



**WEST VIRGINIA
SECRETARY OF STATE**

MAC WARNER

ADMINISTRATIVE LAW DIVISION

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OFFICE OF
WEST VIRGINIA SECRETARY OF STATE

**FORM 1 -- NOTICE OF A PUBLIC HEARING OR COMMENT PERIOD ON A PROPOSED RULE
(Page 1)**

AGENCY **Education**
RULE TYPE **Legislative Exempt AMENDMENT TO EXISTING RULE Yes** TITLE-SERIES **126-**
RULE NAME **West Virginia College- and Career-Readiness Programs of Study/Standards for Career and** **044M**
Technical Education (Policy 2520.13)
CITE AUTHORITY **W. Va. Code §§29A-3B-1, et seq.; W. Va. Board of Education v. Hechler, 180 W. Va. 451; 376 S.E.2d**
839 (1988)

COMMENTS LIMITED TO
Written

DATE OF PUBLIC HEARING

LOCATION OF PUBLIC HEARING

DATE WRITTEN COMMENT PERIOD ENDS
Monday, September 11, 2017 4:00 PM

WRITTEN COMMENTS MAY BE MAILED TO
**Kathy D'Antoni, Associate Superintendent, WVDE
Div of Tech Ed & Governor's Economic Initiatives
Capitol Building 6, Room 221
1900 Kanawha Boulevard, East
Charleston, West Virginia 25305-0330**

BY CHOOSING 'YES', I ATTEST THAT THE PREVIOUS STATEMENTS ARE TRUE AND CORRECT.

Yes
Mary C Tuckwiller -- By my signature, I certify that I am the person authorized to file legislative rules, in
accordance with West Virginia Code §29A-3-11 and §39A-3-2.



Title-Series: 126-044M



Rule Id: 16596



Document: 49785



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**FORM 1 -- NOTICE OF A PUBLIC HEARING OR COMMENT PERIOD ON A PROPOSED RULE
(Page 2)**

AGENCY **Education**
RULE TYPE **Legislative Exempt AMENDMENT TO EXISTING RULE Yes TITLE-SERIES 126-**
RULE NAME **West Virginia College- and Career-Readiness Programs of Study/Standards for Career and Technical Education (Policy 2520.13) 0441**
CITE AUTHORITY **W. Va. Code §§29A-3B-1, et seq.; W. Va. Board of Education v. Hechler, 180 W. Va. 451; 376 S.E.2d 839 (1988)**

PROVIDE A BRIEF SUMMARY OF YOUR PROPOSAL

Policy 2520.13 was amended to better clarify career technical education clusters, pathways and programs as they align to the national career technical education standards. This policy will assist CTE administrations and counselors in better placing students in CTE programs of study that align to their personal career aspirations and goals.

BY CHOOSING 'YES', I ATTEST THAT THE PREVIOUS STATEMENTS ARE TRUE AND CORRECT.

Yes
Mary C Tuckwiller -- By my signature, I certify that I am the person authorized to file legislative rules, in accordance with West Virginia Code §29A-3-11 and §39A-3-2.



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FORM 11 -- FISCAL NOTE FOR PROPOSED RULES (Page 1)

AGENCY **Education**
RULE TYPE **Legislative Exempt AMENDMENT TO EXISTING RULE Yes TITLE-SERIES 126-**
RULE NAME **West Virginia College- and Career-Readiness Programs of Study/Standards for Career and Technical Education (Policy 2520.13) 0441**
CITE AUTHORITY **W. Va. Code §§29A-3B-1, et seq.; W. Va. Board of Education v. Hechler, 180 W. Va. 451; 376 S.E.2d 839 (1988)**

PRIMARY CONTACT

Division of Technical Education and Governor's Economic Initiatives
West Virginia Department of Education
1900 Kanawha Blvd., East, Capitol Building 6
Charleston, West Virginia 25305

SECONDARY CONTACT

Virginia Harris
West Virginia Board of Education
1900 Kanawha Blvd., East, Capitol Building 6
Charleston, West Virginia 25305

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FORM 11 -- FISCAL NOTE FOR PROPOSED RULES (Page 1)

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RULE TYPE **Legislative Exempt AMENDMENT TO EXISTING RULE Yes TITLE-SERIES 126-**
RULE NAME **West Virginia College- and Career-Readiness Programs of Study/Standards for Career and Technical Education (Policy 2520.13) 044M**
CITE AUTHORITY **W. Va. Code §§29A-3B-1, et seq.; W. Va. Board of Education v. Hechler, 180 W. Va. 451; 376 S.E.2d 839 (1988)**

SUMMARIZE IN A CLEAR AND CONCISE MANNER WHAT IMPACT THIS MEASURE WILL HAVE ON COSTS AND REVENUES OF STATE GOVERNMENT.

No cost or revenues will be impacted by the proposed amendment of §126CSR44M, Policy 2520.13.

Mary C Tuckwiller -- By my signature, I certify that I am the person authorized to file legislative rules, in accordance with West Virginia Code §29A-3-11 and §39A-3-2.



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 CITE AUTHORITY **W. Va. Code §§29A-3B-1, et seq.; W. Va. Board of Education v. Hechler, 180 W. Va. 451; 376 S.E.2d 839 (1988)**

FISCAL NOTE DETAIL -- SHOW OVER-ALL EFFECT IN ITEM 1 AND 2 AND, IN ITEM 3, GIVE AN EXPLANATION OF BREAKDOWN BY FISCAL YEAR, INCLUDING LONG-RANGE EFFECT.

Effect Of Proposal	Current Increase/Decrease (use ' - ')	Next Increase/Decrease (use ' - ')	Fiscal Year (Upon Full Implementation)
ESTIMATED TOTAL COST	0	0	0
PERSONAL SERVICES	0	0	0
CURRENT EXPENSES	0	0	0
REPAIRS AND ALTERATIONS	0	0	0
ASSETS	0	0	0
OTHER	0	0	0
ESTIMATED TOTAL REVENUES	0	0	0

Mary C Tuckwiller -- By my signature, I certify that I am the person authorized to file legislative rules, in accordance with West Virginia Code §29A-3-11 and §39A-3-2.



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FORM 11 -- FISCAL NOTE FOR PROPOSED RULES (Page 3)

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CITE AUTHORITY **W. Va. Code §§29A-3B-1, et seq.; W. Va. Board of Education v. Hechler, 180 W. Va. 451; 376 S.E.2d 839 (1988)**

3. EXPLANATION OF ABOVE ESTIMATES (INCLUDING LONG-RANGE EFFECT). PLEASE INCLUDE ANY INCREASE OR DECREASE IN FEES IN YOUR ESTIMATED TOTAL REVENUES.
No cost or revenues will be impacted by the proposed amendment of §126CSR44M, Policy 2520.13.

Mary C Tuckwiller -- By my signature, I certify that I am the person authorized to file legislative rules, in accordance with West Virginia Code §29A-3-11 and §39A-3-2.



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FORM 11 -- FISCAL NOTE FOR PROPOSED RULES (Page 4)

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PLEASE IDENTIFY ANY AREAS OF VAGUENESS, TECHNICAL DEFECTS, REASONS THE PROPOSED RULE WOULD NOT HAVE A FISCAL IMPACT, AND OR ANY SPECIAL ISSUES NOT CAPTURED ELSEWHERE ON THIS FORM.

No cost or revenues will be impacted by the proposed amendment of §126CSR44M, Policy 2520.13.

BY CHOOSING 'YES', I ATTEST THAT THE PREVIOUS STATEMENTS ARE TRUE AND CORRECT.

Mary C Tuckwiller -- By my signature, I certify that I am the person authorized to file legislative rules, in accordance with West Virginia Code §29A-3-11 and §39A-3-2.



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FORM 12 -- BRIEF SUMMARY AND STATEMENT OF CIRCUMSTANCES (Page 1)

AGENCY **Education**
RULE TYPE **Legislative Exempt AMENDMENT TO EXISTING RULE Yes TITLE-SERIES 126-**
RULE NAME **West Virginia College- and Career-Readiness Programs of Study/Standards for Career and Technical Education (Policy 2520.13) 0441**
CITE AUTHORITY **W. Va. Code §§29A-3B-1, et seq.; W. Va. Board of Education v. Hechler, 180 W. Va. 451; 376 S.E.2d 839 (1988)**

SUMMARIZE IN A CLEAR AND CONCISE MANNER CONTENTS OF CHANGES IN RULE AND STATEMENT OF CIRCUMSTANCES REQUIRING THE RULE.

Policy 2520.13 defines the West Virginia College- and Career- Readiness programs required by Policy 2510 and clarifies the required courses, specializations and student certifications that align to the workforce needs of West Virginia.

BY CHOOSING 'YES', I ATTEST THAT THE PREVIOUS STATEMENTS ARE TRUE AND CORRECT.

Yes

Mary C Tuckwiller -- By my signature, I certify that I am the person authorized to file legislative rules, in accordance with West Virginia Code §29A-3-11 and §39A-3-2.



Title-Series: 126-0441



Rule Id: 16596



Document: 49785

**EXECUTIVE SUMMARY
WEST VIRGINIA DEPARTMENT OF EDUCATION**

Policy Number and Title: Policy 2520.13, West Virginia College- and Career-Readiness Programs of Study/Standards for Career Technical Education

Background: Policy 2520.13 defines the West Virginia College- and Career-Readiness programs of study required by Policy 2510.

Proposals: Policy 2520.13 was written to clarify the programs of study and revised to: 1) include updated courses to mimic workforce needs; 2) add and remove programs of study as well as clarifying required courses; 3) add and remove industry credentials to ensure a more seamless alignment with workforce; and 4) add and clarify definitions and acronyms.

Impact: Policy 2520.13 clarifies the required courses, specializations and student certifications that align to the workforce needs of West Virginia. The policy better clarifies career technical education clusters, pathways and programs as they align to the national career technical education standards. This policy will assist CTE administrator and counselors in better placing students in CTE programs of study that align to their personal career aspirations and goals.

Policy 2520.13

WEST VIRGINIA COLLEGE- AND CAREER-READINESS PROGRAMS OF
STUDY/STANDARDS FOR CAREER TECHNICAL EDUCATION

List of Stakeholders

Internal Stakeholders

Dr. Kathy J. D'Antoni, Chief Officer
Division of Technical Education & Governor's Economic Initiatives

Dr. Sherri Nash, Executive Director
Office of Technical Education

Clinton Burch, Executive Director
Office of Governor's Economic CTE Initiatives

Rick Gillman, Assistant Director
Office of Technical Education

Adam Canter, General Manager
Office of Governor's Economic CTE Initiatives

Jason Hughes, Lead Coordinator
Office of Governor's Economic CTE Initiatives

Dan Blackwood, Coordinator
Office of Governor's Economic CTE Initiatives

Doug Cipoletti, Coordinator
Office of Technical Education

Debra Harless, Coordinator
Office of Special Education

Michael Knighton, Coordinator
Office of Special Education

Tami Maynard, Coordinator
Office of Technical Education

Deanna Penn, Coordinator
Office of Technical Education

Lisa Simms, Coordinator
Office of Technical Education

Cyndy Sundstrom, Coordinator
Office of Technical Education

Nathan Taylor, Coordinator
Office of Technical Education

Frank Tetrick, Coordinator
Office of Technical Education

External Stakeholders

Carolyn Baldwin, Administrator
Putnam County Career Center

Matthew Call, Administrator
United Technical Career Center

Barry Crist, Administrator
Fayette Institute of Technology

Michael Cutright, Administrator
Fred Eberle Career Center

Tonia Fry, Instructor
Monongalia Technical Center

Ryan Haught, Administrator
Mid-Ohio Valley Technical Center

Chris Jeney, Instructor
United Technical Career Center

Miranda Kessler, Instructor
Nicholas County Career Center

Shelia Mann, Administrator
Wyoming County Career Center

Doug Martin, Instructor
Mingo Central High School

Alicia Milanese, Instructor
Nicholas county Career Center

John Pheasant, Instructor
Marion County Career Center

Hugh Roberts, Administrator
Spring Valley High School

Judy Toothman, Instructor
Marion County Career Center

126CSR44M

TITLE 126
LEGISLATIVE RULE
BOARD OF EDUCATION

SERIES 44M
WEST VIRGINIA COLLEGE- AND CAREER-READINESS PROGRAMS OF STUDY/STANDARDS
FOR CAREER TECHNICAL EDUCATION (2520.13)

§126-44M-1. General.

1.1. Scope. -- W. Va. 126CSR42, West Virginia Board of Education (WVBE) Policy 2510, Assuring the Quality of Education, Regulations for Education Programs (Policy 2510), provides a definition of a delivery system for, and an assessment and accountability system for, a thorough and efficient education for West Virginia public school students. W. Va. 126CSR44M, WVBE Policy 2520.13, West Virginia College- and Career-Readiness Programs of Study/Standards for Career and Technical Education (Policy 2520.13) defines the college- and career-readiness programs of study/standards for career technical education (CTE) as required by Policy 2510.

1.2. Authority. -- W. Va. Constitution, Article XII, §2, W. Va. Code §§18-2-5, 18-6-1, et seq., and 18-9A-22.

1.3. Filing Date. --

1.4. Effective Date. --

1.5. Repeal of Former Rule. -- This legislative rule repeals and replaces W. Va. 126CSR44M, WVBE Policy 2520.13, College- and Career-Readiness Programs of Study/Standards for Career and Technical Education, filed November 10, 2016 and effective December 12, 2016.

§126-44M-2. Purpose.

2.1. This policy defines the West Virginia college- and career-readiness programs of study/content standards for the programs of study required by Policy 2510. Standards were revised to: 1) include Simulated Workplace protocols; 2) add standards to each program of study for students participating in a co-curricular career technical student organization; 3) add programs of study and clarify required courses for each program of study; 4) add and clarify definitions and acronyms; and, 5) align West Virginia Education Information System (WVEIS) prefixes for each cluster CTE programmatic change.

§126-44M-3. Incorporation by Reference.

3.1. A copy of the West Virginia College- and Career-Readiness Programs of Study/Standards for Career and Technical Education in West Virginia Schools is attached and incorporated by reference into this policy. Copies of Policy 2520.13 may be obtained in the Office of the Secretary of State and in the WVDE Division of Technical Education and Governor's Economic Initiatives.

§126-44M-4. Summary of the West Virginia College- and Career-Readiness Programs of Study/Content Standards for Career Technical Education.

126CSR44M

4.1. The WVBE has the responsibility for establishing high quality standards pertaining to all educational programs (W. Va. Code §18-2E-1). The West Virginia college-and career-readiness programs of study/content skill sets provide a focus for teachers to teach and students to learn those skills and competencies essential for future success in the workplace and further education. The document includes Career Ready Practices; West Virginia college-and career-readiness programs of study/content standards by Career Cluster and Pathway; Simulated Workplace protocols; standards for participation in a co-curricular career technical student organization; changes student performance measures; definitions and acronyms; WVEIS prefixes for each cluster; and a foreword detailing the developmental processes for the West Virginia college- and career-readiness programs of study/standards as found on the CTE website.

§126-44M-5. Severability.

5.1. If any provision of this rule or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of this rule.

West Virginia Department of Education

West Virginia Board of Education

Policy 2520.13,

*West Virginia College- and Career-Readiness
Programs of Study/Standards for
Career Technical Education*

Dr. Steven L. Paine

State Superintendent of Schools

Introduction

West Virginia College- and Career-Readiness Programs of Study/Standards for Career Technical Education have been developed with the goal of preparing students for a wide range of high-quality post-secondary opportunities within a Simulated Workplace environment. Specifically, college- and career-readiness refers to the knowledge, skills and dispositions needed to be successful in obtaining an entry-level job, continued training in a specific craft and/or higher education that all lead to gainful employment. The West Virginia College- and Career-Readiness Programs of Study/Standards for Career Technical Education establish a set of knowledge and skills that all individuals need to transition into the workplace or higher education, as both realms share many expectations. All students throughout their educational experience, should develop a full understanding of the career opportunities available, the education necessary to be successful in their chosen pathway and a plan to attain their goals.

West Virginia College- and Career-Readiness Programs of Study/Standards for Career Technical Education are organized around two major components of a standards based curriculum: knowledge objectives and performance objectives. The knowledge objectives are broad based descriptions of what all students must know and the performance objectives specify what the students will be able to do at the conclusion of the instructional sequence. Students will develop problem solving and critical thinking skills independently and collaboratively as they engage in these two major components. College- and Career-Readiness Programs of Study/Standards are supported in all Career Technical Education pathways allowing students to acquire and further develop their abilities to be critical thinkers and problem solvers as they continue their educational journey.

Committees of educators and representatives from business and industry from across West Virginia were convened to revise the specific content skill sets standards and objectives for each CTE program of study. The overarching goal was to build a rigorous, dynamic and challenging Career Technical Education curriculum that would prepare students for the 21st century. The committees focused their efforts in shaping the content skill sets standards to align with industry standards, industry-recognized credentials, research and best practice in the field of Career Technical Education. The contribution of these professionals was critical in creating content skill sets standards that further define the College- and Career-Readiness Programs of Study/Standards and are meaningful to classroom teachers.

Policy 2520.13 is organized around 12 Career Ready Practices that educators should seek to develop in all students; the College- and Career-Readiness Programs of Study/Standards are organized around the 16 National Career Clusters and supporting Career Pathways.

The use of the College- and Career-Readiness Programs of Study/Standards will assure the delivery of a rigorous and relevant Career Technical Education curriculum to all West Virginia students within a Simulated Workplace environment. These elements, when used to guide the instructional process and when delivered with the creativity and instructional expertise of West Virginia teachers, will become a powerful resource for preparing students to meet the challenges of the 21st century.

Career Technical Education – Alpha Listing of State-Approved Programs of Study, Clusters and Pathways

Program of Study	POS #	Cluster	Pathway	Page #
Accounting and Finance	BM1410	Business Management and Administration	Business Finance and Accounting	18
Advanced Manufacturing (Advanced Career)	MA2235	Manufacturing	Manufacturing Production Process Development	53
Aerospace Engineering (Advanced Career)	ST2200	Science, Technology, Engineering and Math	Engineering & Technology	57
Aesthetics	HU2315	Human Services	Personal Care Services	34
Agribusiness Systems	AG0120	Agriculture, Food and Natural Resources	Agribusiness Systems	1
Allied Health Sciences	HE0715	Health Science	Therapeutic Services	25
Animal Processing	AG0230	Agriculture, Food and Natural Resources	Food Products & Processing Systems	4
Animal Systems	AG0220	Agriculture, Food and Natural Resources	Animal Systems	2
Automotive Technology	TR1620	Transportation, Distribution and Logistics	Facility & Mobile Equipment Maintenance	58
Baking and Pastry	HO1015	Hospitality and Tourism	Restaurants & Food/ Beverage Services	28
Barbering	HU2305	Human Services	Personal Care Services	34
Biomedical Science (PLTW)	HE0780	Health Science	Biotechnology Research & Development	22
Broadcasting Technology	AV1680	Arts, AV Technology and Communications	Journalism & Broadcasting	12
Building Maintenance and Operations	AR1800	Architecture and Construction	Maintenance/Operations	11
Career and Work Skills Training (CWST)	BM0510	Business Management and Administration	Administrative Support	15
Career Integrated Experiential Learning (CIEL)	WV5501	West Virginia Specific Career	Career Integrated Experiential Learning	61
Careers in Education	ED1300	Education and Training	Teaching/Training	19
Carpentry	AR1820	Architecture and Construction	Construction	9
CASE Animal Science	AG0221	Agriculture, Food and Natural Resources	Animal Systems	3
CASE Plant Science	AG0215	Agriculture, Food and Natural Resources	Plant Systems	7

Chemical Energy and Mechanical Technologies	AG2185	Agriculture, Food and Natural Resources	Natural Resources Systems	5
Cisco Networking Academies	IT1640	Information Technology	Network Systems	46
Clean Energy (Advanced Career)	ST2225	Science, Technology, Engineering and Math	Engineering & Technology	57
Coding, App and Game Design	IT1442	Information Technology	Interactive Media	40
Collision Repair Technology	TR1670	Transportation, Distribution and Logistics	Facility & Mobile Equipment Maintenance	59
Computer Aided Drafting and Design	AR1720	Architecture and Construction	Design/Pre-construction	11
Computer Science (PLTW)	IT2215	Information Technology	Computer Programming & Software Development	36
Computer Systems Repair Technology	IT1680	Information Technology	Network Systems	46
Diagnostics Services	HE0718	Health Science	Diagnostic Services	22
Diesel Equipment Technology	TR1740	Transportation, Distribution and Logistics	Facility & Mobile Equipment Maintenance	59
Early Childhood Education	HU1000	Human Services	Early Childhood Development & Services	32
Electrical Technician	AR1760	Architecture and Construction	Construction	9
Electronics Technician	MA1780	Manufacturing	Maintenance, Installation, & Repair	52
Emergency and Firefighting Management Services	LA2200	Law, Public Safety, Corrections and Security	Emergency and Firefighting Management Services	49
Energy, Power and Engineered Systems (Advanced Career)	ST2175	Science, Technology, Engineering and Math	Engineering & Technology	57
Forest Industry	AG0130	Agriculture, Food and Natural Resources	Natural Resources Systems	5
Foundational CTE Courses				63
Global Logistics and Supply Chain Management (Advanced Career)	TR2215	Transportation, Distribution and Logistics	Transportation Systems / Infrastructure Planning, Management & Regulation	60
Graphic Communications	AV1830	Arts, AV Technology and Communications	Printing Technology	14
Graphic Design	AV1850	Arts, AV Technology and Communications	Visual Arts	14
Hair Stylist	HU2310	Human Services	Personal Care Services	35

Health Informatics (Advanced Career)	HE2220	Health Science	Health Informatics	24
Health Informatics	HE0742	Health Science	Health Informatics	23
Hospitality and Tourism	HO1210	Hospitality and Tourism	Travel & Tourism	30
Human Services	HU1025	Human Services	Family & Community Services	33
HVAC Technician	AR1600	Architecture and Construction	Maintenance/Operations	12
Individual Work Ready Competencies (IWRC)	WV5502	West Virginia Specific Career	Individual Work Ready Competencies	62
Industrial Equipment Maintenance	MA1870	Manufacturing	Maintenance, Installation, & Repair	52
Informatics (Advanced Career)	IT2210	Information Technology	Information Support & Services	38
Information Management/Microsoft Computer Applications Specialist	IT1450	Information Technology	Interactive Media	42
Innovations in Science and Technology (Advanced Career)	ST2205	Science, Technology, Engineering and Math	Engineering & Technology	57
JROTC	GO1070	Government and Public Administration	National Security	20
Law and Public Safety	LA1020	Law, Public Safety, Corrections and Security	Law Enforcement Services	50
Machine Tool Technology	MA1900	Manufacturing	Production	54
Management and Administrative Support	BM1465	Business Management and Administration	Administrative Support	16
Marketing Management	MK0420	Marketing	Marketing Management	56
Masonry	AR1910	Architecture and Construction	Construction	9
Millwork and Cabinetmaking	MA2120	Manufacturing	Production	55
Multimedia Publishing	AV1684	Arts, AV Technology and Communications	Journalism & Broadcasting	13
Nail Technology	HU2055	Human Services	Personal Care Services	35
Natural Resources Management	AG0170	Agriculture, Food and Natural Resources	Natural Resources Systems	5
Paralegal Assistant	LA1490	Law, Public Safety, Corrections and Security	Legal Services	51
Personal Fitness and Wellness Training	HE1095	Health Science	Therapeutic Services	26
Pet Grooming	AG0223	Agriculture, Food and Natural Resources	Animal Systems	3

Plant Systems	AG0210	Agriculture, Food and Natural Resources	Plant Systems	6
Plumbing	AR2140	Architecture and Construction	Construction	10
Power Equipment Systems	TR1960	Transportation, Distribution and Logistics	Facility & Mobile Equipment Maintenance	59
Power, Structural and Technical Systems	AG0110	Agriculture, Food and Natural Resources	Power, Structural & Technical Systems	8
Pre-Engineering – Project Lead the Way	ST2460	Science, Technology, Engineering and Math	Engineering & Technology	57
Prevention Support Specialist	HU1015	Human Services	Counseling & Mental Health Services	31
ProStart Restaurant Management	HO1010	Hospitality and Tourism	Restaurants & Food/ Beverage Services	28
Robotics	MA1630	Manufacturing	Manufacturing Production Process Development	53
Therapeutic Services	HE0723	Health Science	Therapeutic Services	26
Virtual Simulation and Game Development	IT1445	Information Technology	Interactive Media	44
Welding	MA1980	Manufacturing	Production	55

Explanation of Terms

Advisory Councils are required by the Carl D. Perkins Act and are charged with advising the WVDE and local CTE programs of study on the development, administration, and evaluation of policies and programs relating to Career Technical Education. The Advisory Council is comprised of high-level contacts and volunteers from business and industry, labor, postsecondary education, the non-profit sector and students. Advisory Council meetings are required to take place a minimum of two times during the school year.

Approved CTE Curriculum List identifies the state-approved programs for individual schools as required by the Carl D. Perkins Act.

Career Technical Education (CTE) Schools must provide students access to programs in a minimum of six (6) of the 16 approved WV Career Clusters.

Career Technical Standards are a set of rigorous, high quality standards that define what students should know and be able to do after completing instruction in a related CTE program.

Career Ready Practices describe the career ready skills that educators should seek to develop in all students. These practices are not exclusive to a Career pathway, CTE program or course. Career ready practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

Career Clusters are broad groupings of related careers as defined by the United States Department of Education and United States Department of Labor – Occupational Classification.

Career Integrated Experiential Learning (CIEL) is a personalized CTE program of study developed to meet student needs by providing them marketable job skills and opportunities to test for multiple nationally recognized certifications.

Career Pathways are subcategories of closely related careers under each of the 16 Career Clusters.

Career Technical Student Organization (CTSO) are CTE organizations primarily based in high schools, comprehensive high schools and career technology centers. CTOS are integrated into programs of study as co-curricular activities and designated as non-profit organizations. CTOS are authorized by the U.S. Congress in the Carl D. Perkins Career Technical Education Act.

Career Technical Education School Types

- CTE in High School – a high school offering four or less career clusters
- Comprehensive High School – a high school offering five or more career clusters
- County Career Center – a career center that services students from the county in which it is located

- Multi-County Career Center – a career center that services student from multiple counties
- CTE in Specialized Facilities – a state approved facility, (i.e., WVSDB) offering students CTE opportunities

Certification is a designation earned by a person to assure qualification to perform a particular job or task and is approved by a recognized credentialing agency.

Civil Rights Pursuant to the Guidelines for Eliminating Discrimination and Denial of Services on the Basis of Race, Color, National Origin, Sex, and Handicap in Vocational Education Programs (34 C.F.R. Part 100, Appendix B) (Guidelines), state Career Technical Education (CTE) agencies (formerly referred to as vocational education agencies) are required to conduct civil rights compliance reviews of selected sub recipients, and to report these compliance activities periodically to the Office for Civil Rights (OCR), U.S. Department of Education. OCR's September 1996 Memorandum of Procedures, developed in partnership with state CTE agencies, requires state agencies to conduct on-site compliance reviews of 2.5 percent of their sub recipients each year, and to report to OCR biennially. In a December 1998 "Dear Colleague" letter to all MOA Coordinators, which was also developed in partnership with state CTE agencies, OCR provided additional instructions to state agencies about the format and content of the biennial reports.

CTE (Participant) is a student who takes a minimum of one state-approved CTE required, elective, or foundation course in a CTE cluster/pathway program of study.

CTE Completer is a student who completes the four state-approved sequence of courses within a specific CTE program of study.

CTE Completer (Dual) is a student who completes the required state-approved sequence of four courses within more than one Career Technical Education program of study.

CTE Completer (State Certified) is a student who completes the four state-approved sequence of courses with a "C" or higher and meets the industry benchmark on the state approved technical assessment.

CTE Elective Courses are state-approved courses, which provide enhanced opportunities to build upon the required four core courses and functions to meet student needs, interests, abilities and goals. CTE Electives also respond to actual or anticipated opportunities for employment, advanced education and practical life application.

CTE Portfolio a collection of personal documents, which showcase an individual's learning experiences, goals and achievements. Student portfolios are created and controlled by the student, facilitated by the instructor, and evaluated by outside entities.

CTE Program Categories:

- **Local CTE Concentration** is a locally approved sequence of four CTE courses.

- **State-Approved CTE Program of Study** is an approved sequence of a minimum of four CTE courses which align to a CTE cluster and pathway, impacts state economic labor market needs as verified by Workforce data and leads to an industry-recognized credential or certificate or opportunity for continuing into postsecondary level education.

Earn a Degree-Graduate Early (EDGE) provides students the opportunity to earn community and technical college credit free-of-charge for the duplicated secondary and post-secondary courses that are identified during a curriculum alignment process, i.e., Welding 1 (secondary CTE) earns credit for Welding 1 taught at a community and technical college.

Federal Perkins Accountability Measures are the outlined provisions within the Carl D. Perkins Career Technical Education Act. These provisions are the state-approved levels of performance, which incorporate: 1) Academic attainment on state-approved assessment; 2) Technical skill attainment; 3) Program of study completion; 4) Graduation rate; 5) Job placement, Continuing Education or Military; 6) Non-traditional participation; 7) Non-traditional completion.

Foundational CTE Course is a non-occupational CTE course offering approved by WVDE.

Individual Work Ready Competencies (IWRC) provides students with learning deficits the opportunity to gain valuable work readiness and occupation specific skills through a CTE program of study. Students who earn the *IWRC* demonstrate the necessary skill sets for entry level support jobs in a specific occupational area.

Internship is an experience that allows students the opportunity to merge and apply the knowledge from their CTE coursework into a meaningful and relevant on-the job experience. The internship should immerse the student into a learning environment outside of the regular school environment. The outside environment must be agreed upon by the county, school, teacher, student and parent/guardian. An outline of goals and outcomes to be achieved by the student should be developed and signed off on by the teacher, student and parent/guardian. The goals and outcomes must align directly to the CTE curriculum skill sets and be able to illustrate how they will be able to assist the student in furthering his/her education and/or entering the workforce. Through working with an adult mentor at the worksite, students should have the opportunity to develop a foundation of general workplace skills and to acquire information and skills in their chosen career cluster/pathway. Students will develop materials to supplement their CTE portfolios.

National Center for Construction Education and Research (NCCER) standardized construction and maintenance curricula and assessments with interstate portable credentials available to students who successfully demonstrate performance proficiently at the various skill levels.

Safety Assessment A program instructor developed and administered general and equipment specific safety exam. The general safety exam covers generalities across the spectrum for each program and is a written exam. The equipment specific exam has both

a written and performance component for each piece of equipment to which the student has access. EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.

Simulated Workplace is an instructional strategy that creates high quality business and industry learning environments providing students opportunities to earn industrial state and national certifications.

Supervised Agricultural Experience Program (SAE) is a unique aspect of agricultural education, providing students with the opportunity to apply knowledge and skills gained in the classroom to real-life work experiences outside of classroom time in the areas of Exploratory, Research, Work Placement and Entrepreneurship. Every student enrolled in an agriculture program of study is required to develop an SAE and to complete the program of study, the student must implement an SAE and keep on-line financial records of all transactions using the Agricultural Experience Tracker (AET) system. To supervise the student SAE process, WV Agricultural Education teachers have extended teaching contracts (240 days preferably) so they are able to visit students after school and during the summer months.

Technical Assessment is a measure of student attainment of career-related technical skills.

West Virginia Department of Agriculture Endorsement is a certification given to all Agriculture, Food and Natural Resources programs of study completers finishing Introduction to Agriculture, a core content and a specialization course, and two years of a Supervised Agricultural Experience Program (SAE) within a specific agricultural program of study.

Work-Based Integration and Transition is a course designed to give students the opportunity to integrate theory and practice by interacting with industry professionals. Students will study various requirements for employability including ethics, communication, teamwork and professionalism. Students will participate in hands-on, digital or work-based experiences related to industry settings in order to practice skill sets and to transition from student to employee. A supervised project will be developed in one or more of the following categories: Entrepreneurship (ownership or operation of a business); Placement (employment or internship); Research and Experimentation (planning and/or conducting a scientific experiment); Exploration (exploration of related careers through activities such as shadowing employees in various work settings, conducting on-line research, attending professional development activities, etc.). Students will develop materials to supplement their CTE portfolios.

Virtual Program E-Learning/Distance Learning courses available to assure consistent, high quality education for the students of West Virginia through courses delivered via technology that promotes efficacy and equity in course offerings and provide options for implementation across the public school system. These programs help bridge the barriers of time, distance and inequities for all West Virginia students by providing access to resources that are either not offered in the local schools, or where scheduling conflicts will allow completion of a required course virtually.

WV Welcome is a guest service course designed to improve the quality of service that all guests of the mountain state receive. West Virginia Welcome provides common sense, proactive training that gives participants the skills necessary to deliver exemplary service to all of the state's visitors and citizens. The training is delivered in a two hour classroom setting without cost. A free and online version of the training is also available and takes about an hour to complete. Both versions award a printed certificate to those passing a short test. West Virginia Welcome is a collaboration between WVU's Hospitality and Tourism Program; West Virginia Department of Education's HEAT program; the West Virginia Hospitality and Travel Association; and the WVU Extension Service.

Simulated Workplace – Student empowered education

All state-approved CTE programs require a classroom shift to a workplace environment for students enrolled in the 3rd and 4th required program courses that implement the following protocols:

- Student Led Companies
- Application/Interview Structure
- Formal Attendance System
- Drug Free Work Zone
- 5S Environments
- Safe Work Areas
- Work Place Teams
- Project-Based Learning/Student Engagement
- Company Name and Handbook
- Company Meetings
- Onsite Business Reviews
- Accountability (data review, report, and technical assessments)

Governor’s Workforce Credential

A credential awarded by West Virginia’s Governor to CTE completers who achieve a rigorous set of standards within their state-approved CTE program of study and demonstrate exemplary performance within the emerging workforce.

Graduating seniors must successfully meet the following criteria:

- Obtain a grade of “B” or better in the four required state-approved CTE Program of Study courses;
- Accomplish a minimum score of 95% on the CTE portfolio;
- Attain a verified school attendance rate of 95% or higher during the senior year;
- Score at an elite level of 70 or higher on the industry-recognized audit;
- Earn a nationally recognized industry certification that coincides with a state-approved CTE Program of Study in accordance with the West Virginia Board of Education Policy 2520.13; and,
- Pass a minimum of two documented drug screenings.

College- and Career-Readiness Programs of Study/Standards

The Career Technical Standards includes a set of broad standards for each of the 16 Career Clusters and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a CTE program of study. All of the West Virginia, state approved CTE programs fall under one of the 16 Career Pathways. Guidelines to assist teachers in designing instruction that leads to student proficiency in the technical core areas can be accessed on the WVDE/CTE website.

Accountability Measures

The means to assess the effectiveness of the state, district, school and program of study in achieving progress on Perkins performance indicators in career technical education, and to optimize the return of investment in career technical education activities.

- Portfolio
 - A collection of personal documents, which showcase an individual's learning experiences, goals and achievements
- Technical Assessments
 - Evaluation of technical skill attainment through benchmarks and audits as they align to industry recognized standards
- Industry Recognized Credentials
 - Those certifications, licenses or certificates that industry groups recognize as being valuable within the industry and illustrate an individual's understanding and/or mastery of subject knowledge
- Positive Job Placement
 - Completers who secure a job, continue their education or join the military

SAFETY TESTING REQUIREMENT

EVERY STUDENT MUST PASS ALL SAFETY EXAMS WITH A SCORE OF 100% BEFORE HAVING ACCESS TO AVAILABLE EQUIPMENT.

Agriculture, Food & Natural Resources Career Cluster™ (AG)

Agribusiness Systems Career Pathway Standards

1. Apply management planning principles in AFNR businesses.
2. Use record keeping to accomplish AFNR business objectives, manage budgets, and comply with laws and regulations.
3. Manage cash budgets, credit budgets and credit for an AFNR business using generally accepted accounting principles.
4. Develop a business plan for an AFNR business.
5. Use sales and marketing principles to accomplish AFNR business objectives.
6. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AG0120 Agribusiness Systems	0101 Introduction to Agriculture, Food and Natural Resources or 0161 CASE Introduction to Agriculture, Food and Natural Resources 0102 The Science of Agriculture *0134 - Agricultural Experience Program (+ Specialization)	<i>(Must select one):</i> 0183 - Forest Management 0212 - Horticulture 0136 - Advanced Principles of Agriculture 0140 - Animal Production and Management 0112 - Fundamentals of Agriculture Mechanics 0139 - Fundamentals of Animal Processing 0200 - Natural Resource Management 0132 - Agricultural Biotechnology 0110 - Agriculture Entrepreneurship 0111 - Food Science Technology	West Virginia Department of Agriculture Agribusiness Systems Endorsement West Virginia Department of Agriculture Pesticide Applicator West Virginia Department of Agriculture Food Safety Practices OSHA 10 WV Welcome
	*0134 - Agricultural Experience Program <i>Students shall receive 1/2 credit per academic year based on completion of approved SAE and submission of approved documentation. Two years must be completed to meet requirement. Refer to Guidelines to Awarding SAE Credit document for more information.</i>		

NOTES:

- 1) Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.

- 2) *EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.*
- 3) *CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.*

Animal Systems Career Pathway Standards

1. Analyze historic and current trends impacting the animal systems industry.
2. Utilize best-practice protocols based upon animal behaviors for animal husbandry and welfare.
3. Design and provide proper animal nutrition to achieve desired outcomes for performance, development, reproduction and/or economic production.
4. Apply principles of animal reproduction to achieve desired outcomes for performance, development and/or economic production.
5. Evaluate environmental factors affecting animal performance and implement procedures for enhancing performance and animal health.
6. Classify, evaluate and select animals based on anatomical and physiological characteristics.
7. Apply principles of effective animal health care.
8. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AG0220 Animal Systems	<p>0101 Introduction to Agriculture, Food and Natural Resources or 0161 CASE Introduction to Agriculture, Food and Natural Resources</p> <p>0140 Animal Production and Management or 0162 CASE Principles of Agriculture Science – Animal</p> <p>*0134 - Agricultural Experience Program</p> <p>(+ Specialization)</p>	<p><i>(Must select one):</i></p> <p>0230 Livestock Production</p> <p>0149 Companion Animal Care</p> <p>0141 Aquaculture</p> <p>2007 Equine Science</p> <p>0170 Introduction to Pet Grooming, Boarding and Obedience</p>	<p>West Virginia Department of Agriculture Pesticide Applicator</p> <p>West Virginia Department of Agriculture Food Safety Practices</p> <p>West Virginia Department of Agriculture Animal Systems Endorsement</p> <p>Laboratory Animal Technician -- American Association for Laboratory Animal (LAT)</p> <p>Assistant Laboratory Animal Technician -- American Association for Laboratory Animal (ALAT)</p>

			Laboratory Animal Technologist -- American Association for Laboratory Animal (LATG) OSHA 10 WV Welcome
	<p>*0134 - Agricultural Experience Program <i>Students shall receive 1/2 credit per academic year based on completion of approved SAE and submission of approved documentation. Two years must be completed to meet requirement. Refer to Guidelines to Awarding SAE Credit document for more information.</i></p>		
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AG0221 CASE Animal Science	<p>0161 CASE Introduction to Agriculture, Food and Natural Resources 0162 CASE Principles of Agriculture Science - Animal *0134 – Agriculture Experience Program</p> <p>(+ Specialization)</p>	<p><i>(Must select one):</i> 0164 CASE Animal and Plant Biotechnology 0165 CASE Food Science and Safety 0163 CASE Agriculture Business, Research and Development</p>	<p>OSHA 10 WV Welcome</p>
	<p>*0134 - Agricultural Experience Program <i>Students shall receive 1/2 credit per academic year based on completion of approved SAE and submission of approved documentation. Two years must be completed to meet requirement. Refer to Guidelines to Awarding SAE Credit document for more information.</i></p>		
WV CTE Programs:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AG0223 Pet Grooming	<p>0170 Introduction to Pet Grooming, Boarding and Obedience 0173 Pet Grooming, Boarding and Obedience Entrepreneurship 0171 Pet Grooming and Understanding Personalities</p> <p>(+ Specialization)</p>	<p><i>(Must select one):</i> 1180 Advanced Pet Grooming and Understanding Personalities 1181 Pet Boarding and Obedience</p>	<p>OSHA 10 WV Welcome</p>

NOTES:

- 1) *Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.*
- 2) *EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.*
- 3) *CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.*

Food Products & Processing Systems Career Pathway Standards

1. Develop and implement procedures to ensure safety, sanitation and quality in food product and processing facilities.
2. Apply principles of nutrition, biology, microbiology, chemistry and human behavior to the development of food products.
3. Select and process food products for storage, distribution and consumption.
4. Explain the scope of the food industry and the historical and current developments of food products and processing.
5. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AG0230 Animal Processing	<p>0101 Introduction to Agriculture, Food and Natural Resources or 0161 CASE Introduction to Agriculture, Food and Natural Resources 0139 Fundamentals of Animal Processing *0134 - Agricultural Experience Program</p> <p>(+ Specialization)</p>	<p><i>(Must select one):</i> 0151 Animal Processing - Retail 0160 Animal Processing - Plant</p>	<p>West Virginia Department of Agriculture Food Safety Practices West Virginia Department of Animal Processing Endorsement OSHA 10 WV Welcome</p>
<p>*0134 - Agricultural Experience Program <i>Students shall receive 1/2 credit per academic year based on completion of approved SAE and submission of approved documentation. Two years must be completed to meet requirement. Refer to Guidelines to Awarding SAE Credit document for more information.</i></p>			

NOTES:

- 1) *Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.*
- 2) *EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.*
- 3) *CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.*

Natural Resources Systems Career Pathway Standards

1. Plan and conduct natural resource management activities that apply logical, reasoned and scientifically based solutions to natural resource issues and goals.
2. Analyze the interrelationships between natural resources and humans.
3. Develop plans to ensure sustainable production and processing of natural resources.
4. Demonstrate responsible management procedures and techniques to protect or maintain natural resources.
5. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AG2185 Chemical Energy and Mechanical Technologies	2497 Basic Production Mechanics 2496 Advanced Production Mechanics (+ 2 Specializations)	<i>(Must select two):</i> 2493 Electrical Maintenance for Energy/Mining Extraction 1871 Electrical Maintenance 0112 Fundamentals of Agricultural Mechanics 0114 Agriculture Equipment and Repair 2449 Chemical Process Control 1808 Electronic Instrumentation 2450 Fundamentals of Energy Systems	CPR/AED First Aid Safe Land - Safe Land Advisory Group OSHA Forklift – OSHA OSHA 10 WV Welcome
WV CTE Programs:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AG0130 Forest Industry	0182 Fundamentals of Forestry 0183 Forest Management 0184 Timber Management 0185 Advanced Principals of Forestry		Certified Logger - West Virginia Forestry Association OSHA 10 WV Welcome
WV CTE Programs:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AG0170 Natural Resources Management	0101 Introduction to Agriculture, Food and Natural Resources or 0161 CASE Introduction to Agriculture, Food and Natural Resources 0200 Natural Resources Management	<i>(Must select one):</i> 0183 Forest Management 0190 Fish and Wildlife Management 2494 Land Management and Surveying 2498 Arboriculture and Urban Forestry	West Virginia Department of Agriculture Natural Resources Endorsements West Virginia Department of Agriculture Food Safety Practices OSHA 10

	*0134 Agricultural Experience Program (+ Specialization)	2499 Water Operator-in-Training 2500 Waste Water Operator-in-Training	WV Welcome
*0134 - Agricultural Experience Program <i>Students shall receive 1/2 credit per academic year based on completion of approved SAE and submission of approved documentation. Two years must be completed to meet requirement. Refer to Guidelines to Awarding SAE Credit document for more information.</i>			

NOTES:

- 1) *Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.*
- 2) *EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.*
- 3) *CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.*

Plant Systems Career Pathway Standards

1. Develop and implement a crop management plan for a given production goal that accounts for environmental factors.
2. Apply the principles of classification, plant anatomy and plant physiology to plant production and management.
3. Propagate, culture and harvest plants and plant products based on current industry standards.
4. Apply principles of design in plant systems to enhance an environment (i.e., floral, forest, landscape and farm).
5. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AG0210 Plant Systems	0101 Introduction to Agriculture, Food and Natural Resources or 0161 CASE Introduction to Agriculture, Food and Natural Resources 0212 Horticulture or 0166 CASE Principles of Agricultural Science-Plant *0134 - Agricultural Experience Program (+ Specialization)	<i>(Must select one):</i> 0220 Fruit and Vegetable Production 0214 Greenhouse Production and Management 0213 Floriculture 0240 Turf and Landscape Systems	West Virginia Department of Agriculture Plant Systems Endorsement Certified Floral Designer -- American Institute of Floral Designers West Virginia Department of Agriculture Pesticide Applicator West Virginia Department of Agriculture Food Safety Practices

			OSHA 10 WV Welcome
	<p>*0134 - Agricultural Experience Program <i>Students shall receive 1/2 credit per academic year based on completion of approved SAE and submission of approved documentation. Two years must be completed to meet requirement. Refer to Guidelines to Awarding SAE Credit document for more information.</i></p>		
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AG0215 CASE Plant Science	<p>0161 CASE Introduction to Agriculture, Food and Natural Resources 0166 CASE Principles of Agricultural Science-Plant *0134 - Agricultural Experience Program</p> <p>(+ Specialization)</p>	<p><i>(Must select one):</i> 0164 CASE Animal and Plant Biotechnology 0165 CASE Food Science and Safety 0163 Agriculture Business, Research and Development</p>	OSHA 10 WV Welcome
	<p>*0134 - Agricultural Experience Program <i>Students shall receive 1/2 credit per academic year based on completion of approved SAE and submission of approved documentation. Two years must be completed to meet requirement. Refer to Guidelines to Awarding SAE Credit document for more information.</i></p>		
<p>NOTES:</p> <ol style="list-style-type: none"> 1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i> 2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i> 3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i> 			

Power, Structural & Technical Systems Career Pathway Standards

1. Apply physical science principles and engineering applications to solve problems and improve performance in AFNR power, structural and technical systems.
2. Operate and maintain AFNR mechanical equipment and power systems.
3. Service and repair AFNR mechanical equipment and power systems.
4. Plan, build and maintain AFNR structures.
5. Use control, monitoring, geospatial and other technologies in AFNR power, structural and technical systems.
6. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AG0110 Power, Structural and Technical Systems	0101 Introduction to Agriculture, Food and Natural Resources or 0161 CASE Introduction to Agriculture, Food and Natural Resources 0112 Fundamentals of Agriculture Mechanics *0134 - Agricultural Experience Program (+ Specialization)	<i>(Must select one):</i> 0113 Agriculture Structures 0114 Agriculture Equipment and Repair	West Virginia Department of Agriculture Power, Structural and Technical Systems Endorsement NCCER West Virginia Department of Agriculture Food Safety Practices OSHA 10 WV Welcome
*0134 - Agricultural Experience Program <i>Students shall receive 1/2 credit per academic year based on completion of approved SAE and submission of approved documentation. Two years must be completed to meet requirement. Refer to Guidelines to Awarding SAE Credit document for more information.</i>			
NOTES: 1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i> 2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i> 3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i>			

Architecture & Construction Career Cluster™ (AR)

Construction Career Pathway Standards

1. Describe contractual relationships between all parties involved in the building process.
2. Describe the approval procedures required for successful completion of a construction project.
3. Implement testing and inspection procedures to ensure successful completion of a construction project.
4. Apply scheduling practices to ensure the successful completion of a construction project.
5. Apply practices and procedures required to maintain jobsite safety.
6. Manage relationships with internal and external parties to successfully complete construction projects.
7. Compare and contrast the building systems and components required for a construction project.
8. Demonstrate the construction crafts required for each phase of a construction project.
9. Safely use and maintain appropriate tools, machinery, equipment and resources to accomplish construction project goals.
10. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AR1820 Carpentry	1842 Carpentry I 1843 Carpentry II 1844 Carpentry III 1845 Carpentry IV		NCCER OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AR1760 Electrical Technician	1756 Electrical Trades I 1757 Electrical Trades II 1758 Electrical Trades III 1759 Electrical Trades IV	<i>(Select four of the below listed courses to complete Journeyman Electrician License hours)</i> 1762 Blueprint Reading For Electricians 1765 Industrial and Commercial Wiring 1766 Integrated Electrical Lab 1767 National Electrical Code 1769 Residential Wiring 1771 Rotating Devices and Control Circuitry	NCCER Electrician Apprenticeship License Electrician Journeyman License OSHA 10 WV Welcome <i>NOTE: See Journeyman Electrician Licensing criteria below.</i>
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AR1910 Masonry	1846 Masonry I		NCCER

	1847 Masonry II 1848 Masonry III 1849 Masonry IV		OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AR2140 Plumbing	2081 Plumbing I 2082 Plumbing II 2083 Plumbing III 2084 Plumbing IV		NCCER OSHA 10 WV Welcome

NOTES:

- 1) Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.
- 2) EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.
- 3) CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.

WVDE requirements to be eligible to sit for the Electrical Journeyman License:

- 1) Attain an overall grade of "B" or better in the four required state-approved CTE Electrical Technician Program of Study required courses **AND** the four specialization courses used to meet the 1080 hours needed to sit for the Journeyman's License as stated in the Electrician Licensing Rules from the West Virginia State Fire Marshall's office;
- 2) Attain a verified school attendance record of no more than 6 days absent in a 1 year - 1,080 hour program or 12 days absent in a two year - 1,080 hour program;
- 3) Earn the NCCER Core certification;
- 4) Earn the OSHA 10 certification;
- 5) Pass a minimum of TWO (2) documented drug screenings; and
- 6) Score at or above the Workforce Entry-Level cut score on the industry-recognized written **AND** performance audit.

Design/Pre-construction Career Pathway Standards

1. Justify design solutions through the use of research documentation and analysis of data.
2. Use effective communication skills and strategies (listening, speaking, reading, writing and graphic communications) to work with clients and colleagues.
3. Describe the requirements of the integral systems that impact the design of buildings.
4. Apply building codes, laws and rules in the project design.
5. Identify the diversity of needs, values and social patterns in project design, including accessibility standards.
6. Apply the techniques and skills of modern drafting, design, engineering and construction to projects.
7. Employ appropriate representational media to communicate concepts and project design.

<p>8. Apply standards, applications and restrictions pertaining to the selection and use of construction materials, components and assemblies in the project design.</p> <p>9. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.</p>			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AR1720 Computer Aided Drafting and Design	1729 Fundamentals of Drafting 1727 Drafting Techniques 1725 Mechanical Drafting 1721 Architectural Drafting		American Design and Drafting Association (ADDA) OSHA 10 WV Welcome
<p>NOTES:</p> <p>1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i></p> <p>2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i></p> <p>3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i></p>			

<p>Maintenance/Operations Career Pathway Standards</p> <p>1. Recognize and employ universal construction signs and symbols to function safely in the workplace.</p> <p>2. Use troubleshooting procedures when solving a maintenance problem in buildings.</p> <p>3. Apply construction skills when repairing, restoring or renovating existing buildings.</p> <p>4. Determine work required to repair or renovate an existing building.</p> <p>5. Plan and practice preventative maintenance activities to service existing buildings.</p> <p>6. Maintain and inspect building systems to achieve safe and efficient operation of buildings.</p> <p>7. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.</p>			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AR1800 Building Maintenance and Operations	1774 Building Maintenance and Operations I 1775 Building Maintenance and Operations II 1776 Building Maintenance and Operations III 1777 Building Maintenance and Operations IV		NCCER OSHA 10 WV Welcome

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AR1600 HVAC Technician	1752 HVAC I 1753 HVAC II 1754 HVAC III 1755 HVAC IV		NCCER EPA 608 Universal Certification OSHA 10 WV Welcome
<p>NOTES:</p> <p>1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i></p> <p>2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i></p> <p>3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i></p>			

Arts, A/V Technology & Communications Career Cluster™ (AV)

<p>Journalism & Broadcasting Career Pathway Standards</p> <ol style="list-style-type: none"> 1. Describe the diversity of functions within the Journalism & Broadcasting Career Pathway. 2. Demonstrate writing processes used in journalism and broadcasting. 3. Plan and deliver a media production (i.e., broadcast, video, Internet, mobile). 4. Demonstrate technical support related to media production (i.e., broadcast, video, Internet, mobile). 5. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities. 			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AV1680 Broadcasting Technology	1681 Fundamentals of Broadcasting 1683 Radio Broadcasting Presentations 1685 Television Production Applications <i>(+ Specialization)</i>	<i>(Must select one):</i> 1687 Broadcast Operations 1689 Producing Live TV 1684 Video Editing	Certified Broadcasting Technologist (CBT) OSHA 10 WV Welcome

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AV1684 Multimedia Publishing	1514 Introduction to Visual Communication 1515 Digital Photography 1516 Videography 1517 Cross-Media Publishing		Adobe Certified Associate - Visual Communication using Photoshop (ACA-Ps) Adobe Certified Associate - Interactive Media using Flash (ACA-An) Adobe Certified Associate - Graphic Design & Illustration using Illustrator (ACA-Ai) Adobe Certified Associate - Web Authoring using Dreamweaver (ACA-Dw) Adobe Certified Associate - Video Communication using Premiere (ACA-Pr) Adobe Certified Associate - Print & Digital Media Publication using InDesign (ACA-Id) Lynda Certification OSHA 10 WV Welcome
<p>NOTES:</p> <ol style="list-style-type: none"> 1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i> 2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i> 3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i> 			

Printing Technology Career Pathway Standards

1. Manage the printing process, including customer service and sales, scheduling, production and quality control.
2. Demonstrate the production of various print, multimedia or digital media products.
3. Perform finishing and distribution operations related to the printing process.
4. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AV1830 Graphic Communications	1835 Fundamentals of Graphic Communications 1833 Electronic Imaging 1839 Image Assembly and Plate Making 1841 Offset Press and Bindery		Printing Industries of America OSHA 10 WV Welcome

NOTES:

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- 2) *EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.*
- 3) *CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.*

Visual Arts Career Pathway Standards

1. Describe the history and evolution of the visual arts and its role in and impact on society.
2. Analyze how the application of visual arts elements and principles of design communicate and express ideas.
3. Analyze and create two and three-dimensional visual art forms using various media.
4. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
AV1850 Graphic Design	1857 Fundamentals of Graphic Design 1851 Fundamentals of Illustration 1859 Graphic Design Applications 1861 Illustration		Adobe Certified Associate - Visual Communication using Photoshop (ACA-Ps) Adobe Certified Associate - Interactive Media using Flash (ACA-An) Adobe Certified Associate - Graphic Design & Illustration using Illustrator (ACA-Ai)

			Adobe Certified Associate - Web Authoring using Dreamweaver (ACA-Dw) Adobe Certified Associate - Video Communication using Premiere (ACA-Pr) Adobe Certified Associate - Print & Digital Media Publication using InDesign (ACA-Id) Lynda Certification OSHA 10 WV Welcome
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NOTES:

- 1) *Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.*
- 2) *EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.*
- 3) *CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.*

Business Management & Administration Career Cluster™ (BM)

Administrative Support Career Pathway Standards

1. Plan, staff, lead and organize human resources to enhance employee productivity and satisfaction.
2. Access, evaluate and disseminate information for business decision making.
3. Plan, monitor and manage day-to-day business activities.
4. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
BM0510 Career and Work Skills Training (CWST)	0511 Career and Work Skills Training I		Business Fundamentals (A*S*K Business Institute)

	0512 Career and Work Skills Training II 0513 CWST Work Experience I 0514 CWST Work Experience II		Office Proficiency Assessment & Certification (OPAC)-Customer Service Digital Literacy (Microsoft Imagine Academy) OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
BM1465 Management and Administrative Support	1411 Business Computer Application I Microsoft Word and Microsoft PowerPoint 1439 Business and Marketing Essentials (+ 2 Specializations)	<i>(Must select two):</i> 1401 Accounting Principles I 1409 Business Communications 1413 Business Computer Application II Microsoft Excel and Microsoft Access 1421 Business Recordkeeping 1445 Management and Entrepreneurship 1449 Office Management 1451 Personal Finance	Microsoft Office Specialist (MOS)-Word Core Microsoft Office Specialist (MOS)-Excel Core Microsoft Office Specialist (MOS)-PowerPoint Microsoft Office Specialist (MOS)-Access Microsoft Office Specialist (MOS)-Word Expert Microsoft Office Specialist (MOS)-Excel Expert Office Proficiency Assessment & Certification (OPAC)-Clerical Skills Office Proficiency Assessment & Certification (OPAC)-Computer Applications Fundamental Business Concepts (A*S*K Business Institute)

			<p>Office Proficiency Assessment & Certification (OPAC)-Keyboard/Data-Entry</p> <p>Office Proficiency Assessment & Certification (OPAC)-Customer Service</p> <p>Office Proficiency Assessment & Certification (OPAC)-Microsoft Applications/Pre-Assessment</p> <p>Microsoft Office Specialist Master Certificate – 2 Expert/2 Core Exams</p> <p>Digital Literacy (Microsoft Imagine Academy)</p> <p>OSHA 10</p> <p>WV Welcome</p>
<p>NOTES:</p> <p>1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i></p> <p>2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i></p> <p>3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i></p>			
<p>Business Finance and Accounting Career Pathway Standards</p> <ol style="list-style-type: none"> 1. Describe and follow laws and regulations to manage business operations and transactions in the banking services industry. 2. Create and maintain positive, ongoing relationships with banking customers. 3. Manage the use of financial resources to enhance banking performance. 4. Demonstrate the use of banking technology and equipment. 			

5. Plan, monitor and manage the day-to-day activities within a banking organization to ensure secure operations.
6. Utilize career-planning concepts, tools and strategies to explore, obtain and/or develop a career in banking services.
7. Determine client needs and wants and respond through planned, personalized communication to guide purchase decisions and enhance future business opportunities in banking services.
8. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
BM1410 Accounting and Finance	1401 Accounting Principles I 1403 Accounting Principles II 1451 Personal Finance (+ Specialization)	<i>(Must select one):</i> 1411 Business Computer Applications I Microsoft Word & Microsoft PowerPoint 1413 Business Computer Applications II Microsoft Excel & Microsoft Access 1417 Business Law 1439 Business and Marketing Essentials	Office Proficiency Assessment & Certification (OPAC)-Financial Concepts of Finance (A*S*K Business Institute) Accounts Payable Fundamentals (Brainbench) Accounts Receivable/Billing Fundamentals (Brainbench) Bookkeeping Fundamentals (Brainbench) Microsoft Office Specialist (MOS)-Word Core Microsoft Office Specialist (MOS)-Excel Core Microsoft Office Specialist (MOS)-PowerPoint Microsoft Office Specialist (MOS)-Access Microsoft Office Specialist (MOS)-Word Expert Microsoft Office Specialist (MOS)-Excel Expert

			OSHA 10 WV Welcome
<p>NOTES:</p> <p>1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i></p> <p>2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i></p> <p>3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i></p>			

Education & Training Career Cluster™ (ED)

<p>Teaching/Training Career Pathway Standards</p> <ol style="list-style-type: none"> 1. Use foundational knowledge of subject matter to plan and prepare effective instruction and design courses or programs. 2. Employ knowledge of learning and developmental theory to describe individual learners. 3. Use content knowledge and skills of instruction to develop standards-based goals and assessments. 4. Identify materials and resources needed to support instructional plans. 5. Establish a positive climate to promote learning. 6. Identify motivational, social and psychological practices that guide personal conduct. 7. Demonstrate organizational and relationship building skills used to manage instructional activities and related procedures. 8. Demonstrate flexibility and adaptability in instructional planning. 9. Utilize assessment and evaluation tools and data to advance learner achievement and adjust instructional plans. 10. Evaluate teaching and training performance indicators to determine and improve effectiveness of instructional practices and professional development. 11. Implement strategies to maintain relationships with others to increase support for the organization. 12. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities. 			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
ED1300 Careers in Education	1301 Foundation in Education 1302 Student Learning, Development, and Diversity 1304 Educational Psychology and Learning 1135 Teacher Preparation: Seminar in Educational Practice		Praxis Core Academic Skills for Educators (Core) Pre-Professional Assessments & Certifications (Pre-PAC) in Education Fundamentals

			OSHA 10 WV Welcome
<p>NOTES:</p> <p>1) Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</p> <p>2) EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</p> <p>3) CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</p>			

Government & Public Administration Career Cluster™ (GO)

<p>National Security Career Pathway Standards</p> <ol style="list-style-type: none"> Instruct persons who will perform tasks relating to national homeland security. Describe the appropriate duties, responsibilities and authority of a national security agency's personnel at all levels. Describe the leadership characteristics necessary to ensure compliance with rules of engagement and applicable ethical standards. Collect and analyze information from within and outside the United States to assess threats and opportunities regarding national security. Develop strategies to defend against and respond to the effects of chemical, biological, radiological, nuclear (CBRN) or other emergent events. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities. 			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
GO1070 JROTC	1065 JROTC I 1066 JROTC II 1080 JROTC III 1081 JROTC IV		<i>DoDI 1205.13 - 5.2.5.1. A student presenting evidence of successful completion of at least 2 academic years of the JROTC program under any Military Department is entitled to advanced promotion to the grade of no less than E-2 on initial enlistment in an Active or Reserve component of a Military Service. At their discretion, the Military Departments may award the</i>

			<p><i>grade of E-3 for successful completion of 3 academic years of the JROTC program.</i></p> <p>CPR/AED</p> <p>First Aid</p> <p>OSHA 10</p> <p>WV Welcome</p>
<p>NOTES:</p> <ol style="list-style-type: none"> 1) <i>JROTC is a cooperative effort between the United States Department of Defense (DoD) and the WVDE.</i> 2) <i>JROTC cadets who successfully pass JROTC I and JROTC II courses will fulfill the 1 credit Physical Education graduation requirement.</i> 3) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i> 4) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i> 5) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i> 			

Health Science Career Cluster™ (HE)

Biotechnology Research & Development Career Pathway Standards

1. Summarize the goals of biotechnology research and development within legal and ethical protocols.
2. Apply the fundamentals of biochemistry, cell biology, genetics, mathematical concepts, microbiology, molecular biology, organic chemistry and statistics to conduct effective biotechnology research and development of products.
3. Demonstrate basic knowledge of recombinant DNA, genetic engineering, bioprocessing, monoclonal antibody production, nanotechnology, bioinformatics, genomics, proteomics and transcriptomics to conduct biotechnology research and development.
4. Demonstrate the principles of solution preparation, sterile techniques, contamination control, and measurement and calibration of instruments used in biotechnology research.
5. Determine processes for product design and production and how that work contributes to an understanding of the biotechnology product development process.
6. Summarize and explain the larger ethical, moral and legal issues related to biotechnology research, product development and use in society.
7. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and

community-based service projects to enhance leadership opportunities.			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
HE0780 Biomedical Science (PLTW)	0727 Principles of Biomedical Science 0766 Human Body Systems 0780 Medical Interventions 0795 Biomedical Innovation (Capstone)		OSHA 10 WV Welcome
<p>NOTES:</p> <p>1) Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</p> <p>2) EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</p> <p>3) CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</p>			

Diagnostic Services Career Pathway Standards			
<ol style="list-style-type: none"> 1. Communicate key diagnostic information to healthcare workers and patients in an accurate and timely manner. 2. Assess and report patient's/client's health status in order to monitor and document patient progress. 3. Demonstrate the principles of body mechanics for positioning, transferring and transporting of patients/clients, and perform them without injury to the patient/client or self. 4. Explain procedures and goals to the patient/client accurately and effectively, using strategies to respond to questions and concerns. 5. Select, demonstrate and interpret diagnostic procedures. 6. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities. 			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
HE0718 Diagnostic Services	0711 Foundations of Health Science* 0715 Advanced Principles of Health Science* (+ Specialization)	<i>(Must select one specialization area and enroll in the two courses to be a completer):</i> Medical Laboratory Technician 0755 Medical Laboratory and Diagnostic Procedures 0756 Medical Laboratory Diagnostic Procedures and Applications **	CPR/AED for Professional Rescuers and Healthcare Providers Preventing Disease Transmission Certification First Aid Certified Phlebotomy Technician

		OR	Certified ECG Technician Medical Laboratory Assistant OSHA 10 WV Welcome
		Clinical Diagnostics 0810 Electrocardiograph Technician 0825 Phlebotomy Skills **	

NOTES:

- 1) *Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.*
- 2) *EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.*
- 3) *CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.*
- 4) **Foundations of Health Science (0711) is a prerequisite for Advanced Principles of Health Science (0715). These two courses provide the introductory core for all Health Science programs of study.*
- 5) **Admission to Advanced Principles of Health Science (0715) requires a minimum course completion score of 80% in Foundations of Health Science (0711).*
- 6) ***These courses require 100% drug testing prior to entering clinical experiences.*

Health Informatics Career Pathway Standards

1. Communicate health information accurately and within legal and regulatory guidelines, upholding the strictest standards of confidentiality.
2. Describe the content and diverse uses of health information.
3. Demonstrate the use of systems used to capture, retrieve and maintain confidential health information from internal and external sources.
4. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
HE0742 Health Informatics	0711 Foundations of Health Science - <i>must be taken prior to any specialization*</i> (+ 3 Specializations)	<i>(Must select three):</i> 1443 Medical Office Management 1411 Business Computer Applications I Microsoft Word and PowerPoint 0769 Introduction to Health Informatics 0768 Health Care Statistics	CPR/AED for Professional Rescuers and Healthcare Providers Preventing Disease Transmission Certification First Aid

		0715 Advanced Principals of Health Science* 0777 Electronic Health Record Specialty 0789 Clinical Specialty I **	Electronic Health Record Specialist Microsoft Office Specialist (MOS)-Word Core Microsoft Office Specialist (MOS)-PowerPoint Microsoft Office Specialist (MOS)-Word Expert OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
HE2220 Health Informatics (Advance Career)	1560 AC Health Informatics I 1561 AC Health Informatics II 1562 AC Health Informatics III 1563 AC Health Informatics IV		OSHA 10 WV Welcome

NOTES:

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- 3) *CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.*
- 4) **Foundations of Health Science (0711) is a prerequisite for Advanced Principles of Health Science (0715). These two courses provide the introductory core for all Health Science programs of study.*
- 5) **Admission to Advanced Principles of Health Science (0715) requires a minimum course completion score of 80% in Foundations of Health Science (0711).*
- 6) ***These courses require 100% drug testing prior to entering clinical experiences.*

Therapeutic Services Career Pathway Standards

1. Utilize communication strategies to answer patient/client questions and concerns on planned procedures and goals.
2. Communicate patient/client information among healthcare team members to facilitate a team approach to patient care.
3. Utilize processes for assessing, monitoring and reporting patient's/clients' health status to the treatment team within protocol and scope of practice.
4. Evaluate patient/client needs, strengths and problems in order to determine if treatment goals are being met.

5. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
HE0715 Allied Health Sciences	0711 Foundations of Health Science* 0715 Advanced Principles of Health Science* (+ Specialization)	<i>(Must select one specialization area and enroll in the two courses to be a completer):</i> Dental Assisting 0746 Dental Science 0743 Dental Assisting Clinical Science** OR Emergency Services 0792 Emergency Services 1 0732 Emergency Services 2** OR Medical Assisting 0737 Medical Assistant Laboratory and Diagnostic Procedures 0733 Medical Assistance Clinical** OR Pre-Nursing 0771 PTCB Prep 0615 Certified Nursing Assistant** OR PTCP PREP 0771 PTCB Preparation 0772 PTCB Clinical Applications** <i>0730 Health Science Clinical Experience may be scheduled in</i>	CPR/AED for Professional Rescuers and Healthcare Providers Preventing Disease Transmission Certification First Aid Certified Phlebotomy Technician Certified ECG Technician Medical Laboratory Assistant OSHA 10 WV Welcome Certified Medical Assistant EMT-Basic Certified Nursing Assistant EMR – Emergency Medical Responder Electronic Health Record Specialist Certified Dental Assistant <i>(must complete additional work hours prior to taking exam)</i>

		<i>conjunction with 0772 to create a 2-credit block</i>	NELDA – National Entry Level Dental Assistant PTCB (Pharmacy Technician Certification Board) eligible (<i>may apply after graduation to take exam</i>)
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
HE1095 Personal Fitness and Wellness Training	1051 Foundations of Wellness 1052 Models of Wellness Training 1053 Wellness Coaching Skills 1054 Practical Applications of Wellness Training		American Fitness Professionals and Association Certification CPR/AED First Aid OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialty:	Student Certification(s):
HE0723 Therapeutic Services	0711 Foundations of Health Science* 0715 Advanced Principles of Health Science* <i>-Select 1 (from the column on the right)</i> 0789 Clinical Specialties I** <i>-Select 1 (from the column on the right)</i> 0790 Clinical Specialties II** <i>-Select 1 (from the column on the right)</i> <i>0730 Health Science Clinical Experience may be scheduled in conjunction with 0789 or 0790 to create a 2-credit block</i>	<ul style="list-style-type: none"> ▪ Advanced Health Seminar ▪ Certified Nursing Assistant ▪ Certified ECG Technician ▪ Certified Health Unit Coordinator ▪ Certified Patient Care Technician ▪ Certified Phlebotomy Technician ▪ Community Emergency Response Team ▪ Dental Aide ▪ Dietary Aide ▪ Direct Care Worker ▪ Electronic Health Record Specialist ▪ Environmental Services 	CPR/AED for Professional Rescuers and Healthcare Providers Preventing Disease Transmission Certification First Aid Clinical Medical Assistant (CCMA) Medical Administrative Assistant Certification (CMAA) Certified Patient Care Technician

		<ul style="list-style-type: none"> ▪ Orientation to Practical Nursing ▪ Laundry Aide ▪ Physical Therapy Aide ▪ Pre-Pharmacy Technician ▪ Imagery Aide ▪ Veterinary Science Aide 	<p>Certified Phlebotomy Technician</p> <p>Direct Care Worker</p> <p>Home Health Aide</p> <p>Certified Nursing Assistant</p> <p>Certified ECG Technician</p> <p>Certified Health Unit Coordinator</p> <p>Community Emergency Response Team</p> <p>OSHA 10</p> <p>WV Welcome</p>
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NOTES:

- 1) *Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.*
- 2) *EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.*
- 3) *CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.*
- 4) **Foundations of Health Science (0711) is a prerequisite for Advanced Principles of Health Science (0715). These two courses provide the introductory core for all Health Science programs of study.*
- 5) **Admission to Advanced Principles of Health Science (0715) requires a minimum course completion score of 80% in Foundations of Health Science (0711).*
- 6) ***These courses require 100% drug testing prior to entering clinical experiences.*

Hospitality & Tourism Career Cluster™ (HO)

Restaurants & Food/ Beverage Services Career Pathway Standards

1. Describe ethical and legal responsibilities in food and beverage service facilities.
2. Demonstrate safety and sanitation procedures in food and beverage service facilities.
3. Use information from cultural and geographical studies to guide customer service decisions in food and beverage service facilities.
4. Demonstrate leadership qualities and collaboration with others.
5. Research costs, pricing, market demands and marketing strategies to manage profitability in food and beverage service facilities.
6. Explain the benefits of the use of computerized systems to manage food service operations and guest service.
7. Utilize technical resources for food services and beverage operations to update or enhance present practice.
8. Implement standard operating procedures related to food and beverage production and guest service.
9. Describe career opportunities and qualifications in the restaurant and food service industry.
10. Apply listening, reading, writing and speaking skills to enhance operations and customer service in food and beverage service facilities.
11. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
HO1015 Baking and Pastry	1013 Restaurant and Culinary Foundations 1024 Baking and Pastry I 1025 Baking and Pastry II 1026 Baking and Pastry Advanced		Certified Journey Baker (CJB) Certification On Baking Certification ServSafe Certification for Managers ServSafe Food Handler Certificate ServSafe Allergens OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
HO1010 ProStart Restaurant Management	1013 Restaurant and Culinary Foundations		ProStart Certificate of Achievement

	1014 Restaurant Management Essentials 1019 Advanced Principles in Food Production 1020 Restaurant Professional		On Cooking Certification On Baking Certification ServSafe Certification for Managers ServSafe Food Handler Certificate ServSafe Allergens OSHA 10 WV Welcome
<p>NOTES:</p> <ol style="list-style-type: none"> 1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i> 2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i> 3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i> 			

Travel & Tourism Career Pathway Standards

1. Apply information about time zones, seasons and domestic and international maps to create or enhance travel.
2. Apply unit and time conversion skills to develop travel schedules and compute cost, distance and time (including travel time) factors.
3. Analyze cultural diversity factors to enhance travel planning.
4. Assess the potential (real and perceived) hazards related to multiple environments, and recommend appropriate safety, health and security measures for travelers.
5. Develop a safety and security plan containing proactive and reactive solutions to manage emergency situations for travelers and staff.
6. Use common travel and tourism terminology used to communicate within the industry.
7. Customize travel with diverse transportation, lodging, cruise and food options.
8. Compare and contrast services and products from related industries to understand and evaluate how they impact the delivery of travel and tourism products and services to customers.
9. Identify the community elements necessary to maintain cooperative tourism development efforts.
10. Develop a travel product that matches customer needs, wants and expectations.
11. Design promotional packages to effectively market travel and tourism.

12. Select the most effective communication technique and media venue to convey travel marketing information to a target audience.
13. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
HO1210 Hospitality and Tourism	1211 Introduction to Hospitality and Tourism 7663 Travel West Virginia (+ Specialization)	<i>(Must select one specialization area and complete two of the specialization courses to be a completer):</i> Event Planning and Design 1115 Event Planning Essentials 1212 Event and Project Planning and Management 1210 Hospitality and Tourism Internship OR Parks and Recreation 1086 Outdoor Education 1125 Parks and Recreation Program Management 1210 Hospitality and Tourism Internship OR Hospitality, Travel and Tourism 1015 Hospitality Products and Services 0437 Hospitality and Tourism Marketing 1210 Hospitality and Tourism Internship OR Adventure Tourism 1086 Outdoor Education 0438 Adventure Tourism 1210 Hospitality and Tourism Internship	ServSafe Food Handler Certificate First Aid CPR/AED Leave No Trace Behind Certified Interpretive Guide Trainer Certified Hospitality & Tourism Management Professional (CHTMP) Certified Front Desk Representative (CFDR) Safety Matters Certified Guest Service Professional (CGSP) OSHA 10 WV Welcome

		<p style="text-align: center;">OR</p> <p>Entrepreneurship 1445 Management and Entrepreneurship 1220 Hospitality and Entrepreneurship Applications 1210 Hospitality and Tourism Internship</p>	
<p>NOTES:</p> <p>1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i></p> <p>2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i></p> <p>3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i></p>			

Human Services Career Cluster™ (HU)

Counseling & Mental Health Services Career Pathway Standards			
<ol style="list-style-type: none"> 1. Use clear written, spoken and nonverbal messages when communicating with clients about mental health services and the counseling process. 2. Utilize functional and specialized assessments to evaluate needs and solutions for counseling and mental health. 3. Evaluate client motivation, strengths and weaknesses to develop a client treatment program. 4. Demonstrate knowledge of an operational mental health or counseling program that meets organizational goals. 5. Demonstrate the ethical and legal responsibilities of counseling and mental health services. 6. Choose appropriate counseling and therapy techniques to serve identified needs. 7. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities. 			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
HU1015 Prevention Support Specialist	0928 Fundamentals of Human Services 0903 Parenting and Strong Families 1060 Essentials of Addiction and Prevention 1061 Practical Applications of Prevention Assistance		<p>WV Certification for Addictions Recovery Support Specialist (with additional qualifying education and work experience)</p> <p>WV Certification for Addictions Professional Prevention Specialist (with additional qualifying</p>

			education and work experience) American Association of family and Consumer Sciences Pre-Professional Assessments and Certifications OSHA 10 WV Welcome
NOTES: 1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i> 2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i> 3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i>			

Early Childhood Development & Services Career Pathway Standards 1. Demonstrate communication techniques with children to facilitate ongoing development and enhance learning. 2. Communicate effectively with fellow staff members to facilitate child development activities. 3. Maintain working knowledge of child development licensing and certification organizations to keep abreast of current procedures and changes. 4. Create and maintain relationships between staff and parents/family members to encourage involvement and facilitate child development and learning. 5. Evaluate safety and sanitation procedures associated with the early childhood education environment to assure compliance and prevent potential hazards. 6. Adhere to ethical and legal responsibilities, laws and regulations to protect children and families. 7. Apply principles of child growth and development, including social, emotional, physical and cognitive milestones, to provide comprehensive program offerings. 8. Evaluate curriculum for inclusiveness of children with special needs. 9. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
HU1000 Early Childhood Education	1003 Early Childhood Education I		Early Childhood Classroom Assistant Teacher (ECCAT)

	1004 Early Childhood Education II 1008 Early Childhood Education III 1009 Early Childhood Education IV		Apprenticeship for Child Development Specialist (ACDS) Child Development Associate (CDA) Pre-Professional Assessments & Certifications (Pre-PAC) in Early Childhood Education OSHA 10 WV Welcome
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NOTES:

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- 3) *CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.*

Family & Community Services Career Pathway Standards

1. Use formal and informal assessment practices to create and evaluate a prevention and/or treatment plan.
2. Identify community resources to provide family and community services.
3. Communicate effectively to gain support from the client's family and other support groups.
4. Comply with laws and procedures that govern abuse, neglect, confidentiality and other health and safety situations.
5. Evaluate crisis prevention, intervention and resolution techniques to formulate emergency plans.
6. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
HU1025 Human Services	0928 Fundamentals of Human Services 0904 Human Development 1070 Practical Applications of Human Services 1071 Seminar in Human Services		Family and Community Services Pre-Professional Assessment And Certifications Pre-PAC from American Association of Family & Consumer Sciences

			OSHA 10 WV Welcome
<p>NOTES:</p> <p>1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i></p> <p>2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i></p> <p>3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i></p>			

<p>Personal Care Services Career Pathway Standards</p> <ol style="list-style-type: none"> Analyze basic principles of biology, chemistry and human anatomy for safe and effective utilization and selection of personal care products and services. Evaluate an individualized personal care plan that reflects client preferences, needs and interests for a course of treatment/action. Utilize data and information to maintain electronic records of client services and make recommendations for personal care services. Demonstrate policies and procedures to achieve a safe and healthy environment for personal care services. Develop organizational policies, procedures and regulations that establish personal care organization priorities, accomplish the mission, and provide high-quality service to a diverse set of clients and families. Identify personal care business opportunities enhanced by community involvement, self-improvement and current trends. Apply methods of obtaining feedback to understand expectations and promote high-quality personal care services standards. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities. 			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
HU2315 Aesthetics	1737 Barbers and Cosmetology Foundations 1732 Skin Sciences I 1731 Aesthetics Science 1714 General Aesthetics I		WV Board of Barbers and Cosmetologists Aesthetician Licensure OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
HU2305 Barbering	1737 Barbers and Cosmetology Foundations 1150 Barbering Science I 1151 Barbering Science II	<i>Select the five courses listed below to complete the Minimum Curriculum for Barbers by the Board of Barbers and</i>	WV Board of Barbers and Cosmetologists Barber Licensure

	1152 Barbering Professional I	<i>Cosmetologists:</i> 1155 Barbering Science Advanced 1153 Barbering Professional II 1156 Barbering Professional III 1157 Barbering Professional IV 1158 Barbering Professional Advanced	OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
HU2310 Hair Stylist	1737 Barbers and Cosmetology Foundations 1734 Cosmetology Professional I 1735 Cosmetology Professional II 1736 Cosmetology Professional Advanced	<i>Select the four courses listed below to complete the Minimum Curriculum for Hair Stylist by the Board of Barbers and Cosmetologists:</i> 1738 Cosmetology Science I 1740 Cosmetology Science II 1730 Cosmetology Chemical I 1750 Cosmetology Chemicals II	WV Board of Barbers and Cosmetologists Hair Stylist Licensure OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
HU2055 Nail Technology	1737 Barbers and Cosmetology Foundations 1716 Nail Technology Science and Procedure 1717 Art of Nail Technology 1719 Nail Technology Clinical Experience		WV Board of Barbers and Cosmetologists Manicurist Licensure OSHA 10 WV Welcome
<p>NOTES:</p> <ol style="list-style-type: none"> 1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i> 2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i> 3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i> 			

Information Technology Career Cluster™ (IT)

Computer Programming & Software Development Career Pathway Standards

1. Analyze customer software needs and requirements.
2. Demonstrate the use of industry standard strategies and project planning to meet customer specifications.
3. Analyze system and software requirements to ensure maximum operating efficiency.
4. Demonstrate the effective use of software development tools to develop software applications.
5. Apply an appropriate software development process to design a software application.
6. Program a computer application using the appropriate programming language.
7. Demonstrate software testing procedures to ensure quality products.
8. Perform quality assurance tasks as part of the software development cycle.
9. Perform software maintenance and customer support functions.
10. Design, create and maintain a database.
11. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
IT2215 Computer Science (PLTW)	1408 Introduction to Computer Science (PLTW) 1410 Computer Science Principles (PLTW) 1412 Computer Science Applications (PLTW) (+ Specialization)	<i>(Must select one):</i> 1414 Simulation and Modeling (PLTW) 1416 Artificial Intelligence (PLTW) 1418 Cybersecurity (PLTW) 1420 Capstone Course: Computational Problem Solving (PLTW)	Autodesk Certification Microsoft Technology Associate(MTA)-Windows Operating System Fundamentals Microsoft Technology Associate(MTA)-Software Development Fundamentals (C#) Microsoft Technology Associate(MTA)-Software Development Fundamentals (VB) Microsoft Technology Associate(MTA)-Database Fundamentals Microsoft Technology Associate(MTA)-Windows

			<p>Server Administration Fundamentals</p> <p>Microsoft Technology Associate(MTA)-Networking Fundamentals</p> <p>Microsoft Technology Associate(MTA)-Security Fundamentals</p> <p>Microsoft Technology Associate(MTA)-Mobility and Device Fundamentals</p> <p>Microsoft Technology Associate(MTA)-Cloud Fundamentals</p> <p>Microsoft Technology Associate(MTA)-HTML5 Application Development Fundamentals</p> <p>OSHA 10</p> <p>WV Welcome</p>
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NOTES:

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- 3) *CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.*

Information Support & Services Career Pathway Standards

1. Provide technology support to maintain service.
2. Manage operating systems and software applications, including maintenance of upgrades, patches and service packs.
3. Apply appropriate troubleshooting techniques in resolving computer hardware, software and configuration problems.
4. Perform installation, configuration and maintenance of operating systems.
5. Demonstrate the use of networking concepts to develop a network.

6. Evaluate the effectiveness of an information system.
7. Employ system installation and maintenance skills to setup and maintain an information system.
8. Employ system administration and control skills to monitor the performance of an information system.
9. Employ technical writing and documentation skills in support of an information system.
10. Apply quality assurance processes to maximize information system operation.
11. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
IT2210 Informatics (Advanced Career)	1550 AC Informatics I 1551 AC Informatics II 1552 AC Informatics III 1553 AC Informatics IV		Autodesk Certification Microsoft Technology Associate(MTA)-Windows Operating System Fundamentals Microsoft Technology Associate(MTA)-Software Development Fundamentals (C#) Microsoft Technology Associate(MTA)-Software Development Fundamentals (VB) Microsoft Technology Associate(MTA)-Database Fundamentals Microsoft Technology Associate(MTA)-Windows Server Administration Fundamentals Microsoft Technology Associate(MTA)-Networking Fundamentals

			<p>Microsoft Technology Associate(MTA)-Security Fundamentals</p> <p>Microsoft Technology Associate(MTA)-Mobility and Device Fundamentals</p> <p>Microsoft Technology Associate(MTA)-Cloud Fundamentals</p> <p>Microsoft Technology Associate(MTA)-HTML5 Application Development Fundamentals</p> <p>Microsoft Office Specialist (MOS)-Word Core</p> <p>Microsoft Office Specialist (MOS)-Excel Core</p> <p>Microsoft Office Specialist (MOS)-PowerPoint</p> <p>Microsoft Office Specialist (MOS)-Access</p> <p>Microsoft Office Specialist (MOS)-Word Expert</p> <p>Microsoft Office Specialist (MOS)-Excel Expert</p> <p>OSHA 10</p> <p>WV Welcome</p>
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- 3) *CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.*

Interactive Media Pathway Standards

1. Analyze customer requirements to design and develop a Web or digital communication product.
2. Apply the design and development process to produce user-focused Web and digital communications solutions.
3. Write product specifications that define the scope of work aligned to customer requirements.
4. Demonstrate the effective use of tools for digital communication production, development and project management.
5. Develop, administer and maintain Web applications.
6. Design, create and publish a digital communication product based on customer needs.
7. Evaluate the functionality of a digital communication product using industry accepted techniques and metrics.
8. Implement quality assurance processes to deliver quality digital communication products and services.
9. Perform maintenance and customer support functions for digital communication products.
10. Comply with intellectual property laws, copyright laws and ethical practices when creating Web/digital communications.
11. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
IT1442 Coding, App and Game Design	1431 Digital Imaging / Multimedia I 1455 Web Page Publishing 1456 Coding, App and Game Design I 1457 Coding, App and Game Design II		Adobe Certified Associate - Visual Communication using Photoshop (ACA-Ps) Adobe Certified Associate - Interactive Media using Flash (ACA-An) Adobe Certified Associate - Graphic Design & Illustration using Illustrator (ACA-Ai) Adobe Certified Associate - Web Authoring using Dreamweaver (ACA-Dw) Adobe Certified Associate - Video Communication using Premiere (ACA-Pr)

			<p>Adobe Certified Associate - Print & Digital Media Publication using InDesign (ACA-Id)</p> <p>Adobe Certified Associate - Multiplatform Animations using Animate (ACA-An)</p> <p>Digital Literacy (Microsoft Imagine Academy)</p> <p>Microsoft Technology Associate (MTA) – Windows Operating System Fundamentals</p> <p>Microsoft Technology Associate (MTA) – Software Development Fundamentals (C#)</p> <p>Microsoft Technology Associate (MTA) – Software Development Fundamentals (VB)</p> <p>Microsoft Technology Associate (MTA) – Database Fundamentals</p> <p>Microsoft Technology Associate (MTA) – Windows Server Administration Fundamentals</p> <p>Microsoft Technology Associate (MTA) – Networking Fundamentals</p>
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			<p>Microsoft Technology Associate (MTA) – Security Fundamentals</p> <p>Microsoft Technology Associate (MTA) – Mobility and Device Fundamentals</p> <p>Microsoft Technology Associate (MTA) – Cloud Fundamentals</p> <p>Microsoft Technology Associate (MTA) – HTML5 Application Development Fundamentals</p> <p>OSHA 10</p> <p>WV Welcome</p>
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
IT1450 Information Management/Microsoft Computer Applications Specialist	<p><i>(Must select four courses):</i></p> <p>1411 Business Computer Applications I Microsoft Word and PowerPoint</p> <p>1413 Business Computer Applications II Microsoft Excel and Access</p> <p>1429 Desktop Publishing</p> <p>1431 Digital Imaging / Multimedia I</p> <p>1432 Digital Imaging / Multimedia II</p> <p>1455 Web Page Publishing</p>		<p>Microsoft Office Specialist (MOS)-Word Core</p> <p>Microsoft Office Specialist (MOS)-Excel Core</p> <p>Microsoft Office Specialist (MOS)-PowerPoint</p> <p>Microsoft Office Specialist (MOS)-Access</p> <p>Microsoft Office Specialist (MOS)-Word Expert</p> <p>Microsoft Office Specialist (MOS)-Excel Expert</p>

			<p>Microsoft Office Specialist Master Certificate – 2 Expert/2 Core Exams</p> <p>Microsoft Technology Associate (MTA) – HTML5 Application Development Fundamentals</p> <p>Adobe Certified Associate - Visual Communication using Photoshop (ACA-Ps)</p> <p>Adobe Certified Associate - Interactive Media using Flash (ACA-An)</p> <p>Adobe Certified Associate - Graphic Design & Illustration using Illustrator (ACA-Ai)</p> <p>Adobe Certified Associate - Web Authoring using Dreamweaver (ACA-Dw)</p> <p>Adobe Certified Associate - Video Communication using Premiere (ACA-Pr)</p> <p>Adobe Certified Associate - Print & Digital Media Publication using InDesign (ACA-Id)</p> <p>Adobe Certified Associate – Multiplatform Animations using Animate (ACA-An)</p> <p>Digital Literacy (Microsoft Imagine Academy)</p>
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			OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Virtual School Courses:	Student Certification(s):
IT1445 Virtual Simulation and Game Development	1431 Digital Imaging/Multimedia I (A) 1455 Web Page Publishing (B) 1465 Game Design I Virtual (C) 1466 Game Design II Virtual (D)	(A) Digital Photography I (0.5) Digital Photography II (0.5) (B) Web Page Publishing - Semester 1 (0.5) Web Page Publishing - Semester 2 (0.5) (C) Web Design (0.5) Game Design I (0.5) (D) Foundations of Programming (1.0)	Adobe Certified Associate - Visual Communication using Photoshop (ACA-Ps) Adobe Certified Associate - Interactive Media using Flash (ACA-An) Adobe Certified Associate - Graphic Design & Illustration using Illustrator (ACA-Ai) Adobe Certified Associate - Web Authoring using Dreamweaver (ACA-Dw) Adobe Certified Associate - Video Communication using Premiere (ACA-Pr) Adobe Certified Associate - Print & Digital Media Publication using InDesign (ACA-Id) Adobe Certified Associate - Multiplatform Animations using Animate (ACA-An) Digital Literacy (Microsoft Imagine Academy) Microsoft Technology Associate (MTA) – Windows Operating System Fundamentals

			<p>Microsoft Technology Associate (MTA) – Software Development Fundamentals (C#)</p> <p>Microsoft Technology Associate (MTA) – Software Development Fundamentals (VB)</p> <p>Microsoft Technology Associate (MTA) – Database Fundamentals</p> <p>Microsoft Technology Associate (MTA) – Windows Server Administration Fundamentals</p> <p>Microsoft Technology Associate (MTA) – Networking Fundamentals</p> <p>Microsoft Technology Associate (MTA) – Security Fundamentals</p> <p>Microsoft Technology Associate (MTA) – Mobility and Device Fundamentals</p> <p>Microsoft Technology Associate (MTA) – Cloud Fundamentals</p> <p>Microsoft Technology Associate (MTA) – HTML5 Application Development Fundamentals</p> <p>OSHA 10</p>
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			WV Welcome
<p>NOTES:</p> <p>1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i></p> <p>2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i></p> <p>3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i></p>			

<p>Network Systems Career Pathway Standards</p> <ol style="list-style-type: none"> Analyze customer or organizational network system needs and requirements. Analyze wired and wireless network systems to determine if they meet specifications (i.e., IEEE, power, security). Design a network system using technologies, tools and standards. Perform network system installation and configuration. Perform network administration, monitoring and support to maintain a network system. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities. 			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
IT1640 CISCO Networking Academies	1642 CCENT1 1644 CCENT2 1646 CCENT3 1648 CCENT4		CCNA/Cisco Certified Entry Level Technician (CCENT) OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
IT1680 Computer Systems Repair Technology	1705 Fundamentals of Computer Systems 1664 CompTIA A+220-901 1665 CompTIA A+220-902 1694 Networking+N10-006		CompTIA A+ 220-901 CompTIA A+ 220-902 CompTIA Network +N10-006 PC Pro Test out Autodesk Certification Microsoft Technology Associate(MTA)-Windows Operating System Fundamentals

			<p>Microsoft Technology Associate(MTA)-Software Development Fundamentals (C#)</p> <p>Microsoft Technology Associate(MTA)-Software Development Fundamentals (VB)</p> <p>Microsoft Technology Associate(MTA)-Database Fundamentals</p> <p>Microsoft Technology Associate(MTA)-Windows Server Administration Fundamentals</p> <p>Microsoft Technology Associate(MTA)-Networking Fundamentals</p> <p>Microsoft Technology Associate(MTA)-Security Fundamentals</p> <p>Microsoft Technology Associate(MTA)-Mobility and Device Fundamentals</p> <p>Microsoft Technology Associate(MTA)-Cloud Fundamentals</p> <p>Microsoft Technology Associate(MTA)-HTML5 Application Development Fundamentals</p>
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			OSHA 10
			WV Welcome
<p>NOTES:</p> <ol style="list-style-type: none"> 1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i> 2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i> 3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i> 			

Law, Public Safety, Corrections & Security Career Cluster™ (LA)

Emergency and Firefighting Management Services Career Pathway Standards

1. Compare and contrast relevant aspects of different career fields available for professionals in fire and emergency management,
2. Execute protocols for handling emergency situations that range from minor medical and fire emergencies to area-wide incidents to demonstrate the application and enhancement of key skills used to respond effectively in such instances.
3. Execute operational and repair requirements when using equipment in order to maintain functional equipment ready for use in fire and medical emergency situations.
4. Examine equipment and summarize the various applications for equipment commonly used in emergency and fire management services.
5. Design and implement an appropriate Incident Command System to assure the effective management of logistical procedures at an incident scene.
6. Recognize materials as hazardous using common codes and icons used in the fire and emergency management environment.
7. Analyze and summarize hazardous materials transportation modes in order to assure the safe transport of substances from fire and emergency scenes.
8. Implement public relations plans involving key community audiences and the local fire and emergency management facilities in order to enhance public awareness and safety in fire and emergency situations.
9. Examine and summarize the various elements and issues involved in using Preparedness and Response Systems during disaster situations in order to demonstrate understanding of the systems available for managing large scale disasters.
10. Examine and summarize the key functions and techniques of critical infrastructure protection to assure protection of potential targets for terrorism and/or natural disasters.
11. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
LA2200 Emergency and Firefighting Management Services	2203 Fire Fighting I 2205 Fire Fighting II (+ Specialization)	<i>(Must select one specialization area and complete two of the specialization courses to be a completer):</i> Industrial Fire Safety 2250 Industrial Incident Command 2251 Industrial Hazardous Material OR Emergency Management 0792 Emergency Services 1 0732 Emergency Services 2	CPR/AED for Professional Rescuers and Healthcare Providers Emergency Medical Responder-EMR (WV State Certification) Emergency Medical Technician-EMT (WV State Certification) Emergency Medical Technician-EMT (National Registry) Fire Fighter I - National Fire Protection Association Standard 1001 Fire Fighter II - National Fire Protection Association Standard 1001 National Incident Management System (NIMS) 100 National Incident Management System (NIMS) 200 National Incident Management System (NIMS) 700 National Incident Management System (NIMS) 800 OSHA 10

			WV Welcome
<p>NOTES:</p> <p>1) Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</p> <p>2) EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</p> <p>3) CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</p>			

<p>Law Enforcement Services Career Pathway Standards</p> <ol style="list-style-type: none"> Demonstrate knowledge of appropriate techniques for managing crisis situations in order to maintain public safety. Demonstrate knowledge of protocols and procedures designed for handling and managing domestic violence, motor vehicle traffic stops, explosive and hazardous materials incidents, crime scenes, and evidence collection. Describe and perform protocols and procedures designed to safely transport a person in custody. Understand and demonstrate techniques and protocols for effectively and safely responding to crimes in progress in order to ensure individual and public safety. Execute protocols and procedures involved with juvenile victims and offenders in order to protect their rights. Investigate and document a motor vehicle accident in compliance with prescribed procedures. Evaluate situations that require the use of force and demonstrate the appropriate level of force necessary. Demonstrate the ability to recognize the signs and symptoms of possible child abuse and neglect. Examine and summarize the various law enforcement issues involved in Preparedness and Response Systems for disaster and potential terrorist situations. Demonstrate knowledge of Victims' Rights and procedures for protecting them. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities. 			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
LA1020 Law and Public Safety	<p>1225 Fundamentals of Public Safety Leadership</p> <p>1226 Ethical Issues in Public Safety</p> <p>1039 Practical Applications of Public Safety</p> <p>(+ Specialization)</p>	<p><i>(Must select one):</i></p> <p>1034 Seminar in Corrections</p> <p>1035 Seminar in Law Enforcement</p> <p>1037 Strategic Security and Protection</p> <p>1031 Seminar in Courts and Legal System</p> <p>6044 Forensic Science</p>	<p>Certified Criminal Justice Professional - courses plus work exp. (WV credential with international reciprocity)</p> <p>CPR/AED</p> <p>First Aid</p> <p>OSHA 10</p> <p>WV Welcome</p>

NOTES:

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Legal Services Career Pathway Standards

1. Execute techniques for effective listening in order to manage receipt of orally communicated information delivered in a legal services environment.
2. Write accomplished materials to demonstrate specific academic writing skills desired from professionals in the legal services environment.
3. Model skills associated with the effective application of information technology tools used to perform daily tasks assigned to legal services professionals.
4. Execute the use of legal terminology in order to effectively communicate within the legal services community of practice.
5. Model the technical knowledge and skills required of legal services professionals in order to pursue the full range of careers in the legal services pathway.
6. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
LA1490 Paralegal Assistant	7780 Introduction to the Court Systems and Legal Procedure 7781 Paralegal Skills 1413 Business Computer Applications II – <i>Microsoft IT Excel and Access</i> 1525 Computerized Legal Office Software		Microsoft Office Specialist (MOS)-Access Microsoft Office Specialist (MOS)-Excel Core Microsoft Office Specialist (MOS)-Excel Expert Microsoft Office Specialist (MOS)-Word Core Microsoft Office Specialist (MOS)-Word Expert Microsoft Office Specialist (MOS)-PowerPoint

			Microsoft Office Specialist Master Certificate – 2 Expert/2 Core Exams Digital Literacy (Microsoft Imagine Academy) OSHA 10 WV Welcome
<p>NOTES:</p> <p>1) Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</p> <p>2) EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</p> <p>3) CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</p>			

Manufacturing Career Cluster™ (MA)

<p>Maintenance, Installation, & Repair Career Pathway Standards</p> <ol style="list-style-type: none"> 1. Demonstrate maintenance skills and proficient operation of equipment to maximize manufacturing performance. 2. Demonstrate the safe use of manufacturing equipment to ensure a safe and healthy environment. 3. Diagnose equipment problems and effectively repair manufacturing equipment. 4. Investigate and employ techniques to maximize manufacturing equipment performance. 5. Implement a preventative maintenance schedule to maintain manufacturing equipment, tools and workstations. 6. Implement an effective, predictive and preventive manufacturing equipment maintenance program. 7. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities. 			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
MA1780 Electronics Technician	1666 DC Circuit Concepts 1667 AC Circuit Concepts 1668 Analog Circuits and Systems 1669 Digital and Computer Concepts		Electronics Technicians Association (ETA) CETa OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
MA1870 Industrial Equipment Maintenance	1873 Fundamentals of Industrial Equipment Maintenance		OSHA 10

	1875 Hydraulic and Pneumatic Systems 1871 Electrical Maintenance 1985 Fundamentals of Welding Technology		WV Welcome
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NOTES:

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Manufacturing Production Process Development Career Pathway Standards

1. Produce quality products that meet manufacturing standards and exceed customer satisfaction.
2. Research, design and implement alternative manufacturing processes to manage production of new and/or improved products.
3. Monitor, promote and maintain a safe and productive workplace using techniques and solutions that ensure safe production of products.
4. Implement continuous improvement processes in order to maintain quality within manufacturing production.
5. Develop procedures to create products that meet customer needs.
6. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
MA2235 Advanced Manufacturing (Advanced Career)	1575 AC Advanced Manufacturing I 1576 AC Advanced Manufacturing II 1577 AC Advanced Manufacturing III 1578 AC Advanced Manufacturing IV		OSHA 10 WV Welcome
MA1630 Robotics	1866 Robotics REC 1 1867 Robotics REC 2 (+ Specialization)	<i>(Must select one specialization area and complete two of the specialization courses to be a completer):</i>	Equipment and Engine Training Counsel (EETC)- Small Engine Certification

		Robotics 1868 Robotics REC 3 1869 Robotics REC 4 OR Drones 1887 FAA 107 Ground Operations 1888 FAA 107 Flight Operations	FAA Part 107 Remote Pilot- Small Unmanned Aircraft Systems Certification OSHA 10 WV Welcome
<p>NOTES:</p> <p>1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i></p> <p>2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i></p> <p>3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i></p>			
<p>Production Career Pathway Standards</p> <ol style="list-style-type: none"> 1. Diagnose production process problems and take corrective action to meet production quality standards. 2. Manage safe and healthy production working conditions and environmental risks. 3. Make continuous improvement recommendations based on results of production process audits and inspections. 4. Coordinate work teams when producing products to enhance production process and performance. 5. Demonstrate the safe use of manufacturing equipment. 6. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities. 			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
MA1900 Machine Tool Technology	1903 Fundamentals of Machine Tool Technology 1905 Fundamentals of Machine Processes 1907 Machine Tool Operations 1909 Metal Trades Processes and Applications		National Institute for Metalworking Skills (NIMS) OSHA 10 WV Welcome

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
MA2120 Millwork and Cabinetmaking	2126 Millwork and Cabinetmaking I 2127 Millwork and Cabinetmaking II 2128 Millwork and Cabinetmaking III 2129 Millwork and Cabinetmaking IV		NCCER OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
MA1980 Welding	1862 Welding I 1863 Welding II 1864 Welding III 1865 Welding IV		WV Welders Certifications * SMAW Plate * GMAW Plate * SMAW Pipe * GMAW Pipe NCCER OSHA 10 WV Welcome
<p>NOTES:</p> <p>1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i></p> <p>2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i></p> <p>3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i></p>			

Marketing Career Cluster™ (MK)

Marketing Management Career Pathway Standards

1. Plan, organize and lead marketing staff to achieve business goals.
2. Plan, manage and monitor day-to-day marketing management operations.
3. Plan, manage and organize to meet the requirements of the marketing plan.
4. Access, evaluate and disseminate information to aid in making marketing management decisions.
5. Determine and adjust prices to maximize return and meet customers' perceptions of value.
6. Obtain, develop, maintain and improve a product or service mix in response to market opportunities.
7. Communicate information about products, services, images and/or ideas.

8. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
MK0420 Marketing Management	0422 Marketing Principles 0425 Marketing Applications (+ 2 Specializations)	<i>(Must select two):</i> 1401 Accounting Principles I 1431 Digital Imaging/Multimedia I 1455 Web Page Publishing 0407 Fashion Marketing 0437 Hospitality And Tourism Marketing 0428 Marketing Work Experience/Internship 0441 Real Estate Marketing 0434 Sports, Entertainment & Rec Marketing	Fundamental Marketing Concepts (A*S*K Business Institute) Fundamental Business Concepts (A*S*K Business Institute) Concepts of Entrepreneurship and Management (A*S*K Business Institute) Digital Literacy (Microsoft Imagine Academy) OSHA 10 WV Welcome
<p>NOTES:</p> <p>1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i></p> <p>2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i></p> <p>3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i></p>			

Science, Technology, Engineering & Mathematics Career Cluster™ (ST)

<p>Engineering & Technology Career Pathway Standards</p> <ol style="list-style-type: none"> 1. Use STEM concepts and processes to solve problems involving design and/or production. 2. Display and communicate STEM information. 3. Apply processes and concepts for the use of technological tools in STEM. 4. Apply the elements of the design process. 5. Apply the knowledge learned in STEM to solve problems. 6. Apply the knowledge learned in the study of STEM to provide solutions to human and societal problems in an ethical and legal manner.

7. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
ST2200 Aerospace Engineering (Advanced Career)	1540 AC Aerospace Engineering I 1541 AC Aerospace Engineering II 1542 AC Aerospace Engineering III 1543 AC Aerospace Engineering IV		OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
ST2225 Clean Energy (Advanced Career)	1565 AC Clean Energy I 1566 AC Clean Energy II 1567 AC Clean Energy III 1568 AC Clean Energy IV		OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
ST2175 Energy, Power and Engineered Systems (Advanced Career)	2485 AC Energy, Power and Engineered Systems I 2486 AC Energy, Power and Engineered Systems II 2487 AC Energy, Power and Engineered Systems III 2488 AC Energy, Power and Engineered Systems IV		OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
ST2205 Innovations in Science and Technology (Advanced Career)	1545 AC Innovations in Science and Technology I 1546 AC Innovations in Science and Technology II 1547 AC Innovations in Science and Technology III 1548 AC Innovations in Science and Technology IV		OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
ST2460 Pre-Engineering – Project Lead the Way	2461 Introduction to Engineering Design (PLTW)	(Must select two):	OSHA 10

	2463 Principles of Engineering (PLTW) (+ 2 Specializations)	2468 Aerospace Engineering (PLTW) 2466 Civil Engineering and Architecture (PLTW) 2465 Computer Integrated Manufacturing (PLTW) 2462 Digital Electronics (PLTW) 2464 Engineering Design and Development (PLTW) 2469 Environmental Sustainability (PLTW)	WV Welcome
<p>NOTES:</p> <p>1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i></p> <p>2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i></p> <p>3) <i>CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.</i></p>			

Transportation, Distribution & Logistics Career Cluster™ (TR)

<p>Facility & Mobile Equipment Maintenance Career Pathway Standards</p> <ol style="list-style-type: none"> 1. Develop preventative maintenance plans and systems to keep facility and mobile equipment inventory in operation. 2. Design ways to improve facility and equipment system performance. 3. Demonstrate the effective use of computer based equipment (containing embedded computers or processors) to control electromechanical devices commonly used in conducting work within industry. 4. Manage ongoing customer relationships with both internal and external customer groups in order to maintain ongoing business. 5. Assess and implement measures to maintain safe and healthful working conditions within the organization. 6. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities. 			
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
TR1620 Automotive Technology	1631 Automotive Technology MLR-1 1623 Automotive Technology MLR-2	<i>Select the four courses listed below to complete the Automotive Service Technician (AST):</i>	Student Automotive Service Excellence (ASE) SP2

	1625 Automotive Technology MLR-3 1637 Automotive Technology MLR-4 <i>Maintenance and Light Repair (MLR)</i>	1629 Automotive Technology AST-1 1633 Automotive Technology AST-2 1635 Automotive Technology AST-3 1627 Automotive Technology AST-4	OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
TR1670 Collision Repair Technology	1671 Fundamentals of Collision Repair Technology 1675 Non-Structural Analysis and Damage Repair 1677 Structural Analysis and Damage Repair 1679 Surface Preparation and Refinishing		Student Automotive Service Excellence (ASE) SP2 OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
TR1740 Diesel Equipment Technology	1751 Fundamentals of Diesel Equipment Technology 1744 Electronic Engine Control 1741 Diesel Engine Components 1747 Diesel Support Systems		Student Automotive Service Excellence (ASE) SP2 OSHA 10 WV Welcome
WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
TR1960 Power Equipment Systems	1962 Fundamentals of Power Equipment I 1964 Fundamentals of Power Equipment II 1966 Power Equipment Service I 1968 Power Equipment Service II		Equipment and Engine Training Counsel (EETC)- Small Engine Certification SP2 OSHA 10 WV Welcome
NOTES:			

- 1) *Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.*
- 2) *EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.*
- 3) *CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.*

Transportation Systems / Infrastructure Planning, Management & Regulation Career Pathway Standards

1. Develop plans to maintain and/or improve the transportation infrastructure.
2. Assess, plan and manage the implementation of transportation services.
3. Describe ways to improve the system utilization, flow, safety and environmental performance of transportation systems.
4. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.

WV CTE Program of Study:	Program Required Courses:	Specialization Courses:	Student Certification(s):
TR2215 Global Logistics and Supply Chain Management (Advanced Career)	1555 AC Global Logistics and Supply Chain Management I 1556 AC Global Logistics and Supply Chain Management II 1557 AC Global Logistics and Supply Chain Management III 1558 AC Global Logistics and Supply Chain Management IV		OSHA 10 WV Welcome

NOTES:

- 1) *Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.*
- 2) *EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.*
- 3) *CTE Elective courses for all state-approved programs of study can be located in the Guidance Document of WVBE Policy 2520.13.*

West Virginia Career Cluster (WV)

Career Integrated Experiential Learning Career Pathway Standards

1. Develop skills and practices required for entry-level employment.
2. Demonstrate basic mathematical, reading, writing, critical and creative thinking, decision-making, and problem-solving skills to effectively perform entry-level career tasks.
3. Model positive work behaviors and personal qualities, including displaying a willingness to acquire new knowledge and skills, demonstrating integrity in a work situation, and indicating a willingness to follow rules and procedures.
4. Investigate interpersonal skills, including teamwork, conflict management, and problem solving.

5. Participate in a co-curricular career technical student organization that provides a variety of ongoing school and community-based service projects to enhance leadership opportunities.			
WV CTE Program of Study:	CTE Anchor Course(s):	CIEL Courses:	Student Certification(s):
WV5501 Career Integrated Experiential Learning (CIEL)	To be a CIEL completer, the personalized program of study must contain, at minimum, one required CTE program of study course. Both REQUIRED COURSES and SPECIALIZATION COURSES outlined in the sixteen nationally recognized career clusters listed within this policy may be used to fulfill the required CIEL Anchor course requirement.	To be a CIEL completer, the program of study may not include more than three of the following courses: 0522 Ready to Work 1 0524 Ready to Work 2 0523 Entrepreneurial Preparedness 0520 Work-Based Integration and Transition 1 0521 Work-Based Integration and Transition 2	OSHA 10 ServSafe Food Handlers ServSafe Managers CPR/AED WV Welcome Digital Literacy (Microsoft Imagine Academy) Tooling U Lean Manufacturing Tooling U OSHA Overview
<p>NOTES:</p> <p>1) <i>Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.</i></p> <p>2) <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i></p>			

<p>Individual Work Ready Competencies Career Pathway</p> <ol style="list-style-type: none"> 1. The IWRC is designed to provide some students with Individualized Education Programs (IEPs) who are pursuing a standard high school diploma the opportunity to gain work readiness and occupation ready skills related to CTE career programs of study during high school. 2. All students working toward the IWRC enroll for the four required CTE program of study courses and plan to enter the workforce directly after high school with on-the-job-training, apprenticeship or continued technical training as an adult. 3. Once a student is selected for the IWRC, the CTE instructor, student, parent/guardian and special educators will review the IWRC skill sets to be mastered. The IWRC skill sets will be taken from the WVDE state approved CTE program of study. The Personalized Education Plan (PEP) and IEP will be updated to reflect the IWRC program of study. 4. The student demonstrates the ability to acquire basic/core CTE skills to become employed in an entry level position. 5. A copy of the approved WVDE skill sets must be provided by CTE staff, special educators, student and family of IWRC candidates to assure they understand the program of study.

6. The IEP for the student describes any specially designed instruction, supports or accommodations necessary for student success.
7. Students selected for the IWRC program of study must master the agreed upon CTE skill sets within the state approved WVDE program of study in order to be counted as a state approved CTE completer.
8. **Prerequisites:** Before selecting IWRC, students must have initially selected the State-Approved (CTE) Program of Study option; completed at least two CTE courses in their chosen area of career interest; passed ALL safety exams; demonstrated the ability to acquire basic/core CTE skills at an entry level; were unable to master ALL of the required skill sets associated with their state-approved CTE program of study.

WV CTE Program of Study:	IWRC Program Requirements:	Program Evaluation:	Student Certification(s):
WV5502 Individual Work Ready Competencies (IWRC)	<p>The IWRC selection will be determined at the end of the student's second state approved CTE program of study course. Eligibility will be based on the following:</p> <ul style="list-style-type: none"> • Students must have a current IEP and be pursuing a standard diploma • Students will be provided accommodations and/or supports as indicated in the IEP • Students must pass ALL safety exams with a score of 100% • Student is unable to master ALL required skill sets of the CTE program of study 	<p>The student will follow the state approved CTE program of study, as well as all specialized courses associated with the program that is available at their local CTE center, comprehensive high school, high school or multi-county center. The student will follow the IWRC skill sets established by the IEP team. The student will complete the appropriate technical assessment for the CTE program of study and the CTE portfolio with accommodations or supports as indicated in the IEP.</p>	<p>The IEP team will list the specific skill sets the student has mastered during the program of study.</p> <p>The IWRC student will be eligible to test for all industry credentials upon meeting qualifications.</p>

NOTES:

- 1) *Successful program of study completers will demonstrate their technical skills attainment through the CTE portfolio and state-approved technical assessment processes.*
- 2) *EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment with accommodations and/or supports as indicated in the IEP.*
- 3) *CTE staff must be represented at students' Individualized Education Program (IEP) Team meetings when the student is a prospective CTE participant.*
- 4) *CTE instructors must confirm that they have read the most recent IEP in order to document awareness of students' needs.*

Career Technical Education: Foundational Standards and Courses

CTE Foundational Course Standards

1. Students understand the academic content required for entry into postsecondary education and/or the workforce.
2. Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts.
3. Students understand how to make effective decisions, use career information, and manage personal career plans:
 - (a) explore job qualifications, interests, aptitudes, information, and skills necessary to succeed in a career;
 - (b) understand the scope of career opportunities and the requirements for education, training, and licensure within a career;
 - (c) develop a career plan that is designed to reflect career interests, pathways, and post-secondary possibilities;
 - (d) explore strategies for self-promotion in the interviewing process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.
4. Students utilize career-planning concepts, tools and strategies to explore, obtain and/or develop a career.
5. Students understand the use of technological resources as they apply to career preparedness.
6. Students understand how to develop alternate solutions by integrating critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques.
7. Students demonstrate the proper behaviors associated with workplace etiquette and business processes.
8. Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution.

The following courses are foundational and are considered non-occupational:

Course Name	Course #
Exploration in Agriculture (5-8)	0290
Exploring Business, Marketing and Entrepreneurialship (5-8)	0295
Exploring Health Professions (5-12)	0700
Life Connections (9-12)	0901
Parenting and Strong Families (8-12)	0903
Life Basics (5-8)	0922
Learning for Independence Family and Employment (9-12)	0929
Applied Design-Housing and Interior Design (9-12)	0941
Foundational Food Preparation (9-12)	0954
Applied Design-Fashion (9-12)	0961
Business Prep (5-8)	1404
Keyboarding (5-12)	1441
Gateway Automation and Robotics	1893
Gateway Design and Modeling	1894
Gateway Energy and Environment	1895

Gateway Flight and Space	1896
Gateway Green Architecture	1897
Gateway Magic of Electrons	1898
Gateway Science of Technology	1899
Gateway Medical Detectives	1900
Gateway Computer Science 1	1918
Gateway Computer Science 2	1920
Middle Exploring Technology 6	2406
Middle Exploring Technology 7	2407
Middle Exploring Technology 8	2408
Middle Exploring Technology 9	2409
Touring West Virginia (5-12)	7664
<ul style="list-style-type: none"> ▪ <i>EVERY student must pass ALL safety exams with a score of 100% before having access to available equipment.</i> 	

126CSR44M

POLICY 2520.13, West Virginia College- and Career-Readiness Programs of Study/Standards for Career and Technical Education

COMMENT PERIOD ENDS: September 11, 2017

COMMENT RESPONSE FORM

NOTICE: Comments, as submitted, shall be filed with the West Virginia Secretary of State's Office and open for public inspection and copying for a period of not less than five years.



The following form is provided to assist those who choose to comment on Policy 2520.13, West Virginia College- and Career-Readiness Programs of Study/Standards for Career and Technical Education. Additional sheets may be attached, if necessary.

Name: _____ Organization: _____

Title: _____

City: _____ State: _____

Please check the box below that best describes your role.

- | | | |
|-------------------------------------------------------|----------------------------------------------|--------------------------------------------|
| <input type="checkbox"/> School System Superintendent | <input type="checkbox"/> School System Staff | <input type="checkbox"/> Parent/Family |
| <input type="checkbox"/> Principal | <input type="checkbox"/> Teacher | <input type="checkbox"/> Business/Industry |
| <input type="checkbox"/> Professional Support Staff | <input type="checkbox"/> Service Personnel | <input type="checkbox"/> Community Member |



COMMENTS/SUGGESTIONS
§126-44M-1. General.
§126-44M-2. Purpose.

126CSR44M

§126-44M-3. Incorporated by Reference.

§126-44M-4. Summary of the West Virginia College- and Career-Readiness Programs of Study/Content Standards for Career and Technical Education.

§126-44M-5. Severability.

West Virginia College- and Career-Readiness Programs of Study/Content Standards for Career and Technical Education.

Please identify standard prior to comment.

Please direct all comments to:

Kathy D'Antoni, Associate Superintendent
Division of Technical Education and Governor's Economic Initiatives
West Virginia Department of Education
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