

West Virginia Career and Technical Education Endorsement and Testing Manual

A listing of all WVBE-required licensure exams and industry credentials required for educator certification and for completion of West Virginia Board of Education-approved Career and Technical Education programs leading to West Virginia licensure. This Manual is maintained on the WVDE website. When tests, scores, or industry credentials listed in the manual are changed, the validity period for the previously listed test, score, and/or industry credential shall be one year from the effective date of the new test, score, or industry credential. Exception: tests, scores, or industry credentials shall remain valid for twelve months after completion of an approved program for licensure where the applicant was continuously enrolled even if the test, score, or industry credential has changed.

REQUIRED TESTS, INDUSTRY CREDENTIALS AND WORK EXPERIENCE REQUIRED FOR ISSUANCE OF THE CAREER/TECHNICAL PERMIT AND CAREER/TECHNICAL CERTIFICATE^{1,2,3,4,5}

TABLE 1: REQUIRED BASIC SKILLS TESTS

| California Achievement Tests Required for Career/Technical Educators Required Score | | |
|---|-------------------------|------------------------------|
| | Career/Technical Permit | Career Technical Certificate |
| Reading | 771 | 777 |
| Writing | 757 | 765 |
| Mathematics | 775 | 783 |
| Content Specializations ³ | | |

TABLE 2: WAGE EARNING EXPERIENCE REQUIRED FOR CLUSTER AREA ENDORSEMENTS

AGRICULTURE, FOOD AND NATURAL RESOURCES

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| Wage earning experience required for the career and technical education alternatively certified teacher in Agriculture, Food and Natural Resources |
| Wage-Earning Experience – Complete four years (8,000 clock hours) of satisfactory and reasonably continuous work experience in the occupation for which licensure is requested; OR Bachelor’s Degree. – Hold a bachelor’s degree AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested; OR Associate Degree. – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested. Completion of a full year of training from an approved education program in the specialization may count toward a half year of the work experience requirements. Relevant teaching experience may count as equal to work experience requirements. |

| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENITLING ORGANIZATION/S |
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| 7215 ARCGIS | | |
| 7410 Forestry | | |
| 7430 Oil/Gas Extraction and Distribution | | |
| 7720 Agriculture Industry | | Complete Professional Development and/or WVDE approved course work related to Career and Technical Education. |
| 7726 Mining Extraction | Miner's Health Safety and Training | 40-Hour Surface Mining Card 80 Hour Underground Card |
| 7962 Pet Grooming | | Complete a minimum of 50 hours of professional development and/or WVDE approved course work related to Career and Technical Education |
| 7963 Taxidermy | | |
| 7964 Environmental Technology and Management | | |

ARCHITECTURE AND CONSTRUCTION CLUSTER

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| <p align="center">Wage earning experience required for the career and technical education alternatively certified teacher in Architecture and Construction Cluster</p> | | |
| <p>Wage-Earning Experience – Complete four years (8,000 clock hours) of satisfactory and reasonably continuous work experience in the occupation for which licensure is requested; OR Bachelor's Degree. – Hold a bachelor's degree AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested; OR Associate Degree. – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested.</p> <p>Completion of a full year of training from an approved education program in the specialization may count toward a half year of the work experience requirements. Relevant teaching experience may count as equal to work experience requirements.</p> | | |
| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENITLING ORGANIZATION/S |

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|---|---|---|
| 7083 Air Conditioning and Refrigeration | ICE Industry Competency Exam Entry Level Residential Heating & Cooling Technician | Industry Competency Exams (ICE) Certified Testing Center |
| | EPA Section 608 Technician Certification, Universal Certification | US Environmental Protection Agency (EPA) EPA Testing Center |
| 7105 Civil Technology | Certified Drafters – Architectural or Certified Drafters – Mechanical or Certified Drafters - Civil | American Design and Drafting Association (ADDA) |
| 7030 Electrical Technology | Master Electrician License | WV State Fire Marshal |
| 7021 Carpentry | | |
| 7027 Building Maintenance & Operations | | |
| 7028 General Building Construction (House Construction) | | |
| 7022 Masonry | | |
| 7073 Operation/Maintenance-Heavy Equipment | | |
| 7023 Plumber and Pipefitting | WV Master Plumber's License | West Virginia Division of Labor |

ARTS, A/V TECHNOLOGY AND COMMUNICATIONS

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| <p>Wage earning experience required for the career and technical education alternatively certified teacher in Arts, A/V Technology and Communications Cluster</p> |
| <p>Wage-Earning Experience – Complete four years (8,000 clock hours) of satisfactory and reasonably continuous work experience in the occupation for which licensure is requested; OR Bachelor’s Degree. – Hold a bachelor’s degree AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested; OR Associate Degree. – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested.</p> <p>Completion of a full year of training from an approved education program in the specialization may count toward a half year of the work experience requirements. Relevant teaching experience may count as equal to work experience requirements.</p> |

| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENITLING ORGANIZATION/S |
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| 7175 Broadcasting Technology | | |
| 7012 Commercial Art | | |

| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENTIALIZING ORGANIZATION/S |
|--|---|---|
| 7026 Painting-Decorating | | |
| 7132 Communication Technology | | |
| 7014 Graphic Arts | | |
| 7015 Offset Printing | | |

BUSINESS MANAGEMENT AND ADMINISTRATION

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| <p>Wage earning experience required for the career and technical education alternatively certified teacher in Business Management and Administration Cluster</p> |
| <p>Wage-Earning Experience – Complete four years (8,000 clock hours) of satisfactory and reasonably continuous work experience in the occupation for which licensure is requested; OR Bachelor’s Degree. – Hold a bachelor’s degree AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested; OR Associate Degree. – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested.</p> <p>Completion of a full year of training from an approved education program in the specialization may count toward a half year of the work experience requirements. Relevant teaching experience may count as equal to work experience requirements.</p> |

| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENTIALIZING ORGANIZATION/S |
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| 7721 Business Management & Administration Industry | | |

FINANCE

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| <p>Wage earning experience required for the career and technical education alternatively certified teacher in Finance Cluster</p> |
| <p>Wage-Earning Experience – Complete four years (8,000 clock hours) of satisfactory and reasonably continuous work experience in the occupation for which licensure is requested; OR Bachelor’s Degree. – Hold a bachelor’s degree AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested; OR Associate Degree. – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested.</p> <p>Completion of a full year of training from an approved education program in the specialization may count toward a half year of the work experience requirements. Relevant teaching experience may count as equal to work experience requirements.</p> |

| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENITLING ORGANIZATION/S |
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| 7722 Finance Industry | | |

HEALTH SCIENCE EDUCATION

Wage earning experience required for the career and technical education alternatively certified teacher in Health Science Education is specified in relevant sections below

| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENITLING ORGANIZATION/S |
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| <p>Wage-Earning Experience – Complete four years (8,000 clock hours) of satisfactory and reasonably continuous work experience in the occupation for which licensure is requested; OR</p> <p>Bachelor’s Degree. – Hold a bachelor’s degree AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested; OR</p> <p>Associate Degree. – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested.</p> <p>Completion of a full year of training from an approved education program in the specialization may count toward a half year of the work experience requirements. Relevant teaching experience may count as equal to work experience requirements.</p> | | |
| 7457 AC Health Informatics I | | Complete Professional Development and/or WVDE approved course work related to Career and Technical Education. |
| 7458 AC Health Informatics II | | |
| 7459 AC Health Informatics III | | |
| 7460 AC Health Informatics IV | | |
| <p>Wage-Earning Experience – Bachelor’s Degree. – Hold a bachelor’s degree in an area related to the specialization AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested; OR</p> <p>Associate Degree. – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested.</p> | | |
| 7048 Health Assistant | Valid West Virginia License as Registered Nurse (RN). | West Virginia Board of Examiners for Registered Professional Nurses |
| 7403 Veterinary Technician | Educated from an American Veterinary Medical Association accredited Veterinary Technology program and currently a Licensed Veterinary Technician or Registered Veterinary Technician or Certified Veterinary technician or hold credential by passing | West Virginia State Veterinary Board and American Association of Veterinarian State Boards. |

| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENITLING ORGANIZATION/S |
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| | the Veterinary Technician National Exam prior to change of 1/1/2010. | |
| <p>Wage-Earning Experience – Bachelor’s Degree. – Hold a bachelor’s degree in an area related to the specialization AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested which includes 1 year (2000 hours) of long term care experience within those two years; OR</p> <p>Associate Degree. – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested which includes 1 year (2000 hours) of long term care experience within those two years.</p> | | |
| 7042 Nursing Aide | Valid West Virginia License as Registered Nurse (RN) | West Virginia Board of Examiners for Registered Professional Nurses |
| <p>Wage Earning Experience – Complete 3 years (6000 clock hours) employment as a registered professional nurse 3 years immediately preceding employment as a faculty member; have or be enrolled in a baccalaureate degree program; have at least 3 years of experience as a registered professional nurse which should include 2 years of patient side nursing care experience in an acute, intermediate or long term care clinical facility; 1 year experience in one or more of the following areas: teaching, supervision or administration; and present evidence of continuing education.</p> | | |
| 7041 Practical Nursing (LPN) | Valid unencumbered West Virginia License as Registered Nurse (RN) | West Virginia Board of Examiners for registered Professional Nurses |
| <p>Wage-Earning Experience – Complete two years (4,000 clock hours) of wage earning experience in a dental office with practice, i.e., scheduling, billing and chair side assisting. The most recent experience must have been within the past three years and beyond the training period. Has completed a dental assistant program or is a graduate with a degree in dental hygiene from an approved dental hygiene program of a college, school or dental department of a university. Holds a valid certification from the Dental Assistant National Board, or a Registered Dental Assistant from the American Medical Technician Organization or has passed the national board dental hygiene examination and the WV Dental Board examination.</p> | | |
| 7043 Dental Assistant | Certified Dental Assistant or a Licensed Dental Hygienist | Holds a valid certification from the Dental Assistant National Board, or a Registered Dental Assistant from the American Medical Technician Organization or has passed the national board dental hygiene examination and the WV Dental Board examination. |
| <p>Wage-Earning Experience – Complete two years (4,000 clock hours) of wage earning experience as a dental laboratory technician as qualified by education, training or experience who has completed a dental</p> | | |

| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENTIALIZING ORGANIZATION/S |
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| laboratory technology education program and who fabricates, repairs or alters a dental prosthesis in accordance with a dentist's work authorization. The most recent experience must have been within the past three years and beyond the training period. | | |
| 7171 Dental Lab Technician | Dental Lab Technician or Dentist | Hold a valid certificate from the National Board for Certification hereinafter NCB. A Doctor of Dental Surgery (DDS) or Doctor of Dental Medicine (DMD) and licensed in the state of WV to practice in the profession. |
| Wage-Earning Experience – Complete two years (4,000 clock hours) of wage earning experience in a healthcare facility working with filtering data, medical records and/or health informatics. The most recent experience must have been within the past three years and beyond the training period. Completion of three years (6000 clock hours) of on the job training in health informatics (coding, electronic health record implementation, data mining) in this specialization may count toward a two years of the work experience requirements. Relevant teaching experience may count as equal to work experience requirements. | | |
| 7724 Health Informatics | Medical Assistant or Valid West Virginia Licenses as Registered Nurse (RN) Or healthcare experience and hold a certification by the American Health Informatics Association Or Certified Coding Associate, Certified Coding Specialist or a Registered Health Information Technician. | Hold a valid certificate from the American Association of Medical Assistants (AAMA), National Association for Health Professionals (NAHP), National Center for Competency Testing (NCCT), National Healthcareer Association (NHA), American Medical Technologists (AMT) or a valid license as a registered nurse in West Virginia with a minimum of a nursing diploma/associate degree and/or hold a certification by the American Health Informatics Association. |
| Wage-Earning Experience – Complete two years (4,000 clock hours) of wage earning experience in a medical office or out-patient clinic with experience in all aspects of medical office practice, i.e. insurance, medical transcription, and clinical procedures such as treatments and examinations. The most recent experience must have been within the past three years and beyond the training period. | | |
| 7045 Medical Assistant | Medical Assistant or Valid West Virginia License as Registered Nurse (RN) | Hold a valid certificate from the American Association of Medical Assistants (AAMA), National Association for Health Professionals (NAHP), National Center for Competency Testing (NCCT), National Healthcareer Association (NHA), American |

| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENTIALIZING ORGANIZATION/S |
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| | | Medical Technologists (AMT) or a valid license as a registered nurse in West Virginia with a minimum of an associate degree. |
| Wage-Earning Experience – Complete two years (4,000 clock hours) of Paramedic experience, which may include emergency room or emergency medical care with a licensed EMS agency. | | |
| 7050 Medical Emergency Preparedness | Medical Emergency Preparedness | Hold a current West Virginia Paramedic Certification including a current Cardiopulmonary Resuscitation (CPR) Instructor Certification, current First Aid Instructor Certification and Current Emergency Medical Technician (EMT) Instructor Certification. |
| Wage-Earning Experience – Complete two years (4,000 clock hours) of wage earning experience as a certified/registered pharmacy technician which means as a registered supportive personnel who work under the direct supervision of a pharmacist or as a registered nurse. The most recent experience must have been within the past three years and beyond the training period. | | |
| 7608 Pharmacy Technician | Valid Certified Pharmacy Technician (CPHT) or a Registered Pharmacy Technician (RPT)) or a Registered Nurse | West Virginia Board of Pharmacy for Pharmacy Technician. West Virginia Board of Examiners for Registered Professional Nurses |
| Wage-Earning Experience – Complete two years (4,000 clock hours) of wage earning experience as a certified phlebotomy technician, as a registered supportive personnel who works under the direct supervision of a medical lab assistant or director or complete two years (4000) hours of wage earning experience in a clinical laboratory in a hospital, physician’s office or clinic in the performance of collection of routine laboratory samples. | | |
| 7603 Phlebotomist | Valid Certified Phlebotomy certification or a Medical Laboratory Technician or a Registered Nurse | American Society of Phlebotomy (ASPT) National Health Career Association or American Medical Technologist Association (AMTA) also known as American Medical Technologist (AMT) Or Medical Lab Assistant Certification (CMLA) or American Society of Clinical Pathology (ASCP) or International Society for Clinical Lab Technology (ISCLT) |

| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENITLING ORGANIZATION/S |
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| | | or West Virginia Board of Examiners for Registered Professional Nurses |
| Wage-Earning Experience – Complete two years (4000) hours of wage earning experience in a clinical laboratory in a hospital, physician’s office or clinic in the performance of routine laboratory procedures in bacteriology, blood-banking, hematology, urinalysis and serology. The most recent experience must have been within the past three years and beyond the training period. | | |
| 7172 Lab Tech-Medical | Medical Lab Technician | (AMT) or Medical Lab Assistant Certification (CMLA) or American Society of Clinical Pathology (ASCP) or International Society for Clinical Lab Technology (ISCLT) |
| 7614 Foundations of Health Science | Hold a Professional Teaching Certificate endorsed for biology, chemistry, general science or health | Complete WVDE sponsored professional development yearly |
| Wage-Earning Experience – Complete two years (4,000 clock hours) of wage earning experience in a hospital or out-patient clinic with experience in all aspects of respiratory therapy including clinical procedures such as treatments, examinations and documentation. The most recent experience must have been within the past three years and beyond the training period. | | |
| 7606 Respiratory Therapy | Certified Respiratory Therapist or Registered Respiratory Therapist | Licensed by the West Virginia Board of Respiratory Therapy |
| Wage-Earning Experience – Associate’s Degree. – Hold a related associate’s degree and complete two years (4,000 clock hours) of wage earning experience in a hospital or out-patient clinic with experience in all aspects of Surgical Technology including surgical procedures, surgical instrumentation, and operating room policy and surgical procedures. Must also be familiar with central supply certification requirements. The most recent employment experience must have been within the past three years and beyond the training period. | | |
| 7607 Surgical Technologist | Certified Surgical Technologist or Certified Technologist/Surgical Assistant | National Board of Surgical Technology and Surgical Assisting |
| Wage-Earning Experience – Complete four years (8,000 clock hours) of satisfactory and reasonably continuous work experience in the occupation for which licensure is requested; OR Bachelor’s Degree – Hold a bachelor’s degree AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested; OR Associate Degree – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested. | | |

| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENITING ORGANIZATION/S |
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| Completion of a full year of training from an approved education program in the specialization may count toward a half year of the work experience requirements. Relevant teaching experience may count as equal to work experience requirements. | | |
| 7625 Massage Therapy | National Certification of Therapeutic Massage and Body Work or Federation of State Massage Therapy Board | Hold a valid certificate from the West Virginia Massage Therapy Board and valid Cardiopulmonary Resuscitation (CPR) card. |
| Wage-Earning Experience -- Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in a medical/health care setting with experience in selected health care professions in which a valid certificate or license is held. The most recent must have been within the past 3 years and beyond the training period. OR Bachelor's Degree in Related Area – Hold a bachelor's degree in a related area. | | |
| 7615 Other Health Occupations | Hold a valid certificate or license from the appropriate state and/or national organization or agency, when applicable | |
| 7966 Biomedical Science | Project Lead the Way Certificate | Project Lead the Way College Affiliates |

HOSPITALITY AND TOURISM

| Wage earning experience required for the career and technical education alternatively certified teacher in Hospitality and Tourism | | |
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| Wage-Earning Experience – Complete four years (8,000 clock hours) of satisfactory and reasonably continuous work experience in the occupation for which licensure is requested; OR Bachelor's Degree. – Hold a bachelor's degree AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested; OR Associate Degree. – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested. Completion of a full year of training from an approved education program in the specialization may count toward a half year of the work experience requirements. Relevant teaching experience may count as equal to work experience requirements. | | |
| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENITING ORGANIZATION/S |
| 7095 Culinary Arts | ServSafe for Managers | National Restaurant Association |
| 7315 Lodging, Travel and Tourism | | |
| 7320 Event Planning and Design Production | | |
| 0227 Parks and Recreation Management | Cardiopulmonary Resuscitation Instructor Certification, and | American Red Cross, American Heart Association, American |

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| | First Aid | Safety & Health Institute, Emergency Care & Safety Institute, National Safety Council |
| 7967 Baking and Pastry | | |

HUMAN SERVICES

| <p>Wage earning experience required for the career and technical education alternatively certified teacher in Human Services</p> | | |
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| <p>Wage-Earning Experience – Complete four years (8,000 clock hours) of satisfactory and reasonably continuous work experience in the occupation for which licensure is requested; OR Bachelor’s Degree. – Hold a bachelor’s degree AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested; OR Associate Degree. – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested. Completion of a full year of training from an approved education program in the specialization may count toward a half year of the work experience requirements. Relevant teaching experience may count as equal to work experience requirements.</p> | | |
| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENTIALING ORGANIZATION/S |
| 7185 Social Services Occupation | Valid Cardiopulmonary Resuscitation (CPR) and First Aid Cards | American Red Cross, American Heart Association, American Safety & Health Institute, Emergency Care & Safety Institute, National Safety Council |
| 7065 Cosmetology | Cosmetologists | WV Board of Barbers & Cosmetologists |
| 7473 Barbering | Barber | WV Board of Barbers & Cosmetologists |
| 7317 Early Childhood Education | Valid Cardiopulmonary Resuscitation (CPR) and First Aid Cards | American Red Cross, American Heart Association, American Safety & Health Institute, Emergency Care & Safety Institute, National Safety Council |
| 7627 Direct Support Professional | Valid Cardiopulmonary Resuscitation (CPR) and First Aid Cards | American Red Cross, American Heart Association, American Safety & Health Institute, Emergency Care & Safety Institute, National Safety Council |

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| 7626 Personal Fitness and Wellness Training | Valid Cardiopulmonary Resuscitation (CPR) and First Aid Cards | American Red Cross, American Heart Association, American Safety & Health Institute, Emergency Care & Safety Institute, and National Safety Council |
| 7316 Personal Organizer | Valid Cardiopulmonary Resuscitation (CPR) and First Aid Cards | American Red Cross, American Heart Association, American Safety & Health Institute, Emergency Care & Safety Institute, and National Safety Council |
| 7714 Prevention Support Specialist | Valid Cardiopulmonary Resuscitation (CPR) and First Aid Cards | American Red Cross, American Heart Association, American Safety & Health Institute, Emergency Care & Safety Institute, National Safety Council |
| 7728 Nail Technology | Nail Technician | WV Board of Barbers and Cosmetologists |
| 7723 Hair Styling | Hair Stylist | WV Board of Barbers and Cosmetologists |
| Wage-Earning Experience – Hold a bachelor’s degree or higher AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested. Relevant teaching experience may count as equal to work experience requirements. | | |
| 7900 Adult (Basic) Education | Completion of WVDE required training for Adult Basic Education (both pre-service and in-service trainings) OR equivalent from another state | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |

INFORMATION TECHNOLOGY

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| Wage earning experience required for the career and technical education alternatively certified teacher in Information Technology |
| <p>Wage-Earning Experience – Complete four years (8,000 clock hours) of satisfactory and reasonably continuous work experience in the occupation for which licensure is requested; OR</p> <p>Bachelor’s Degree. – Hold a bachelor’s degree AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested; OR</p> <p>Associate Degree. – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested.</p> <p>Completion of a full year of training from an approved education program in the specialization may count toward a half year of the work experience requirements. Relevant teaching experience may count as equal to work experience requirements.</p> |

| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENITALING ORGANIZATION/S |
|--|---|--|
| 7212 Computer Technology - System | CompTIA+ 220-901 CompTIA Network+ 220-902 | Computing technology Industry Association (CompTIA) |
| 7970 Computer Technology – Application Software | Current MOS Certification Exams – Word, Excel, PowerPoint, Access | Microsoft Certifications via Certiport |
| 7121 Data Processing Programming | | |
| 7134 Electro-Mechanical Technology | | |
| 7449 AC Informatics I | | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7450 AC Informatics II | | |
| 7451 AC Informatics III | | |
| 7452 AC Informatics IV | | |
| 7954 Networking | CISCO Certified Network Associate (CCNA) | CISCO |
| 7968 Computer Science | Project Lead the Way Certificate | Project Lead the Way College Affiliates |
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LAW AND PUBLIC SAFETY, CORRECTIONS AND SECURITY

| <p>Wage earning experience required for the career and technical education alternatively certified teacher in Law and Public Safety, Corrections and Security</p> | | |
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| <p>Wage-Earning Experience – Complete four years (8,000 clock hours) of satisfactory and reasonably continuous work experience in the occupation for which licensure is requested; OR Bachelor’s Degree. – Hold a bachelor’s degree AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested; OR Associate Degree. – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested. Completion of a full year of training from an approved education program in the specialization may count toward a half year of the work experience requirements. Relevant teaching experience may count as equal to work experience requirements.</p> | | |
| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENTIALIZING ORGANIZATION/S |
| 7710 Criminal Justice | Valid Cardiopulmonary Resuscitation (CPR) and First Aid Cards | American Red Cross, American Heart Association, American Safety & Health Institute, Emergency Care & Safety Institute, National Safety Council |
| <p>License – Hold a current West Virginia EMT or Paramedic License and a current Cardiopulmonary Resuscitation, hereinafter CPR, Instructor Certification and documentation of completion of the field based experience in fire instruction and EMT instructor training; AND Experience – Complete four years (8,000 clock hours) of satisfactory recent work experience with a combination of in fire service and EMT experience, which may include emergency room or emergency medical care; AND Test – Test scores reflecting a minimum of 85% on the West Virginia EMT certification or re-certification examination and on the West Virginia State Fire Commission approved exam for the Fire Fighter 1 and Fire Fighter 2 or the National Fire Protection Association, hereinafter NFPA 1001 National Certification Exam.</p> | | |
| 7040 Emergency Services | WV EMT-Basic or Paramedic Certification Instructor Certification; First Aid Certification; Field Based Experience in EMT Training; Field Based Experience in fire service training; Firefighter 1 and Firefighter 2; Materials Operations Level Certification | WV State Fire Commission WV Department of Health & Human Services, Bureau of Public Health, Office of Emergency Medical Services American Red Cross, American Heart Association, American Safety & Health Institute, Emergency Care & Safety Institute, and National Safety Council |

| | | |
|-------------------------------------|---|---|
| 7060 Industrial Fire Management | Certified in First Aid; CPR-Instructor Certification; Field Based Experience in fire service training; Fire Fighter 1 and Firefighter 2; and Hazardous Materials Operations Level Certifications. | WV State Fire Commission American Red Cross, American Heart Association, American Safety & Health Institute, Emergency Care & Safety Institute, National Safety Council |
| 7050 Medical Emergency Preparedness | WV EMT-Basic or Paramedic Certification; CPR Instructor Certification First Aid Certification; Field Based Experience in EMT Training | WV Department of Health & Human Services, Bureau of Public Health, Office of Emergency Medical Services American Red Cross, American Heart Association, American Safety & Health Institute, Emergency Care & Safety Institute, National Safety Council |

MANUFACTURING

| | | |
|---|---|---|
| Wage earning experience required for the career and technical education alternatively certified teacher in Manufacturing | | |
| <p>Wage-Earning Experience – Complete four years (8,000 clock hours) of satisfactory and reasonably continuous work experience in the occupation for which licensure is requested; OR</p> <p>Bachelor’s Degree. – Hold a bachelor’s degree AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested; OR</p> <p>Associate Degree. – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested.</p> <p>Completion of a full year of training from an approved education program in the specialization may count toward a half year of the work experience requirements. Relevant teaching experience may count as equal to work experience requirements.</p> | | |
| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENTIALIZING ORGANIZATION/S |
| 7000 Automotive Machining | | |
| 7016 Industrial Control Systems | | |
| 7164 Computer Integrated Manufacturing | | |
| 7131 Electronics Technology | CETa | Electronics Technicians Association (ETA) |
| 7069 Hydraulics/Pneumatics | | |
| 7070 Industrial Equipment Maintenance | | |

| | | |
|------------------------------------|---|--|
| 7051 Machine Tool Technology | Machining Level 1 | National Institute for Metal Working Skills (NIMS) |
| 7469 AC Advanced Manufacturing I | | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7470 AC Advanced Manufacturing II | | |
| 7471 AC Advanced Manufacturing III | | |
| 7472 AC Advanced Manufacturing IV | | |
| 7181 Manufacturing Technology | | |
| 7092 Millwork and Cabinet | | |
| 7052 Welding | SMAW Plate and GMAW Plate in the 2G, 3G and 4G positions (SMAW and GMAW Pipe in the 6G position exceeds the minimum plate requirements) | American Welding Society (AWS) or WVDE Welding Certification |
| 7221 Robotics | | |
| 7953 Cabling Technology | C-Tech Certification | C-Tech |

MARKETING

| | | |
|---|---|---------------------------------------|
| Wage earning experience required for the career and technical education alternatively certified teacher in Marketing | | |
| <p>Wage-Earning Experience – Complete four years (8,000 clock hours) of satisfactory and reasonably continuous work experience in the occupation for which licensure is requested; OR</p> <p>Bachelor’s Degree. – Hold a bachelor’s degree AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested; OR</p> <p>Associate Degree. – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested.</p> <p>Completion of a full year of training from an approved education program in the specialization may count toward a half year of the work experience requirements. Relevant teaching experience may count as equal to work experience requirements.</p> | | |
| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENITALING ORGANIZATION/S |
| 7727 Marketing Industry | | |

SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS

| <p align="center">Wage earning experience required for the career and technical education alternatively certified teacher in Science, Technology, Engineering and Mathematics</p> | | |
|---|---|--|
| <p>Wage-Earning Experience – Complete four years (8,000 clock hours) of satisfactory and reasonably continuous work experience in the occupation for which licensure is requested; OR Bachelor’s Degree. – Hold a bachelor’s degree AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested; OR Associate Degree. – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested.</p> <p>Completion of a full year of training from an approved education program in the specialization may count toward a half year of the work experience requirements. Relevant teaching experience may count as equal to work experience requirements.</p> | | |
| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENTILING ORGANIZATION/S |
| 0608 Technology Education | | |
| 7441 AC Aerospace Engineering I | | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7442 AC Aerospace Engineering II | | |
| 7443 AC Aerospace Engineering III | | |
| 7444 AC Aerospace Engineering IV | | |
| 7461 AC Clean Energy I | | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7462 AC Clean Energy II | | |
| 7463 AC Clean Energy III | | |
| 7464 AC Clean Energy IV | | |
| 7465 AC Energy, Power, and Engineered Systems I | | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7466 AC Energy, Power, and Engineered Systems II | | |
| 7467 AC Energy, Power, and Engineered Systems III | | |
| 7468 AC Energy, Power, and Engineered Systems IV | | |
| 7445 AC Innovations in Science and Technology I | | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7446 AC Innovations in Science and Technology II | | |
| 7447 AC Innovations in Science and Technology III | | |

| | | |
|--|----------------------------------|---|
| 7448 AC Innovations in Science and Technology IV | | |
| 7550 Pre-Engineering | Project Lead the Way Certificate | Project Lead the Way College Affiliates |

TRANSPORTATION, DISTRIBUTION AND LOGISTICS

| Wage earning experience required for the career and technical education alternatively certified teacher in Transportation, Distribution and Logistics | | |
|---|---|--|
| <p>Wage-Earning Experience – Complete four years (8,000 clock hours) of satisfactory and reasonably continuous work experience in the occupation for which licensure is requested; OR</p> <p>Bachelor’s Degree. – Hold a bachelor’s degree AND complete two years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested; OR</p> <p>Associate Degree. – Hold an Associate Degree in an area related to the specialization AND complete two (2) years (4,000 clock hours) of satisfactory and reasonably continuous work experience in the area for which licensure is requested.</p> <p>Completion of a full year of training from an approved education program in the specialization may count toward a half year of the work experience requirements. Relevant teaching experience may count as equal to work experience requirements.</p> | | |
| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION | INDUSTRY CREDENTIALIZING ORGANIZATION/S |
| 7001 Automotive Technology | Engine Performance Brakes Electrical/Electronics Systems Suspension/Steering | National Institute for Automotive Service Excellence (ASE) |
| 7007 Diesel Equipment Technology | Diesel Engines Suspension/Steering Brakes Electrical/Electronics Systems Preventative Maintenance Inspection | National Institute for Automotive Service Excellence (ASE) |
| 7010 Collision Repair | Structural Non-Structural Painting/Refinishing Mechanical/Electrical | National Institute for Automotive Service Excellence (ASE) |
| 7453 AC Global Logistics and Supply Chain Management I | | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7454 AC Global Logistics and Supply Chain Management I | | |
| 7455 AC Global Logistics and Supply Chain Management I | | |
| 7456 AC Global Logistics and Supply Chain Management I | | |
| 7098 Materials Distribution | | |
| 7006 Power Equipment Technology | | |
| 7960 Commercial Driver’s License | Commercial Driver’s License (CDL) | West Virginia Department of Transportation, Division of Motor Vehicles |
| 7180 Transportation Technology | | |

¹Exemptions to the Basic Skills Tests are identified in §126-136-10.1.b.3.F.1

²The testing components and scores established for the renewal of a permit are also required for the issuance of a Career/Technical Certificate.

³If a NOCTI test or a national or state certificate or license is not available, content specialization test may be developed or obtained from other sources.

⁴The minimum score for passing the NOCTI test shall be one-half standard deviation below the mean plus the standard error of measurement.

⁵Three years of relevant teaching experience within the last seven years in one or combination of specializations recognized on a valid Out-of-State Career and Technical Education Certificate may be accepted in place of the wage earning experience requirements of Appendix C.

⁶If continuously employed on a First-Class/Full-Time Permit for Career and Technical Education (CTE), an individual who holds an endorsement no longer included in Appendix C., may use the criteria effective at the time of application for the initial First Class/Full Time permit when applying for permit renewal or initial CTE certification.

TABLE 3 Content Written and Performance Test and Industry Credentials

| Endorsement Name | NOCTI | Exam | 1 Year to Earn Industry Credential | Industry Credential Required Prior to Being Hired |
|---|-------|------|--|---|
| AGRICULTURE, FOOD AND NATURAL RESOURCES | | | | |
| 7720 Agriculture Industry | X | | | |
| 7410 Forestry | X | | X | |
| 7215 ARCGIS | | | | |
| 7726 Mining Extraction | | | X | |
| 7430 Oil/Gas Extraction and Distribution | | | X | |
| 7962 Pet Grooming | | | X | |
| 7963 Taxidermy | | | | |
| 7964 Environmental Technology and Management | | | | |
| ARCHITECTURE AND CONSTRUCTION CLUSTER | | | | |
| 7083 Air Conditioning and Refrigeration | | | X (Expired Credential and Substitute Permit) | X (Certificate and First Class Full Time Permit) |
| 7105 Civil Technology | | | X | |
| 7030 Electrical Technology | | | | X |
| 7021 Carpentry | X | | X | |
| 7027 Building Maintenance & Operations | X | | X | |
| 7028 General Building Construction (House Construction) | X | | X | |
| 7022 Masonry | X | | X | |
| 7073 Operation/Maintenance-Heavy Equipment | X | | X | |
| 7023 Plumber and Pipefitting | | | | X |
| ARTS, A/V TECHNOLOGY AND COMMUNICATIONS | | | | |
| 7175 Broadcasting Technology | X | | | |
| 7012 Commercial Art | X | | | |
| 7026 Painting-Decorating | | | | |
| 7132 Communication Technology | X | | | |
| 7014 Graphic Arts | X | | | |
| 7015 Offset Printing | X | | | |
| BUSINESS MANAGEMENT & ADMINISTRATION | | | | |
| 7721 Business Management & Administration Industry | X | | | |
| FINANCE | | | | |
| 7722 Finance | X | | | |
| HEALTH SCIENCE EDUCATION | | | | |
| 7457 AC Health Informatics I | | | X | |
| 7458 AC Health Informatics II | | | X | |
| 7459 AC Health Informatics III | | | X | |
| 7460 AC Health Informatics IV | | | X | |

| Endorsement Name | NOCTI Exam | 1 Year to Earn Industry Credential | Industry Credential Required Prior to Being Hired |
|---|-----------------|------------------------------------|---|
| 7048 Health Assistant | | | X |
| 7042 Nursing Aide | | | X |
| 7403 Veterinary Technician | | | X |
| 7041 Practical Nursing (LPN) | | | X |
| 7043 Dental Assistant | | | X |
| 7171 Dental Lab Technician | | | X |
| 7724 Health Informatics | | | X |
| 7045 Medical Assistant | | | X |
| 7050 Medical Emergency Preparedness | | | X |
| 7608 Pharmacy Technician | | | X |
| 7603 Phlebotomist | | | X |
| 7172 Lab Tech-Medical | | | X |
| 7614 Foundations of Health Science | | | X |
| 7606 Respiratory Therapy | | | X |
| 7607 Surgical Technologist | | | X |
| 7625 Massage Therapy | | | X |
| 7615 Health Occupations | | X | |
| 7966 Biomedical Science | | | |
| HOSPITALITY AND TOURISM | | | |
| 7095 Culinary Arts | X | X | |
| 7315 Lodging, Travel and Tourism | X | | |
| 7320 Event Planning and Design Production | | | |
| 0227 Parks and Recreation Management | | X | |
| 7967 Baking and Pastry | X | | |
| HUMAN SERVICES | | | |
| 7185 Social Services Occupation | | X | |
| 7065 Cosmetology | | | X |
| 7473 Barbering | | | X |
| 7317 Early Childhood Education | X | X | |
| 7900 Adult (Basic) Education | | | X |
| 7627 Direct Support Professional | | X | |
| 7626 Personal Fitness and Wellness Training | | X | |
| 7316 Personal Organizer | | X | |
| 7714 Prevention Support Specialist | | X | |
| 7728 Nail Technology | Nail Technician | | X |
| 7723 Hair Styling | Hair Stylist | | X |
| INFORMATION TECHNOLOGY | | | |
| 7212 Computer Technology – System | X | X | |
| 7970 Computer Technology – Application Software | X | X | |
| 7121 Data Processing Programming | | X | |
| 7134 Electro-Mechanical Technology | | X | |

| Endorsement Name | NOCTI Exam | 1 Year to Earn Industry Credential | Industry Credential Required Prior to Being Hired |
|---|------------|------------------------------------|---|
| 7449 AC Informatics I | | X | |
| 7450 AC Informatics II | | X | |
| 7451 AC Informatics III | | X | |
| 7452 AC Informatics IV | | X | |
| 7954 Networking | | | X |
| 7968 Computer Science | | | |
| LAW AND PUBLIC SAFETY, CORRECTIONS AND SECURITY | | | |
| 7710 Criminal Justice | X | X | |
| 7040 Emergency Services | | | X |
| 7060 Industrial Fire Management | | | X |
| 7050 Medical Emergency Preparedness | | | X |
| MANUFACTURING | | | |
| 7000 Automotive Machining | | X | |
| 7016 Industrial Control Systems | | X | |
| 7164 Computer Integrated Manufacturing | | X | |
| 7131 Electronics Technology | | X | |
| 7069 Hydraulics/Pneumatics | | X | |
| 7070 Industrial Equipment Maintenance | X | X | |
| 7051 Machine Tool Technology | | X | |
| 7469 AC Advanced Manufacturing I | | X | |
| 7470 AC Advanced Manufacturing II | | X | |
| 7471 AC Advanced Manufacturing III | | X | |
| 7472 AC Advanced Manufacturing IV | | X | |
| 7181 Manufacturing Technology | | | |
| 7092 Millwork and Cabinet | X | X | |
| 7052 Welding | | X (Substitute Permit) | X (First Class Full Time Permit and Certificate) |
| 7221 Robotics | | X | |
| 7953 Cabling Technology | | X | |
| MARKETING | | | |
| 7727 Marketing Industry | | | |
| SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS | | | |
| 0608 Technology Education | | X | |
| 7441 AC Aerospace Engineering I | | X | |
| 7442 AC Aerospace Engineering II | | X | |
| 7443 AC Aerospace Engineering III | | X | |
| 7444 AC Aerospace Engineering IV | | X | |
| 7461 AC Clean Energy I | | X | |
| 7462 AC Clean Energy II | | X | |
| 7463 AC Clean Energy III | | X | |
| 7464 AC Clean Energy IV | | X | |

| Endorsement Name | NOCTI | Exam | 1 Year to Earn Industry Credential | Industry Credential Required Prior to Being Hired |
|--|-------|------|--|--|
| 7465 AC Energy, Power, and Engineered Systems I | | | X | |
| 7466 AC Energy, Power, and Engineered Systems II | | | X | |
| 7467 AC Energy, Power, and Engineered Systems III | | | X | |
| 7468 AC Energy, Power, and Engineered Systems IV | | | X | |
| 7445 AC Innovations in Science and Technology I | | | X | |
| 7446 AC Innovations in Science and Technology II | | | X | |
| 7447 AC Innovations in Science and Technology III | | | X | |
| 7448 AC Innovations in Science and Technology IV | | | X | |
| 7550 Pre-Engineering | | | X | |
| TRANSPORTATION, DISTRIBUTION AND LOGISTICS | | | | |
| 7001 Automotive Technology | | | Expired Credential | X |
| 7007 Diesel Equipment Technology | | | Expired Credential | X |
| 7010 Collision Repair | | | Expired Credential | X |
| 7453 AC Global Logistics and Supply Chain Management I | | | X | |
| 7454 AC Global Logistics and Supply Chain Management I | | | X | |
| 7455 AC Global Logistics and Supply Chain Management I | | | X | |
| 7456 AC Global Logistics and Supply Chain Management I | | | X | |
| 7098 Materials Distribution | X | | X | |
| 7006 Power Equipment Technology | X | | X | |
| 7960 Commercial Driver's License | | | | X |
| 7180 Transportation Technology | | | X | |

TABLE 3.1 Content Written and Performance Test and Industry Credentials
 Section 1
 NOCTI exam requirements

AGRICULTURE, FOOD AND NATURAL RESOURCES

| |
|--|
| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS |
| 7720 Agriculture Industry, NOCTI #3063 |
| 7410 Forestry, NOCTI # 3037 Forest Products and Processing |

ARCHITECTURE AND CONSTRUCTION

| |
|--|
| 7021 Carpentry, NOCTI #5165 -- Carpentry |
| 7027 Building Maintenance & Operations, NOCTI #5164 – Building Trades Maintenance |
| 7028 General Building Construction (House Construction), NOCTI #5163 – Building Construction Occupations |
| 7022 Masonry, NOCTI #4125 -- Construction Masonry-Brick |
| 7073 Operation/Maintenance-Heavy Equipment, NOCTI #3046 -- Heavy Equipment Maintenance and Repair |

ARTS, A/V TECHNOLOGY AND COMMUNICATIONS

| |
|--|
| 7175 Broadcasting Technology, NOCTI #3005 -- Audio-Visual Communications |
| 7012 Commercial Art, NOCTI #5161—Advertising and Design |
| 7132 Communication Technology, NOCTI # 3005 -- Audio-Visual Communications |
| 7014 Graphic Arts, NOCTI #4242 -- Graphic Production Technology |
| 7015 Offset Printing, NOCTI #4242 -- Graphic Production Technology |

BUSINESS MANAGEMENT AND ADMINISTRATION

| |
|--|
| 7721 Business Management & Administration Industry, NOCTI #5260 – Administrative Assisting |
|--|

FINANCE

| |
|--|
| 7722 Finance, NOCTI #5180 - Accounting |
|--|

HOSPITALITY AND TOURISM

| |
|---|
| 7095 Culinary Arts, NOCTI #5167 – Commercial Foods |
| 7315 Lodging, Travel and Tourism, NOCTI #1288 -- Travel and Tourism |
| 7967 Baking and Pastry, NOCTI #4010 – Retail Commercial Baking |

HUMAN SERVICES

| |
|--|
| 7317 Early Childhood Education, NOCTI #4017 -- Early Childhood Education and Care-Advanced **Individuals who hold a valid West Virginia Professional Teaching Certificate with an endorsement in 3600 (Elementary Education), 3601 (Early Childhood), 3602 (Primary), 3603 (Early Education), or 3606 (Pre-School Education) are exempt from the NOCTI Exam #4017 (Early Childhood Education and Care-Advanced) |
|--|

INFORMATION TECHNOLOGY

| |
|---|
| 7212 Computer Technology – System, NOCTI #5182 – Computer Repair Technology |
| 7970 Computer Technology – Application Software, NOCTI #5260 – Administrative Assisting |

LAW AND PUBLIC SAFETY, CORRECTIONS AND SECURITY

| |
|---|
| 7710 Criminal Justice, NOCTI #5169 – Criminal Justice |
|---|

MANUFACTURING

| |
|---|
| 7070 Industrial Equipment Maintenance, NOCTI #5174 – Industrial Maintenance Mechanics |
|---|

| |
|---|
| 7092 Millwork and Cabinet, NOCTI #3014 Cabinet Making |
|---|

TRANSPORTATION

| |
|--|
| 7098 Materials Distribution, NOCTI #2071 – Logistics Technology-Distribution Center Services |
|--|

| |
|--|
| 7006 Power Equipment Technology, NOCTI #4068 – Small Engine Technology |
|--|

TABLE 3.2 Content Written and Performance Test and Industry Credentials

Section 2

Industry credentials that meet the NOCTI exam requirements
and have 1 year to earn industry credential

AGRICULTURE, FOOD AND NATURAL RESOURCES

| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION |
|---|--|
| 7720 Agriculture Industry | Complete WVDE-approved program |
| 7215 ARCGIS | None |
| 7430 Oil/Gas Extraction and Distribution | None |
| 7726 Mining Extraction | 40 hr Surface Mining and 80 hr underground Mining Certificates |
| 7962 Pet Grooming | Complete WVDE-approved program |
| 7963 Taxidermy | None |
| 7964 Environmental Technology and Management | None |

ARCHITECTURE AND CONSTRUCTION

| | |
|---|--|
| With Expired Credential 7083 Air Conditioning and Refrigeration | AHRI Industry Competency Exam Entry Level Residential Heating & Cooling Technician |
| | Recovery & Recycling Certification Air-Conditioning Refrigeration Institute (ARI) |
| 7105 Civil Technology | Certified Drafters – Architectural or Certified Drafters Mechanical Or Certified Drafters - Civil |

ARTS, A/V TECHNOLOGY AND COMMUNICATIONS

| | |
|---|--------------------------------|
| 7445 AC Innovations in Science and Technology I | Complete WVDE-approved program |
| 7446 AC Innovations in Science and Technology II | Complete WVDE-approved program |
| 7447 AC Innovations in Science and Technology III | Complete WVDE-approved program |
| 7448 AC Innovations in Science and Technology IV | Complete WVDE-approved program |
| 7026 Painting-Decorating | None |

BUSINESS MANAGEMENT & ADMINISTRATION

| | |
|--|------|
| 7721 Business Management & Administration Industry | None |
|--|------|

FINANCE

| | |
|-----------------------|------|
| 7722 Finance Industry | None |
|-----------------------|------|

HEALTH SCIENCE EDUCATION

| | |
|--------------------------------|----------------------------------|
| 7457 AC Health Informatics I | Complete WVDE-approved program |
| 7458 AC Health Informatics II | Complete WVDE-approved program |
| 7459 AC Health Informatics III | Complete WVDE-approved program |
| 7460 AC Health Informatics IV | Complete WVDE-approved program |
| 7615 Health Occupations | Complete WVDE-approved program |
| 7966 Biomedical Science | Project Lead the Way Certificate |

HOSPITALITY AND TOURISM

| | |
|---|---|
| 0227 Parks and Recreation Management | Cardiopulmonary Resuscitation Instructor Certification, and First Aid |
| 7320 Event Planning and Design Production | None |
| 7967 Baking and Pastry | None |

HUMAN SERVICES

| | |
|---|---|
| 7185 Social Services Occupation | Valid Cardiopulmonary Resuscitation (CPR) and First Aid Cards |
| 7315 Lodging, Travel and Tourism | None |
| 7627 Direct Support Professional | Valid Cardiopulmonary Resuscitation (CPR) and First Aid Cards |
| 7626 Personal Fitness and Wellness Training | Valid Cardiopulmonary Resuscitation (CPR) and First Aid Cards |
| 7316 Personal Organizer | None |
| 7714 Prevention Support Specialist | Valid Cardiopulmonary Resuscitation (CPR) and First Aid Cards |
| 7900 Adult (Basic) Education | Completion of WVBE required training for Adult Basic Education (both pre-service and in-service trainings) OR equivalent from another state |

INFORMATION TECHNOLOGY

| | |
|--|--|
| 7212 Computer Technology - System | Comp Tia A+ 220-901, Comp Tia A+ 220-902 |
| 7970 Computer Technology- Application Software | None |
| 7121 Data Processing Programming | None |
| 7134 Electro-Mechanical Technology | None |
| 7449 AC Informatics I | Complete WVDE-approved program |
| 7450 AC Informatics II | Complete WVDE-approved program |
| 7451 AC Informatics III | Complete WVDE-approved program |
| 7452 AC Informatics IV | Complete WVDE-approved program |

| | |
|-----------------------|----------------------------------|
| 7968 Computer Science | Project Lead the Way Certificate |
|-----------------------|----------------------------------|

LAW AND PUBLIC SAFETY, CORRECTIONS AND SECURITY

| | |
|-----------------------|---|
| 7710 Criminal Justice | Must submit the following to the WVDE Program Area Coordinator to become exempt from the required NOCTI- WV State Police Academy Training Certificate of completion AND a notarized V10 indicating 5 or more years of Law Enforcement experience |
|-----------------------|---|

MANUFACTURING

| | |
|--|--------------------------------|
| 7725 Manufacturing Industry | None |
| 7000 Automotive Machining | None |
| 7016 Industrial Control Systems | None |
| 7164 Computer Integrated Manufacturing | None |
| 7131 Electronics Technology | CETa |
| 7069 Hydraulics/Pneumatics | None |
| 7051 Machine Tool Technology | Machining Level 1 |
| 7469 AC Advanced Manufacturing I | Complete WVDE-approved program |
| 7470 AC Advanced Manufacturing II | Complete WVDE-approved program |
| 7471 AC Advanced Manufacturing III | Complete WVDE-approved program |
| 7472 AC Advanced Manufacturing IV | Complete WVDE-approved program |
| 7221 Robotics | None |
| 7953 Cabling Technology | C-Tech Certification |

SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS

| | |
|---|----------------------------------|
| 7461 AC Clean Energy I | Complete WVDE-approved program |
| 7462 AC Clean Energy II | Complete WVDE-approved program |
| 7463 AC Clean Energy III | Complete WVDE-approved program |
| 7464 AC Clean Energy IV | Complete WVDE-approved program |
| 7465 AC Energy, Power, and Engineered Systems I | Complete WVDE-approved program |
| 7466 AC Energy, Power, and Engineered Systems II | Complete WVDE-approved program |
| 7467 AC Energy, Power, and Engineered Systems III | Complete WVDE-approved program |
| 7468 AC Energy, Power, and Engineered Systems IV | Complete WVDE-approved program |
| 0608 Technology Education | None |
| 7550 Pre-Engineering | Project Lead the Way Certificate |

TRANSPORTATION, DISTRIBUTION AND LOGISTICS

| | |
|--|---|
| With Expired Credential 7001 Automotive Technology | Engine Performance, Brakes, Electrical/Electronics Systems Suspension/Steering |
| With Expired Credential 7007 Diesel Equipment Technology | Diesel Engines, Suspension/Steering, Brakes, Electrical/Electronics, Systems, Preventative Maintenance, Inspection |
| Expired Credential 7010 Collision Repair | Structural Analysis & Damage Repair, Non-Structural Analysis & Damage Repair, Painting/Refinishing, Mechanical/Electrical |
| 7006 Power Equipment Technology | None |
| 7453 AC Global Logistics and Supply Chain Management I | Complete WVDE-approved program |
| 7454 AC Global Logistics and Supply Chain Management II | Complete WVDE-approved program |
| 7455 AC Global Logistics and Supply Chain Management III | Complete WVDE-approved program |
| 7456 AC Global Logistics and Supply Chain Management IV | Complete WVDE-approved program |
| 7098 Materials Distribution | None |
| 7180 Transportation Technology | None |

TABLE 3.3 Content Written and Performance Test and Industry Credentials

Section 3 Mandatory credentials prior to being hired that meet NOCTI exam requirements

ARCHITECTURE AND CONSTRUCTION

| WVBE ENDORSEMENTS AND ENDORSEMENT CODES AWARDED FOR CTE CONCENTRATIONS | REQUIRED INDUSTRY CREDENTIALS FOR CTE CERTIFICATION |
|---|--|
| 7083 Air Conditioning and Refrigeration | AHRI Industry Competency Exam, Entry Level Residential Heating & Cooling Technician Recovery & Recycling Certification , Air-Conditioning Refrigeration Institute (ARI) |
| 7030 Electrical Technology | Master Electrician License |
| 7023 Plumber and Pipefitting | WV Master Plumber's License |

HEALTH SCIENCE EDUCATION

| | |
|-------------------------------------|---|
| 7403 Veterinary Technician | Licensed Veterinarian, or Veterinary Technician |
| 7048 Health Assistant | Valid West Virginia License as Registered Nurse (RN) |
| 7042 Nursing Aide | Valid West Virginia License as Registered Nurse (RN) AND one year (2000 hours) long term care experience. |
| 7041 Practical Nursing (LPN) | Valid West Virginia License as Registered Nurse (RN) |
| 7043 Dental Assistant | Certified Dental Assistant |
| 7171 Dental Lab Technician | Dental Lab Technician Or Dentist |
| 7724 Health Informatics | Medical Assistant or Valid West Virginia Licenses as Registered Nurse (RN) Or healthcare experience and hold a certification by the American Health Informatics Association Or Certified Coding Associate, Certified Coding Specialist or a Registered Health Information Technician. |
| 7045 Medical Assistant | Medical Assistant Or Valid West Virginia License as Registered Nurse (RN) |
| 7050 Medical Emergency Preparedness | First Aid Certification; Field Based Experience in EMT Training |
| 7608 Pharmacy Technician | Certified Pharmacy Technician (CPhT) or Registered Pharmacy Technician (RPT) or West Virginia License as Registered Nurse (RN) |
| 7603 Phlebotomist | Valid Certified Phlebotomy certification or West Virginia License as Registered Nurse (RN) |
| 7172 Lab Tech-Medical | Medical Lab Technician or Certified Medical Laboratory Assistant |
| 7614 Foundations of Health Science | Hold a Professional Teaching Certificate endorsed for biology, chemistry, general science or health |
| 7606 Respiratory Therapy | Certified Respiratory Therapist or Registered Respiratory Therapist |

| | |
|------------------------------------|--|
| 7607 Surgical Technologist | Certified Surgical Technologist or Certified Surgical Technologist/Surgical Assistant |
| 7625 Massage Therapy | National Certification of Therapeutic Massage and Body Work of Federation of State Massage Therapy Board |
| 7614 Foundations of Health Science | West Virginia Professional Teaching Certificate endorsed for biology, chemistry, general science or health |
| 7966 Biomedical Science | Project Lead the Way Certificate |

HUMAN SERVICES

| | |
|----------------------|-----------------|
| 7065 Cosmetology | Cosmetologists |
| 7473 Barbering | Barber |
| 7728 Nail Technology | Nail Technician |
| 7723 Hair Styling | Hair Stylist |

INFORMATION TECHNOLOGY

| | |
|-----------------|--|
| 7954 Networking | CISCO Certified Network Associate (CCNA) Certification |
|-----------------|--|

LAW AND PUBLIC SAFETY, CORRECTIONS AND SECURITY

| | |
|-------------------------------------|--|
| 7040 Emergency Services | WV EMT-Basic or Paramedic Certification; CPR Instructor Certification; First Aid Certification; Field Based Experience in EMT Training; Field Based Experience in fire service training; Firefighter 1 and Firefighter 2; Materials Operations Level Certification |
| 7060 Industrial Fire Management | Certified in First Aid, EMT, or Paramedic; CPR-Instructor Certification; Field Based Experience in fire service training; Fire Fighter 1 and Firefighter 2; and Hazardous Materials Operations Level Certifications. |
| 7050 Medical Emergency Preparedness | WV EMT-Basic or Paramedic Certification; CPR Instructor Certification; First Aid Certification; Field Based Experience in EMT Training |
| 7052 Welding | SMAW Plate and GMAW Plate in the 2G, 3G and 4G positions |

SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS

| | |
|----------------------|--|
| 7550 Pre-Engineering | Project Lead the Way Certificate AND Bachelor's Degree |
|----------------------|--|

TRANSPORTATION, DISTRIBUTION AND LOGISTICS

| | |
|----------------------------------|---|
| 7001 Automotive Technology | Engine Performance, Brakes, Electrical/Electronics Systems, Suspension/Steering |
| 7007 Diesel Equipment Technology | Diesel Engines, Suspension/Steering, Brakes, Electrical/Electronics Systems Preventative Maintenance, Inspection |

| | |
|----------------------------------|---|
| 7010 Collision Repair | Structural Analysis & Damage Repair, Non-Structural Analysis & Damage Repair, Painting/Refinishing, Mechanical/Electrical |
| 7960 Commercial Driver's License | CDL License |

TABLE 4: CTE Permanent Advanced Credentials

| WVBE ADVANCED CREDENTIAL AND CODE AWARDED FOR CTE CONCENTRATIONS | CERTIFICATE REQUIREMENTS | PROFESSIONAL DEVELOPMENT/ COURSE WORK |
|--|---|--|
| 7969 Coding, App, and Game Design | Hold a Career and Technical Education Certificate or a Professional Teaching Certificate endorsed for one, at a minimum, of the following: 0400 Business Principles 0419 Business Principles including Business Mathematics 0500 Secretarial Studies or Occupation Commerce 0519 Secretarial Studies including Business Mathematics 0560 Business Education Specialist 0561 Marketing Education Specialist 0600 Business Education 0603 Business Education/Marketing 0605 Business Education including Business Math 0608 Technology Education 1900 Mathematics 7212 Computer Technology – Systems 7970 Computer Technology – Application Software 7954 Networking | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 0560 Business Education | Hold a valid West Virginia Professional Certificate endorsed at a minimum for one of the following: 0710 Marketing Education or 0700 Distributive Education. | Successful completion of fifteen (15) clock hours of professional development approved by the WVDE, and successful completion of assignments related to Business Education programs offered by the WVDE. |
| 0561 Marketing Education | Hold a valid West Virginia Professional Certificate; | Successful completion of fifteen (15) clock hours of |

| WVBE ADVANCED CREDENTIAL AND CODE AWARDED FOR CTE CONCENTRATIONS | CERTIFICATE REQUIREMENTS | PROFESSIONAL DEVELOPMENT/ COURSE WORK |
|--|---|--|
| | <p>endorsed for one, at a minimum, of the following: 0400 Business Principles; 0419 Business Principles including Business Mathematics; 0500 Secretarial Studies or Occupation Commerce; 0519 Secretarial Studies including Business Mathematics; 0600 Business Education; 0605 Business Education including Business Math; or 0700 Distributive Education.</p> | <p>WVDE-approved professional development and successful completion of assignments related to Marketing Education programs offered by the WVDE.</p> |
| <p>7702 Coordinator of Career and Work Skills Training</p> | <p>Career and Technical Education Certificate or a Professional Teaching Certificate endorsed for a specialization in engineering technical, human services, agriculture, food and natural resources, health science education, marketing education or business education.</p> | <p>Complete a minimum of one year (2,000 clock hours) of related wage earning experience in a non-teaching position.</p> |
| <p>7707 Careers in Education</p> | <p>Valid Certificate. Hold a Career and Technical Education Certificate or a Professional Teaching Certificate.</p> | <p>Complete professional development and/or coursework related to Careers in Education training programs in Career and Technical Education as specified by the WVDE.</p> |
| <p>7703 ORACLE</p> | <p>Hold a Career and Technical Education Certificate or a Professional Teaching Certificate.</p> | <p>Complete professional development and/or WVDE-approved coursework related to Career and Technical Education.</p> |
| <p>7704 Certified Internet Webmaster</p> | <p>Hold a Career and Technical Education Certificate or a Professional Teaching Certificate.</p> | <p>Complete professional development and/or WVDE-approved coursework related to</p> |

| WVBE ADVANCED CREDENTIAL AND CODE AWARDED FOR CTE CONCENTRATIONS | CERTIFICATE REQUIREMENTS | PROFESSIONAL DEVELOPMENT/ COURSE WORK |
|--|--|--|
| | | Career and Technical Education. |
| 7705 Gateway | Hold a Career and Technical Education Certificate or a Professional Teaching Certificate. | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7441 AC Aerospace Engineering I | Hold a teaching certification in one of the following areas: 0608 Technology Education 1800 Industrial Arts 1801 General Shop 1802 Technical Education 2500 Physics 2910 Earth/Space Science 2710 Chemistry/Physics 7550 Pre-Engineering | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7442 AC Aerospace Engineering II | Hold a teaching certification in one of the following areas: 0608 Technology Education 1800 Industrial Arts 1801 General Shop 1802 Technical Education 2500 Physics 2910 Earth/Space Science 2710 Chemistry/Physics 7550 Pre-Engineering | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7443 AC Aerospace Engineering III | Hold a teaching certification in one of the following areas: 0608 Technology Education 1800 Industrial Arts 1801 General Shop 1802 Technical Education 2500 Physics 2910 Earth/Space Science 2710 Chemistry/Physics 7550 Pre-Engineering | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7444 AC Aerospace Engineering IV | Hold a teaching certification in one of the following areas: 0608 Technology Education 1800 Industrial Arts 1801 General Shop | Complete professional development and/or WVDE-approved coursework related to |

| WVBE ADVANCED CREDENTIAL AND CODE AWARDED FOR CTE CONCENTRATIONS | CERTIFICATE REQUIREMENTS | PROFESSIONAL DEVELOPMENT/ COURSE WORK |
|--|---|--|
| | 1802 Technical Education 2500 Physics 2910 Earth/Space Science 2710 Chemistry/Physics 7550 Pre-Engineering | Career and Technical Education. |
| 7445 AC Innovations in Science and Technology I | Hold a teaching certification in one of the following areas: 2500 Physics 2600 Biological Sciences 2700 Chemistry 2705 Chemistry through Chemistry I 2710 Chemistry/Physics 2800 Physical Science 2900 General Science 2910 Earth/Space Science 2915 General/Physical Science 1900 Mathematics 1905 Math Through Algebra I 0608 Technology Education 1800 Industrial Arts 1801 General Shop 1802 Technical Education | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7446 AC Innovations in Science and Technology II | Hold a teaching certification in one of the following areas: 2500 Physics 2600 Biological Sciences 2700 Chemistry 2705 Chemistry through Chemistry I 2710 Chemistry/Physics 2800 Physical Science 2900 General Science 2910 Earth/Space Science 2915 General/Physical Science 1900 Mathematics 1905 Math Through Algebra I 0608 Technology Education 1800 Industrial Arts 1801 General Shop 1802 Technical Education | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |

| WVBE ADVANCED CREDENTIAL AND CODE AWARDED FOR CTE CONCENTRATIONS | CERTIFICATE REQUIREMENTS | PROFESSIONAL DEVELOPMENT/ COURSE WORK |
|--|---|--|
| 7447 AC Innovations in Science and Technology III | Hold a teaching certification in one of the following areas: 2500 Physics 2600 Biological Sciences 2700 Chemistry 2705 Chemistry through Chemistry I 2710 Chemistry/Physics 2800 Physical Science 2900 General Science 2910 Earth/Space Science 2915 General/Physical Science 1900 Mathematics 1905 Math Through Algebra I 0608 Technology Education 1800 Industrial Arts 1801 General Shop 1802 Technical Education | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7448 AC Innovations in Science and Technology IV | Hold a teaching certification in one of the following areas: 2500 Physics 2600 Biological Sciences 2700 Chemistry 2705 Chemistry through Chemistry I 2710 Chemistry/Physics 2800 Physical Science 2900 General Science 2910 Earth/Space Science 2915 General/Physical Science 1900 Mathematics 1905 Math Through Algebra I 0608 Technology Education 1800 Industrial Arts 1801 General Shop 1802 Technical Education | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7449 AC Informatics I | Hold a teaching certification in one of the following areas: 0400 Business Principles 0419 Business Principles including Business Mathematics | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |

| WVBE ADVANCED CREDENTIAL AND CODE AWARDED FOR CTE CONCENTRATIONS | CERTIFICATE REQUIREMENTS | PROFESSIONAL DEVELOPMENT/ COURSE WORK |
|--|---|--|
| | 0500 Secretarial Studies or Occupation Commerce 0519 Secretarial Studies including Business Mathematics 0560 Business Education Specialist 0561 Marketing Education Specialist 0600 Business Education 0603 Business Education/Marketing 0608 Technology Education 7037 Industrial Electronics 7121 Data Processing Programming] 7212 Computer Technology | |
| 7450 AC Informatics II | Hold a teaching certification in one of the following areas: 0400 Business Principles 0419 Business Principles including Business Mathematics 0500 Secretarial Studies or Occupation Commerce 0519 Secretarial Studies including Business Mathematics 0560 Business Education Specialist 0561 Marketing Education Specialist 0600 Business Education 0603 Business Education/Marketing 0608 Technology Education 7037 Industrial Electronics 7121 Data Processing Programming] 7212 Computer Technology | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7451 AC Informatics III | Hold a teaching certification in one of the following areas: 0400 Business Principles | Complete professional development and/or WVDE-approved coursework related to |

| WVBE ADVANCED CREDENTIAL AND CODE AWARDED FOR CTE CONCENTRATIONS | CERTIFICATE REQUIREMENTS | PROFESSIONAL DEVELOPMENT/ COURSE WORK |
|--|---|--|
| | 0419 Business Principles including Business Mathematics 0500 Secretarial Studies or Occupation Commerce 0519 Secretarial Studies including Business Mathematics 0560 Business Education Specialist 0561 Marketing Education Specialist 0600 Business Education 0603 Business Education/Marketing 0608 Technology Education 7037 Industrial Electronics 7121 Data Processing Programming] 7212 Computer Technology | Career and Technical Education. |
| 7452 AC Informatics IV | Hold a teaching certification in one of the following areas: 0400 Business Principles 0419 Business Principles including Business Mathematics 0500 Secretarial Studies or Occupation Commerce 0519 Secretarial Studies including Business Mathematics 0560 Business Education Specialist 0561 Marketing Education Specialist 0600 Business Education 0603 Business Education/Marketing 0608 Technology Education 7037 Industrial Electronics 7121 Data Processing Programming] 7212 Computer Technology | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7453 AC Global Logistics and Supply Chain Management I | Hold a teaching certification in one of the following areas: | Complete professional development and/or |

| WVBE ADVANCED CREDENTIAL AND CODE AWARDED FOR CTE CONCENTRATIONS | CERTIFICATE REQUIREMENTS | PROFESSIONAL DEVELOPMENT/ COURSE WORK |
|--|--|--|
| | 7098 Materials Distribution 7180 Transportation Technology | WVDE-approved coursework related to Career and Technical Education. |
| 7454 AC Global Logistics and Supply Chain Management II | Hold a teaching certification in one of the following areas: 7098 Materials Distribution 7180 Transportation Technology | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7455 AC Global Logistics and Supply Chain Management III | Hold a teaching certification in one of the following areas: 7098 Materials Distribution 7180 Transportation Technology | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7456 AC Global Logistics and Supply Chain Management IV | Hold a teaching certification in one of the following areas: 7098 Materials Distribution 7180 Transportation Technology | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7457 AC Health Informatics I | Hold a teaching certification in one of the following areas: 0400 Business Principles 0419 Business Principles including Business Mathematics 0500 Secretarial Studies or Occupation Commerce 0519 Secretarial Studies including Business Mathematics 0560 Business Education Specialist 0561 Marketing Education Specialist 0600 Business Education 0603 Business Education/Marketing 7212 Computer Technology 7604 Medical Transcription 7610 Medical Records | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |

| WVBE ADVANCED CREDENTIAL AND CODE AWARDED FOR CTE CONCENTRATIONS | CERTIFICATE REQUIREMENTS | PROFESSIONAL DEVELOPMENT/ COURSE WORK |
|--|--|--|
| 7458 AC Health Informatics II | Hold a teaching certification in one of the following areas: 0400 Business Principles 0419 Business Principles including Business Mathematics 0500 Secretarial Studies or Occupation Commerce 0519 Secretarial Studies including Business Mathematics 0560 Business Education Specialist 0561 Marketing Education Specialist 0600 Business Education 0603 Business Education/Marketing 7212 Computer Technology 7604 Medical Transcription 7610 Medical Records | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7459 AC Health Informatics III | Hold a teaching certification in one of the following areas: 0400 Business Principles 0419 Business Principles including Business Mathematics 0500 Secretarial Studies or Occupation Commerce 0519 Secretarial Studies including Business Mathematics 0560 Business Education Specialist 0561 Marketing Education Specialist 0600 Business Education 0603 Business Education/Marketing 7212 Computer Technology 7604 Medical Transcription 7610 Medical Records | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7460 AC Health Informatics IV | Hold a teaching certification in one of the following areas: 0400 Business Principles | Complete professional development and/or WVDE-approved |

| WVBE ADVANCED CREDENTIAL AND CODE AWARDED FOR CTE CONCENTRATIONS | CERTIFICATE REQUIREMENTS | PROFESSIONAL DEVELOPMENT/ COURSE WORK |
|--|--|--|
| | 0419 Business Principles including Business Mathematics 0500 Secretarial Studies or Occupation Commerce 0519 Secretarial Studies including Business Mathematics 0560 Business Education Specialist 0561 Marketing Education Specialist 0600 Business Education 0603 Business Education/Marketing 7212 Computer Technology 7604 Medical Transcription 7610 Medical Records | coursework related to Career and Technical Education. |
| 7461 AC Clean Energy I | Hold a teaching certification in one of the following areas: 2500 Physics 2600 Biological Sciences 2700 Chemistry 2705 Chemistry through Chemistry I 2710 Chemistry/Physics 2800 Physical Science 2900 General Science 2910 Earth/Space Science 2915 General/Physical Science 1900 Mathematics 1905 Math Through Algebra I 0608 Technology Education 1800 Industrial Arts 1801 General Shop 1802 Technical Education 7030 Electrical Technology 7031 Industrial Electricity 7035 General Electrical Occupations 7083 Air Condition and Refrigeration 7131 Electronics Technology | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |

| WVBE ADVANCED CREDENTIAL AND CODE AWARDED FOR CTE CONCENTRATIONS | CERTIFICATE REQUIREMENTS | PROFESSIONAL DEVELOPMENT/ COURSE WORK |
|--|--|--|
| 7462 AC Clean Energy II | Hold a teaching certification in one of the following areas: 2500 Physics 2600 Biological Sciences 2700 Chemistry 2705 Chemistry through Chemistry I 2710 Chemistry/Physics 2800 Physical Science 2900 General Science 2910 Earth/Space Science 2915 General/Physical Science 1900 Mathematics 1905 Math Through Algebra I 0608 Technology Education 1800 Industrial Arts 1801 General Shop 1802 Technical Education 7030 Electrical Technology 7031 Industrial Electricity 7035 General Electrical Occupations 7083 Air Condition and Refrigeration 7131 Electronics Technology | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7463 AC Clean Energy III | Hold a teaching certification in one of the following areas: 2500 Physics 2600 Biological Sciences 2700 Chemistry 2705 Chemistry through Chemistry I 2710 Chemistry/Physics 2800 Physical Science 2900 General Science 2910 Earth/Space Science 2915 General/Physical Science 1900 Mathematics 1905 Math Through Algebra I 0608 Technology Education 1800 Industrial Arts 1801 General Shop 1802 Technical Education | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |

| WVBE ADVANCED CREDENTIAL AND CODE AWARDED FOR CTE CONCENTRATIONS | CERTIFICATE REQUIREMENTS | PROFESSIONAL DEVELOPMENT/ COURSE WORK |
|--|--|--|
| | 7030 Electrical Technology 7031 Industrial Electricity 7035 General Electrical Occupations 7083 Air Condition and Refrigeration 7131 Electronics Technology | |
| 7464 AC Clean Energy IV | Hold a teaching certification in one of the following areas: 2500 Physics 2600 Biological Sciences 2700 Chemistry 2705 Chemistry through Chemistry I 2710 Chemistry/Physics 2800 Physical Science 2900 General Science 2910 Earth/Space Science 2915 General/Physical Science 1900 Mathematics 1905 Math Through Algebra I 0608 Technology Education 1800 Industrial Arts 1801 General Shop 1802 Technical Education 7030 Electrical Technology 7031 Industrial Electricity 7035 General Electrical Occupations 7083 Air Condition and Refrigeration 7131 Electronics Technology | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7465 AC Energy, Power, and Engineered Systems I | Hold a teaching certification in one of the following areas: 2500 Physics 2710 Chemistry/Physics 1900 Mathematics 1905 Math Through Algebra I 0608 Technology Education 1800 Industrial Arts 1801 General Shop 1802 Technical Education 7030 Electrical Technology 7031 Industrial Electricity | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |

| WVBE ADVANCED CREDENTIAL AND CODE AWARDED FOR CTE CONCENTRATIONS | CERTIFICATE REQUIREMENTS | PROFESSIONAL DEVELOPMENT/ COURSE WORK |
|--|--|--|
| | 7035 General Electrical Occupations 7131 Electronics Technology | |
| 7466 AC Energy, Power, and Engineered Systems II | Hold a teaching certification in one of the following areas: 2500 Physics 2710 Chemistry/Physics 1900 Mathematics 1905 Math Through Algebra I 0608 Technology Education 1800 Industrial Arts 1801 General Shop 1802 Technical Education 7030 Electrical Technology 7031 Industrial Electricity 7035 General Electrical Occupations 7131 Electronics Technology | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7467 AC Energy, Power, and Engineered Systems III | Hold a teaching certification in one of the following areas: 2500 Physics 2710 Chemistry/Physics 1900 Mathematics 1905 Math Through Algebra I 0608 Technology Education 1800 Industrial Arts 1801 General Shop 1802 Technical Education 7030 Electrical Technology 7031 Industrial Electricity 7035 General Electrical Occupations 7131 Electronics Technology | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |
| 7468 AC Energy, Power, and Engineered Systems IV | Hold a teaching certification in one of the following areas: 2500 Physics 2710 Chemistry/Physics 1900 Mathematics 1905 Math Through Algebra I 0608 Technology Education 1800 Industrial Arts 1801 General Shop 1802 Technical Education 7030 Electrical Technology 7031 Industrial Electricity | Complete professional development and/or WVDE-approved coursework related to Career and Technical Education. |

| WVBE ADVANCED CREDENTIAL AND CODE AWARDED FOR CTE CONCENTRATIONS | CERTIFICATE REQUIREMENTS | PROFESSIONAL DEVELOPMENT/ COURSE WORK |
|--|--|---------------------------------------|
| | 7035 General Electrical Occupations 7131 Electronics Technology | |

TABLE 5: Adult Permit (Part Time)

Endorsed for Areas of Career and Technical Education:

| WVBE ADULT PART TIME PERMIT | PART TIME ADULT PROGRAM | CERTIFICATE REQUIREMENTS | INDUSTRY CREDENITALING ORGANIZATION/S |
|-----------------------------|--|--|---|
| 7041 Practical Nursing | Practical Nursing Part-Time Instructor | Wage earning experience. - four years with a high school diploma or equivalent, two years with a related bachelor’s degree or two years with a related associate’s degree. AND Valid West Virginia license as a registered nurse | West Virginia Board of Examiners for Registered Nurses |
| 7042 Nursing Aide | HE 0761 Certified Nursing Assistant | Wage earning experience. - two years with a related bachelor’s degree or two years with a related associate’s degree. The identified wage earning experience must include 1 year, (2,000 clock hours) of long term care experience within the identified wage earning experience. AND Valid West Virginia License as Registered Nurse (RN) | West Virginia Board of Examiners for Registered Professional Nurses |

| WVBE ADULT PART TIME PERMIT | PART TIME ADULT PROGRAM | CERTIFICATE REQUIREMENTS | INDUSTRY CREDENTIALING ORGANIZATION/S |
|----------------------------------|---|--|---|
| 7603 Phlebotomist | HE 0773 Phlebotomy Technician | Complete two years (4,000 clock hours) of wage earning experience as a certified phlebotomy technician, as a registered supportive personnel who works under the direct supervision of a medical lab assistant or director. AND Valid Certified Phlebotomy certification | American Society of Phlebotomy (ASPT) National Health Career Association or American Medical Technologist Association (AMTA) |
| 7611 EKG Technician | HE 0810 Electrocardiograph Technician | Complete two years (4,000 clock hours) of wage earning experience as a certified as a Electrocardiograph Technician, as a registered supportive personnel who works who works in a clinic, hospital, emergency services or other health care facility. | Hold a valid certificate or license from the appropriate state and/or national organization or agency, when applicable |
| 7960 Commercial Driver's License | TR 2170 Truck Driver Training | Wage earning experience. - four years with a high school diploma or equivalent, two years with a bachelor's or two years with an associate's degree. AND Commercial Driver's License (CDL) License | West Virginia Department of Transportation, Division of Motor Vehicles |
| 7440 Business Prep | BM1400 Business Prep Any Business Education course listed in the adult programs of study | Wage-Earning Experience. – Compete three years (6,000 clock hours) of successful wage-earning experience in the occupation for which licensure is requested | None |
| 7953 Cabling Technology | MA 2165 Cabling Technology | Wage earning experience. - four years with a high school diploma or equivalent, two years with a bachelor's or two years with an associate's | C-Tech |

| WVBE ADULT PART TIME PERMIT | PART TIME ADULT PROGRAM | CERTIFICATE REQUIREMENTS | INDUSTRY CREDENTIALING ORGANIZATION/S |
|-----------------------------|-------------------------|----------------------------------|---------------------------------------|
| | | degree. AND C-Tech Certification | |

EMS and Fire Service Endorsements:

| | | | |
|---------------------------------|---|--|--|
| 7047 Emergency Medical Services | EMS (Public Service Training) | License. – Hold a current WV EMT, WV Paramedic Certification, or National Registry EMT or Paramedic license; AND Complete four years of recent volunteer or paid work experience, which may include emergency room or emergency medical care, beyond the training period in the occupation to be taught; AND Score a minimum of 85% on WVDE approved examination; AND Hold current CPR instructor certification; And Complete an approved instructor course; AND Successfully complete the EMT field-based experience. | WV Department of Health and Human Resources, Bureau of Public Health, Office of Emergency Medical Services or American Red Cross or American Heart Association or American Safety & Health Institute or Emergency Care & Safety Institute or National Safety Council |
| 7087 Fire Service Training | Fire Service Training (Public Service Training) | Complete four years of volunteer or paid work experience in the field of fire service; AND Complete an approved instructor training program and successfully complete the field-based experience in fire instructor training and provide verification from the RESA Public Service Coordinator of completion of required training in firefighting, hazardous materials, CPR and First Aid; AND Score a minimum of 85% on a WVDE approved examination. | American Red Cross or American Heart Association or American Safety & Health Institute or Emergency Care & Safety Institute or National Safety Council WV Fire Commission |