

# Program Catalog

## 2021 – 2022



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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**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 <https://www.wvact.net/resources-links>.

# *Academy of Careers & Technology*

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

August 2021

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 PROGRAMS

P r o g r a m	T u i t i o n	R e g i s t r a t i o n	A p p l i c a t i o n	T e c h n o l o g y	L a b	B o o k s	S u p p l i e s	G r o u n d B a c k C h e c k	T e s t	A d m i n D o c	D r u g T e s t	P a r k i n g	C T S O	I - D -	T o t a l
Cosmetology	7,560.00	51	100	0	1400	250	800	50	200	50	75	25	200	25	10,786.00
Electrical Technician	4,320.00	25	100	0	1300	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	2,160.00	25	100	0	670	365	0	50	340	50	75	25	40	0	3,900.00
Practical Nursing	5,400.00	25	100	0	1000	1650	0	100	410	50	0	25	175	25	8,960.00
Truck Driving	400.00	25	100	0	995	0	0	50	605	50	0	25	0	0	2,250.00
Welding	4,320.00	25	100	0	1730	0	0	50	0	50	75	25	40	0	6,415.00

## TR1620 AUTOMOTIVE TECHNOLOGY

*The Automotive Technology Program of Study 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 Program of Study. 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**

This course introduces the student to the knowledge base and technical skills as they relate to the field of Automotive Technology. In the Automotive Technology MLR-1 class 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.

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

Automotive Technology MLR-2 continues as 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 Antilock Brake Systems and Steering and Suspension-Diagnosis of Steering & Suspension Systems.

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

Automotive Technology MLR-3 build student 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.

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

Automotive Technology MLR-4 completes the Program of Study with 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.

### Specialization Courses

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

The Skill Sets in Automotive Technology AST-1 will introduce students to the skills sets related to Electrical-Electrical/Electronic System Basics; and Alternative Fuels-Hybrid Vehicles; NAFTC Program or Additional electrical Tasks from NATEF MAST Program.

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

The Skill Sets in Automotive Technology AST-2 will concentrate on the skills sets related to Steering and Suspension; and Brakes.

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

The Skill Sets in Automotive Technology AST-3 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**

The Skill Sets in Automotive Technology AST-4 will introduce 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: 7:25 AM - 10:15 AM; Second Year: 11:15 AM - 2:23 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** Automotive Service Excellence (ASE)/National Automotive Technicians Education Foundation (NATEF), OSHA 10 General Industry, WV Motor Vehicle State Inspector, NOCTI



## AR1800 BUILDING MAINTENANCE & OPERATIONS

*The Building Maintenance and Operations Program of Study focuses on careers that maintain a safe and productive environment, follow codes and regulations, identify unsafe conditions, and take corrective actions to reinstate a proper working and safe environment. 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

#### **1774 Building Maintenance and Operations I**

This course introduces the student to the knowledge base and technical skills of the Building Maintenance and Operations industry. Building Maintenance and Operations 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 Building Maintenance and Operations such as Site Layout One: Distance Measurement and Leveling; and Introduction to Concrete, Reinforcing Materials and Forms.

#### **1775 Building Maintenance and Operations II**

Building Maintenance and Operations II will continue to build student skill sets in areas such as Handling and Placing Concrete; Introduction to Masonry; and Masonry Units and Installation Techniques.

#### **1776 Building Maintenance and Operations III**

Building Maintenance and Operations III will continue to build student skill sets in areas of Floor Systems; Wall and Ceiling Framing; Roof Framing; and Roofing Applications.

#### **1777 Building Maintenance and Operations IV**

Building Maintenance and Operations IV will continue to build student skill sets in areas of Exterior Finishing; Basic Stair Layout; Electrical Safety; and Residential Electrical Services.

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

**Meeting Times:** 7:25 AM - 10:15 AM or 11:15 AM - 2:23 PM

**Articulation Agreements:** Edge Credit

**Certifications:** NCCER (National Center for Construction Education and Research)  
OSHA 10 Construction Industry, NOCTI, Custodial Certification, Fire Extinguisher Training

## **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: 7:25 AM - 10:15 AM; Second Year: 11:15 AM - 2:23 PM

**Articulation Agreements:** EDGE Credit

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

## IT1442 CODING, APP AND GAME DESIGN

*The Coding, App and Game Design provides knowledge and skills necessary for a career in coding, game and app design, web page publishing, computer programming, and software development industries. Students receive training in both the graphic design and technical programming elements of the industry.*

### 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.

#### **1432 Digital Imaging/Multimedia II (prerequisite Digital Imaging/Multimedia I)**

This course is designed to develop student understanding and skills in such areas as imaging, drawing, animation, and video software which will be used to create advanced projects.

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

This course is designed to develop student knowledge and skills in programming and designing game and app ideas paper prototyping and other planning techniques. Using various design platforms, programming languages, drawing and animation techniques, students create an interactive demonstration of the games and apps.

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

This course is designed to develop student knowledge and skills in developing apps and games using more advanced coding and graphic design including both 2D and 3D elements.

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

**Meeting Times:** 11:15 A.M. - 2:23 P.M

**Articulation Agreements:** EDGE Credit

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

## 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: 7:25 AM - 10:15 AM; Second Year: 11:15 AM - 2:23 PM

**Articulation Agreements:** EDGE Credit

**Certifications:**

Automotive Service Excellence (ASE)/National Automotive Technicians Education Foundation (NATEF), OSHA 10 General Industry, WV Motor Vehicle State Inspector, NOCTI

## AR1720 COMPUTER AIDED DRAFTING AND DESIGN

*The Computer Aided Drafting and Design 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.

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

**Meeting Times:** 11:15 AM - 2:23 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** American Design and Drafting Association (ADDA), OSHA 10, NOCTI

## 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

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

This course covers PC hardware and peripherals, mobile device hardware, networking and troubleshooting hardware and network connectivity issues. Content Skill Sets are based on testing objectives for the CompTIA A+ 220-901 certification.

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

This course covers installing and configuring operating systems including Windows, iOS, Android, Apple OS X and Linux. It also addresses security, the fundamentals of cloud computing and operational procedures. Content Skill Sets are based on testing objectives for the CompTIA A+ 220-902 certification.

#### **1694 Networking+N10-006**

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.

### Specialization Course

#### **1696 Security+**

This course introduces the students to the knowledge base and technical skills related to working with network security. Areas of study include Network Security, Compliance and Operational Security, Threats and Vulnerabilities, Application, Data and Host Security, Access Control and Identity Management and Cryptography. Courses are aligned with CompTIA standards. Emphasis will be placed on personal and professional ethics and students will explore a variety of career opportunities.

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

**Meeting Times:** 7:25 AM - 10:15 AM

**Articulation Agreements:** EDGE Credit

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



## **HU9505 COSMETOLOGY (ACE)-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**

#### **9193A Barbering 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.

#### **9201A 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.

#### **9202A 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.

#### **9198A 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.

#### **9199A 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.

#### **9200A 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.

#### **9196A 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.

#### **9194A 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.

**9195A Aesthetics Science**

This course provides information on the aspects of aesthetics science such as: inflectional control; general anatomy and physiology; basics of chemistry; basics of electricity and basics of nutrition as delineated by the WV Board of Barbers and Cosmetologist.

**9197A General Aesthetics II**

This course gives students the knowledge and skills of the aging process of skin, skin analysis and skin care products as delineated by the WV Board of Barbers and Cosmetologists.

**9190A Nail Technology Science and Procedure**

This course provides knowledge and understanding of infection control specifically for nail technicians; general anatomy and physiology; skin structure and growth; nail structure and growth; nail diseases and disorders; basics of chemistry, nail product chemistry; and electricity as delineated by the WV Board of Barbers and Cosmetology.

**9191A Art of Nail Technology**

This course provides the knowledge and skills to perform basic manicures and pedicures; electric filing; wraps; tips; paraffin wax treatments; monomer liquid and polymer powder nail enhancements; UV gels; and creative design as delineated by the WV Board of Barbers and Cosmetologists.

**9192A Nail Technology Clinical Experience**

The student will practice hands on the skills acquired to perform basic manicures and pedicures; electric filing; wraps; tips; paraffin wax treatments; monomer liquid and polymer powder nail enhancements; UV gels; and creative design as delineated by the WV Board of Barbers and Cosmetologists.

**9203A 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.

**9204A 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>	1800 hours Program is designed to be completed in about one-and-a-half years (315 days @ 6 hours/day).
<b>Meeting Times:</b>	7:30 AM - 2:30 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.

### Specialization Courses

#### **0746 Dental Science**

This course provides an introduction to 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 Clinical Science**

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 Health 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: 7:25 AM - 10:15 AM; Second Year: 11:15 AM - 2:23 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** Certificate in Dental Assisting, CPR, Dean Vaughn Medical Terminology, NOCTI

## 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 Control**

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 Troubleshooting**

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: 7:25 AM - 10:15 AM; Second Year: 11:15 AM - 2:23 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** OSHA, Forklift License, Automotive Service Excellence (ASE), WV Motor Vehicle State Inspector, NOCTI

## **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.

#### **1765 Industrial and Commercial Wiring**

Areas of study include conduit and raceways and commercial load calculations and configurations.

#### **1769 Residential Wiring**

Area of study include wiring data, service entrance equipment, luminary and receptacle outlets, protective devices, appliance and special circuits and low-voltage systems.

#### **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 standards are met.

- Course Length:** Two years (1080 hours)
- Meeting Times:** First Year: 7:25 AM - 10:15 AM; Second Year: 11:15 AM - 2:23 PM
- Articulation Agreements:** EDGE Credit
- Certifications:** National Center for Construction Education and Research (NCCER),  
Journeyman/Electrician License, OSHA 10, Forklift and Scissor Lift Certifications,  
NOCTI Written and Performance
- 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 1 year-1080 hour program or 12 days absent in a two year-1080 hour program;
  - 3) Earn the OSHA 10 certification;
  - 4) Pass a minimum of TWO (2) documented drug screenings; and
  - 5) Score at or above the Workforce Entry-Level cut score on the industry-recognized written **AND** satisfactorily pass a performance audit.



## **AR9101 ELECTRICAL TECHNICIAN (ACE) -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**

#### **9001A 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.

#### **9002A 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.

#### **9003A 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.

#### **9004A 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**

#### **9005A Blueprint Reading for Electricians**

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

#### **9006A Industrial and Commercial Wiring**

Areas of study include conduit and raceways and commercial load calculations and configurations.

#### **9009A Residential Wiring**

Area of study include wiring data, service entrance equipment, luminary and receptacle outlets, protective devices, appliance and special circuits and low-voltage systems.

#### **9008A 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 standards are met.

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

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

**Articulation Agreements:** EDGE Credit

**Certifications:** National Center for Construction Education and Research (NCCER), Journeyman/Electrician License, OSHA 10, Scissor Lift Certifications, NOCTI Written and Performance

WVDE requirements to sit for the Electrical Journeyman License:

- 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 1 year-1080 hour program or 12 days absent in a two year-1080 hour program;
- 3) Earn the OSHA 10 certification;
- 4) Pass a minimum of TWO (2) documented drug screenings; and
- 5) Score at or above the Workforce Entry-Level cut score on the industry-recognized written **AND** satisfactorily pass a performance audit.

## LA2200 EMERGENCY AND FIREFIGHTING MANGEMENT SERVICES

*The emergency and fire management services pathway includes workers involved in public safety and rapid responses to fires and emergency situation, including providing medical services after or during traffic accidents, natural disasters and other medical emergencies.*

### Required Courses

#### **2203 Fire Fighting I**

This course is designed to provide knowledge and skills needed in the fire service field including the basic fundamentals of firefighting. Students will demonstrate: proper procedures used in responding to a structure fire; safety procedures, lifting and carrying of equipment; forcible entry; rescue; use of radio equipment; working in hazardous environments; fire attack; advancement of hose lines and ventilation; disabling utilities; set-up of supply lines and fire apparatus; and hazardous materials awareness.

#### **2205 Fire Fighting II**

This course is designed to provide knowledge and skills needed in the fire service field including: proper procedures for incident response involving automobile rescue, extrication, and fires; the role of emergency medical care in fire service; and basic emergency medical care.

#### **2250 Industrial Incident Command**

This course is designed to provide the foundations of a successful response to an industrial emergency. Topics include: components of incident command; span of control; giving and receiving of orders; setting up a command post; and communications.

#### **2251 Industrial Hazardous Material**

This course is designed to provide knowledge and skills related to the use of hazardous materials in an industrial setting. Topics include: OSHA General Industry Standards and other consensus and proprietary standards relating to the use of hazardous materials; flammable and combustible liquids; compressed gases; LP-gases; cryogenic liquids; processes such as spraying and dipping; and use of electrical equipment in hazardous locations.

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

**Meeting Times:** 7:25 AM - 10:15 AM or 11:15 AM - 2:23 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** Fire Fighter I - National Fire Protection Association Standard 1001  
Fire Fighter II - National Fire Protection Association Standard 1001  
National Incident Management System

## 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.

### Specialization Courses

#### **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:** 7:25 AM - 10:15 AM or 11:15 AM - 2:23 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** CPR/HAZMAT Awareness/Mass Casualty Incident Awareness and Operations Training/National Registry of Emergency Medical Technicians (NREMT) Certification, OSHA 10 Healthcare, Stop The Bleed, NOCTI

## 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 and Conditioning/Activities**

This course focuses on knowledge necessary for improved capability to perform specific tasks, mobilize the body efficiently, reduced risk during physical tasks, psychological preparation, reduce stress and associated health risk.

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

**Meeting Times:** First Year: 7:25 AM - 10:15 AM; Second Year: 11:15 AM - 2:23 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** Certified Criminal Justice Professional - courses plus work experience (WV credential with international reciprocity), CPR, HAZMAT Awareness, Mass Casualty Incident Awareness and Operations Training, Stop The Bleed, NOCTI

## 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 Foundation and Footings**

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

#### **1914 Bricklaying Applications**

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: 7:25 AM - 10:15 AM; Second Year: 11:15 AM - 2:23 PM

**Articulation Agreements:** EDGE Credit

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





## 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.

### Specialization Courses

#### **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**

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 Health 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: 7:25 AM - 10:15 AM; Second Year: 11:15 AM - 2:23 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** First Aid, CPR, OSHA 10 Healthcare, NOCTI, Nationally Registered Certified Medical Assistant (National Association for Health Professionals)

**HE9301 PHLEBOTOMY TECHNICIAN (ACE)-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**

**9065A 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:** Twelve Weeks Classroom/Two Weeks Clinical  
(226 hours-146 classroom, 80 clinical)  
Classes begin in August and late January or early February

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

**Articulation Agreements:** N/A

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

## **TR9804 POWER EQUIPMENT SYSTEMS (ACE)-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**

#### **9285A Fundamentals of Power Equipment I**

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

#### **9286A 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.

#### **9287A Power Equipment Service I**

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

#### **9288A 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.

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

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

**Articulation Agreements:** N/A

**Certifications:** Equipment and Engine Training Council (EETC): Technician Certification,  
OSHA 10

## HE9311 PRACTICAL NURSING (ACE)-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:** Daytime Program: One year (1350 hours)  
Evening Program: Approximately 15 months (1350 hours)

**Meeting Times:** Daytime Program: Monday – Friday 8:00 AM – 3:00 PM  
Clinical Hours: Basic Skills and Medical-Surgical Phases 7:30 AM – 3:00 PM  
Specialties 8:00 AM – 3:00 PM

Evening Program: Monday-Friday 5:00 PM - 9:00 PM  
Clinical Hours: 5:00 PM – 10:00 PM  
Clinicals for evening program are typically Wednesday, Thursday, and Friday. Clinical groups are on a rotating schedule. Clinical hours may vary according to clinical group. Each evening clinical group will be scheduled for approximately 10 Saturday clinicals over the course of the program. Saturday hours: 7:30 AM - 3:30 PM.

**Articulation Agreements:** N/A

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

## ST2460 PRE-ENGINEERING-PROJECT LEAD THE WAY

*The Pre-Engineering Program of Study focuses on a broad range of engineering careers and foundation knowledge including basic safety, plan reading, use of tools and equipment as well as how to employ positive work ethics in an engineering career.*

### Required Courses

#### **2461 Introduction to Engineering Design**

This course teaches problem-solving skills using a design development process. Models of product solutions are created, analyzed, and communicated using solid modeling computer design software. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.

#### **2463 Principles of Engineering**

This course will help students understand the field of engineering and engineering technology. Exploring various technology systems and manufacturing processes help students learn how engineers and technicians use math, science, and technology in an engineering problem solving process to benefit people. The course also includes concerns about social and political consequences of technological change. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. \*This course will fulfill the requirement for a third science course graduation requirement.

#### **2464 Engineering Design and Development**

This is an engineering research course in which students work in teams to research, design, and construct a solution to an open-ended engineering problem. Students apply principles developed in the four preceding courses and are guided by a community mentor. They must present progress reports, submit a final written report, and defend their solutions to a panel of outside reviewers at the end of the school year. Safety instruction is integrated into all activities. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.

#### **2465 Computer Integrated Manufacturing**

Computer Integrated Manufacturing is a component of the Project Lead the Way (PLTW) pre- engineering curriculum. This course will introduce students to principles of robotics and automation and CAD design. The course builds on computer solid modeling skills developed in Computer Integrated Manufacturing, and Design and Drawing for Production. Students use CNC equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing and design analysis are included. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.

**Course Length:** Two semesters (540 hours)

**Meeting Times:** 7:25 AM - 10:15 AM

**Articulation Agreements:** EDGE Credit

**Certifications:** Inventor Certification, Revit Certification

## 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 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 career options and qualifications in hospitality services, integrate hospitality skills, food service etiquette, and processes used by many enterprises, including individual and group settings, and food environments into hospitality service.

#### **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 incorporated in the coursework.

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

Nutrition basics and the guidelines used for foodservice meal planning are covered. Dietary guidelines and special dietary needs will be used in modifying menu choices.

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

This course focuses on weights, measures, and general baking, classifications, handling and storage of ingredients, safety and handling, yeast raised dough products, cakes, cookies, batters, breads, muffins, pies, and special desert preparation.

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

**Meeting Times:** First Year: 7:25 AM - 10:15 AM; Second Year: 11:15 AM - 2:23 PM



**Articulation Agreements:** EDGE Credit

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

## 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 Specialties 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 Specialties 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.

### 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 Health 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: 7:25 AM - 10:15 AM; Second Year: 11:15 AM - 2:23 PM

**Articulation Agreements:** EDGE Credit

**Certifications:** Pharmacy Technician, Phlebotomy, ECG, NOCTI, CPR, First Aid, Stop The Bleed, OSHA 10

## TR9803 TRUCK DRIVING (ACE)-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.*

### **9260A Truck Driver Training I**

### **9283A Truck Driver Training II**

#### 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.

Week 6 Passenger and School Bus Endorsement

The final week covers the passenger and school bus endorsement.

**Course Length:** 5 to 6 weeks; 180 hours

**Meeting Times:** 7:00 AM to 2:30 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:** First Year: 7:25 AM - 10:15 AM; Second Year: 11:15 AM - 2:23 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), NOCTI, OSHA 10

**MA9704 WELDING (ACE)-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**

**9235A 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.

**9236A 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.

**9237A 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.

**9238A Welding IV**

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

**Elective Courses**

**9240A Blueprint Reading and Metallurgy**

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

**9241A Gas Metal Arc Welding**

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

**9239A Ornamental Welding**

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



## **9242A 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:** Monday-Friday 2:30 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