



Central Westmoreland CTC Programs of Study

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Central Westmoreland Career & Technology Center offers vocational skill training and academic course work for secondary students from 10 sending districts. Upon completion of their program of study, secondary students enter the workforce or continue onto a post-secondary institution. CWCTC is committed to helping all students become lifelong learners to keep pace with the changes in technology which will permit them to remain competitive in a highly complex work environment and to contribute to our region's economic growth. The CWCTC offers 19 Programs with opportunities to earn industry certifications/credentials and articulated credits for higher education. See www.cwctc.org for more information. More information about qualifying for advanced credits is available at [SOAR \(Students Occupationally and Academically Ready\)](#)

Agriculture & Landscape Design - *Do you enjoy working outdoors and in nature? Would you like to design and maintain outdoor spaces? Explore caring for animals with our own small farm family members.* This program is a specialized curriculum designed to prepare students to be desirable employees of architects, landscapers, nurseries, greenhouses, florists or various other landscape businesses. Both maintenance and establishment of lawns, as well as, landscaping homes and businesses are included in the curriculum. Caring for small farm animals. The principles of design are also included along with plant identification, budgeting, and cultivation procedures. Certification opportunities; PA Pesticides, Worker Protection Standard, Landscape Safety

Aspiring Educators Program - *Have you ever considered a career in education?* Available to rising Juniors, the Aspiring Educators Program combines theory work led by a master teacher with interactive field experiences. The Program will work with teacher preparation programs at nearby colleges and universities. Successful completion of the Program will afford students articulation and dual enrollment opportunities at no additional cost. The Aspiring Educators Program is a collaborative initiative between the CWCTC and our sending highschools. The program will operate out of designated locations for half of the academic day. Placement is dependent upon the sending school location. All core classes are still delivered at the sending LEA. Multiple higher education articulation and dual credit opportunities are available. - Student drivers are permitted. *See your school counselor for additional information with the application process. Limited seats available.

Automotive Collision Technology - *Have you always wanted to restore or repair a classic car or paint a hot rod?* Automotive Collision students will learn the skills needed to repair, reconstruct, and finish damaged vehicle bodies, and external features. In a garage setting, students will learn maintenance and safety standards of the automobile industry. They will have the opportunity to work with frame straightening equipment, complete car panel replacement, and work in a spray booth, which includes

state-of-the-art water-based technology. Students will also practice customer service skills and estimate the cost of vehicle repairs. Certification opportunities; SP2, OSHA 10, I-CAR

Automotive Mechanics Technology - Do you have an interest in cars and trucks? Are you mechanically curious and like to troubleshoot technical problems? Students who choose this program will be prepared to work with the latest technology that will provide them with the skills needed to repair, service, and maintain automobile systems and their components. Students will receive instruction in brake systems, electrical systems, fuel systems, engine performance and repair, suspension and steering, and air conditioning. Critical thinking skills will be employed and strengthened through the diagnosis and repair of current model vehicles. System training simulators are utilized and students will learn the procedures for State Inspection and Emissions. Certification opportunities; ASE, PA State Safety Inspection & Emissions, SP2 Safety/Pollution, A4, Lifting it Right, EPA 609 Refrigerant, Ford ACE

Computer Information Science - Do you consider yourself a novice coder? Are you curious about how videogames are designed? How are computers built and networked? Discover what happens in the background. Students in the Computer Information Science classroom will be instructed in various programming languages. Students will gain an understanding of computer fundamentals, Microsoft Office, HTML, Javascript, CSS, C++, Java, and Linux Operating Systems. Students will develop web pages and sites and will learn to troubleshoot backend and frontend applications in a variety of workplace environments. Certification opportunities; Microsoft, CompTIA, Test Out, OSHA and dual credit opportunities.

Construction Trades - Do you like to build things and work with power tools? Are you interested in what it takes to build something from the ground up? Students will be instructed in a variety of the skills in several construction trades areas including carpentry, electrical, masonry, plumbing, and equipment operating. Students will learn the following carpentry skills; cutting, shaping and installation of building materials during the construction of buildings, bridges, concrete formwork, etc. Students will learn aspects of the electrical trades by installing and repairing wiring, and maintaining electrical systems. Students will also learn relevant safety regulations and electrical codes to ensure that they perform a job properly. Students will study the art of masonry which includes bricks, concrete blocks, or natural stones to build structures that include walls, walkways, fences, and chimneys. Students will learn the systems of pipes, tanks, fittings, and other apparatus required for the water supply, heating, and sanitation in a building. This program also prepares students to safely maintain and operate different pieces of diesel equipment such as skid loaders and mini excavators. Student learning will include cost estimating and blueprint reading, use and maintenance of power and hand tools, general safety and building code requirements. Certification opportunities; OSHA 10, OSHA 30, American Ladder Safety.

Cosmetology - Are you interested in Hair, Make-up and Nails? Do you find yourself scrolling through style ads for current fashion industry trends? A salon environment allows students to practice and prepare to become licensed cosmetologists. Students will gain skills in haircutting, hairstyling, chemical treatments, manicures and pedicures, as well as facial treatments. Information and training will be focused on salon safety and sanitation, customer service, and applicable labor laws and regulations. Students who successfully complete the 900 hours of coursework will be eligible to take the PA State Board of Cosmetology Examination. Upon passing the exam and completion of the remaining 350 hours of training the candidate will become a PA licensed Cosmetologist (1250 total training hours). Certification opportunities; Licensed Cosmetologist, Licensed Nail Technician, Licensed Esthetician, SP2 Cosmetology, and OSHA 10.

Culinary Arts - Do you enjoy cooking and baking? Do you like to watch culinary shows or dabble with creating your own recipes? The students will gain the skills to effectively work safely and under pressure in the hospitality industry. Instruction will focus on following standardized recipes/formulas, instructions, time management, selecting, storing, preparing and serving food safely, waitstaff training,

menu planning and basic nutrition. Food safety and sanitation and learning the proper techniques to use and care for commercial equipment will be taught as well. Throughout the course, students will receive an introduction to culinary arts, baking and pastry arts, to include proper cooking methods and temperatures, soups, stocks and sauces, weighing and measuring with accuracy, and cake decorating. Instruction and on the job training will occur in our industry equipped kitchen and restaurant type setting. Certification opportunities; Beef University, Lamb Curriculum, OSHA-30 (Young worker safety), SP2, OSHA 10, Servsafe - Allergens, Food Handler, Manager, ProStart COA, Rouxbe-Professional Cooking, Heartsaver First Aid/CPR, ACF (CFC), ACF (CC)

Electrical Technology - *Are you into exploring how things work? Can you follow a complex set of directions to build something? All things electricity...* Students in this program will learn to install, operate, maintain, and repair electrical systems. Use of electrical codes, circuit diagrams, and blueprint reading will be key components. Students will gain valuable experience working with transformers, conduit bending, resulting in a solid background to working in the electrical field. Certification opportunities: OSHA 30, Ladder Safety, Heartsaver First Aid/CPR

Health Occupations Technology - *Do you see yourself working in the healthcare industry? Do you have compassion and like to help others? Are you interested in the human body and its systems?* Students choosing this program will gain knowledge to assist them in preparing for a future career in a related field. The class will focus on basic structures and functions of the human body, related diseases with associated terminology, legal and ethical aspects of health care, and communication. Nutrition, safety, infection control, emergency care, and disaster preparedness are also studied. Students will combine core book knowledge with skills practice in order to be ready to meet the needs of the healthcare industry. Certification opportunities; AMCA-PCT Testing

HVAC & Steamfitting - *Do you like to solve mechanical problems? Can you follow complex directions and enjoy using hand tools?* Students will learn to repair, install, service and maintain heating, air conditioning, and refrigeration systems as well as installing, assembling, fabricating, maintaining, and repairing mechanical piping systems. Students will learn diagnostic techniques, blueprint reading, the use of testing equipment, electronic and pneumatic control systems, and the principles of electricity, electronics and mechanics as each relates to the industry. Students will also learn how to overhaul, repair, and make adjustments to various units and parts. Certification opportunities; OSHA 10, OSHA 30, EPA 608 Refrigerant

Multimedia Design - *Are you creative? Do you like to create art by hand and on the computer? Create advertisements, web pages and more... from sketching to photography and even creating your own ad campaigns that include video.* Students in this program will be able to apply knowledge and skills in the field of multimedia design. The elements and principles of art are the basis of good design. Combined with graphic design, audio, visual, web introduction, and photography this course provides the instruction necessary to develop a creative concept into a final visual communication product. Oral and written communication, customer service, and display production are a focus. Students will design, edit, and create projects using hand illustration and computer design software such as Adobe Illustrator, InDesign, Photoshop, Premiere, and AfterEffects. Certification opportunities; Adobe Certified Associate in multiple areas (Additional Certifications -Available Certifications -SP/2- Land that Job! Building a Resume, SP/2- Time for a Team Huddle! Running Successful Team Meetings, SP/2- Be a Pro! Life Skills for Professional Success, SP/2- Creating a Customer-Centered Culture, SP/2- Telephone Skills for Today's Professional World, SP/2- Successful Meeting Management for Managers and Business Owners, Free Code Camp - Responsive Web Design Certification, Google - Digital Marketing, Google - Project Management, HubSpot - Social Media Marketing and Great Learning - Intro to Graphic Design with Photoshop)

Powerline - *Do you enjoy the outdoors? Would you say you are an all weather type of person who is not intimidated by heights? Is helping others through providing the resources of energy and*

communication interesting to you? Students will gain technical knowledge and skills in installation, troubleshooting and repair of telecommunication equipment of all kinds. Throughout the course, students will gain a fundamental understanding of electricity and electronics and will learn about fiber optics and copper based systems. CWCTC students will have the opportunity to study pole and tower climbing techniques, trenching, high voltage installation, maintenance and inspection. safety and applicable codes and standards in regards to the powerline and telecommunications fields. Certification opportunities; National Ladder Safety, OSHA 10, Copper Networking, Fiber Optics

Protective Services - Are you interested in public service and saving lives? Do you have a drive to help others in an emergency event? Would you like to protect and serve your community? Our instructional program focuses on three areas of learning: firefighting services, emergency medical technician training, and law enforcement. Students will apply technical knowledge and skills required to work in the public safety sector and will be expected to learn a minimum level of proficiency in all areas of the training program. The program focuses on personal safety and the relationship between the public safety agencies. Skill sets within the program include vehicle and equipment operations, application of math skills, communication skills, and pre-hospital emergency medical assessment and treatment. Students will participate in live fire exercises in a simulated residential burn building. Certification opportunities; (EBM Program) ICS 100/700, HMA, PSFA Rope I, II, PA-DOH Basic Vehicle Rescue (Exterior & Interior), First Aid CPR

Restoration & Design - Do you like to rearrange, paint or decorate your room and other spaces? Are you creative and like to explore design trends? Repurpose something to make it useful again through design, refinishing and repair techniques. Students in this program will be prepared to apply technical knowledge and skills to finish exterior and interior structural surfaces by applying protective or decorative coating materials, such as paint, stain, and wallpaper. Includes instruction in surface preparation; selecting, preparing, and applying finishes. Students will learn equipment operation and maintenance; finish selection; safety and clean-up; environmental effects on finishes; adhesion properties; and applicable codes and standards. Design, color theory, and faux finishes are also explored. Certification opportunities; NCCER CORE, National Ladder Safety, OSHA 10

Robotics Engineering & Manufacturing(REM/Phoenix Manufacturing) - Do you have a technical and mechanical mindset? Are you interested in how things work and building something from the bottom up? How about manufacturing your own parts and designs? BotsIQ opportunities galore in this exciting and dynamic working lab. You will be working with our state of the art HAAS machines, 3 D Printers and more. Robotics, Engineering & Manufacturing is a program focused on the development, installation, and use of Advanced Manufacturing devices. This program prepares students for careers in the engineering and manufacturing fields. Students enrolled will learn a combination of electronics, manual machining, mechanical drives, CNC machining, fluid systems, programming, inspection, robotics, properties of materials, and engineering processes. Students who enjoy STEM activities will enjoy this classroom and will be engaged in designing, developing, and testing electromechanical devices, automation systems, manufacturing systems. Students will also learn how to work as a team and develop engineering solutions to problems. There is a focus on industrial systems and procedures. Certification opportunities; CNC Mill/Lathe Certifications, OSHA 10

Service Occupations - Do you like to do a variety of things both indoor and out? Do you enjoy helping others and creating a clean and welcoming environment? Would you like to work with customers? Service Occupations is an innovative program focusing on training students in a diverse array of skill sets in service-related employment areas. Students will learn in an environment that fosters good work ethic, competitive time on task and appropriate work skills for each identified career area. The Service Occupations curriculum encompasses the areas of workplace safety, grounds maintenance, cleaning practices, housekeeping, custodial and retail stock, as well as, kitchen safety, cooking and baking, food preparation, dining room services, commercial dishwashing and commercial laundry

services. All areas are instructed with the intent of achieving a level of competency commensurate with competitive employment. Certification opportunities; American Ladder Institute, ServeSafe Food Handler, First Aid/CPR ****Students and families interested in applying to this program will need to contact their school counselor for more details****

Sports Medicine - Are you thinking about a career in healthcare and enjoy helping others? Interested in how the body responds to injury and how to improve athletic performance? The goal of the Sports Medicine program is to prepare students for placement in a post-secondary institution for advanced studies in the health sciences. Course topics include medical terminology, anatomy and physiology, body systems, sports nutrition and hydration, and concussion management. Students will become proficient in the use of therapeutic modalities, vital signs assessment, injury diagnosis and management, and injury rehabilitation through therapeutic exercise and exercise prescription. Students who successfully complete the Sports Medicine program often enter the healthcare field as physical therapists, physical therapist assistants, occupational therapists, athletic trainers, physician assistants, exercise physiologists, sports psychologists, nurses, medical assistants, and rehabilitation aides. Certification Opportunities: BLS for the Healthcare Professional (CPR/AED); Articulations with local Colleges: Duquesne University, Robert Morris University, Penn West University.

Welding & Metal Fabrication - Are you interested in working in the metal industry? Do you like to build and design things? Design, Fabricate and Weld using industry tools of the trade, which includes a 4 x 8 ft. plasma cutting machine. Students in this class will learn technical knowledge and skills to join or cut metal surfaces using stick welding, tig welding, mig welding, and flux core welding. Safety practices are a focus in this program. Instruction includes welding symbols, properties of metals, types and uses of electrodes and welding rods, and blueprint reading. Certification Opportunities; AWS Sense