

# Program Catalog

## 2018 – 19



Academy of Careers and Technology

*“preparing students for their future”*

390 Stanaford Road

Beckley, West Virginia 25801

304-256-4615

<http://wvact.net>

<http://facebook.com/wvact>

Programs are provided under the administration of:

**RALEIGH COUNTY BOARD OF EDUCATION**

105 Adair Street  
Beckley, West Virginia 25801  
(304) 256-4500

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Jack "Gordie" Roop, Vice-President  
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**ACADEMY OF CAREERS AND TECHNOGY**

390 Stanaford Road  
Beckley, West Virginia 25801  
(304) 256-4615

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**WEST VIRGINIA DEPARTMENT OF EDUCATION**

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## **MISSION STATEMENT**

“Preparing Students for Their Future”

## **CORE BELIEF**

Students will acquire:  
Academic Skills, Career Skills, and Technical Skills

The Academy of Careers and Technology (ACT) is a West Virginia School of Excellence. It is a Career and Technical Education Center that serves adults and secondary students in Raleigh County and southern West Virginia. ACT provides students with the academic and technical skills, knowledge, and training necessary to succeed in future careers and develop skills they will use throughout their lives. The programs at ACT represent eleven of the sixteen career clusters, based on the National Career Cluster Framework<sup>®</sup>, which identifies the knowledge and skills students need as they follow a pathway to their goals. ACT prepares students for the world of work by introducing them to workplace competencies and makes academic content accessible to students by providing it in a hands-on context.

## **ACCREDITATION**

The Academy of Careers and Technology is approved and operated in cooperation with the West Virginia Department of Education and the Raleigh County Board of Education. ACT is accredited by the Council on Occupational Education (COE). The Council on Occupational Education accredits post-secondary occupational institutions that offer certificate, diploma, or applied associate degree programs. These institutions include public technical colleges, private career colleges (both for-profit and not-for-profit), Army, Navy, and Department of Defense institutions, and Job Corps Centers. The Commission of the Council on Occupational Education (COE) is located at 7840 Roswell Road; Building 300, Suite 325; Atlanta GA 30350; (770) 396-3898; [www.council.org](http://www.council.org).

## **EQUAL EDUCATION OPPORTUNITY**

The Raleigh County Board of Education does not discriminate based on race, color, national origin, sex, disability, or age in its educational programs and activities. The following person has been designated to handle inquiries regarding the nondiscrimination policies:

Eric Dillon, Director of Pupil Services  
Title IX and Title II Officer  
105 Adair Street  
Beckley, WV 25801  
Telephone: (304) 256-4500 extension 3329

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The Program Catalog is a working document and subject to change. For the most updated version of the Handbook, visit <http://wvact.net/students.html>.

# *Academy of Careers & Technology*

390 STANAFORD ROAD  
BECKLEY, WEST VIRGINIA 25801  
(304) 256-4615

August, 2018

Dear Students:

Welcome to the Academy of Careers and Technology, located in Beckley, West Virginia! Our center is a premier career and technical education institution serving secondary students from Raleigh County's four high schools and adult students from southern West Virginia. We offer a broad spectrum of innovative and challenging technical programs that provide the knowledge and skills necessary to excel in the ever-changing world of work and post-secondary education.

Opened in 1977, ACT has long been recognized as a primary work-force provider and a significant educational institution and recently received the West Virginia Department of Education's highest rating, the School of Excellence award. To attain and maintain such distinction, our administration, faculty, and staff work in close cooperation with our partnering secondary schools and through collaborative efforts involving students, parents, businesses, industry, labor, and higher education.

The curricula at ACT are diverse and challenging. Our students are encouraged to actively explore challenging technical studies that enable them to see the relationship between course content and future career plans. The career and technical instructional programs are rigorous and yet designed to adapt to the needs of diverse learners.

Our goal at ACT is to provide the citizens of Raleigh County, West Virginia, opportunities to find and attain a position in life which is personally productive, useful, and satisfying. I invite you to visit our website, accept our invitation to visit Academy of Careers and Technology, or contact us for additional information.

Sincerely,



Charles M. Pack, Jr.

Director of Career Technical Education/Principal

[cmpack@k12.wv.us](mailto:cmpack@k12.wv.us)

# Academy of Careers and Technology

## TUITION AND FEES

Program	Tuition	Registration	Application	Technology	Lab	Books	Supplies	Ground Check	Back	Test	Admin Doc	Test	Drug	Parking	CTSO	I.D.	Total
Automotive Technology	4,320.00	25	100	330	1,100	0	0	50	0	50	75	25	40	0	6,115.00		
Carpentry	4,320.00	25	100	330	1,100	0	0	50	0	50	75	25	40	0	6,115.00		
Collision Repair Technology	4,320.00	25	100	330	1,100	0	0	50	0	50	75	25	40	0	6,115.00		
Computer Aided Drafting and Design	4,320.00	25	100	330	1,100	0	0	50	0	50	75	25	40	0	6,115.00		
Cosmetology	7,280.00	51	100	0	1,400	250	800	50	130	50	75	25	200	25	10,436.00		
Dental Assisting	4,320.00	25	100	330	1,100	0	0	50	0	50	75	25	40	25	6,140.00		
Diesel Equipment Technology	4,320.00	25	100	330	1,100	0	0	50	0	50	75	25	40	0	6,115.00		
Electrical Technician	4,320.00	25	100	330	1,300	170	0	50	135	50	75	25	40	0	6,620.00		
Law and Public Safety	4,320.00	25	100	330	1,100	0	0	50	0	50	75	25	40	25	6,140.00		
Masonry	4,320.00	25	100	330	1,100	0	0	50	0	50	75	25	40	0	6,115.00		
Medical Assisting	4,320.00	25	100	330	1,100	250	0	50	150	50	75	25	40	25	6,540.00		
Practical Nursing	4,050.00	25	100	0	1,000	1550	0	100	410	50	0	25	175	25	7,510.00		
Pro-Start Restaurant Management	4,320.00	25	100	330	1,100	0	0	50	0	50	75	25	40	25	6,140.00		
Surgical Technology	4,860.00	25	100	0	1,000	980	150	50	250	50	75	25	220	25	7,810.00		
Therapeutic Services	4,320.00	25	100	330	1,100	0	0	50	0	50	75	25	40	25	6,140.00		
Truck Driving	3,375.00	25	100	0	1,000	0	0	50	530	50	75	25	0	0	5,230.00		
Welding	4,320.00	25	100	330	1,400	0	0	50	0	50	75	25	40	0	6,415.00		
<b>TUITION AND COST EVENING PROGRAMS</b>																	
Electrical Technician	4,320.00	25	100	0	1,300	630	0	50	135	50	75	25	40	0	6,750.00		
Phlebotomy Technician	1,050.00	25	100	0	300	125	0	50	150	50	75	25	0	25	1,975.00		
Power Equipment Systems	4,320.00	25	100	0	1,100	365	0	50	340	50	75	25	40	0	6,490.00		
Welding	4,320.00	25	100	0	1,290	0	0	50	0	50	75	25	40	0	5,975.00		

To view the GE information for programs at ACT, please visit <http://wvact.net/geinfo.html>.

## TR1620 AUTOMOTIVE TECHNOLOGY

*The Automotive Technology concentration focuses on careers that will build a knowledge base and technical skills in all aspects of the automotive industry. Skill set standards for Career Preparation Skills, Safety, Leadership Development and Customer and Personal Service have been integrated throughout the concentration. Student skills sets will be acquired for Automotive Maintenance and Light Repair in the areas of Automotive Service Consultant, Tire Repair and Replacement, Maintenance Services, Electrical System Diagnosis and Repair, Engine and Engine Performance Diagnosis and Repair, Heating and Air Conditioning Diagnosis and Repair, Brake System Diagnosis and Repair, Suspension and Steering Diagnosis and Repair, and Driveline Diagnosis and Repair. Students will have the opportunity to acquire hours towards industry certification and be exposed to skills to develop positive work ethics.*

### Required Courses

#### **1631 Automotive Technology MLR-1**

Areas of study include Automotive Service Consultant, Career Opportunities and Practices, Shop and Personal Safety, Tools and Equipment, Preparing Vehicle for Service, Electrical-General Electrical System Diagnosis, Electrical-Diagnosis and Service of Batteries, and Engines-Lubrication and Cooling Systems Diagnosis and Repair. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.

#### **1623 Automotive Technology MLR-2**

Students are exposed to skills sets in areas such as Steering and Suspension-Diagnosis and Repair of Wheels and Tires, Brakes-Diagnosis and Repair of Hydraulic Systems, Brakes-Diagnosis and Repair of Drum Brake Systems, Brakes-Diagnosis and Repair of Disk Brake Systems, Brakes-Diagnosis and Repair of Power Assist Units, Brakes-Diagnosis and Repair of Miscellaneous Automotive Items, Brakes-Diagnosis and Repair of Anti-lock Brake Systems and Steering and Suspension-Diagnosis of Steering & Suspension Systems, Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.

#### **1625 Automotive Technology MLR-3**

Student develop skill sets in the areas of Electrical-Demonstrate Starting System Diagnosis and Repair, Electrical-Demonstrate Charging System Diagnosis and Repair; Electrical-Demonstrate Lighting System Diagnosis and Repair, Electrical-Demonstrate Accessories System Diagnosis and Repair, Engines, General Engines, Engines-Diagnosis and Repair of Cylinder Head and Valve Train, and Engine Performance-General Engine Diagnosis. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.

#### **1637 Automotive Technology MLR-4**

Students develop skills sets in the areas of Engine Performance-Computerized Engine Controls; Engine Performance-Fuel, Air Induction, and Exhaust Systems Diagnosis and Repair; Engine Performance-Emissions Control Systems Diagnosis and Repair; Automatic Transmission and Transaxle-Diagnosis Maintenance, and Adjustment; Manual Drive Train and Axles-Diagnosis, Maintenance, and Adjustment; and Heating and Air Conditioning-Diagnosis, Maintenance, and Adjustment. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.

## Elective Courses

### **1629 Automotive Technology AST-1**

This course introduces students to the skills sets related to Electrical-Electrical/Electronic System Basics; and Alternative Fuels-Hybrid Vehicles; NAFTA Program or additional electrical Tasks from NATEF MAST Program.

### **1633 Automotive Technology AST-2**

This course will concentrate on the skills sets related to Steering and Suspension; and Brakes.

### **1635 Automotive Technology AST-3**

This course will introduce students to Engines-General Engines: Engine Diagnosis; Removal and Re-installation (R&R); Engines-Diagnosis and Repair of Cooling and Lubrication Systems; and Engine Performance-General Engine Diagnosis.

### **1627 Automotive Technology AST-4**

This course introduces students to the skills, technology, and service of Automatic Transmission and Transaxle-Diagnosis, Maintenance, Repair and Adjustment; Manual Drive Train and Axles-Diagnosis, Maintenance, Repair and Adjustment; and Heating and Air Conditioning-Diagnosis, Maintenance, Repair and Adjustment.

**Course Length:** Two years (1080 hours)

**Meeting Times:** First Year: 11:15 AM - 2:15 PM; Second Year: 7:15 AM - 10:15 AM

**Articulation Agreements:** EDGE Credit

**Certifications:** Automotive Service Excellence (ASE)/National Automotive Technicians Education Foundation (NATEF); OSHA 10 General Industry



# BUILDING MANAGEMENT

*This program incorporates all the skills needed to train the people who keep everything running behind the scenes. This includes learning to apply basic construction safety standards, measuring and mixing chemicals, performing cleaning operations, and minor general maintenance including electrical, plumbing, flooring, and upkeep of grounds.*

## Required Courses

### Building Management I

Incorporated into this course students will learn to apply basic construction safety standards, measure and mix chemicals, perform cleaning operations, general building, electrical, and plumbing maintenance of buildings, and maintain interior and exterior upkeep and grounds.

### Building Management II

Students will take the skills taught in Building Management I and practice practical application of previously learned skills.

### Building Management III

Incorporated into this course students will learn to maintain walls, windows, and master more advanced skills working with general building, electrical, plumbing, and grounds maintenance.

### Building Management IV

Students will take the skills taught in Building Management III and practice practical application of previously learned skills.

**Course Length:** One year (540 clock hours)

**Meeting Times:** 7:15 AM - 10:15 AM or 11:15 AM - 2:15 PM

**Articulation Agreements:** N/A

**Certifications:** NCCER (National Center for Construction Education and Research)  
OSHA 10 Construction Industry

**This course is not open for adult enrollment.**

## ED1300 CAREERS IN EDUCATION

*The Careers in Education concentration is an innovative approach designed to attract talented students to the teaching profession. The Careers in Education concentration focuses on careers in teaching and training.*

### Required Courses

#### **1301 Foundations in Education**

This course is designed to introduce the history, development, organization, and practices of preschool, elementary, and secondary education. In addition to classroom training, students will participate in field experiences at local elementary, middle, and high schools. Students also gain the professional or skilled knowledge and skills necessary to begin a career in the education profession.

#### **1302 Student Learning, Development, and Diversity**

This course is designed to focus on the various physical, cognitive, social, emotional and moral development, environments and social institutions, family life, demographics, and culture influencing human growth and development. This course also provides information and activities for guiding behavior and meeting the needs of special age groups.

#### **1304 Educational Psychology and Learning**

This course is designed to as well as statistics, trends, and assessment strategies influencing education and training. Also included are challenges confronting educational settings, historical background of American education and influences from around the world, effective teacher attributes, and major philosophies of education. This course includes organizational strategies and systems and use of appropriate resources and assessments to advance learning in a variety of organizational structures. This course introduces applications within the teaching and training profession, preparation for educational licensure and ongoing employment, exposure to legal and ethical issues, environmental structure and culture, and basic historical, sociological, philosophical, physiological, and psychological principles that apply to classroom practice. Extensive observation in an approved school setting is a part of this course.

#### **1135 Teacher Preparation: Seminar in Education Practice**

This course is designed to provide content related to preparation and credentials and provide students with the opportunity to gain the professional or skilled knowledge and skills necessary in beginning a career in an education profession in a real-world classroom. Extensive observation and actual classroom teaching experience in an approved school setting is a part of this course. It is the expectation of this course that students will be prepared to pass the Praxis I Test: Pre-Professional Skills Tests (PPST®).

**Course Length:** One year (540 clock hours)

**Meeting Times:** 11:15 AM - 2:15 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** Praxis 1/Raleigh County Service Personnel – Classroom Aide

**This course is not open for adult enrollment**

## **AR1820 CARPENTRY**

*The Carpentry concentration focuses on careers that will build a knowledge base and technical skills in all aspects of the carpentry industry. Learners will be exposed to a broad range of construction careers and foundation knowledge including basic safety; plan reading; use of tools and equipment; basic rigging; and how to employ positive work ethics in their careers. Students will have the opportunity to earn NCCER certification for each skill set mastered.*

### **Required Courses**

#### **1842 Carpentry I**

This course introduces the student to the knowledge base and technical skills of the carpentry industry. Carpentry I begins with the NCCER Core curriculum which is a prerequisite to all Level I completions. The students will complete modules in Basic Safety; Introduction to Construction Math; Introduction to Hand Tools; Introduction to Power Tools; Introduction to Construction Drawings; Basic Rigging; Basic Communication Skills; Basic Employability Skills; and Introduction to Materials Handling. Students will then begin developing skill sets related to the fundamentals of Carpentry such as Orientation to the Trade; Building Materials, Fasteners, and Adhesives; and Hand and Power Tools.

#### **1843 Carpentry II**

Carpentry II will continue to build student skill sets in areas such as Reading Plans and Elevations; Floor Systems, Wall and Ceiling Framing; Roof Framing; Introduction to Concrete, Reinforcing Materials, and Forms; Windows and Exterior Doors; Basic Stair Layout.

#### **1844 Carpentry III**

Carpentry III will continue to build student skill sets in areas of Commercial Drawings; Roofing Applications; Thermal and Moisture Protection; and Exterior Finishing.

#### **1845 Carpentry IV**

Carpentry IV will continue to build student skill sets in areas of Cold-Formed Steel Framing; Drywall Installation; Drywall Finishing; Doors and Door Hardware; Suspended Ceilings; Window, Door, Floor, and Ceiling Trim; Cabinet Installation; and Cabinet Fabrication.

### **Elective Courses**

#### **1829 Masonry and Plumbing**

This course introduces the student to the knowledge base and technical skills for concepts in the Building Construction Concentration. Areas of study include estimation, masonry materials, rough-in plumbing systems and installation of finish plumbing.

#### **1822 Blueprint Reading for Construction**

Areas of study include identifying various blueprints, terms, symbols, components, dimensions, classifications and construction task objectives.

#### **1803 Basic Plumbing and Electricity**

Areas of study include basic plumbing skills, advanced plumbing repair and basic electrical skills.

## **1821 Concrete Finishing**

This course introduces the student to the knowledge base and technical skills for concepts in the Building Construction Concentration. Areas of study include estimation, concrete construction, finishing concepts, properties of concrete, tools and equipment, concrete placement, work site preparation, finishing techniques, curing and protecting and troubleshooting concrete problems.

**Course Length:** Two years (1080 hours)

**Meeting Times:** First Year: 11:15 A.M. - 2:15 P.M.; Second Year: 7:15 A.M. - 10:15 A.M.

**Articulation Agreements:** EDGE Credit

**Certifications:** National Center for Construction Education and Research (NCCER)  
OSHA 10 Construction Industry

## IT1442 CODING, APP AND GAME DESIGN

*This concentration introduces students to programming technologies, design, and development related to web sites, mobile applications, and games.*

### Required Courses

#### **1431 Digital Imaging/Multimedia I\***

This course is designed to develop student knowledge and skills in such areas as producing images, operating a digital camera, using imaging software, using drawing software, creating simple animations and manipulating video images. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.

#### **1455 Web Page Publishing\***

Web page design including using web page development software, creating page layouts, adding images and frames, creating elements and components, creating tables, managing files, publishing to the Internet, creating hyperlinks, organizing tasks and using codes (markup languages).

#### **1456 Coding, App and Game Design I**

This course is designed to develop student understanding and skills in such areas as digital ethics, app and game design elements and principles, original app production processes, coding languages and design, app evaluation, and innovation of new app ideas. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.

#### **1457 Coding, App and Game Design II**

This course continues to enhance student understanding and skills in such areas as digital ethics, app and game design elements and principles, original app and game production processes, coding processes, coding languages and design, and app and game evaluation. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.

**Course Length:** One year (540 hours)

**Meeting Times:** 11:15 A.M. - 2:15 P.M

**Articulation Agreements:** EDGE Credit

**Certifications:** Adobe Certified Associate (Adobe Flash Professional, Adobe Dreamweaver, Adobe Photoshop, Adobe Premiere Pro)

\*Courses taught only at the high school. **This course is not open for adult enrollment.**

## TR1670 COLLISION REPAIR TECHNOLOGY

*The Collision Repair Technology concentration focuses on careers that will build a knowledgebase and technical skills in all aspects of the Collision Repair industry. Students will have the opportunity to acquire hours towards NATEF certification and be exposed to skills to develop positive work ethics.*

### Required Courses

#### **1671 Fundamentals of Collision Repair Technology**

Areas of study include career opportunities and practices, integrated academics, knowledge of tools and equipment, panel straightening techniques, and introduction to vehicle preparation. Safety instruction is integrated into all activities.

#### **1675 Non-Structural Analysis and Damage Repair**

Student will continue to build student skill sets in non-structural analysis and repair of metal and composite parts.

#### **1677 Structural Analysis and Damage Repair**

Students will continue to build student skill sets in frame and unibody type vehicles using welding techniques, measuring equipment, and frame machines.

#### **1679 Surface Preparation and Refinishing**

Students will continue to build student skill sets in preparing a surface for refinishing; inspect, clean and operate spraying equipment; detail a vehicle; and diagnose finish defects.

### Elective Courses

#### **1672 Detailing and Interior Parts**

Incorporated into this course are elements of introductory knowledge and skills necessary in detailing and maintaining interior parts as they apply to Collision Repair Technology.

#### **1673 Mechanical and Electrical Components**

Incorporated into this course are elements of introductory knowledge and skills necessary for mechanical and electrical repairs as they apply to Collision Repair Technology.

#### **1674 Refinishing Techniques**

Incorporated into this course are elements of advanced refinishing skills necessary for a career in the collision repair industry.

#### **1676 Custom Finishing Processes**

Incorporated into this course are elements of advanced custom finishing processes and skills necessary for a career in the collision repair industry.

**Course Length:** Two years (1080 hours)

**Meeting Times:** First Year: 11:15 AM - 2:15 PM; Second Year: 7:15 AM - 10:15 AM

**Articulation Agreements:** EDGE Credit

**Certifications:** Automotive Service Excellence (ASE)/National Automotive Technicians Education Foundation (NATEF) OSHA 10 General Industry

## **AR1720 COMPUTER AIDED DRAFTING AND DESIGN**

*The Drafting concentration focuses a broad range of architecture and construction careers and foundation knowledge including basic safety, plan reading, use of tools and equipment as well as how to employ positive work ethics in a drafting career.*

### **Required Courses**

#### **1729 Fundamentals of Drafting**

This course introduces the student to the knowledge base and technical skills for all courses in the Drafting concentration. Areas of study include tools and equipment, measurement, basic drafting techniques, freehand technical sketching, orthographic projection, dimensioning, basic computer skills, and drawing techniques. Emphasis will be placed on personal and professional ethics, and students will explore a variety of career opportunities.

#### **1721 Architectural Drafting**

This course introduces students to the specialization of architectural drawing and design. Areas of study include architectural styles, floor plans, dimensioning and annotation, site and foundation plans, elevations and section layouts, and residential utilities.

#### **1727 Drafting Techniques**

This course introduces the student to techniques used in advanced orthographic projection. Areas of study include sectioning, pictorial views, auxiliary views, patterns and developments, dimensioning, advanced 2D CAD techniques, and basic 3D modeling in CAD. Students will demonstrate knowledge and technical expertise in various fundamental drafting techniques.

#### **1725 Mechanical Drafting**

This course introduces the student to the knowledge base and technical skills necessary for mechanical drafting. Areas of study include advanced dimensioning techniques, assembly drawings, threads and fasteners, gears and cams, welding, and basic solid modeling.

### **Elective Courses**

#### **1726 Structural Steel Drafting**

This course introduces the student to the knowledge base and technical skills for structural steel drafting. Areas of study include structural steel, high strength bolts, welding symbols and structural truss floor plans.

#### **1728 Advanced Computer Aided Drafting**

This course introduces the student to the knowledge base and technical skills for advanced computer aided drafting. Areas of study include paper space/model space, layout, and add-on software. Students will demonstrate knowledge and technical expertise in the use of CAD software.

#### **1723 Civil Drafting**

This course will introduce students to the specialization of civil drafting and design. Areas of study include maps and construction and utilization of survey data.

#### **1661 Blueprint Reading**

This course will introduce students to basic blueprint reading fundamentals. Areas of study include blueprints and symbols. Students will demonstrate knowledge and technical expertise in interpreting blueprints.

**Course Length:** Two years (1080 hours)

**Meeting Times:** First Year: 11:15 AM - 2:15 PM; Second Year: 7:15 AM - 10:15 AM

**Articulation Agreements:** EDGE Credit

**Certifications:** American Design and Drafting Association (ADDA)



## IT1680 COMPUTER SYSTEMS REPAIR TECHNOLOGY

*The Computer Systems Repair Technology concentration validates foundation-level knowledge and skills necessary for a career in PC support. It is the starting point for a career. The CompTIA A+ and Network+ certifications are both international and vendor-neutral and prove competence in areas such as installation, preventative maintenance, networking, security and troubleshooting.*

### Required Courses

#### **1705 Fundamentals of Computer Systems**

This course introduces the student to the knowledge and technical skills for all courses in the Computer Systems Repair Technology pathway. Areas of study include computer hardware, data representation, operating system, utility, productivity software, communications and networks and the Internet.

#### **1664 CompTIA A+220-901**

This courses introduces the knowledge required to understand the fundamentals of computer technology, networking and security, and will have the skills required to identify hardware, peripheral, networking and security components. Content Skill Sets are based on testing objectives for the CompTIA A+ 220-901 certification.

#### **1665 CompTIA A+220-902**

This course introduces the competencies for an entry-level IT professional who has hands-on experience in the lab or the field. Successful candidates will have the skills required to install, configure, upgrade and maintain PC workstations, the Windows OS and SOHO networks. The successful candidate will utilize troubleshooting techniques and tools to effectively and efficiently resolve PC, OS and network connectivity issues and implement security practices. Content Skill Sets are based on testing objectives for the CompTIA A+ 220-902 certification.

#### **1694 Networking+**

This course introduces the student to the knowledge base and technical skills related to networking. Areas of study include media and topologies, protocols and standards, network implementation and network support. Content Skill Sets are based on testing objectives for the CompTIA Network+ certification.

**Course Length:** One year (540 clock hours)

**Meeting Times:** 7:15 AM - 10:15 AM

**Articulation Agreements:** EDGE Credit

**Certifications:** CompTIA A+ 220-901/CompTIA A+ 220-902/CompTIA Network +/PC Pro TestOut

**This course is not open for adult enrollment**

## HU1731 COSMETOLOGY-ADULT STUDENTS ONLY

*The Cosmetology program prepares students to become the creative, well-trained professionals demanded by today's beauty industry. The Professional Cosmetologist will be trained with entry-level skills relating to hair, nails and skin with an emphasis on hygiene, sanitation, customer relations and salon management. The program provides the Cosmetologist with theory and skills-training in basic haircutting, hairstyling, and hair coloring. In addition to training on related hair services, nail and skin care will be introduced and implemented. Graduates are eligible to take the licensing examination from the West Virginia Board of Barbers and Cosmetologists.*

### Required Courses

#### **1737 Barbers and Cosmetology Foundations**

This course develops knowledge and understanding of fundamental theory and practices of the cosmetology profession as delineated by the WV Board of Barbers and Cosmetologists.

#### **1738 Cosmetology Science I**

This course provides information on the scientific aspects of cosmetology as delineated by the WV Board of Barbers and Cosmetologists such as: human anatomy; the basics of chemistry and electricity; infection control; and tools and equipment.

#### **1740 Cosmetology Science II**

This course will provide the student with information on electricity and chemical products used in cosmetology and the effects on the human anatomy as delineated by the WV Board of Barbers and Cosmetologists.

#### **1734 Cosmetology Professional I**

This course provides knowledge and skills for working with hair and scalp, scalp treatment, shampoo and rinse, facial shapes, and hair styles as delineated by the WV Board of Barbers and Cosmetologists.

#### **1735 Cosmetology Professional II**

This course will provide advanced knowledge and skills for working with hair and scalp, scalp treatment, shampoo and rinse, facial shapes, hair styles, wiggery, hair relaxer, and hair coloring as delineated by the WV Board of Barbers and Cosmetologists.

#### **1736 Cosmetology Professional Advanced**

This course will provide advanced knowledge and skills for working with hair and scalp, scalp treatment, shampoo and rinse, facial shapes, hair styles, wiggery, hair relaxer, and hair coloring as delineated by the WV Board of Barbers and Cosmetologists.

#### **1732 Skin Sciences I**

This course will provide the student with knowledge and skills to be able to apply nail tips, wraps and gels; apply facial make-up; and practice various methods of hair removal as delineated by the WV Board of Barbers and Cosmetologists.

#### **1714 General Aesthetics I**

This course will provide the student with knowledge and skills to be able to apply nail tips, wraps and gels; apply facial make-up; and practice various methods of hair removal as delineated by the WV Board of Barbers and Cosmetologists.

**1731 Aesthetics Science**

This course will provide the student with advanced knowledge and skills to be able to facial make-up as delineated by the WV Board of Barbers and Cosmetologists.

**1739 General Aesthetics II**

This course will provide the student with advanced knowledge and skills to be able to facial make-up as delineated by the WV Board of Barbers and Cosmetologists.

**1716 Nail Technology Science and Procedure**

This course provides knowledge and skills for the provision of manicures, pedicures, massage, and facials as delineated by the WV Board of Barbers and Cosmetologists. Students also gain the professional or skilled knowledge and skills necessary in beginning a career in the cosmetology profession.

**1717 Art of Nail Technology**

This course develops knowledge and understanding of fundamental theory and practices of nail technology as delineated by the WV Board of Barbers and Cosmetologists.

**1730 Cosmetology Chemicals I**

This course will provide the student with information on basic chemistry, mixing techniques, and formulations of products in the field of study.

**1750 Cosmetology Chemicals II**

This course will provide the student with a more in-depth understanding of the process for using chemicals I the field of study.

<b>Course Length:</b>	1890 hours Program is designed to be completed in about one-and-a-half years (315 days @ 6 hours/day).
<b>Meeting Times:</b>	7:15 AM - 2:15 PM
<b>Articulation Agreements:</b>	EDGE Credit
<b>Certifications:</b>	WV Board of Barbers and Cosmetologists license

## HE0715 ALLIED HEALTH SCIENCES: DENTAL ASSISTING

*The Allied Health Concentration allows the student to explore careers focused primarily on changing the health status of the patient over time. Health professionals in this concentration work directly with patients; they may provide care, treatment and health education information.*

### Required Courses

#### **0711 Foundations of Health Science**

This course is designed to allow instructional content to focus on basic medical terminology, growth and development, nutrition, health maintenance practices and healthcare delivery systems. It is designed to provide the student with knowledge and technical skills required for infection control and the prevention of disease transmission, CPR and First Aid. Students will be provided with the opportunity to acquire certification in these areas.

#### **0715 Advanced Principles of Health Science**

Instructional content will focus on healthcare safety, environmental safety processes and procedures, ethical and legal responsibilities and mathematical computations. Medical terminology and the reinforcement, expansion and enhancement of biology content specific to diseases and disorders are an integral part of the course. Instruction will incorporate project and problem based healthcare practices and procedures to demonstrate the importance of these skills. Students will develop basic technical skills required for all health career specialties including patient privacy, communication, teamwork and occupational safety and be provided with opportunities to obtain certifications in HIPPA/Data Privacy and health care safety.

#### **0746 Dental Assisting III**

This course introduces dental laboratory techniques and procedures while preparing the student for entry-level employment as a dental laboratory assistant. Students will obtain the knowledge and skills necessary to assist and/or perform basic laboratory and diagnostic procedures.

#### **0743 Dental Assisting IV**

The student completing this course will be able to use knowledge from previously Required Courses to perform and practice all aspects of Dental Laboratory Assisting in a clinical setting. Students will obtain the knowledge and skills necessary to assist and/or perform basic laboratory and diagnostic procedures.

### Elective Courses

#### **0742 Dental Assistant Clinical Practice**

The student within the Dental Assistant Clinical Practices course will focus on knowledge and skills required for the Dental Assistant to function within the areas of radiography and emergency medical care.

#### **0747 Dental Specialties**

This course contains the beginning concepts and skills students will need for entry-level employment as a dental assistant in a specialty office. Major instructional concepts include orientation to specialty areas, instrumentation and procedures. Students are required to complete a work-based clinical experience in each of the specialty areas within this course.

**0749 Supervised Dental Clinical Experience**

The student within the Supervised Dental Assistant Experience course will focus on instructional components that will enable him/her to work as an effective member of the dental team. Students will be introduced to the specialties of dentistry and the requirements necessary to function as an administrative and chair side assistant in a dental office.

**0730 Science Clinical Experience**

This course is designed to be used in conjunction with a Health Science Education course that includes a clinical specialization experience.

**Course Length:** Two years (1080 hours)

**Meeting Times:** First Year: 7:15 AM - 10:15 AM; Second Year: 11:15 AM - 2:15 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** Certified Dental Assistant

## TR1740 DIESEL EQUIPMENT TECHNOLOGY

*The Diesel Equipment Technology concentration focuses on careers that will build a knowledge base and technical skills in all aspects of the Diesel Equipment Technology industry. Students will have the opportunity to acquire hours towards industry ASE/NATEF certification and be exposed to skills to develop positive work ethics.*

### Required Courses

#### **1751 Fundamentals of Diesel Equipment Technology**

This course introduces the student to the knowledge base and technical skills as they relate to the field of Fundamentals of Diesel Equipment Technology. Areas of study include personal and shop safety, career opportunities in the diesel technology industry, the proper use of hand and power tools, basic oxyacetylene cutting, electric welding, and basic shop etiquette. Safety instruction is integrated into all activities.

#### **1747 Diesel Support Systems**

This course introduces the student to the knowledge base and technical skills as they relate to Diesel Support Systems. Areas of study include lubricating and cooling systems, air intake and exhaust systems, starting and charging systems, engine retarders, fuel systems, and governor operation. Safety instruction is integrated into all activities.

#### **1744 Electronic Engine Controls**

This course introduces the student to the knowledge base and technical skills for concepts in diesel electronic engine controls. Areas of study include electronic control modules, electronic fuel injection, and electronic control test equipment. Emphasis will be placed on career exploration, job seeking skills, and personal and professional ethics.

#### **1741 Diesel Engine Components**

This course introduces the student to the knowledge base and technical skills as they relate to the field of Diesel Equipment Technology. In the Diesel Engine Components class areas of study include basic engine components, primary functions, service, inspection, and assembly procedures.

### Elective Courses

#### **1745 Diesel Preventative Maintenance and Inspection**

Incorporated into this course include engine system maintenance, under hood and cab maintenance, electrical/electronic systems, frame and chassis maintenance.

#### **1749 Diesel Truck Chassis Concepts**

Incorporated into this course are elements of transmissions, clutches, suspension, steering, and air brakes. Emphasis will be placed on operating theory, removal and installation of major components, and service and inspection procedures for a career in diesel equipment technology.

#### **1743 Diesel Engine Tune Up and Trouble Shooting**

Incorporated into this course are elements of introductory knowledge and skills necessary for a career in diesel mechanics.

## **1742 Diesel Equipment Electrical Systems**

Incorporated into this course are heavy-truck electrical theory, engine and truck wiring circuits, storage batteries and diesel electrical system testing.

**Course Length:** Two years (1080 hours)

**Meeting Times:** First Year: 11:15 AM - 2:15 PM; Second Year: 7:15 AM - 10:15 AM

**Articulation Agreements:** EDGE Credit

**Certifications:** State Inspection License, OSHA Forklift License, Automotive Service Excellence (ASE)/National Automotive Technicians Education Foundation (NATEF)

## HU1000 EARLY CHILDHOOD EDUCATION

*The Early Childhood Education concentration focuses on the knowledge, skills, attitudes and practices of early childhood development required for careers in the field of Early Childhood Education. Emphasis is placed on the integration of all aspects of development into best practices for nurturing children from birth through age 8. Courses are aligned with Office of Early Learning requirements.*

### Required Courses

#### **1003 Early Childhood Education I**

This course is designed to provide both an overview of the field of early childhood education (ECE) and an introduction to child development. Topics include ECE career paths; early childhood programs; regulatory and ethical requirements; physical development in early childhood years; social emotional development in early childhood year; cognitive development in early childhood years; language development in early childhood years; and an integrated approach to child development.

#### **1004 Early Childhood Education II**

This course is designed to explore concepts of school readiness, special needs inclusion; and family and community engagement.

#### **1008 Early Childhood Education III**

This course is designed to explore various theoretical perspectives on early childhood in general and with language and literacy in particular. Emphasis will be placed on developing a personal educational theory and creating a language rich environment.

#### **1009 Early Childhood Education IV**

This course is designed to provide a review of previous concepts and developmentally appropriate practices as well as an overview of early childhood curriculum and assessment. Students will experience work-based involvement and transition as possible.

**Course Length:** One year (540 clock hours)

**Meeting Times:** 7:15 AM - 10:15 AM

**Articulation Agreements:** EDGE Credit

**Certifications:** Early Childhood Classroom Assistant Teacher's Aid

**This course is not open for adult enrollment**



## AR1760 ELECTRICAL TECHNICIAN

*The Electrical Technician concentration focuses on careers that will build a knowledge base and technical skills in all aspects of the Electrical Trades industry. Students will have the opportunity to earn NCCER certification for each skill set mastered and be exposed to skills to develop positive work ethics.*

### Required Courses

#### **1756 Electrical Trades I**

The students will complete modules in Basic Safety; Introduction to Construction Math; Introduction to Hand Tools; Introduction to Power Tools; Introduction to Construction Drawings; Basic Rigging; Basic Communication Skills; Basic Employability Skills; and Introduction to Materials Handling. Students will then begin developing skill sets related to the fundamentals of Electricity such as Orientation to the Electrical Trade; and Electrical Safety.

#### **1757 Electrical Trades II**

Electrical Trades II will continue to build student skill sets in areas such as Introduction to Electrical Circuits; Electrical Theory; Introduction to the National Electrical Code®; Device Boxes; Hand Bending; Raceways and Fittings; Conductors and Cables; Basic Electrical Construction Drawings; Residential Electrical Services; and Electrical Test Equipment.

#### **1758 Electrical Trades III**

Electrical Trades III will continue to build student skill sets in areas of Alternating Current; Motors: Theory and Application; Electric Lighting; and Conduit Bending.

#### **1759 Electrical Trades IV**

Electrical Trades IV will continue to build student skill sets in areas of Pull and Junction Boxes; Conductor Installations; Cable Tray; Conductor Terminations and Splices; Grounding and Bonding; Circuit Breakers and Fuses; and Control Systems and Fundamental Concepts.

### Elective Courses

#### **1762 Blueprint Reading for Electricians**

Areas of study include building plans and specifications and blueprint and schematic reading.

#### **1771 Rotating Devices and Control Circuitry**

This course introduces the student to the knowledge base and technical skills for concepts in the Rotating Devices and Control Circuitry. Areas of study include control circuitry and motor controls.

#### **1767 National Electrical Code**

This course introduces the student to the knowledge base and technical skills for the NEC. Areas of study include demonstrating skills in the use of the NEC, applying calculations to assure NEC 76 standards are met.

#### **1766 Integrated Electrical Lab**

This course introduces the student to the knowledge base and technical skills for concepts in the Integrated Electrical Lab. Areas of study include electrical installation project, rough-in procedure, test and check circuits and termination and trim-out. Emphasis will be placed on career exploration, job seeking skills and personal and professional ethics.

**Course Length:** Two years (1080 hours)

**Meeting Times:** First Year: 11:15 AM - 2:15 PM; Second Year: 7:15 AM - 10:15 AM

**Articulation Agreements:** EDGE Credit

**Certifications:** National Center for Construction Education and Research (NCCER)/  
Journeyman/Electrician License

WVDE requirements to sit for the Electrical Journeyman License for secondary students:

- 1) Attain an overall grade of “B” or better in the four required state-approved CTE Electrical Technician Program of Study required courses **AND** the four specializations courses used to meet the 1080 hours needed to sit for the Journeyman’s License as stated in the Electrician Licensing Rules from the West Virginia State Fire Marshall’s office;
- 2) Attain a verified school attendance record of no more than 6 days absent in a year-1080 hour program or 12 days absent in a two year-1080 hour program;
- 3) Earn the NCCER Core certification;
- 4) Earn the OSHA 10 certification;
- 5) Pass a minimum of TWO (2) documented drug screenings; and
- 6) Score at or above the Workforce Entry-Level cut score on the industry-recognized written **AND** performance audit.

## **AR1760 ELECTRICAL TECHNICIAN -ADULT STUDENTS ONLY EVENING PROGRAM**

*The Electrical Technician concentration focuses on careers that will build a knowledge base and technical skills in all aspects of the Electrical Trades industry. Students will have the opportunity to earn NCCER certification for each skill set mastered and be exposed to skills to develop positive work ethics.*

### **Required Courses**

#### **1756 Electrical Trades I**

The students will complete modules in Basic Safety; Introduction to Construction Math; Introduction to Hand Tools; Introduction to Power Tools; Introduction to Construction Drawings; Basic Rigging; Basic Communication Skills; Basic Employability Skills; and Introduction to Materials Handling. Students will then begin developing skill sets related to the fundamentals of Electricity such as Orientation to the Electrical Trade; and Electrical Safety.

#### **1757 Electrical Trades II**

Electrical Trades II will continue to build student skill sets in areas such as Introduction to Electrical Circuits; Electrical Theory; Introduction to the National Electrical Code ®; Device Boxes; Hand Bending; Raceways and Fittings; Conductors and Cables; Basic Electrical Construction Drawings; Residential Electrical Services; and Electrical Test Equipment.

#### **1758 Electrical Trades III**

Electrical Trades III will continue to build student skill sets in areas of Alternating Current; Motors: Theory and Application; Electric Lighting; and Conduit Bending.

#### **1759 Electrical Trades IV**

Electrical Trades IV will continue to build student skill sets in areas of Pull and Junction Boxes; Conductor Installations; Cable Tray; Conductor Terminations and Splices; Grounding and Bonding; Circuit Breakers and Fuses; and Control Systems and Fundamental Concepts.

### **Elective Courses**

#### **1762 Blueprint Reading for Electricians**

Areas of study include building plans and specifications and blueprint and schematic reading.

#### **1769 Residential Wiring**

This course introduces the student to the knowledge base and technical skills for Residential Wiring. Areas of study include wiring data, service entrance equipment, luminary and receptacle outlets, protective devices, appliance and special circuits and low-voltage systems.

#### **1771 Rotating Devices and Control Circuitry**

This course introduces the student to the knowledge base and technical skills for concepts in the Rotating Devices and Control Circuitry. Areas of study include control circuitry and motor controls.

**1767 National Electrical Code**

This course introduces the student to the knowledge base and technical skills for the NEC. Areas of study include demonstrating skills in the use of the NEC, applying calculations to assure NEC 76 standards are met.

**Course Length:** Two years (1080 hours)

**Meeting Times:** Tuesday-Thursday 5:00 PM – 10:00 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** Journeyman/Electrician License

## HE0715 ALLIED HEALTH SCIENCES: EMT-B

*The Allied Health Concentration allows the student to explore careers focused primarily on changing the health status of the patient over time. Health professionals in this concentration work directly with patients; they may provide care, treatment and health education information.*

### Required Courses

#### **0711 Foundations of Health Science**

This course is designed to allow instructional content to focus on basic medical terminology, growth and development, nutrition, health maintenance practices and healthcare delivery systems. It is designed to provide the student with knowledge and technical skills required for infection control and the prevention of disease transmission, CPR and First Aid. Students will be provided with the opportunity to acquire certification in these areas.

#### **0715 Advanced Principles of Health Science**

Instructional content will focus on healthcare safety, environmental safety processes and procedures, ethical and legal responsibilities and mathematical computations. Medical terminology and the reinforcement, expansion and enhancement of biology content specific to diseases and disorders are an integral part of the course. Instruction will incorporate project and problem based healthcare practices and procedures to demonstrate the importance of these skills. Students will develop basic technical skills required for all health career specialties including patient privacy, communication, teamwork and occupational safety and be provided with opportunities to obtain certifications in HIPPA/Data Privacy and health care safety.

#### **0792 Emergency Services 1**

This course introduces students to the role of an emergency medical technician in the health care system. Students will focus on relevant medical terminology, anatomy and physiology, and pharmacology. Students learn to recognize, assess and manage medical and trauma emergencies in any pre-hospital setting.

#### **0732 Emergency Services 2**

Students will continue to learn and practice techniques to manage medical and trauma emergencies, IV fluids, cardiac and respiratory emergencies, gynecological and obstetrics emergencies, musculoskeletal emergencies, and head, spinal, and neck injuries. Procedures to manage trauma will be studied in detail. Students will complete a clinical experience.

**Course Length:** One year (540 hours)

**Meeting Times:** 7:15 AM - 10:15 AM or 11:15 AM - 2:15 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** CPR/HAZMAT Awareness/Mass Casualty Incident Awareness and Operations Training/WV EMT-B certification/National Registry of Emergency Medical Technicians (NREMT) Certification

**This course is not open for adult enrollment**

## LA1020 LAW AND PUBLIC SAFETY

*The Law and Public Safety concentration focuses on methods used by public safety leaders to protect a democratic society. The history and organization of the criminal justice system and issues relating to the administration and p and practice of law and public safety in a culturally diverse society are explored.*

### Required Courses

#### **1035 Seminar in Law Enforcement**

This course is designed to provide students with fundamental principles of the law enforcement field such as the history of policing in the US, the characteristics of law enforcement agencies and types of police activities including criminal investigation. Current issues and trends in law enforcement will be investigated. Aspects of criminal investigation will be presented.

#### **1226 Ethical Issues in Public Safety**

This course is designed to examine the philosophical issues and applications of the objectives and processes of Public Safety Leadership including; Constitutional limitations; accountability; civil liability; criminal investigation; criminal procedure; and forensics. Students will examine a variety of serious offenses and apply concepts of profiling, behavioral analysis and threat assessment within an ethical paradigm. Students will analyze and critique the system of dealing with convicted persons and the long-term implications of corrections policy.

#### **1039 Practical Applications of Public Safety**

This course is designed to give students the opportunity to connect theory and practice by interacting with Public Safety professionals. Students will study various requirements for employability in the Public Safety field including ethics, teamwork, and professionalism. Students may participate in activities associated with Public Safety agencies for hands-on or work-based experiences.

#### **1225 Fundamentals of Public Safety Leadership**

This course is designed to present foundational principles of Public Safety Leadership including: how public safety leaders protect a democratic society; public policy issues such as crime and justice; history, organization and functions of components of public safety including the criminal justice system; and the issues and challenges relating to the administration of justice in a culturally diverse society.

### Elective Courses

#### **1034 Seminar in Corrections**

This course is designed to provide students with fundamental principles in the corrections field including: the evolution of correctional practices and philosophies including treatment models; correctional law; the relationship of correctional activities to other aspects of the criminal justice system; detention facilities; and probation and parole programs.

#### **1031 Seminar in Courts and Legal System**

This course is designed to provide students with the knowledge and skills needed to assist the legal industry with court preparation, legal interventions, research and office management.

### **1037 Strategic Security and Protection**

This course is designed to provide students with the knowledge and skills needed for the development and implementation of protective security operations including: the protective security law and management; procedures for basic instant response; methods of collecting intelligence and security related investigations; chemical, biological, radiological and nuclear weapons use; and aspects of domestic and international terrorism.

### **6709 Fitness/Conditioning Activities**

This course is designed to present the fundamentals of coaching wellness for optimal living including: wellness concepts integrating mind, body and spirit; foundations of physical and emotional wellness; common conditions requiring wellness strategies; scope of practice; the differences between fitness and wellness; wellness assessments; motivational theories, principles and techniques; working with medical and allied professionals; and the development of a personal wellness foundation.

**Course Length:** Two years (1080 hours)

**Meeting Times:** First Year: 11:15 AM - 2:15 PM; Second Year: 7:15 AM - 10:15 AM

**Articulation Agreements:** EDGE Credit

**Certifications:** Certified Criminal Justice Professional - courses plus work experience (WV credential with international reciprocity)

## AR1910 MASONRY

*The Masonry concentration focuses on careers that will build a knowledge base and technical skills in all aspects of the Masonry industry. Students will have the opportunity to earn NCCER certification for each skill set mastered and be exposed to skills to develop positive work ethics.*

### Required Courses

#### **1846 Masonry I**

The students will complete modules in Basic Safety; Introduction to Construction Math; Introduction to Hand and Power Tools; Introduction to Construction Drawings; Basic Rigging; Basic Communication Skills and Employability Skills; and Introduction to Materials Handling.

#### **1847 Masonry II**

Students continue to build skill sets in areas such as Measurements, Drawings, and Specifications; Mortar; and Masonry Units and Installation Techniques.

#### **1848 Masonry III**

Students continue to build skill sets in in areas of Residential Plans and Drawing Interpretation; Residential Masonry; Grout and Other Reinforcement; and Metal Work in Masonry.

#### **1849 Masonry IV**

Students continue to build skill sets in in areas of Advanced Laying Techniques; Construction Techniques and Moisture Control; and Construction Inspection and Quality Control.

### Elective Courses

#### **1821 Concrete Finishing**

Areas of study include estimation, concrete construction, finishing concepts, properties of concrete, tools and equipment, concrete placement, work site preparation, finishing techniques, curing and protecting and troubleshooting concrete problems.

#### **1917 Foundations and Footings**

Areas of study include blueprint reading, site layout and footer and foundation installation.

#### **1914 Bricklaying**

Areas of study include installing brick paving, building chimneys and fireplaces, constructing brick steps, and building brick archways.

#### **1916 Decorative Masonry Work**

Areas of study include building with the six different brick positions, building with landscape block, integrating arches into openings and setting ceramic tile.

**Course Length:** Two years (1080 hours)

**Meeting Times:** First Year: 11:15 AM - 2:15 PM; Second Year: 7:15 AM - 10:15 AM

**Articulation Agreements:** EDGE Credit

**Certifications:** National Center for Construction Education and Research (NCCER);  
OSHA 10 Construction Industry



## HE0715 ALLIED HEALTH SCIENCES: MEDICAL ASSISTING

*The Allied Health Concentration allows the student to explore careers focused primarily on changing the health status of the patient over time. Health professionals in this concentration work directly with patients; they may provide care, treatment and health education information.*

### Required Courses

#### **0711 Foundations of Health Science**

This course is designed to allow instructional content to focus on basic medical terminology, growth and development, nutrition, health maintenance practices and healthcare delivery systems. It is designed to provide the student with knowledge and technical skills required for infection control and the prevention of disease transmission, CPR and First Aid. Students will be provided with the opportunity to acquire certification in these areas.

#### **0715 Advanced Principles of Health Science**

Instructional content will focus on healthcare safety, environmental safety processes and procedures, ethical and legal responsibilities and mathematical computations. Medical terminology and the reinforcement, expansion and enhancement of biology content specific to diseases and disorders are an integral part of the course. Instruction will incorporate project and problem based healthcare practices and procedures to demonstrate the importance of these skills. Students will develop basic technical skills required for all health career specialties including patient privacy, communication, teamwork and occupational safety and be provided with opportunities to obtain certifications in HIPPA/Data Privacy and health care safety.

#### **0737 Medical Assistant Laboratory and Diagnostic Procedures**

Instructional content will focus on an introduction to the medical laboratory, safety, principles of disease transmission and prevention, as well as medical and surgical asepsis. Students will obtain the knowledge and skills necessary to assist and/or perform basic laboratory and diagnostic procedures.

#### **0733 Medical Assistant Clinical Procedures**

Instructional content in this will focus on clinical procedures utilized within medical offices. Major components include emergency medical care, physical exam, basic pharmacology and administration of medication. Students will participate in a work-based clinical externship within a medical office or equivalent health care facility.

### Elective Courses

#### **0721 Medical Terminology**

Through the study of medical terminology, the student will be introduced to the language of medicine. Students will gain an understanding of basic elements, rules of building and analyzing medical words, and medical terms associated with the human body utilizing a systems approach.

#### **0734 Medical Assistant Advanced Pharmacology**

Course content will include the uses, sources, forms and delivery routes of drugs. Knowledge will be gained in drug classifications and actions, along with legal implications regarding controlled substances and other medications.

**0736 Medical Assistant Administrative Procedures II**

Instructional content will focus on advanced pharmacology. Course content will include the uses, sources, forms and delivery routes of drugs. Knowledge will be gained in drug classifications and actions, along with legal implications regarding controlled substances and other medications.

**0730 Science Clinical Experience**

Instructional content is focuses on extending career preparation and technical skills associated with a previously selected clinical specialization.

**Course Length:** Two years (1080 hours)

**Meeting Times:** First Year: 7:15 AM - 10:15 AM; Second Year: 11:15 AM - 2:15 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** Certified Medical Assistant/Certified Nursing Assistant;  
First Aid/CPR; OSHA 10 Healthcare

**HE0773 PHLEBOTOMY TECHNICIAN-ADULT STUDENTS ONLY  
EVENING PROGRAM**

*Phlebotomists draw blood from patients in hospitals, blood centers, or similar facilities for analysis or other medical purposes.*

**Required Courses**

**0825 Phlebotomy Skills**

Students will learn the anatomy of the vascular system as well as perform basic phlebotomy procedures. Students will evaluate patients for ability to withstand venipuncture procedure, can explain the venipuncture procedure and answer patient questions. Students will demonstrate basic point of care testing, such as blood glucose levels on patients; prepare blood, urine, and other body fluid specimens for testing per established standards.

**Course Length:** Ten weeks (226 hours-146 classroom, 80 clinical)

**Meeting Times:** Monday – Thursday 6:00 p.m. -9:00 p.m.

**Articulation Agreements:** N/A

**Certifications:** National Healthcare Association (NHA)

## **TR1960 POWER EQUIPMENT SYSTEMS-ADULT STUDENTS ONLY EVENING PROGRAM**

*Power Equipment Systems is a two-year program which provides students with the knowledge and skills required to service and repair air-cooled, engine-powered lawn and garden equipment, outboard motors, ATVs, etc. Areas of study include drivelines, hydraulics, hydrostatic transmissions and electrical systems. Students use of variety of power and machine tools, such as pneumatic wrenches, lathes, grinding machines, and welding equipment. Hand tools, including pliers, wrenches, and screwdrivers are commonly used.*

### **Required Courses**

#### **1962 Fundamentals of Power Equipment I**

Incorporated into this course are learning the components and principles of operation of combustion engines.

#### **1964 Fundamentals of Power Equipment II**

Incorporated into this course are learning the components and principles of the lubrication system, cooling system, and electrical system of small engines.

#### **1966 Power Equipment Service I**

Incorporated into this course are performing diagnostic and service on two and four stroke-cycle engines and accessories.

#### **1968 Power Equipment Service II**

Incorporated into this course are servicing engine powered equipment drive systems, performing service operations on chainsaws, and performing service and repair on outdoor power equipment.

### **Elective Courses**

#### **1970 Power Equipment Systems Applications**

Incorporated into this course are required forms for service department operation, motorcycle and ATV brake systems, transmissions, and suspension systems for a career in power equipment systems.

#### **1972 Recreational Applications**

Incorporated into this course are learning to service multiple carburetor and fuel injection engines and outboard motors and their controls, proper propeller selection for optimum operation, preparing motor for the off-season, and service and maintenance to personal watercraft and snowmobiles.

#### **1973 Compact Diesels**

Incorporated into this course are learning characteristics of compact diesel engines, components unique to diesel engines, cold weather operation, servicing and maintaining a compact diesel engine.

## **1974 Generators**

Incorporated into this course are learning the principles of operation of generators, estimating generator size for customer requirements, and operating and servicing a portable generator to the manufacturer's specifications.

**Course Length:** Two years (1080 hours)

**Meeting Times:** Monday-Friday

Class 1 3:30 pm to 6:30 pm for two years

Class 2 7:00 pm to 10:00 pm for two years

Or take both and complete in one year

**Articulation Agreements:** N/A

**Certifications:** Equipment and Engine Training Council (EETC): Technician Certification in six areas

## HE0776 PRACTICAL NURSING-ADULT STUDENTS ONLY

*Licensed practical nurses (LPNs) provide basic nursing care. They work under the direction of registered nurses and doctors. Licensed practical nurses work in many settings, including nursing homes and extended care facilities, hospitals, physicians' offices, and private homes.*

### Required Courses

Basic Skills Phase  
Fundamentals of Nursing  
Social Science I  
Gerontology  
Social Science II  
Growth and Development  
Nursing Skills  
Introduction to Anatomy and Physiology  
Introduction to Pharmacology  
Introduction to Nutrition and Diet Therapy

### Med-Surg Phase

Medical Surgical Nursing  
Integrated Anatomy  
Integrated Nutrition  
Integrated Pharmacology

### Specialty Phase

Gerontology  
Maternal Child Health  
Psychiatric Nursing  
Community Health  
Entry to Practice

**Course Length:** One year (1350 hours)

**Meeting Times:** Monday – Friday 8:00 AM – 3:00 PM (clinical hours vary)

**Articulation Agreements:** N/A

**Certifications:** State Board of Examiners for Licensed Practical Nursing

## HO1010 PROSTART RESTAURANT MANAGEMENT

*The ProStart Restaurant Management concentration focuses on the skills needed for a successful employment in a restaurant environment, but has applicability for students interested in culinary nutrition, dietary services, and child nutrition services.*

### Required Courses

#### **1013 Restaurant and Culinary Foundations**

This course focuses on the basic preparation and service of safe food, introduction to industry safety standards, restaurant equipment, knife skills, stocks and sauces, and communication concepts in the restaurant industry.

#### **1014 Restaurant and Management Essentials**

This course focuses on management essentials in the restaurant industry, guest service, food production, and career exploration and pursuit.

#### **1019 Advanced Principles in Food Production**

This course is designed to examine advanced food production, nutrition, and cost control.

#### **1020 Restaurant Professional**

This course is designed to provide content related global cuisine, sustainability, desserts and baked goods, and marketing.

### Elective Courses

#### **1015 Hospitality Products and Services**

Students will research and review integrated hospitality skills, food service etiquette, and processes used in individual and group settings.

#### **1016 Food Service Management Practices**

Management roles and financial responsibilities, staff supervision and training, marketing and advertising, menu planning, food safety, sanitation, labor rules and regulations, and HACCP planning are introduced.

#### **1017 Culinary Nutrition and the Menu**

Nutrition basics, dietary guidelines and special dietary needs will be used in modifying menu choices.

#### **1018 Baking and Pastry Applications**

This course focuses on yeast raised dough products, cakes, cookies, batters, breads, biscuits, muffins, pies, and special dessert preparation.

**Course Length:** Two years (1080 hours)

**Meeting Times:** First Year: 11:15 AM - 2:15 PM; Second Year: 7:15 AM - 10:15 AM

**Articulation Agreements:** EDGE Credit

**Certifications:** ProStart Certificate of Achievement/ServSafe Foodhandler's Certificate; WV Welcome Certificate in Customer Service/ServSafe Certification for Managers/American Culinary Foundation (ACF) Junior Culinarian

## HE0782 SURGICAL TECHNOLOGY-ADULT STUDENTS ONLY

*Students in the Surgical Technology program are educated to be surgical technologists who work as part of the surgical team to ensure the operative procedure is conducted under optimal conditions. The Surgical Technologist is responsible for three phases (preoperative, intraoperative, and postoperative) of patient care with minimal direction. All surgical team members must adhere to the principles of asepsis and the practice of sterile technique. The Surgical Technologist normally functions in a sterile capacity, passing instruments, equipment and supplies to the surgeon during the surgical procedure but may also perform many non-sterile duties throughout the workday. The content includes but is not limited to communication and interpersonal skills, legal and ethical responsibilities, anatomy & physiology, pathophysiology, microbiology, aseptic techniques, patient care procedures, surgical technology procedures, patient safety, use of equipment and supplies, CPR, employability skills, and practice skills for the National Board Certification testing.*

### Required Courses

<b>Courses:</b>	<b>0651</b>	Surgical Technology I	Anatomy & Physiology
	<b>0652</b>	Surgical Technology II	Lab
	<b>0653</b>	Surgical Technology III	Pharmacology
	<b>0654</b>	Surgical Technology IV	Medical Terminology
	<b>0655</b>	Surgical Technology V	Theory
			<ul style="list-style-type: none"><li>• Introduction into Surgical Technology</li><li>• Principles and Practices of Surgical Technology</li></ul>
	<b>0656</b>	Introduction to Central Supply and Employability Skills	
			<ul style="list-style-type: none"><li>• Microbiology</li></ul>
	<b>0657</b>	Surgical Technology VI	Surgical Procedures
	<b>0658</b>	Surgical Technology VII	Clinical Rotation
	<b>0730</b>	Science Clinical Experience	Clinical Rotation

**0651 ANATOMY AND PHYSIOLOGY** -This course of study includes topographic or surgical anatomy as it relates to surgical procedures. The main focus is the structure of the human body.

**0656 MICROBIOLOGY**-This course includes theory and lab and is designed to place an emphasis on the foundation of aseptic technique, including, infection control, and the immune process, wound healing, and the handling of tissue samplings in relationship to the surgical environment.

**0655 INTRODUCTION INTO SURGICAL TECHNOLOGY**-This course intends to introduce the student to the broad field of surgical technology and incorporate professional responsibilities from an ethical, legal, and historical aspect of the surgical environment.

**0655 PRINCIPLES AND PRACTICES OF SURGICAL TECHNOLOGY**-This course introduces the concepts and processes essential to both the Scrub and Circulator roles of Surgical Technology. Material covered in this course deals with the preoperative routines, positioning, prepping, instrumentation, counts, and draping the patient with related nursing procedures.



**0653 PHARMACOLOGY/MATH**-This course provides an emphasis on basic math/algebra and pharmacologic agents used in the surgical setting. This area of pharmacology is incorporated into the curriculum as is the care of handling drugs and solutions, terminology, and medications used in surgery and anesthesia.

**0657 SURGICAL PROCEDURES**-This course, consisting of parts I and II, is designed to cover a large variety of surgical procedures and a detailed analysis of general surgery, gastrointestinal surgery, obstetrics and gynecology, head and neck surgery, plastic/reconstructive surgery, ophthalmic, orthopedics, neurosurgery, thoracic surgery, and cardiovascular/peripheral vascular surgery.

**0654 MEDICAL TERMINOLOGY**-This course introduces the student into the language of medicine, and the meaning of the terminology in which they will be accustomed to at the clinical setting as well as reference in the academic portion of the program.

**0658 CLINICAL ROTATION**-An emphasis is placed on clinical practice experiences as it relates to the surgical, anesthesia, and central supply departments in the hospital.

**0730 SCIENCE CLINICAL EXPERIENCE**-This course is designed to be used in conjunction with a Health Science Education course that includes a clinical specialization experience. Instructional content focuses on extending career preparation and technical skills associated with a previously selected clinical specialization.

**Course Length:** Eleven months (1215 hours)

**Meeting Times:** Monday-Friday 11:30 a.m. to 6:00 p.m. (clinical hours vary)

**Articulation Agreements:** N/A

**Certifications:** Certified Surgical Technologists (CST) by the National Board of Surgical Technologists & Surgical Assistants (NBSTSA)  
CPR/AED Healthcare Provider or Professional Rescuer, First Aid,  
Blood Borne Pathogens Training: Preventing Disease Transmission

## HE0723 THERAPEUTIC SERVICES

*The Therapeutic Services Concentration allows the student to explore careers focused primarily on changing the health status of the patient over time. Health professionals in this concentration work directly with patients; they may provide care, treatment, counseling and health education information*

### Required Courses

#### **0711 Foundations of Health Science**

This course is designed to allow instructional content to focus on basic medical terminology, growth and development, nutrition, health maintenance practices and healthcare delivery systems. It is designed to provide the student with knowledge and technical skills required for infection control and the prevention of disease transmission, CPR and First Aid. Students will be provided with the opportunity to acquire certification in these areas.

#### **0715 Advanced Principles of Health Science**

Instructional content will focus on healthcare safety, environmental safety processes and procedures, ethical and legal responsibilities and mathematical computations. Medical terminology and the reinforcement, expansion and enhancement of biology content specific to 27 diseases and disorders are an integral part of the course. Instruction will incorporate project and problem based healthcare practices and procedures to demonstrate the importance of these skills. Students will develop basic technical skills required for all health career specialties including patient privacy, communication, teamwork and occupational safety and be provided with opportunities to obtain certifications in HIPPA/Data Privacy and health care safety.

#### **0789 Clinical Specialty I**

Upon successful completion of the prerequisite courses in the Health Science Education concentration, students will be provided the opportunity in Clinical Specialty I to participate in a work-based clinical experience. Students choose a health career specialty for in-depth study and must complete a minimum of 25-55 hours in an applicable clinical rotation. Instruction is guided by career-specific content skill sets that must be mastered before students are eligible to attain established credentials and/or industry validation.

#### **0790 Clinical Specialty II**

Upon successful completion of the prerequisite courses in the Health Science Education concentration, students will be provided the opportunity in Clinical Specialty II to participate in a work-based clinical experience. Students choose a health career specialty for in-depth study and must complete a minimum of 25-55 hours in an applicable clinical rotation. Instruction is guided by career-specific content skill sets that must be mastered before students are eligible to attain established credentials and/or industry validation. (2 credits)

### Elective Courses

#### **0721 Medical Terminology**

Through the study of medical terminology, the student will be introduced to the language of medicine. Students will gain an understanding of basic elements, rules of building and analyzing medical words, and medical terms associated with the human body utilizing a systems approach.

**0725 Understanding Human Behavior**

Within this course, students will learn basic principles of human behavior. Because of this knowledge, students should gain an improved sense of self and build interpersonal relationship skills. The end goal will be the delivery of conscientious, personalized care which conveys respect and sincerity.

**0716 Body Structures and Functions**

This course focuses on the structure and function of each system in the human body. Additional instructional components include concepts that pertain to the body as a whole, applicable medical terminology and the pathophysiology common to each system.

**0730 Science Clinical Experience**

This course is designed to be used in conjunction with a Health Science Education course that includes a clinical specialization experience. Instructional content focuses on extending career preparation and technical skills associated with a previously selected clinical specialization.

**Course Length:** Two years (1080 hours)

**Meeting Times:** First Year: 7:15 AM - 10:15 AM; Second Year: 11:15 AM - 2:15 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** Pharmacy Technician, Phlebotomy, ECG

## TRUCK DRIVING-ADULT STUDENTS ONLY

*This course introduces the student to the knowledge base and technical skills for Commercial Driving License. Areas of study include CDL license information, licensing procedures, requirements, and traffic laws.*

### **2171 Truck Driver Training**

#### Classroom-Week 1 & 2

1. Classroom introduction to general knowledge, air brakes, and combination vehicle. Endorsements will follow and will include tanker, hazardous materials, doubles/triples, passenger and school bus. Students will be tested on each subject in preparation for the state CDL learners permit examination for class A commercial motor vehicles along with endorsements.
2. Instruction covering log book rules and regulations, hours of service, use of electronic logs, and paperless logging systems "people net", management of paperwork covering bill of lading, shipper and receiver documents, and hazmat record keeping.
3. Instruction covering trip planning, time management, map reading, and GPS operation.
4. Driving wellness, awareness, and the effects of fatigue related to safety.
5. Adverse weather conditions and the effects upon a commercial motor vehicle.

#### Week 2 & 3

1. Introduction to pre-trip, post trip, and en-route inspections. Emphasis on safety concerns of operating an unsafe vehicle.
2. Introduction to shifting, basic utilization of speed, RPMs, load weight, and road grade to select and shift in and out of gears.
3. Defensive driving course, covering need for defensive driving skills to prevent fatalities, injuries, and property damage.
  - a. Distinguish between preventable and non-preventable accidents.
  - b. Cover factors that contribute to accidents: Driver, Vehicle, and Environment.
  - c. Explain the use of the 3 step DDC Collision Prevention Formula.
  - d. Recognize personal responsibility to protect the motoring public and yourself.

#### Week 3 and 4 Classroom To Range and Road

1. In depth pre, post, and en-route inspections, hands on instructor demonstration, student interaction progressing to student practice and mastering.
  - a. Allow memory aid for pre-trip. CRITICAL TASK
2. Begin backing exercises instructor demo, student hands on, develop space management skills, depth perception, and SAFETY.
3. Docking exercise, instructor demo, student practice to gain skills for this critical job function, develop depth perception, space management, and good safety practices. Emphasis on "GET OUT AND LOOK" rule.
4. Coupling and uncoupling tractor trailer, instructor demo, and then students practice step by step procedures for completing task.

5. Checking proper adjustment of automatic slack adjusters, instructor demo of inspection of the brake hardware system, will cover laws regarding automatic slack adjusters, include the difference in brake systems and physical hands on systems check.
6. Sliding tandems and fifth wheel, instructor demo, students will perform, lecture the necessity of the functions, and its effects for weight distribution.
7. Students will practice and master each of the required backing skills for state examination, alley dock 90, offset, straight line, and parallel.

Week 4 and 5 On the Road Driving

1. Begin shifting, turning, braking, acceleration, and off tracking exercise. Will use low traffic public roadways.
2. Traffic/mirror checks, negotiation of intersections, implementing space management skills, awareness and detection/understanding of traffic signals. Emphasis stale green light
3. Left turns, right turns, and the effects of trailer off tracking for both.
4. Uphill and downhill shifting RPM watch, listen, and feel methods.
5. Railroad crossings laws bus and truck, school, and construction zones.
6. Urban Driving
7. Highway/freeway on ramps and off ramps, lane changing, and space management use.
8. Detection of potential hazards before they become an EMERGENCY, following distances for length of vehicle, road speed, conditions, type of load, and to determine stopping distance.
9. City driving, high volume of traffic and congestion, use of space management, proper setup of vehicle before left or right turns, off tracking, and sign recognition.

**Course Length:** 5 to 6 weeks

**Meeting Times:** 7:15 AM to 2:15 PM  
Monday-Friday

**Articulation Agreements:** N/A

**Certifications:** General Knowledge Learners Permit  
Tanker, Doubles/Triples, Hazmat, Passenger and School Bus Endorsements  
Road and Skills Test  
Hazmat Background Check  
State Final Exam

## **MA1980 WELDING**

*The Welding concentration focuses on careers that will build a knowledge base and technical skills in all aspects of the Welding industry. Students will have the opportunity to earn both NCCER certification and the WV Welding Certification for each skill set mastered and be exposed to skills to develop positive work ethics.*

### **Required Courses**

#### **1862 Welding I**

This course is designed to introduce the student to the knowledge base and technical skills of the Welding industry. Welding I begins with the NCCER Core curriculum which is a prerequisite to all Level I completions. The students will complete modules in Basic Safety; Introduction to Construction Math; Introduction to Hand Tools; Introduction to Power Tools; Introduction to Construction Drawings; Basic Rigging; Basic Communication Skills; Basic Employability Skills; and Introduction to Materials Handling. Students will then begin developing skill sets in the fundamentals of Welding such as Welding Safety; Oxyfuel Cutting; and Plasma Arc Cutting.

#### **1863 Welding II**

Welding II will continue to build student skill sets in areas of Air Carbon Arc Cutting and Gouging; Base Metal Preparation; Weld Quality; SMAW-Equipment and Setup; Shielded Metal Arc Electrodes; SMAW-Beads and Fillet Welds; Joint Fit Up and Alignment; SMAW-Groove Welds with Backing; and SMAW-Open V-Groove Welds.

#### **1864 Welding III**

Welding III will continue to build student skill sets in areas of Welding Symbols; Reading Welding Detail Drawings; Physical Characteristics and Mechanical Properties of Metals; Preheating and Post-Heating of Metals; GMAW and FCAW-Equipment and Filler Metals; and GMAW and FCAW-Plate.

#### **1865 Welding IV**

Welding IV will continue to build student skill sets in areas of GTAW-Equipment and Filler Metals; and GTAW-Plate.

### **Elective Courses**

#### **1983 Blueprint Reading and Metallurgy**

Areas of study include drawing fundamentals, sketching and fabricating, basic welding symbols, and properties of metals and alloys.

#### **1987 Gas Metal Arc Welding**

Incorporated into this course are elements of introductory knowledge and skills necessary for a career in welding.

#### **1982 Ornamental Metalwork**

Areas of study include measurement, metal layout and bending, operation of the drill press, band saw, and the iron worker.

## **1989 Gas Tungsten Arc Welding**

Incorporated into this course are elements of introductory knowledge and skills necessary for a career in welding.

**Course Length:** Two years (1080 hours)

**Meeting Times:** Tuesday-Thursday 5:00 PM – 10:00 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** SMAW State Certification, GMAW State Certification, GTAW Stainless Steel State Pipe Certification, GTAW Aluminum Pipe State Certification, GTAW Inconel Pipe State Certification, National Center for Construction Education and Research (NCCER)

## **MA1980 WELDING-ADULT STUDENTS ONLY EVENING PROGRAM**

*The Welding concentration focuses on careers that will build a knowledge base and technical skills in all aspects of the Welding industry. Students will have the opportunity to earn both NCCER certification and the WV Welding Certification for each skill set mastered and be exposed to skills to develop positive work ethics.*

### **Required Courses**

#### **1862 Welding I**

This course is designed to introduce the student to the knowledge base and technical skills of the Welding industry. Welding I begins with the NCCER Core curriculum which is a prerequisite to all Level I completions. The students will complete modules in Basic Safety; Introduction to Construction Math; Introduction to Hand Tools; Introduction to Power Tools; Introduction to Construction Drawings; Basic Rigging; Basic Communication Skills; Basic Employability Skills; and Introduction to Materials Handling. Students will then begin developing skill sets in the fundamentals of Welding such as Welding Safety; Oxyfuel Cutting; and Plasma Arc Cutting.

#### **1863 Welding II**

Welding II will continue to build student skill sets in areas of Air Carbon Arc Cutting and Gouging; Base Metal Preparation; Weld Quality; SMAW-Equipment and Setup; Shielded Metal Arc Electrodes; SMAW-Beads and Fillet Welds; Joint Fit Up and Alignment; SMAW-Groove Welds with Backing; and SMAW-Open V-Groove Welds.

#### **1864 Welding III**

Welding III will continue to build student skill sets in areas of Welding Symbols; Reading Welding Detail Drawings; Physical Characteristics and Mechanical Properties of Metals; Preheating and Post-Heating of Metals; GMAW and FCAW-Equipment and Filler Metals; and GMAW and FCAW-Plate.

#### **1865 Welding IV**

Welding IV will continue to build student skill sets in areas of GTAW-Equipment and Filler Metals; and GTAW-Plate.

### **Elective Courses**

#### **1983 Blueprint Reading and Metallurgy**

Areas of study include drawing fundamentals, sketching and fabricating, basic welding symbols, and properties of metals and alloys.

#### **1987 Gas Metal Arc Welding**

Incorporated into this course are elements of introductory knowledge and skills necessary for a career in welding.

#### **1982 Ornamental Metalwork**

Areas of study include measurement, metal layout and bending, operation of the drill press, band saw, and the iron worker.



### **1989 Gas Tungsten Arc Welding**

Incorporated into this course are elements of introductory knowledge and skills necessary for a career in welding.

**Course Length:** Two years (1080 hours)

**Meeting Times:** Tuesday, Wednesday, and Thursday 5:00 PM – 10:00 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** SMAW State Certification, GMAW State Certification, GTAW Stainless Steel State Pipe Certification, GTAW Aluminum Pipe State Certification, GTAW Inconel Pipe State Certification