OF CREATIVE PRACTICE 1-4-3

This course provides strategies for students to adjust to college as a first step in pursuing a creative career. Students will learn about the college's resources, services, policies, and educational technology. The course will also teach proper use of tools, equipment, and chemicals, and will introduce digital skills necessary for portfolio documentation. Students will develop skills in educational planning, goal setting, and time management particular to their creative pursuits.

ART 140—INVENTIVE DRAWING 1-4-3

This course is an introduction to inventive drawing techniques, with an emphasis on narrative. The skills developed are applicable to a range of illustration styles, from simple cartooning to anime and naturalistic rendering. Students examine strategies for effective communication of story and mood to create characters, props, and environments. Exercises use both traditional and digital media.

ART 142—TYPOGRAPHY 1-4-3

This course is an exploration of type design, including its history and contemporary use. The course examines the development of letter formation. It addresses calligraphy, letterpress printing, and digital experimentation. Concepts will be examined for creative potential, corporate identification, and personal exploration. Assignments demonstrate visual solutions for typographic design problems, with emphasis on traditional and digital solutions.

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 explores the potential of the variant and the edition print. Relief, intaglio, drypoint, monoprint and risograph processes will be covered. It introduces an analysis of paper, print matrix, inks and the related fields of bookmaking and letterpress printing. Students will examine the role of the hand- printed image, the digital reproduction and the rich hybrid between these methods of printmaking.

ART 155—INTRODUCTION TO ART HISTORY 3-0-3

This course 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 course examines the function, construction, and context of objects created in the non-Western cultures of Africa, Asia, the Pacific, and the Americas. It establishes how art objects are an unconscious representation of a culture's ideology. The arts of these areas will be examined from an anthropological perspective. Particular attention will be paid to 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 the 1960s to the present. It covers the fundamental framework and critical ideas that have been documented in recent art history. It explores the major changes in the perception and function of art – how it is made, where it is presented, the role of the audience and how the work is historically recorded. The course focuses on a thematic approach to content.

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. It examines the development of a distinctly American art. In addition to the history and progression of art of the United States, students will examine the role of local institutions such as the Westmoreland Museum of American Art.

ART 159—HISTORY OF GRAPHIC DESIGN 3-0-3

This course explores the evolution of visual communication from early symbolic systems to digital culture, tracing key movements, influential designers, and major technological shifts. Students examine how typography, imagery, layout, and design principles emerged and transformed in response to cultural, political, and technological change. The course emphasizes learning to interpret design within historical contexts, analyze landmark works, and understand design's role in communication, persuasion, and cultural identity.

ART 160—2-D DESIGN 1-4-3

This course examines the elements and principles of 2D design, including line, shape, value, color, and composition. Students will solve design problems to develop their understanding of visual communication.

ART 161—3-D DESIGN 1-4-3

This course applies the basic elements and principles of design to the creation of three-dimensional projects, from wall-reliefs to free-standing forms. Students use a variety of materials to solve sculptural design problems involving volume, space, fabrication and construction. *Prerequisite(s): ART 160 or Permission of Instructor*

ART 162—DRAWING I 1-4-3

Drawing is a foundational art skill, which enables students to think visually and imaginatively. The course will emphasize drawing from observation, while exploring other ways to analyze shapes and the illusion of space on a two-dimensional picture-plane. In this survey course, students will explore a range of techniques and materials.

ART 163—DRAWING II 1-4-3

By focusing on the human figure, students will learn to render complex forms using a variety of strategies and materials. The course mixes anatomical study and observational drawing. Emphasis is placed on a balance of gesture and structure to express the personality and emotion of both artist and subject. *Prerequisite(s): ART 162 or Permission of Instructor*

ART 165—PAINTING I 1-4-3

Students will be introduced to the fundamentals of color mixing, paint application, surface preparation, and other key factors of the painter's craft. The course will explore composition, visual observation, and personal expression as crucial components of the picture making process. Students will consider the historical and contexts of painting. *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 exploration of ideas. The basics of the

idea-development process will be studied while refining and experimenting with techniques and materials. Students will work independently to develop a thematically related body of work. Students will explore historical and contemporary artists 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 legal issues that may affect artists and 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 issues such as: copyright protection, censorship, contract law, forms of business entities, and online resources.

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 180—CREATIVE BUSINESS BASICS 3-0-3

This course will provide students with the educational foundations to grow or launch a creative business. This course focuses on six essential elements of creative business success- capital, markets, peers, space, guidance, and workforce as the guiding elements for assignments and class discussions. Over the course of the semester, each student will develop a business plan framework for a real or fictional creative business, which will include aspects such as basic legal considerations, art business finances, and marketing. Students will gain the fundamental building blocks to make a living as a creative professional.

ART 183—BOOK ARTS I 1-4-3

This course is an introduction to the materials and techniques used in creating artist's books. In addition to lectures and discussions, students will explore historical and contemporary binding methods through hands-on activities. Students will develop skills in signature binding, material selection, and container construction. Additionally the course will focus on the conceptual aspects of book design, including narrative structures, text/image relationships, and alternative book forms.

ART 188—TEXTILES I 1-4-3

This course provides an overview of fabric arts. Students will explore the development of textile aesthetics with an emphasis on cultural context. Students will experiment with a variety of techniques, including dying, batiking, and weaving. The course will also examine color, material, and strategies for pattern design.

ART 285—CREATIVE PRACTICE I 1-4-3

This course is designed to prepare a student's work for advanced art programs and professional employment. The student will be provided with a fundamental set of skills that will be used throughout their developing careers. Students will assess and define their professional goals and write an artist statement. Students will document, present, and organize their studio work. They will also create a resume and portfolio web page. Students are required to enter at least one art competition or graphic publication, locate desirable job descriptions, and participate in a mock interview.

ART 286—CREATIVE PRACTICE II 1-4-3

This course is a capstone experience for art students, which builds upon the material covered in ART 101 and ART 285. Students will develop and install an exhibition based on a cohesive body of their own work. Students will be responsible for all aspects of the exhibition process, including curation, time management, publicity, and installation. In addition to a public reception, the resulting show will be reviewed by a committee of faculty and professionals. *Prerequisite(s): ART 285*

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 105-AMERICAN DEAF CULTURE AND THE DEAF COMMUNITY 3-0-3

This course is an introduction to deaf culture and examines both the emergence of the deaf community as a linguistic and cultural group and the history of American Sign Language. Students will study cultural norms, values, traditions, and rules of social behavior of the deaf community, as well as dynamics and cross-cultural interactions.

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. *Prerequisite(s): ASL 102*

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 settings 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.

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 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 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 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 150/151, CHM 225 or HS chemistry (C or better) 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 (C 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 programs and non-science programs 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 150/151, CHM 225 or HS chemistry (C or better), ENG 095 or Placement*

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): FOR 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.

Prerequisite(s): CUL 104

BKP 221—BAKING BISTRO 1-6-4

The student will study and prepare baked goods and pastries used in commercial operations with an emphasis on speed scratch techniques with ready-made components and fresh ingredients. Menus will be evaluated and developed for food and labor cost and where speed scratch techniques can be introduced. Uniform and program tool kit required. *Prerequisite(s): BKP 141*

BKP 223—BAKE II 1-6-4

A continuation of developing baking and pastry skills. Teaches the reasons for preparing various bakery and pastry products to satisfy the clientele. Students practice quantity baking on commercial equipment that is available to produce the best quality end-product. Emphasis is placed on menu planning, standardizing recipes, and production. The student is made aware of work simplification, cost control organization, and administration. A part of this course is preparing for and operating the Bistro. *Prerequisite(s): BKP 141*

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 kits are required.

BKP 247—SPECIALTY/ARTISTIC TECHNIQUES 1-6-4

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 kits are required. *Prerequisite(s): BKP 223*

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 kits 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 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 145—EXCEL FOR BUSINESS ENVIRONMENT 3-0-3

Excel for Business Environment focuses on decision making enhanced by Excel 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 Excel spreadsheet will be used in this course. This is an introductory course in business.

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 organizations.

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): BUS 120 (C or better) or MTH 052*

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 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 differential and integral calculus used in understanding and solving problems arising in business and economics. Topics include: limits, differentiation, integration, exponential and logarithmic functions, and functions of several variables. Calculus will be applied to real world business and economic scenarios. *Prerequisite(s): MTH 157*

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. *Prerequisite(s): BUS 244*

BUS 285—COMPENSATION MANAGEMENT 3-0-3

This course is designed to show students how to create fairness and equity when building a sound and equitable wage structure. Wage and salary administration is developed to enhance employee motivation. Job analysis, job evaluation and performance appraisal are presented as vehicles for advancing the understanding of fairness as it applies to both internal and external wage equity. Pay models are designed to be consistent with the legal framework as it applies to the job market. Competitiveness in performing a job is explored when considering a merit or seniority pay system.

BUS 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.

CHM–CHEMISTRY

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 150—GENERAL CHEMISTRY I LECTURE 3-0-3

CHM 150 is the first semester of a two-semester general chemistry lecture 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 150 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 gasses, the structure of solids and liquids and chemical periodicity are also studied. *Prerequisite(s): HS chemistry (C or better) or CHM 107, MTH 052 or Placement.*

CHM 151—GENERAL CHEMISTRY I LAB 0-2-1

General Chemistry I Laboratory is offered as the laboratory component to accompany CHM 150 (lecture) offering the hands-on experimental approach to collecting and analyzing experimental data in the laboratory. *Corequisite(s): CHM 150*

CHM 160—GENERAL CHEMISTRY II LECTURE 3-0-3

CHM 160 is the second semester of a two-semester general chemistry lecture sequence following CHM 150. CHM 160 focuses on the following topics: bonding in molecules, ionic compounds, metals and semimetals, chemical kinetics, equilibrium and thermodynamics. Acid/base equilibria, pH, titrations and electrochemistry are also explored along with an introduction to band gap theory and real-world applications. A brief introduction to organic chemistry and appropriate applications are presented. *Prerequisite(s): CHM 150*

CHM 161—GENERAL CHEMISTRY II LAB 0-2-1

General Chemistry II Laboratory is offered as the laboratory component to accompany CHM 160 (lecture) offering the hands-on experimental approach to collecting and analyzing experimental data in the laboratory. *Corequisite(s): CHM 160*

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 225—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): HS chemistry (C or better), CHM 107, or CHM 150/151*

CHM 260—ORGANIC CHEMISTRY I LECTURE 3-0-3

Organic Chemistry I is the first semester of a two-semester Organic Chemistry lecture course. CHM 260 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 160/161*

CHM 261—ORGANIC CHEMISTRY I LAB 0-4-1

Organic Chemistry I Laboratory is offered as the laboratory component to CHM 260 (lecture) offering the hands-on experimental approach to collecting and analyzing experimental data in the organic chemistry laboratory. *Corequisite(s): CHM 260*

CHM 270—ORGANIC CHEMISTRY II LECTURE 3-0-3

Organic Chemistry II is the second semester of the lecture 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 260/261*

CHM 271—ORGANIC CHEMISTRY II LAB 0-4-1

Organic Chemistry II Laboratory is offered as the laboratory component to accompany CHM 270 (lecture) offering the hands-on experimental approach to collecting and analyzing experimental data in the organic chemistry laboratory. *Corequisite(s): CHM 270*

CHM 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, CHM 225, or CHM 260/261*

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 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 AND 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*

CIS 265-PENETRATION TESTING 3-0-3

This course is designed to help students gain the knowledge and skills necessary to analyze systems in the same way hackers do, to identify vulnerabilities, and reduce security risks. Topics include but are not limited to: Setting up a Penetration Testing Lab; Planning, Scoping, and Information Gathering; Performing Vulnerability Scanning; Exploitation Methods and Tools; The various types of attacks; Reporting and Communication; Writing and Understanding Code

CMT–CONSTRUCTION MANAGEMENT

CMT 101—RELATED TRADES 2-4-4

This course will help the student develop skills 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 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.

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 and MTH 104*

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 161—INTRODUCTION TO CLOUD COMPUTING 3-0-3

This course is intended to teach students the skills necessary to master fundamental, vendor-independent cloud computing concepts. The course will help prepare students to take the CompTIA Cloud+ certification exam.

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

This course 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, mathematical and financial functions. The course will introduce dynamic linking, macros and importing/exporting data. Successful completion of this course enables the student to sit for the Microsoft Office Specialist (MOS) certification exam.

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 from 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. Successful completion of this course enables the student to sit for the Microsoft Office Specialist (MOS) certification exam.

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 I. 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 172 or CPT 183*

CPT 216—ROUTING AND SWITCHING ESSENTIALS (CISCO II) 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. *Prerequisite(s): CPT 172*

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 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.

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 or BUS 145, CPT 196 and OFT 185*

CPT 286—SYSTEM 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—INTRODUCTION TO 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 flowchart 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 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 the 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 evaluate 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 OF ADULTS AND JUVENILES 3-0-3

Correctional institutions relative to their role in the punishment and rehabilitation of individuals will be studied. The early history of imprisonment, classification and custody of incarcerates, security measures, and the development and organizational structure of jail and prison systems will be examined. Discussion will be conducted on contemporary dilemmas within institutionalization. Students will evaluate juvenile incarceration.

CRJ 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 104—FOUNDATIONS OF COOKING AND BAKING 1-4-3

This course is designed to prepare students with the foundational knowledge and skills of cooking and baking. Basic skills of dicing, cutting, chopping, egg cookery, stock making, quick breads, cookies, and yeast doughs will be demonstrated and practiced. Emphasis is placed on sanitation and safety. Uniforms and program tool kit required.

CUL 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. *Prerequisite(s): CUL 104*

CUL 112—FOODS II 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. Uniforms and program tool kit required. *Prerequisite(s): CUL 105*

CUL 121—APPRENTICESHIP I 1-40-1

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 the coordinator. Uniforms required. *Prerequisite(s): Must be enrolled in the Chef Apprenticeship program.*

CUL 122—APPRENTICESHIP II 1-40-1

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 1-40-1

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 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.

CUL 220—CULINARY BISTRO 1-6-4

The student will study and prepare foods used in commercial operations with an emphasis on speed scratch cooking with ready-made components and fresh ingredients. Menus will be evaluated and developed for food and labor cost and where speed scratch techniques can be introduced. Uniform and program tool kit required. *Prerequisite(s): CUL 105*

CUL 224—APPRENTICESHIP IV 1-40-1

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 1-6-4

Advanced food preparation skills to include regional and ethnic cuisine, food trends and menus. Uniforms and program tool kit required. *Prerequisite(s): CUL 105*

CUL 243—NUTRITIONAL COOKING AND BAKING 1-4-3

The student learns the nutrients, their sources and their relation to body functions. General nutrition is discussed including the social, economic and psychological implications of food and eating. Students research current nutritional recommendations and produce recipes including diet modifications. *Prerequisite(s) CUL 105 or BKP 141*

CUL 251 - APPRENTICESHIP V 1-40-1

A supervised and evaluated on-the-job training experience designed to provide practical application of the skills of the skills and methodology of the skilled culinarian or restaurant/culinary manager. Uniforms required. *Prerequisite(s): CUL 224*

CUL 253 - APPRENTICESHIP VI 1-40-1

A supervised and evaluated on-the-job training experience designed to provide practical application of the skills and methodology of the skilled culinarian or restaurant/culinary manager. Uniforms required. *Prerequisite(s): CUL 251*

Course Descriptions

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) *Corequisite: DAE 101*

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. *Corequisite: DAE 100*

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 225, 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 225, PSY 160, SOC 155; Corequisite(s): BIO 172, DAH 101, DAH 104*

DAH 103—MEDICAL EMERGENCIES 1-0-1

Prepares students 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. *Prerequisite(s): BIO 171, CHM 225, PSY 160, SOC 155; 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 225, 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 101, DAH 102, DAH 104, BIO 172; 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. *Prerequisite(s): DAH 101, DAH 102, DAH 104, BIO 172; 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): DAH 101, DAH 102, DAH 104, 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. *Prerequisite: DAH 101, DAH 102, DAH 104, BIO 172; Corequisite(s): DAH 103, DAH 105, DAH 111, DAH 112, 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. *Prerequisite(s): DAH 101, DAH 102, DAH 104, BIO 172; Corequisite(s): DAH 103, DAH 105, DAH 111, DAH 112, DAH 113*

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 2-2-3

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; Corequisite(s): DAH 206, DAH 207, DAH 209*

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, and DAH 117; Corequisite(s): DAH 205, DAH 207, DAH 209*

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 106, DAH 109, DAH 115, DAH 117; Corequisite(s): DAH 206, DAH 209, 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 207, DAH 209*

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. *Prerequisite(s): DAH 106, DAH 109, DAH 115, DAH 117 Corequisite(s): DAH 205, DAH 206, DAH 207*

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 or BIO 171 or BIO 172); Corequisite: 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, 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 or BIO 171 or BIO 172); Corequisite: 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 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. ASME 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. Students apply the basic design fundamentals and computations needed to produce a product. *Prerequisite(s): EGR 101 or DFT 112*

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) 3-4-4

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) 3-4-4

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(s): DFT 266*

ECE–EDUCATION/PRE-K–GRADE 4

ECE 155—INTRODUCTION TO EARLY CHILDHOOD EDUCATION 3-0-3

This course is an introduction to the field of early childhood education, with focuses on professionalism and cultural competence. It provides an overview of the history, knowledge base, and mission of the ECE profession in the United States and addresses the broader contexts and challenges impacting the field. The course emphasizes asset-based theories and funds of knowledge as a foundation for effective teaching and learning. Developmentally appropriate practice is introduced as central to professionalism and education. The course requires observations at an approved early childcare site. This course fulfills the prerequisite for ECE 166 and ECE 255.

ECE 156—INFANT & TODDLER DEVELOPMENT 3-0-3

The course provides an overview of infant and toddler development from birth through 48 months, as grounded in culturally responsive and sustaining practices. The course explores development related to physical growth, neurological and cognitive development, motor skills, language acquisition, social-emotional competencies. Culturally relevant approaches are emphasized, including inclusive environments, authentic family engagement, and play-based, experiential learning. The course explores the role of epigenetics and how access to resources impacts outcomes. The course covers infant and toddler mental health and a trauma-informed approach to support all learners. This course requires observations at a licensed child-care site. *Corequisite(s) ECE 283*

ECE 157—CHILD GROWTH AND DEVELOPMENT 3-0-3

This course provides an overview of development from 4-9 years, grounded in developmentally appropriate practices and culturally responsive practices. The course explores development related to physical growth, neurological and cognitive development, motor skills, language acquisition, and social-emotional competencies. The course examines historical and modern theories, and their application and relevance to development. Developmentally appropriate approaches to learning are emphasized, including inclusive environments, authentic family engagement, and play-based, experiential learning in formal and informal education systems. The course covers mental health and a trauma-informed approach to support all learners. Professionalism practices, including communication strategies with diverse families are emphasized. This course requires observations at a licensed child-care site.

ECE 165—FAMILY AND SOCIETY 3-0-3

This course explores cultural and social variables relevant to effective engagement with families and caregivers. Funds of knowledge and Bronfenbrenner's Theory are discussed as ways to understand family processes and support engagement from an asset based framework. Changing conceptions of family, family structure, and parenting across culture and social class are introduced as ways to understand families. The course introduces the concepts of structural poverty, childhood trauma, explores the impacts of toxic stress on families and children. Through this course, students will be equipped with the knowledge and skills necessary to engage with diverse families respectfully and reciprocally. This course requires field experience working with families and in community settings.

ECE 166—EARLY CHILDHOOD LANGUAGE AND LITERACY 3-0-3

This course examines asset based theories of language and literacy development. Funds of knowledge are utilized as a base for centering children's, families', and communities' language practices to support development. Strategies to promote speaking, listening, reading and writing are explored along with materials to foster language and literacy development for children birth to age 9, with an emphasis on the preschool years. The course explores incorporating literacy across learning experiences, settings, and content areas. This course requires observations at a licensed child-care site. This course fulfills a part of the prerequisite for ECE 284 Early Childhood Education Practicum. *Prerequisite(s): ECE 155 (C or better).*

ECE 167—CREATIVE EXPERIENCES 3-0-3

This course focuses on the important role of creativity for children's

development emphasizing culturally inclusive and equitable learning environments. The course explores how to craft a developmentally appropriate curriculum that honors the backgrounds and experiences of learners. Learners recognize the value of incorporating art, fine art, play, technology, music, creative dramatics, and literacy in the classroom from dominant and marginalized creators. This course requires observations at a licensed childcare site.

ECE 168—CHILDCARE MANAGEMENT 3-0-3

This course provides an introduction to the planning, administration, and culturally responsive leadership of early childhood programs. Students will explore the importance of building and maintaining positive, inclusive interpersonal staff relationships; effective communication with diverse families and communities; culturally responsive program evaluations and assessments; and understanding and navigating regulations, standards, and budgets through a lens of equity and inclusion. The course will support students in embracing professionalism and Pennsylvania (PA) initiatives that promote equity and advocacy in early childhood education.

ECE 170—CHILD HEALTH, SAFETY, AND NUTRITION 3-0-3

The course prepares early childhood educators and caregivers to promote children's health, safety, and nutrition from birth to age 12, focusing on culturally responsive practices. Students will learn to identify risks to children's health and safety and develop strategies for health promotion, disease prevention, and basic care at each developmental stage, considering children's and families' cultural backgrounds and needs. The course covers the physical, emotional, and social needs of children. This course requires observations at a licensed child-care site.

ECE 176—CDA PORTFOLIO I 1-0-1

This course supports students as they develop an understanding of CDA Functional Areas 1-4. The content ensures students gain knowledge and practical skills essential for early childhood education. The course explores foundational topics to reinforce key concepts, fostering a deep connection between coursework and real-world application. The course supports students in building the resource collection items for CDA Functional Areas 1-4. Emphasis is placed on understanding the purpose of each item, ensuring inclusivity, and integrating reflective practices to document the value of each resource. This course serves as a prerequisite for ECE177 CDA Portfolio 2.

ECE 177—CDA PORTFOLIO II 1-0-1

This course supports students as they develop an understanding of CDA Functional Areas 5-9. The content ensures students gain knowledge and practical skills essential for early childhood education. The course explores foundational topics to reinforce key concepts, fostering a deep connection between coursework and real-world application. The course supports students in building the resource collection items for CDA Functional Areas 5-9. . Emphasis is placed on understanding the purpose of each item, ensuring inclusivity, and integrating reflective practices to document the value of each resource. Through peer reviews, discussions, and assignments, students will gain confidence in preparing a professional portfolio that aligns with best practices in early childhood education. This course serves as a prerequisite to ECE178 CDA Portfolio III. *Prerequisite(s): ECE 176*

ECE 178—CDA PORTFOLIO III 1-0-1

This course guides students as they develop an understanding of CDA Functional Areas 10-13 and guides them through the final stages of CDA portfolio preparation with a focus on cultural competence and professionalism. Reflection, inclusivity, and cultural responsiveness in early childhood practices are emphasized. The course ensures that students produce a well-rounded and comprehensive portfolio and are prepared for the CDA verification visit and exam. The course focuses on verification visit preparation, including interview practice to build confidence and readiness. Through these steps, students prepare to showcase their knowledge and dedication to equity-driven, high-quality early childhood education in their professional CDA portfolios. *Prerequisite(s): ECE 177*

ECE 255—EARLY CHILDHOOD EDUCATION CURRICULUM 3-0-3

This course explores planning developmentally appropriate learning activities for children ages 3 to 9, with a focus on the preschool years. Play is emphasized as a central learning tool. Learners will observe classrooms for content area learning, then create and implement inclusive lessons using the PA Early Learning Standards, with a focus on developmentally appropriate practices and culturally responsive pedagogy. Emergent curriculum and commercial curriculum are compared for practicality and supporting learner development. Field experience at an approved childcare site is required. This course fulfills a part of the prerequisite for ECE 284 Early Childhood Education Practicum. *Prerequisite(s): ECE 155 (C or better).*

ECE 256—ASSESSMENT AND OBSERVATION OF YOUNG CHILDREN 3-0-3

This course introduces the ways that assessment supports child development and program planning in early childcare settings for children from birth to 9 years. Assessment is discussed within the context of developmentally appropriate practice, curriculum planning, pedagogy, universal design, and program development and modification. Ethics of assessment, including confidentiality, communication with caregivers, cultural and linguistic appropriateness, and standardized assessment are explored. This course requires observations at a licensed childcare center.

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 course addresses exceptionalities. Special attention is given to laws addressing special education as well as inclusion. Emphasis is placed on the important roles of the families and communities in special education. This course addresses disability as another form of diversity and equitable access to quality services to ensure all children thrive in their educational environment. This course requires observations at an approved 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. *Corequisite(s): ECE 257*

ECE 283—INFANT & TODDLER PRACTICUM 0-1-1

This course offers an in-depth examination of the infant and toddler classroom that builds upon the content in ECE 156 Infant & Toddler Development. Special attention is placed on the physical safety and care of infants and toddlers, supporting growth and development across domains, developing authentic relationships with caregivers, and lesson design and implementation. Professional development is emphasized and the course requires the completion of 50 hours of field experience at an approved early childcare site. *Prerequisite(s): Completed interest form, site agreement, and liability insurance. Students must verify the prerequisites with the program director to register for this course; Corequisite(s): ECE 156.*

ECE 284—EARLY CHILDHOOD EDUCATION

PRACTICUM **2-10-4**

This course offers practical experience regarding the role of the early childhood educator through 150 hours of field experience at an approved early childcare site. The course provides opportunities to explore, implement, and evaluate early childhood pedagogy, curriculum, and site administration. The practicum experience develops an authentic awareness and competency within the field of early childhood education with emphasis on reflective practice, professionalism, lesson design and implementation, developmentally appropriate practice, professionalism, lesson design and implementation, developmentally appropriate practice and an understanding of the whole child within the learning setting. *Prerequisite(s): Minimum 2.0 GPA, ECE 166 & ECE 255. Completed interest form, site agreement, and liability insurance. 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): BUS 120 (C or better) or MTH 052*

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): BUS 120 (C or better) or MTH 052*

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 or ECN 256*

EDU–EDUCATION

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.

EGX-ENGINEERING SCIENCE

EGX 101-FOUNDATION OF ENGINEERING ANALYSIS AND DESIGN **3-2-4**

This course provides an integrated introduction to engineering problem solving, quantitative analysis, computational tools, and engineering design. Students learn foundational engineering analysis methods, apply mathematics to real-world engineering problems, and acquire hands-on experience with the engineering design process through team-based projects. Emphasis is also placed on written, visual, and oral communication for technical audiences, incorporating principles from engineering composition. Students explore engineering majors, ethics, professional expectations, and team collaboration through seminar-style activities. This course prepares students for discipline-specific study and higher-level engineering courses. *Prerequisite(s): MTH 100 or Placement; Corequisite(s): MTH 157 or higher*

EGX 105-ENGINEERING COMPUTING AND PROFESSIONAL COMMUNICATION **3-2-4**

This course introduces engineering students to computational problem solving and professional engineering communication. Students learn fundamental programming concepts, algorithmic thinking, data analysis, and object-oriented principles using a modern programming language (Python or Java). Emphasis is placed on applying computation to engineering problems, developing readable and well-documented code, and communicating technical results through written reports, presentations, and visualizations. Team-based projects integrate computing with professional communication practices used in engineering workplaces. *Prerequisite(s): MTH 157 and 167 or MTH 170 or Placement; Corequisite(s): MTH 172*

EGX 109-MATERIALS STRUCTURE AND PROPERTIES **3-3-4**

This course introduces the fundamental relationships between the atomic structure, microstructure, and macroscopic properties of engineering materials. Students learn how metals, ceramics, polymers, and composites behave under mechanical, thermal, chemical, and electrical stimuli. Emphasis is placed on material selection, failure mechanisms, structure–property processing relationships, and applications across engineering disciplines. Laboratory activities reinforce lecture topics through experimental characterization, data analysis, and professional technical communication. *Prerequisite(s): CHM 150/151 and MTH 172; Corequisite(s): PHY 255*

EGX 201-STATICS AND MECHANICS OF MATERIALS **3-2-4**

This course introduces students to the analysis of forces acting on particles and rigid bodies, including equilibrium, structural analysis, and friction. It then extends to the mechanical behavior of materials under axial, shear, torsional, and bending loads. Students learn to compute stress, strain, deformation, internal forces, and material failure criteria. Laboratory sessions provide hands-on experience with tension, compression, torsion, and bending testing of engineering materials. Applications emphasize civil, mechanical, industrial, and bioengineering systems. *Prerequisite(s): EGX 101, MTH 172, and PHY 255; Corequisite(s): MTH 173 or Permission of Instructor*

EGX 205-DYNAMIC SYSTEMS AND RIGID-BODY DYNAMICS **3-3-4**

This course introduces the fundamental principles of particle dynamics, rigid-body kinematics and kinetics, energy and momentum methods, and modeling of dynamic systems. Students apply Newtonian and analytical approaches to describe, analyze, and predict the motion of particles and rigid bodies. Additional emphasis is placed on system modeling, vibrations, computational simulation, and engineering applications in mechanical, aerospace, civil, and biomedical contexts. Topics include kinematics, force analysis, work-energy, impulse-momentum, planar rigid-body motion, 3D motion

introduction, dynamic system formulation, free and forced vibrations, damping, and numerical solution strategies. *Prerequisite(s): EGX 201 and MTH 271; Corequisite(s): MTH 276*

EGX 209-ENGINEERING THERMODYNAMICS 3-0-3

An introduction to classical thermodynamics emphasizing the principles governing energy, heat, work, and entropy. Topics include thermodynamic systems and properties, the First and Second Laws of Thermodynamics, energy analysis of closed and open systems, entropy and exergy, power and refrigeration cycles, and basic thermodynamic relations. Applications span mechanical, civil, chemical, electrical, and materials engineering systems. *Prerequisite(s): MTH 173 and PHY 255 and EGX 101 and EGX 105; Corequisite(s): MTH 276*

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 Python to perform engineering calculations and simulations. *Pre/Corequisite(s): MTH 104 or MTH 157*

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. *Prerequisite(s): EGR 101*

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 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. *Prerequisite(s): EGR 101 or Permission of Instructor; MTH 172 or Permission of Instructor*

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. *Prerequisite(s): EGR 101 or Permission of Instructor*

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. *Prerequisite(s): EGR 101*

ELC–ELECTRONICS

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(s): MTH 104*

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*

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 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 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 and ELC 107*

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 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 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*

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.

**ENG 085 is a pass/fail course. To be considered to have met their developmental requirements, students must complete ENG 085 with a 70% or higher. Students who pass ENG 085 with a 70-89% may register for ENG 095 or ENG 095 and ENG 161. The criteria for being exempt from ENG 095 are as follows: 90% or higher in the course overall, 80% or higher on the final assessment and an average score of 1300 or higher on the course Lexile readings.*

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.

**ENG 095 is a pass/fail course. To be considered to have met their developmental requirements, students must complete ENG 095 with a 70% or higher.*

ENG 099—FUNDAMENTALS OF COLLEGE WRITING 1-0-1

ENG 099 provides support for the development of critical reading, thinking and writing skills integrated with standard *College Writing* assignments. The curriculum is tailored to support the coursework completed in ENG 161, so that the student has the best possible success in *College Writing*.

**ENG 099 is a pass/fail course. To be considered to have met their developmental requirements, students must complete ENG 099 with a 70% or higher.*

ENG 161—COLLEGE WRITING 3-0-3

This course covers the fundamentals of college writing including the paragraph, expository essay patterns and the argumentative essay. Emphasis is placed on developing a coherent thesis, writing concisely and clearly, and adapting one's writing to a particular audience. In addition, it will foster an appreciation of cultural diversity, explain how experiences and attitudes shape an individual's reading and demonstrate how language can shape thinking. This course also emphasizes self-editing, mechanics, grammar and word choice. It provides the basis for students to produce a range of effective writing from technical and business communications to research papers and critical essays. *Prerequisite(s): ENG 085 with Permission of Instructor, ENG 095 or Placement.*

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 of 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 200—WRITING ABOUT LITERATURE 3-0-3

Writing About Literature is an entry point into the English program, providing the techniques for compositions that demonstrate an informed, critical analysis of literary works. Students will read short fiction, poetry, and drama, develop analytical interpretations supported by research and critical theory, and compose a series of essays that emphasize clear and original understanding of the work and appropriate MLA documentation and format.

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 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.

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—WORLD LITERATURE 3-0-3

World Literature covers western and non-western literary classics and their relevant modern counterparts. The types of literature covered include the epic, the tale, the novel, drama, the essay, and poetry. A comparative approach is used in dealing with such themes as war, adventure, love, social customs, and death and the afterlife.

ENG 260—AMERICAN LITERATURE 3-0-3

This survey of American literature covers the period of exploration and settlement to the current era. Students will study and write about works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts, and in consideration of what constitutes a national identity in literature. Texts will be selected from among a diverse group of authors for what they reflect and reveal about the evolving American experience and character.

ENG 270—ENGLISH LITERATURE 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-present) movement. The course will also explore historical and cultural issues, as well as societal problems encountered by African American authors from the Colonial through the antebellum period and into the Harlem Renaissance. The course will introduce students to traditional literary forms including poetry, narrative and drama, but may also include speeches, letters, sermons and/or nonfiction essays.

ENG 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 provides through discussion and writing activities a study of Shakespeare's comedies, tragedies, and histories, examining Shakespeare's culture and Elizabethan theatre, the texts themselves, their sources, unique interpretations, and stage and film productions.

EPS–EARTH AND PLANETARY SCIENCE

EPS 150—ASTRONOMY 3-2-4

An introductory course for non-science programs. 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 expanding universe; cosmology based on the Big Bang theory; and life in the universe. This course covers most of the areas of modern astronomy at a level, which requires only basic algebra and mathematics. *Prerequisite(s): MTH 052 or Placement*

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 rock beds; earthquakes and volcanoes; the interior processes and origins of the earth.

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 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*

FOR-FORENSIC

FOR 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.

FOR 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.

FOR 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.

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 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 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 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—WAITSTAFF/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 70% 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 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

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): CUL 105 and CUL 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 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. The job-site must be approved by the 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 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 file preparation and management as it relates to print production and web and mobile media creation. Students explore communicating and sharing resources, image design and preparation, and file conversion/optimization, and printing directly from devices.

GCT 115—DESIGN & LAYOUT I 3-0-3

This fundamental course in two-dimensional design exposes students to the profession of graphic design. The focus is on visual thinking, experimentation, and exploring the relationship of elements. Students explore page layout, design principles, color decisions, typography choices, and working with vector and pixel-based imagery through the creation of practical projects.

GCT 126—MOTION GRAPHICS 3-0-3

An introductory course incorporating vector graphic, digital imaging, and animation/motion software for generating static and motion content for web, mobile, and games. Students gain experience designing, creating, and optimizing loading gifs, cinemagraphs, cartoons/animations, sprite sheets, bitmap textures, social media imagery, and motion-based media elements.

GCT 131—TYPE & PUBLISHING I 3-0-3

This course emphasizes page layout and design techniques for creating a variety of static printed materials such as posters, flyers, brochures, and interactive digital publications, e-books and PDFs. Basic tools and techniques merge with digital publishing and interactive PDFs to design, create, and distribute engaging communications via mobile and tablet viewing, social networks, URLs, or email.

GCT 151—ART & ILLUSTRATION I 3-0-3

An introductory course where students apply their art and design skills to create visually compelling, vector-based artwork for creative entertainment, print media, advertising and branding, design elements for web and mobile content, and for the digital media industry.

GCT 156—GRAPHICS PRODUCTION 3-0-3

Environmental graphic design involves the coordination of research, design elements, digital technology with design thinking and creative problem-solving to create symbols, signs, and wayfinding orientation. This course introduces students to various printing technologies from apparel decoration, graphics production and installation to functional printing of simple and complex close register images for various printing market segments. *Prerequisite(s): GCT 151*

GCT 161—CREATIVE IMAGING I 3-0-3

An introductory course exploring creative imaging concepts and techniques to create, correct and improve digital images. This course emphasizes the importance of nondestructive imaging using layers and channels, selections and masks, adjustment layers and typographic design. It focuses on preparing images for print production, and web and mobile media creation.

GCT 164—INTERACTIVE DESIGN 3-0-3

An introductory course exploring the constantly changing landscape of web design: visual layout and design considerations including user interface design (UI), and user experience (UX). Students will implement these aesthetic influences, web technology, and web standards to address usability issues, layout/positioning methods, image optimization, and web typography in the creation of innovative, credible, functional responsive web design. *Prerequisite(s): GCT 126*

GCT 200—DESIGN TECHNOLOGY II 3-0-3

This course is designed to introduce students to emerging technology and software as it becomes available for today's "*create anytime, anywhere*" social, cultural practice. This course meets the changing needs of students and businesses as developing technologies, that are not within the curriculum, are explored before they become mainstream. *Prerequisite(s): GCT 100*

GCT 290—DESIGN STUDIO 3-0-3

Students prepare marketing and self-promotion materials, create a LinkedIn profile page, and develop a digital and web-based showcase portfolio under faculty guidance. Under the supervision of the Career Connections Center, students are involved in an on-campus pre-internship experience in preparation for interviewing for an off-campus internship.

GCT 296—UI/UX DESIGN 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(s): GCT 164*

GCT 299—DESIGN INTERNSHIP 0-12-3

Students gain experience involving production art techniques, technical support, and customer service or sales responsibilities that broaden their understanding of the graphic/communications design profession through supervised and evaluated workplace experience in design studios, marketing and advertising agencies, digital fabrication, graphic production, and digital publishing environments. Transportation to an 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.

GER–GERMAN

GER 155—BEGINNING GERMAN I 4-0-4

Beginning German I is an introductory course that requires no prerequisite knowledge or background in the German language or culture; the course will focus on establishing basic reading, writing, listening and speaking skills in German. It will also address social, cultural, political, and historical themes in English at the instructor's discretion and depending on student interest. Additionally, there will be an emphasis on the development of circumlocution skills and effective communication in real-life situations in German.

GER 156—BEGINNING GERMAN II 4-0-4

Beginning German II is an intermediate course in German language and culture. It requires the prerequisite knowledge of an introductory German level I course. Additionally, it will build upon vocabulary and grammar knowledge, as well as listening, writing, reading and speaking skills already established in entry level German. It will also address social, culture, political, and historical themes in English at the instructor's discretion and depending on student interest. Additionally, there will be continued emphasis on the development of circumlocution skills and effective communication in real-life situations in German. *Prerequisite(s): GER155*

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 including residential and commercial blueprints.. 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 in detail.

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 the 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 multimedia 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. Hydronic 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 the 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 HVACR students to take their EPA 608 licensing exam. Students will learn proper refrigerant handling requirements by code. Students will learn EPA regulations, refrigerant chemistry, refrigerant lubricants, transportation and disposal.

HCM-HEALTHCARE MANAGEMENT

HCM 130—A&P FOR MEDICAL OFFICE 3-0-3

Designed for students enrolled in medical administration; it 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 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 healthcare 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 healthcare 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 program*

HCM 230—REVENUE CYCLE FOR HEALTHCARE 3-0-3

This course is designed to advance topics in health care revenue cycle management and explore current issues impacting health care organizations' reimbursement. The students will learn many processes, programs, organization and departments involved in managing healthcare revenue. The students critical thinking skills will be enhanced by looking at hospital measures of performance, clinical documentation integrity, physician queries, claims audits, denials and appeals alongside the pay-for-performance and other critical areas of the revenue cycle.

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 or BIO 171 and BIO 172*

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 or BIO 171 and BIO 172*

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 exercises 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 credit hours of HCM courses.*

HCM 299—VIRTUAL CAPSTONE 3-0-3

This course provides virtual office experience for those completing the health care management associate degree. Students will gain valuable experience working strictly online from a home environment. Students will develop proper communication skills, time management, proper office etiquette, appropriate ethical and legal responsibilities with office staff and management by working with other classmates and the instructor of the course. *Prerequisite(s): BIO 107 or BIO 171 and BIO 172, HCM 145, HCM 150, HCM 155, HCM 165, HCM 250, and HCM 260*

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 250—AMERICAN REVOLUTION 3-0-3

This course explores the causes, conduct, and consequences of the American Revolution from the Seven Years' War to the ratification of the Constitution, by focusing on political, economic, intellectual, social, military, cultural, and religious developments of the period. The course examines the roles of diverse groups of the era, including Patriots, Loyalists, enslaved people, Native Americans, religious leaders, and women. The course details the postwar era (the Critical Period) with a focus on the Articles of Confederation and the disagreements of Federalists and Anti-Federalists that led to the ratification of the United States Constitution.

HIS 255—EARLY US 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 US 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.

HIS 268—WORLD HISTORY TO 1500 3-0-3

A survey of world history from early human societies through the sixteenth century, this course is a general, but comprehensive, study following a topical approach by focusing on social, cultural and military developments of the period. Major topics include the early complex societies, the formation of classical societies, the postclassical era, and cross-cultural interactions.

HIS 269—WORLD HISTORY SINCE 1500 3-0-3

A survey of world history from the sixteenth century to the present, this course is a comprehensive study following a topical approach by focusing on social, cultural, political, economic and military developments of the period. Major topics include the origins of global independence, the age of revolution, industry, and empire, and contemporary global realignments.

HMT–HOTEL/MOTEL MANAGEMENT

HMT 266—EVENT MANAGEMENT 3-0-3

The events industry is an ever changing and evolving industry. Many aspects such as social media, global interaction, sustainability, social responsibility, and the economic and cultural shifts have driven rapid expansion and increased competition. This course will provide comprehensive coverage of the theory, concepts and practice of event management. It will cover creating, organizing, promoting, and managing special events of all kinds. *Prerequisite(s): FSM 103*

HPE–HEALTH AND PHYSICAL EDUCATION

HPE 156—HEALTH AND PHYSICAL EDUCATION 3-0-3

This course focuses on three dimensions of health: physical, mental, and social health and the lifestyle choice that can have either a positive or a negative effect on these dimensions of health. Specific areas of emphasis include; exercise and fitness, nutrition, stress management, drug use and abuse, infectious diseases including sexually transmitted diseases, cardiovascular disease, cancer, diabetes, injury prevention and social relationships. Students will perform a pre/post fitness test and develop an individually prescribed exercise program to be performed a minimum of three times 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 120- 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. The class explores the artists, intellectuals and technicians who shaped movie history. Students will explore genres and styles of international cinema and learn to better analyze films within their historical contexts. Cross-listed as VPP 120.

LAS–LEGAL STUDIES/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 and 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 and 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 and 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 and LAS 111*

LAS 200—CONSTITUTIONAL LAW **3-0-3**

An introduction to the U.S. Constitution, individual rights, and the structure of government, using key Supreme Court cases to show how these principles apply in real life.

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 and 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): Permission of Instructor.*

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*

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 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 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 101—INTRODUCTION TO NANOTECHNOLOGY 1-0-1

Nanoscale science and nanotechnology are broad, interdisciplinary areas, encompassing not just materials science but everything from biochemistry to electrical engineering and more. This will be a survey course introducing some of the fundamental principles behind nanotechnology and nanomaterials, as well as applications of nanotechnology. The role of physics and chemistry in nanotech will be emphasized. Nanoscale tools such as surface probe and atomic force microscopy, nanolithography, and special topics such as molecular electronics will also be covered.

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, turbomolecular, 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. *Prerequisite(s): MTH 157 and ENG 161*

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. *Prerequisite(s): MTH 157 and ENG 161*

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. Students 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. *Prerequisite(s): MTH 157 and ENG 161*

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. *Prerequisite(s): MTH 157 and ENG 161*

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. *Prerequisite(s): MTH 157 and ENG 161*

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. *Prerequisite(s): MTH 157 and ENG 161*

MTH–MATHEMATICS

MTH 050—BASIC MATHEMATICS 3-0-3

Designed for students who need to develop the basic mathematical 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 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 or Placement*

MTH 061—INTEGRATED REVIEW FOR MODERN MATH 0-1-1

This course provides a just-in-time review of algebra skills for students who are taking MTH 161 Modern College Mathematics. Topics include operations on numbers and expressions, solving linear equations, graphs of linear equations, properties of exponents, the square root property of equations, and problem solving including proportions and variation. Taking this course concurrently with MTH 161 replaces MTH 161's prerequisite of MTH 052.

MTH 100—INTERMEDIATE ALGEBRA 3-0-3

This course is designed for students with some previous algebra background and further enhances these algebraic skills while developing others necessary for achievement in College Algebra. Topics include: linear and compound inequalities; absolute value equations and inequalities; factoring; rational and radical expressions; rational exponents; complex numbers; and solving rational, radical and quadratic equations and word problems. *Prerequisite(s): MTH 052 or Placement*

MTH 104—INTRODUCTION TO APPLIED MATHEMATICS 4-04-

A course for applied industrial programs emphasizing a practical approach to algebra and geometry. Topics include measurement, estimation, propagation of error, solving first degree equations and modeling with linear equations, problem solving with rates and proportions, unit conversations, area and volume calculations, the coordinate plane, and trend lines. *Prerequisite(s): MTH 050 or Placement*

MTH 108—MATHEMATICS FOR THE TECHNOLOGIES I 4-0-4

A course for technology programs emphasizing application and problem solving. Topics include review of fundamental algebra; formula transformation; dimensions and units; radicals; systems of linear equations; graphing of data, equations and functions; right triangle trigonometry; and quadratic equations and functions. *Prerequisite(s): MTH 104 (C or better) or Placement*

MTH 109—MATHEMATICS FOR THE TECHNOLOGIES II 4-0-4

A course for technology programs 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 (C or better) or Placement*

MTH 157—COLLEGE ALGEBRA 3-0-3

This course builds upon the algebraic skills from Intermediate Algebra. Topics include: graphing and slope; functions and relations including circles and linear, polynomial, rational, exponential and logarithmic functions; transformations and analysis of functions including symmetry; function composition and inverses; polynomial and rational inequalities; variation; properties of logarithms; linear and nonlinear systems of equations in two and three variables; and systems of inequalities in two variables. *Prerequisite(s): MTH 100 (C 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 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 in non-science programs, 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 or Placement*

MTH 167—COLLEGE TRIGONOMETRY 3-0-3

This course is designed to prepare students with the necessary background in trigonometric functions for the Calculus sequence. Topics include right triangle trigonometry, unit circle trigonometry, periodic functions, trigonometric identities, vectors, and application problem solving involving trigonometry. *Prerequisite(s): MTH 157 (C or*

better) or Placement

MTH 170—COLLEGE PRECALCULUS 4-0-4

This course is intended to prepare students with the necessary background of function manipulation for the Calculus sequence. Discussion of functions includes transformations of functions, inverse functions; algebraic functions (including power functions, radical functions, polynomial functions, and rational functions); exponential functions, logarithmic functions; trigonometric functions, and inverse trigonometric functions. Additional topics include systems of equations, analytic geometry, and triangle trigonometry. *Prerequisite(s): MTH 100 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): C or better in one of MTH 109, MTH 167 or MTH 170 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 (C or better)*

MTH 180—ELEMENTS OF MATHEMATICS I 3-0-3

A presentation of 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 (C 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 (C 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 (C or better)*

MTH 276—ORDINARY AND PARTIAL DIFFERENTIAL EQUATIONS 4-0-4

A study of ordinary and partial differential equations with applications. First order equations, second order linear equations, initial value problems, boundary value problems The Laplace transform and convolution. Methods for nonlinear equations including power series, special functions. Systems of differential equations and phase plane analysis. Fourier series and partial differential equations. *Prerequisite(s): MTH 173 (C or better); Corequisite: MTH 271*

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 mathematical induction), combinatorics, probability, relations and functions, and graph theory. *Prerequisite(s): MTH 172 (C 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.

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 104*

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 be 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 and CNC 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(s): 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(s): 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 156—EARLY CHILDHOOD MUSIC 3-0-3

This course covers basics in music for the non-music specialist, including pedagogical methods for effectively incorporating music into early childhood classrooms.

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.

NAA–NURSE AIDE

NAA 100—NURSING ASSISTANT SKILLS I 6-3-7

Provides knowledge and skills for nurse aides to assume the role and responsibility required in a long-term care setting. The focus is communication, infection control, safety, resident/patient rights, and basic nursing skills. This is a NATCEP approved course. Note: Faculty and clinical sites must comply with applicable Federal and Pennsylvania laws and regulations (141.5 hours). *Prerequisite(s): Acceptance into Nurse Aide Program*

NMT–NUCLEAR MEDICINE TECHNOLOGY

NMT 100—INTRODUCTION TO NUCLEAR MEDICINE 1-0-1

Introduction to Nuclear Medicine provides a comprehensive overview of the principles, practices, and applications of nuclear medicine in healthcare. This course introduces students to the foundational concepts of nuclear medicine, including the history and evolution of the field, the role of radiopharmaceuticals, and the use of imaging technologies in diagnosing and treating diseases. *Prerequisite(s): Admission to Program, BIO 171 (C or better)*

NMT 102—APPLIED NUCLEAR MEDICINE - PET TECHNOLOGY I 4-0-4

Applied Nuclear Medicine - PET Technology I focuses on the advanced principles and applications of Positron Emission Tomography (PET) in nuclear medicine. This course provides students with in-depth knowledge of PET imaging, emphasizing its role in diagnosing and monitoring diseases such as cancer, neurological disorders, and cardiovascular conditions. *Prerequisite(s): Admission to the Nuclear Medicine Technology Program.*

NMT 104—NUCLEAR MEDICINE - PET INSTRUMENTATION I 3-0-3

Nuclear Medicine PET Instrumentation I provides an introduction to the fundamental principles and operational aspects of Positron Emission Tomography (PET) imaging systems. This course focuses on the design, function, and performance of PET instrumentation, including detectors, electronics, data acquisition systems, and image reconstruction methods. *Prerequisite(s): Admission to the Program.*

NMT 150—NUCLEAR MEDICINE - PET PHYSICS 3-0-3

Nuclear Medicine - PET Physics provides an in-depth exploration of the physical principles underlying Positron Emission Tomography (PET) imaging. The course focuses on the interaction of positrons with matter, the mechanics of positron annihilation, and the detection of resulting gamma photons. Students will study the fundamental physics concepts essential to PET imaging, including radioactive decay processes, coincidence detection, and time-of-flight technology. *Prerequisite(s): NMT 100, HS Physics (C or better); or PHY 107 (C or better); or PHY 110 (C or better).*

NMT 152—NUCLEAR MEDICINE - PET INSTRUMENTATION II 3-0-3

Nuclear Medicine - PET Instrumentation II builds on the principles and applications of Positron Emission Tomography (PET) in nuclear medicine NMT 102. This course provides students with in-depth knowledge of PET imaging, emphasizing its role in diagnosing and monitoring diseases such as cancer, neurological disorders, and cardiovascular conditions. *Prerequisite(s): NMT 102; Corequisite(s): NMT 150*

NMT 154—APPLIED NUCLEAR MEDICINE - PET TECHNOLOGY II 4-0-4

Applied Nuclear Medicine - PET Instrumentation II provides a continued instruction in the l principles and operational aspects of Positron Emission Tomography (PET) imaging systems. This course focuses on the design, function, and performance of PET instrumentation, including detectors, electronics, data acquisition systems, and image reconstruction methods. *Prerequisite(s): NMT 104*

NMT 165—CLINICAL NUCLEAR MEDICINE EDUCATION I 0-16-4

Clinical Nuclear Medicine Education I focuses on the practical application of nuclear medicine principles in a clinical setting. This course emphasizes the use of radiopharmaceuticals, imaging techniques, and therapeutic procedures to diagnose and treat a variety of medical conditions. Students will learn to integrate theoretical knowledge with hands-on practice in performing nuclear medicine procedures, interpreting diagnostic images, and ensuring patient safety and care. *Prerequisite(s): NMT 152*

NMT 175—CLINICAL NUCLEAR MEDICINE EDUCATION II 0-12-3

Clinical Nuclear Medicine Education II focuses on the practical application of nuclear medicine principles in a clinical setting. This course emphasizes the use of radiopharmaceuticals, imaging techniques, and therapeutic procedures to diagnose and treat a variety of medical conditions. Students will learn to integrate theoretical knowledge with hands-on practice in performing nuclear medicine procedures, interpreting diagnostic images, and ensuring patient safety and care. *Prerequisite(s): NMT 165*

NMT 185—CLINICAL NUCLEAR MEDICINE EDUCATION III 0-12-3

Clinical Nuclear Medicine Education III focuses on the practical application of nuclear medicine principles in a clinical setting. This course emphasizes the use of radiopharmaceuticals, imaging techniques, and therapeutic procedures to diagnose and treat a variety of medical conditions. Students will learn to integrate theoretical knowledge with hands-on practice in performing nuclear medicine procedures, interpreting diagnostic images, and ensuring patient safety and care. *Prerequisite(s): NMT 175*

NMT 202—APPLIED NUCLEAR MEDICINE - PET TECHNOLOGY III 4-0-4

Applied Nuclear Medicine - PET Technology III builds on the principles and applications of Positron Emission Tomography (PET) in nuclear medicine NMT152. This course provides students with in-depth knowledge of PET imaging, emphasizing its role in diagnosing and monitoring diseases such as cancer, neurological disorders, and cardiovascular conditions. *Prerequisite(s): NMT 152*

NMT 215—CLINICAL NUCLEAR MEDICINE

EDUCATION IV **4-0-4**

Clinical Nuclear Medicine Education IV focuses on the practical application of nuclear medicine principles in a clinical setting. This course emphasizes the use of radiopharmaceuticals, imaging techniques, and therapeutic procedures to diagnose and treat a variety of medical conditions. Students will learn to integrate theoretical knowledge with hands-on practice in performing nuclear medicine procedures, interpreting diagnostic images, and ensuring patient safety and care. *Prerequisite(s): NMT 185*

NMT 265—CLINICAL NUCLEAR MEDICINE EDUCATION V **0-20-5**

Clinical Nuclear Medicine Education V focuses on the practical application of nuclear medicine principles in a clinical setting. This course emphasizes the use of radiopharmaceuticals, imaging techniques, and therapeutic procedures to diagnose and treat a variety of medical conditions. Students will learn to integrate theoretical knowledge with hands-on practice in performing nuclear medicine procedures, interpreting diagnostic images, and ensuring patient safety and care. *Prerequisite(s): NMT 215*

NSG–NURSING

NSG 112—INTRODUCTION TO PROFESSIONAL NURSING AND HEALTH PROMOTION ACROSS THE LIFESPAN **2.55-1.35-3**

The five critical elements of the Westmoreland County Community College Nursing program: caring, competency, communication, clinical judgment, and commitment serve as the framework for this course. The course focuses on the profession of nursing, the healthcare 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 116*

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, clinical judgment 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**

The five critical elements of the Westmoreland nursing program - caring, competency, communication, clinical judgment and commitment - serve as a framework of the course. The 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 opportunity to develop and practice selected skills will be provided in the Simulation Laboratories, acute 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**

The five critical elements of the Westmoreland nursing program - caring, competency, communication, clinical judgment and commitment - serve as a framework of the course. The 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 of 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. The opportunity to develop and practice selected skills is provided in the campus laboratory, Simulation Laboratories, and in the acute care clinical setting. *Prerequisite(s): BIO 171, BIO 172, CPT 150, NSG 112, NSG 114, NSG 116; Corequisite(s): PSY 160*

NSG 200—LPN TRANSITION INTO ASSOCIATE DEGREE NURSING **2.5-4.38-3**

The five critical elements of the Westmoreland nursing program - caring, competency, communication, clinical judgment and commitment - serve as a framework of the course and is designed specifically for the Licensed Practical Nurse (LPN) who meets the criteria for advanced placement in the Associate Degree Nursing (ADN) program. This course is specifically tailored for LPNs who meet the requirements for advanced placement in the ADN program. It provides both theoretical knowledge and hands-on experience to facilitate the transition from the role of a practical nurse to that of a professional nursing student. The course strongly emphasizes critical thinking, clinical reasoning, and the nursing process. Students will learn to organize and assess clinical data using the Clinical Judgment Model while focusing on communication and care throughout the lifespan. Practical application of these concepts and technical and mathematical skills will be demonstrated through lab assignments, clinical assignments, and coursework.

NSG 212—SPECIALTY NURSING ACROSS THE LIFESPAN **6.5-7.5-9**

The five critical elements of the WCCC Nursing Program: caring, competency, communication, clinical judgment and commitment serve as the framework for this course. Students are introduced to the role of the nurse as the provider of care to clients in specialty settings across the lifespan. Specific focus is on health promotion during common processes for women, children, infants and families as well as health restoration for individuals experiencing alterations in psychosocial needs. Emphasis is placed on caring communication, teaching and learning and identifying and responding to health alterations. Students will have opportunities to practice skills in the clinical and laboratory settings. Learning activities will take place in a variety of simulations, direct care clinical and community settings providing the student with a rich and diverse experience. *Prerequisite(s): NSG 124, PSY 160, ENG 161, MTH Elective; Corequisite(s): BIO 265*

NSG 224—ADVANCED MEDICAL-SURGICAL NURSING CARE OF THE ADULT **4.5-7.5-7**

The five critical elements of the Westmoreland County Community College Nursing Program - caring, competency, communication, clinical judgment and commitment - serve as the framework for this course. This course emphasizes the utilization of the nursing process in the care of individuals with alterations in basic human needs. Evidence-based research and practices are employed to focus on advanced health problems in acute care settings. In addition, an emphasis is placed on health promotion, risk reduction, disease prevention, and treatment to prevent health problems from occurring or reoccurring. The opportunity to practice psychomotor and clinical judgment related to patient care and symptom management is provided in the campus laboratory and acute care clinical settings.

NSG 236—CAPSTONE: TRANSITION TO PRACTICE **1-9-4**

The five critical elements of the Westmoreland County Community College Nursing Program - caring, competency, communication, clinical

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 and 20 hours of Office Administration 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 101—FIRST YEAR SEMINAR 1-0-1

This course provides strategies for adjusting to college culture and understanding college expectations. 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 120—CAREER DEVELOPMENT 1-0-1

This course is designed to introduce students to essential career readiness skills. Topics will include teamwork, workplace communication skills, job search strategies, including how to recognize common job scams, resumes/cover letters, and interviewing. Throughout the course, students will apply these skills to develop a resume and job search strategy they can use when conducting their future job search.

PDV 130—WORKFORCE READINESS 1-0-1

This course will help students develop the knowledge and skills needed to evaluate job offers and be successful in a job. Students will learn about topics such as labor laws, commonly offered benefits, employer expectations, work-life balance, self-advocacy, conflict resolution, and professionalism.

PDV 140—WORK-BASED LEARNING 2-0-2

This course will connect classroom learning to the workplace, allowing students to develop and apply academic and career readiness skills in real-world settings.

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. The course is scheduled during the first 8 weeks of the semester. *Corequisite(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. The course is scheduled during the first 8 weeks of the semester. *Corequisite(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 the second 8 weeks of the 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 (If applicable) during the first 8 weeks of semester.*

PHL–PHILOSOPHY

PHL 101—INTRODUCTION TO PHILOSOPHY 3-0-3

Explores fundamental philosophical questions about existence, knowledge, ethics, and human experience. Students examine major philosophical traditions, critical reasoning, and key thinkers from ancient to contemporary philosophy. The course develops analytical skills by investigating foundational questions about reality, morality, consciousness, and the human condition through reading, discussion, and Socratic methodology.

PHL 102—CRITICAL THINKING 3-0-3

Introduces systematic approaches to analytical reasoning and critical thinking. Students develop skills to evaluate arguments, distinguish between fact and opinion, and analyze complex information across multiple disciplines. The course emphasizes logical reasoning, evidence-based analysis, and effective communication strategies. Students learn to deconstruct arguments, recognize cognitive biases, and construct well-reasoned, objective perspectives.

PHL 103—ETHICS 3-0-3

Examines fundamental ethical theories and approaches to moral reasoning. Students critically analyze normative ethical frameworks, exploring perspectives on moral judgements, individual and societal moral challenges, and complex ethical dilemmas. The course investigates the major philosophical traditions of moral philosophy, developing skills in ethical reasoning, argumentation, and critical moral assessment across diverse contemporary contexts.

PHL 104—CITIZENSHIP & SOCIAL RESPONSIBILITY 3-0-3

Explores citizenship and social responsibility in the digital age, exploring the evolving nature of civic participation through traditional and emerging technological and social platforms. Students critically analyze the rights and obligations of citizens in a technology-driven democracy, investigating digital literacy, online activism, misinformation, and privacy challenges within an interconnected global context.

PHL 202—LOGIC 3-0-3

Introduces principles of rational reasoning through systematic analysis of deductive and inductive logic. Students develop analytical skills by examining symbolic propositional and predicate logic, logical inference, argument structure, and formal proof techniques. The course emphasizes critical thinking, precise language use, and methodical approaches to evaluating reasoning and constructing valid arguments.

PHL 203—BIOMEDICAL ETHICS 3-0-3

Examines complex ethical challenges in healthcare and biomedical sciences through rigorous analysis of fundamental ethical theories. Students critically investigate contemporary medical dilemmas, including genetic engineering, end-of-life care, medical research ethics, and technological interventions in human health. The course develops analytical skills for navigating moral complexities in scientific and clinical decision-making.

PHL 204—BUSINESS & PROFESSIONAL ETHICS 3-0-3

Critically examines ethical challenges in contemporary business environments, exploring normative ethical theories and their practical applications. Students analyze complex issues including corporate social responsibility, governmental regulation, organizational decision-making, workplace integrity, professional conduct, and the intersection of business practices with moral reasoning. The course develops analytical skills for navigating ethical dilemmas in professional settings.

PHL 210-POLITICAL IDEAS: FROM PLATO TO THE PRESENT 3-0-3

This course introduces students to the central ideas, thinkers, and debates that have shaped political thought from classical to modern times. Topics may include concepts of justice, liberty, equality, democracy, and power, as well as competing thinking and analytical skills through reading, discussion, and application of political theory to contemporary issues. Cross-listed as POL 210.

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*

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 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): HS physics (C or better), PHY 107 or PHY 110; Corequisite(s): RAD 131, RAD 141, RAD 146*

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 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 HS physics (C or better)*

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 HS physics (C or better); 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. *Prerequisite(s): PHY 256*

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. *Prerequisite(s): PHY 255*

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 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 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 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 210-POLITICAL IDEAS: FROM PLATO TO THE PRESENT 3-0-3

This course introduces students to the central ideas, thinkers, and debates that have shaped political thought from classical to modern times. Topics may include concepts of justice, liberty, equality, democracy, and power, as well as competing visions of the individual, society, and the state. Emphasis is placed on developing critical thinking and analytical skills through reading, discussion, and application of political theory to contemporary issues. Cross-listed as PHL 210.

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 & 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: 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: 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 230—SPORT PSYCHOLOGY 3-0-3

This course introduces students to the psychological principles that influence sport, exercise, and athletic performance. Students will examine motivation, confidence, arousal regulation, group dynamics, leadership, and mental skills training. Emphasis will be placed on applying psychological strategies to improve performance, promote mental well-being, and enhance participation in sport and physical activity across diverse populations.

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. Assignments are utilized to help students understand all the phases of scientific research: hypothesis formation, design, data collection, analysis, and interpretation. *Prerequisite(s): PSY 160; Pre/corequisite(s): 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(s): 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 safety. 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 exposure 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. Students will be introduced to the concepts of ongoing Quality Assurance and Quality control testing in radiology, along with general performance improvement processes in healthcare. Principles of digital system quality assurance and maintenance are presented as well. *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, RADIOLOGIC PROCEDURES III, AND CAREER PREP 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. During the course, the final set of imaging procedures specific to the human bodily systems that include the use of contrast media are also reviewed. Students will enhance their understanding of the positioning and set-up of non- skeletal examinations including fluoroscopy, myelography, arthrography and c-arm studies. In this course, equipment quality control procedures are reviewed and tested in the lab. Students will also learn basic phlebotomy skills including blood collection methods and techniques, as well as specimen processing

and handling. During the semester, students will also prepare a profession resume package in preparation for employment post-graduation. *Prerequisite(s): RAD 215, RAD 255*

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 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, necessary exam modifications, and treatment options. Students will complete a project that will correlate classroom learning with clinical experience as they research and compile a professional case study, focusing on a particular pathologic condition. Students will focus on an exam in which they participated at their clinical site and use that experience to complete the case study paper. That project is then presented to the class. *Prerequisite(s): RAD 211, RAD 216*

RAD 226—CLINICAL EDUCATION V 0-24-6

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 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 3-2-4

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 be 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): ELC 106*

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): ELC 106*

RBT 225—INDUSTRIAL ELECTRONICS IN ADVANCED MANUFACTURING 3-2-4

Industrial Electronics in Advanced Manufacturing is concerned with devices, applications, instruments and control techniques used 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): ELC 106*

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 235—INDUSTRIAL ROBOTICS II 3-2-4

This course is a continuation of the RBT 135 Industrial Robotics. Topics covered will include sensor and actuator interfacing, vision systems, integration and networking, fault and error management, automation interfacing, robot maintenance, and a robotic system project. System maintenance, safety and troubleshooting considerations are emphasized. *Prerequisite(s): RBT 135*

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): ELC 106 and RBT 121*

RBT 245—ROBOTICS CONTROL SYSTEMS 3-2-4

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. *Prerequisite(s): ELC 106 & RBT 140.*

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. *Prerequisite(s): RBT 135; Corequisite(s): 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 104—REAL ESTATE PRACTICES 3-0-3

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.

SGT–SURGICAL TECHNOLOGY

SGT 100—FUNDAMENTALS OF SURGICAL TECHNOLOGY 12-0-12

Provides an overview of the history of surgery and the role of the surgical technologists, including professional responsibilities, developing a professional resume, legal and ethical considerations, interpersonal relationships and communication skills. Incorporates safety, hazards preparation, aseptic technique and duties of the scrubbed and the circulating surgical technologist during a surgical procedure. Provides information for the performance and completion of surgical procedures including general surgery, ob/gyn with attendant specialty equipment, abdominal incisions, wound closures, and standard precaution skills. *Prerequisite(s): C or better in ALH 122, BIO 171, BIO 172, ALH 225; Corequisite(s): SGT 101, SGT 110, SGT 115*

SGT 101—FUNDAMENTALS OF SURGICAL TECHNOLOGY LAB 0-9-3

Provides opportunity for demonstration of skills required to prepare the patient, operating room, basic equipment, and supplies; and to function as a member of an operating room team. Incorporates OSHA safety standards, aseptic technique, and duties of both the scrubbed and circulating technologist during a surgical procedure. *Prerequisite(s): C or better in ALH 122, BIO 171, BIO 172, ALH 225; Corequisite(s): SGT 100, SGT 110*

SGT 110—SURGICAL PHARMACOLOGY PRINCIPLES 2-0-2

Introduces the fundamental principles of the clinical use of drugs. Emphasizes the role and responsibility of the surgical technologist related to drugs, a review of basic mathematical skills, a thorough knowledge of the systems of measurement, and conversion and application of skills to perform dosage calculations. Presents information related to medicines in common use in the surgical setting. *Prerequisite(s): C or better in ALH 122, BIO 171, BIO 172, ALH225; Corequisite(s): SGT 100, SGT 101, SGT 115*

SGT 115—SURGICAL TECHNOLOGY SKILLS

PRACTICUM **0-9-3**

Provides experience in a healthcare setting performing the duties of a scrubbed and/or circulating technologist during an assigned surgical procedure with an emphasis on OSHA standards. *Prerequisite(s): SGT 101; Corequisite(s): SGT 100, SGT 110*

SGT 200—ADVANCED SURGICAL TECHNOLOGY THEORY **9-0-9**

Focuses on the relevant anatomy, indications for surgery, patient preparation, special equipment and supplies, purpose, expected outcomes, and possible complications of specialty areas following OSHA standards. *Prerequisite(s): C or better in SGT 100, SGT 110, SGT 115; Corequisite(s): SGT 205*

SGT 205—ADVANCED SURGICAL TECHNOLOGY PRACTICUM **0-21-7**

Provides opportunity for application of techniques learned in SGT 200 in a healthcare setting performing the duties of a scrubbed and/or circulating technologist during an assigned surgical procedure with an emphasis on OSHA standards. *Prerequisite(s): C or better in SGT 100, SGT 110, SGT 115; Corequisite(s): SGT 200*

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 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. Cross-listed as SWK 170.

SOC 210—SOCIOLOGY OF DEVIANCE **3-0-3**

This course examines the ways societies define, interpret, and respond to behaviors, identities, and conditions considered "deviant." Students explore major sociological theories of deviance, including labeling, conflict, functionalist, and interactionist perspectives. Students will investigate deviance in areas such as crime, medicalization, gender, race, mental health, and digital culture. Emphasis is placed on the relationship between deviance and social power, inequality, and social control. Students develop critical thinking skills by analyzing real-world examples of deviance and applying theoretical frameworks to contemporary issues.

SOC 255—CULTURAL ANTHROPOLOGY **3-0-3**

This course offers students the opportunity to examine the concept of culture and its significance in the study of the behavior of individual humans as well as human groups. This course places special emphasis on the various types of social organization. Numerous comparisons are made between Western and non-Western cultural practices in an attempt to further an overall understanding of the role and meaning of culture.

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 communication 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 165—INTRODUCTION TO MASS COMMUNICATION **3-0-3**

This course provides an introductory and critical examination of the social, cultural, economic, and political influences on the current media landscape, including print newspapers and magazines, books, television, radio, film, internet, and advertising. Additionally, the course traces basic communication theory and the historical relationship between media and the consumer, and what that impact may hold in the future.

STM–SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS

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. *Prerequisite(s): 9 credits of Natural Science and/or Math with at least one of these courses at the 200-level.*

SWK–SOCIAL WORK

SWK 155—INTRODUCTION TO SOCIAL WORK **3-0-3**

This course is an introduction to the field of social work. It is intended to provide a history of the profession, current trends, identification of people in need and the professionals who work in the field. This course is a survey course for those who are interested in helping people and plan to work with people in need. The course will include information about the necessary personal qualities, service delivery systems, and basic skills. 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 SKW 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): SWK 155*

SWK 160—GROUP PROCESS 3-0-3

Many social agencies utilize group exercise, counseling, and treatment. Using this technique, agencies are able to help more individuals in a timely manner. It also allows clients to learn from each other, support each other, and learn new skills. To enhance the sought after skills of group leadership, this course is provided to enhance the student's basic knowledge of group therapy and teach them the skills to organize, prepare, and lead a group. It also teaches the ability to handle problem situations and clients. It also covers documentation that is required. This course emphasizes practical application of group process skills. *Prerequisite(s): SWK 155 and SWK 157*

SWK 161—SOLUTIONS-FOCUSED COUNSELING 3-0-3

This course is an introduction to counseling techniques used in the field of social work. It focuses on solution-based therapy to problem solve. Students will take the basic interviewing skills they obtained in SWK 157 and build additional skills to help students go from gathering information to helping clients set goals and interventions. This class will include lecture and role-playing to practice techniques. *Prerequisite(s): SWK 155 and SWK 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 165—HUMAN BEHAVIOR IN THE SOCIAL ENVIRONMENT 3-0-3

This first course in the human behavior sequence studies the bio-psycho-social, cultural, and spiritual influences on the life cycle from pre-birth through adolescence. The content will emphasize on understanding the interactions between individuals, groups, institutions, and communities and their environments from various perspectives including systems, ecological, strengths, diversity, and human development. This course will allow students to understand how to engage from a change agent/leader perspective.

SWK 170—RACE & DIVERSITY IN THE U.S. 3-0-3

This is an introductory course for the study of minorities in the USA. The course will expose students to 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. Cross-listed as SOC 170.

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 program 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): SWK 155, SWK 157 and Permission of Instructor*

SWK 259—SOCIAL WORK PRACTICUM II 2-8-4

Building on the experience acquired in SWK 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): SWK 258 (C or better), 2.0 QPA, Permission of Instructor.*

VPP—VIDEO PRODUCTION AND PHOTOGRAPHY

VPP 100—BASIC VIDEO 2-2-3

Basic Video introduces students to digital, single-camera video production methods. Students will learn basic camera operation and use of non-linear 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 video recording device and a way to store files.

VPP 110—INTRO 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.

VPP 120—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. The class explores the artists, intellectuals and technicians who shaped movie history. Students will explore genres and styles of international cinema and learn to better analyze films within their historical contexts. Cross-listed as HUM 120.

VPP 150—VIDEO EDITING 3-0-3

This is an introductory level course in the theory and practice of non-linear video editing. Students utilize industry standard software to

produce digital video. Basic editing procedures encompassing video, audio and still imagery will be employed. Key figures from the field of motion picture editing will be discussed and analyzed. Students will need access to a video recording device. Emerging technology will also be explored.

VPP 160—BASIC PHOTOGRAPHY 3-0-3

Basic Photography is an introductory course on the use of photographic principles in the production of images. The course covers the use and operation of digital cameras and other tools of the trade. The class will explore concepts of lighting and composition. Students will become familiarized with digital editing tools and presentation methods. In addition to the production of images, basic photography offers an overview of the history of photography and discussion of prominent artists. Students must have access to a digital camera.

VPP 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 on location. *Prerequisite(s): VPP 160*

VPP 170—DIGITAL COMPOSITING AND PHOTOGRAPHY 3-0-3

Digital Compositing and Photography is a course that covers the creation of visual images using digital photography and digital photo editing. The course covers camera operation, photo editing software, the use of color, light, and composition to create complex digital composite images. The course will also explore the varied ways in which digital images can be arranged and utilized/ Students learn to plan and carry out the steps required for creating digital assets that are combined to create visual art. Students will be exposed to art forms such as collage and art movements that utilize photography such as surrealism and constructivism.

VPP 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 program course requirements*

VPP 200—PORTFOLIO DEVELOPMENT 3-0-3

Students will utilize their experience to develop a multimedia portfolio. During the course students will critique their images and develop a presentable portfolio to showcase their photographic work for seeking employment and self promotion. Topics will include creating prints, making a photobook, and creating an online portfolio. We will examine methods of marketing and self-promotion to accompany the portfolio. *Prerequisite(s): VPP 160 and VPP 170*

VPP 240—SOUND DESIGN 3-0-3

This course introduces students to audio mixing and recording. It incorporates the fundamental use of using sound recordings for podcasting, music, video production, games, and other media. Students will use a variety of microphones, recorders, and software to record and edit sound files.

VPP 250—NONFICTION MEDIA PRODUCTION 3-0-3

Non-Fiction Media Production is a course on the creation of documentary, educational and creative non-fiction motion pictures. The course will cover documentary research methods. Students will learn best practices to conduct interviews for time-based media. During the course we will discuss current trends in non-fiction content and the ethics of documentary film. Students will be introduced to various methods of non-fiction media production as well as the artists and researchers who have shaped the field. *Prerequisite(s): VPP 100*

VPP 255—MULTI CAMERA PRODUCTION AND STREAMING 3-0-3

Students explore the televisual style of video production. The course is focused on multi camera production for internet distribution and live streaming. This course prepares students for work as part of a multi-camera production team by giving them hands-on experience developing content for a multi-camera production, prepping broadcast-ready assets, coordinating and executing live shoots, and live-streaming content on a variety of online platforms. This course also aims to provide students with a broad overview of current market developments. *Prerequisite(s): VPP 100*

VPP 260—INTERACTIVE MULTIMEDIA 3-0-3

Introductory course using interactive design software to create multimedia design for artistic expression, training, educational and commercial use. The course combines audio, animation, design and video into interactive media experiences for use on display screens and mobile devices. *Prerequisite(s): VPP 150 Recommended*

VPP 263—DOCUMENTARY PHOTOGRAPHY 3-0-3

Documentary Photography is an intermediate study in technique and production of images for newspapers, magazines and the Internet. Documentary encompasses a wide variety of methods for a variety of purposes. These may include documentary storytelling, event documentation, product documentation or travelogs. *Prerequisite(s): VPP 160 and VPP 170*

VPP 266—PHOTOGRAPHY II 3-0-3

Instructs students in studio and location situations as they apply to commercial digital photography. Studies encompass elements of lighting techniques to create images while working from a layout. Portfolio assignments develop skills in illustrative, industrial, architectural and fashion areas of photography. *Prerequisite(s): VPP 160 and VPP 170*

VPP 270—VIDEO II 3-0-3

A continuation of VPP 100 and 150. Students continue to study and create motion pictures. The class involves the use of video cameras, editing, lighting, sound and effects to create short videos. Digital cinematography, advanced editing techniques and organizing production are the focus of class projects. *Prerequisite(s): VPP 100 and VPP 150*

VPP 271—DIGITAL COMPOSITING AND PHOTOGRAPHY II 3-0-3

Digital image manipulation and retouching will be covered using industry standard photo editing software to produce creative, state-of-the-art portfolio intended images. Studio set-up camera operation and lighting instruction will allow students to develop personal digital pieces. Students will create digital composite photography for use in a variety of settings. Emerging technology will also be explored. *Prerequisite(s): VPP 170*

VPP 280—CAPSTONE 3-0-3

This course is for students who wish to pursue independent video making. Instead of an internship experience students will produce and direct a substantial narrative or documentary video under faculty supervision. The student will propose a video and go through the stages of pre-production, production, and post-production. The student must hold a public screening of the video before the end of the semester. *Prerequisite(s): VPP 100, VPP 150, VPP 170 and Permission of Instructor*

VPP 290—ANIMATION AND MOTION GRAPHICS 3-0-3

Animation and Motion Graphics covers the creation of animated videos and motion design. The course will explore various types of stop motion animation and the use of key frame animation to produce short motion pictures. In addition to production techniques, students will explore the history of animation as a field of artistic expression. Students will experiment with a variety of ways to create the illusion of life on screen. The animation methods we will include but may not be limited to motion graphics and stop motion. *Prerequisite(s): VPP 100, VPP 150, VPP 170 and Permission of Instructor*

VPP 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(s): Permission of Instructor and completion of 30 credits in program course requirements.*

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 a 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 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 1-6-4

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(s): 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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*For a list of current faculty and staff, click here:
Faculty and Staff Directory

Programs

Associate of Arts Degree—AA

If you plan to transfer to a four-year institution in a program other than one listed on this page, or if you are undecided as to your program, use code LIB.

TRANSFER

BUS	Business Administration
CRJ	Criminal Justice
ECE	Elementary Education PreK-4
ENG	English
HIS	History
LIB	Liberal Arts
PSY	Psychology

Associate in Engineering—AE

EGX	Engineering Science

Associate of Science—AS

BIO	Biology
BPP	Biology, Pre-Pharmacy
CHM	Chemistry
CPS	Computer Science
HLS	Health Science
MTH	Mathematics
PHY2	Physics

Associate of Fine Arts Degree—AFA

ART	Visual Art
ATH	Art Therapy
GRA	Graphic Design

Associate of Applied Science Degree—AAS, Diploma, Certificate

Programs with an asterisk (*) also require students to complete the Health Professions Application. The application can be found at MyWestmoreland (access given after submitting Westmoreland application).

ACCOUNTING

ACT	Degree
ACCTS	Computer Accounting and Tax Specialist - Certificate
ACCTG	General Accounting — Certificate

ADDITIVE MANUFACTURING

ADM	Degree
ADMF	Diploma

APPLIED INDUSTRIAL TECHNOLOGY

AIT	Degree

ARCHITECTURAL DRAFTING AND DESIGN

ADD	Degree

ART

ARTBS	Art Business - Certificate

BUSINESS

FIN	Finance - Degree
BUS	Management - Degree
HRM	Human Resource Management - Degree
MKM	Marketing - Degree
SBM	Entrepreneurship — Degree
BUSG	Business - Diploma
FINMG2	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
COTE	Diploma

CRIMINAL JUSTICE

CJU	Degree
CJS	Cyber Security - Degree
CJUCO	Corrections Officer - Certificate
CJUSP	Security Professional - Certificate

CULINARY ARTS

CUA2	Apprenticeship - Degree
CUL2	Degree
CUAA2	Apprenticeship - Diploma
CULI2	Diploma
CULIN2	Certificate

CYBER SECURITY

CYB	Degree
CYBER	Cyber Security - Certificate

*DENTAL ASSISTING

DEAS	Diploma

*DENTAL HYGIENE

DEH	Degree

DRAFTING & DESIGN TECHNOLOGY

DDC	CADD/CAM - Degree
DDM	Mechanical Drafting - Degree

EARLY CHILDHOOD EDUCATION

ERC	Degree
ERCCT	Certificate
ECEDC	Certificate – CDA

ELECTRONICS ENGINEERING TECHNOLOGY

EET	Electronics - Degree

ENGINEERING TECHNOLOGY

ENT	Degree
APENT	Certificate

*EXPANDED FUNCTIONS DENTAL ASSISTING

EFD	Degree
EXFDA	Certificate

FORENSIC SCIENCE

STF	Forensic Science - Degree
FORSC	Forensic Science - Certificate

*HEALTH PROFESSIONS

HPR	Degree

Programs

HEALTHCARE MANAGEMENT
HCM2 Degree
HCMG2 Diploma
HCMGT2 Certificate
HCMCO2 Certificate – Medical Coding

HEATING, VENTILATION, AIR-CONDITIONING & REFRIGERATION
HVA Degree
HVAC Diploma

HOSPITALITY MANAGEMENT
HOS Degree
HOSP Diploma
HOSTM2 Certificate

INTEGRATED STUDIES
INTST Certificate

JOURNEYMAN MACHINING TECHNOLOGY
JRM Degree
JOUR Diploma

LEGAL STUDIES/PARALEGAL
LEA Degree
LEAS Diploma

*MEDICAL ASSISTING
MEAS Diploma

NANOTECHNOLOGY
NNT Degree

*NUCLEAR MEDICINE TECHNOLOGY
NMT Degree
NUMT Diploma

*NURSE AIDE
CNADE Certificate

*NURSING
NUR Degree

OFFICE ADMINISTRATION
OTA Degree
OADM Diploma
OADMN Certificate
OTCSV Certificate

PASTRY ARTS
PAR Degree
PAA Apprenticeship - Degree
PARA Apprenticeship - Diploma
PART Diploma
PARTS Certificate

*PHLEBOTOMY
PHBSP Phlebotomy/Specimen Processing - Certificate
PHLEB Phlebotomy - Certificate

PLUMBING
PMB Degree
PLMB Diploma

*PRACTICAL NURSING
NPN Diploma

*RADIOLOGY TECHNOLOGY
RAD Degree

ROBOTICS
ROB Degree

SOCIAL WORK
SWK Degree
SOCWK Certificate

*SURGICAL TECHNOLOGY
SGT Degree

VIDEO PRODUCTION & PHOTOGRAPHY
VPP Video Production – Degree
PHT Photography – Degree

WELDING ENGINEERING TECHNOLOGY
WET Degree
WELD Diploma

Westmoreland-Youngwood
145 Pavilion Lane
Youngwood, PA 15697
724.925.4000

Westmoreland-Advanced Technology Center
1001 Technology Drive
Mt. Pleasant, PA 15666
724.925.4104

Westmoreland-Fayette County
140 North Beeson Blvd.
Uniontown, PA 15401
724.437.3512

Westmoreland-Indiana County
439 Hamill Road
Indiana, PA 15701
724.925.4039

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
1150 Fifth Avenue
New Kensington, PA 15068
724.335.8110

Westmoreland-Public Safety Training Center
65 Public Safety Drive
Smithton, PA 15479
724.872.2447

WESTMORELAND COUNTY COMMUNITY COLLEGE

Students First!