

Career and Technical Education – State Approved Clusters, Pathways, Embedded Credit, and Programs of Study – Alphabetical

Program of Study	Cluster #	Cluster	Pathway	Academic Embedded Credit OR Course Substitution (See Section Below)
Accounting	BM1410	Business Management and Administration	Business Finance and Accounting	
Advanced Manufacturing (Advanced Career)	MA2235	Manufacturing	Manufacturing Production Process Development	
Aerospace Engineering (Advanced Career)	ST2200	Science, Technology, Engineering and Math	Engineering & Technology	
Aesthetics	HU2315	Human Services	Personal Care Services	
Agribusiness Systems	AG0120	Agriculture, Food and Natural Resources	Agribusiness Systems	
Allied Health	HE0715	Health Science	Therapeutic Services	Transition ELA for Seniors (Embedded Credit)
Animal Processing	AG0230	Agriculture, Food and Natural Resources	Food Products & Processing Systems	
Animal Systems	AG0220	Agriculture, Food and Natural Resources	Animal Systems	
Automotive Technology	TR1620	Transportation, Distribution and Logistics	Facility & Mobile Equipment Maintenance	Transition Math for Seniors (Embedded Credit)
Baking and Pastry	HO1015	Hospitality and Tourism	Restaurants & Food/ Beverage Services	
Barbering	HU2305	Human Services	Personal Care Services	
Barbering Apprenticeship	HU2050	Human Services	Personal Care Services	
Biomedical Science (PLTW)	HE0780	Health Science	Biotechnology Research & Development	Transition ELA for Seniors (Embedded Credit)
Broadcast Journalism	AV1682	Arts, A/V Technology and Communications	Journalism & Broadcasting	
Broadcasting Technology	AV1680	Arts, A/V Technology and Communications	Journalism & Broadcasting	
Building Maintenance and Operations	AR1800	Architecture and Construction	Maintenance/Operations	Transition Math for Seniors (Embedded Credit)
Business Finance	FI1430	Finance	Business Finance	
Career and Work Skills Training (CWST)	BM0510	Business Management and Administration	Administrative Support	

Program of Study	Cluster #	Cluster	Pathway	Academic Embedded Credit OR Course Substitution (See Section Below)
Career Integrated Experiential Learning (CIEL)	WV5501	West Virginia Specific Career	Career Integrated Experiential Learning	
Careers in Education	ED1300	Education and Training	Teaching/Training	Transition ELA for Seniors (Embedded Credit)
Carpentry	AR1820	Architecture and Construction	Construction	Transition Math for Seniors (Embedded Credit)
CASE Animal Science	AG0221	Agriculture, Food and Natural Resources	Animal Systems	3rd Science - ANIMAL AND PLANT BIOTECHNOLOGY Course (0164)
CASE Plant Science	AG0215	Agriculture, Food and Natural Resources	Plant Systems	3rd Science - ANIMAL AND PLANT BIOTECHNOLOGY Course (0164) 3rd Science - PRINCIPLES OF AGRICULTURAL SCIENCE- PLANT Course (0166)
Chemical Energy and Mechanical Technologies	AG2185	Agriculture, Food and Natural Resources	Natural Resources Systems	
Cisco Networking Academies	IT1640	Information Technology	Network Systems	
Clean Energy (Advanced Career)	ST2225	Science, Technology, Engineering and Math	Engineering & Technology	
Coding, App and Game Design	IT1442	Information Technology	Interactive Media	
Collision Repair Technology	TR1670	Transportation, Distribution and Logistics	Facility & Mobile Equipment Maintenance	
Computer Science (Project Lead the Way)	IT2215	Information Technology	Computer Programming & Software Development	
Computer Systems Repair Technology	IT1680	Information Technology	Network Systems	
Diagnostics Services	HE0718	Health Science	Diagnostic Services	Transition ELA for Seniors (Embedded Credit)
Diesel Equipment Technology	TR1740	Transportation, Distribution and Logistics	Facility & Mobile Equipment Maintenance	

Program of Study	Cluster #	Cluster	Pathway	Academic Embedded Credit OR Course Substitution (See Section Below)
Drafting	AR1720	Architecture and Construction	Design/Pre-construction	<ul style="list-style-type: none"> Transition Math for Seniors (Embedded Credit) Art - Drafting Techniques course (1727)
Early Childhood Education	HU1000	Human Services	Early Childhood Development & Services	Transition ELA for Seniors (Embedded Credit)
Electrical Technician	AR1760	Architecture and Construction	Construction	Transition Math for Seniors (Embedded Credit)
Electronics Technician	MA1780	Manufacturing	Maintenance, Installation, & Repair	
Emergency and Firefighting Management Services	LA2200	Law, Public Safety, Corrections and Security	Emergency and Firefighting Management Services	Transition Math for Seniors (Embedded Credit)
Energy, Power and Engineered Systems (Advanced Careers)	ST2175	Science, Technology, Engineering and Math	Engineering & Technology	<ul style="list-style-type: none"> Transition Math for Seniors (Embedded Credit) Advanced Math Modeling (Embedded Credit) 3rd Science
Environmental Technology and Management	AG2190	Agriculture, Food and Natural Resources	Natural Resources Systems	
Food Science and Nutrition	HE1215	Health Science	Support Services	
Forest Industry	AG0130	Agriculture, Food and Natural Resources	Natural Resources Systems	
Global Logistics and Supply Chain Management (Advance Career)	TR2215	Transportation, Distribution and Logistics	Transportation Systems / Infrastructure Planning, Management & Regulation	
Graphic Communications	AV1830	Arts, A/V Technology and Communications	Printing Technology	
Graphic Design	AV1850	Arts, A/V Technology and Communications	Visual Arts	Art - Fundamentals of Graphic Design course (1857) OR Advanced Graphic Design (1859)

Program of Study	Cluster #	Cluster	Pathway	Academic Embedded Credit OR Course Substitution (See Section Below)
Hair Stylist	HU2310	Human Services	Personal Care Services	
Health and Safety Leadership	HU2320	Human Services	Family & Community Services	
Health Informatics (Advanced Career)	HE2220	Health Science	Health Informatics	
Health Informatics-Pilot	HE0742	Health Science	Health Informatics	Transition ELA for Seniors (Embedded Credit)
Hospitality and Tourism Concentration	HO1210	Hospitality and Tourism	Travel & Tourism	
HVAC Technician	AR1600	Architecture and Construction	Maintenance/Operations	Transition Math for Seniors (Embedded Credit)
Individual Work Readiness Certificate (IWRC)	WV5502	West Virginia Specific Career	Individual Work Readiness Certificate	
Industrial Equipment Maintenance	MA1870	Manufacturing	Maintenance, Installation, & Repair	
Informatics (Advanced Career)	IT2210	Information Technology	Information Support & Services	
Information Management/Microsoft Computer Applications Specialist	IT1450	Information Technology	Interactive Media	
Innovations in Science and Technology (Advanced Career)	ST2205	Science, Technology, Engineering and Math	Engineering & Technology	
JROTC	GO1070	Government and Public Administration	National Security	PE – Completion of JROTC I and JROTC II
Law and Public Safety	LA1020	Law, Public Safety, Corrections and Security	Law Enforcement Services	Transition ELA for Seniors (Embedded Credit for Law Enforcement)
Machine Tool Technology	MA1900	Manufacturing	Production	Transition Math for Seniors (Embedded Credit)
Management and Administrative Support	BM1465	Business Management and Administration	Administrative Support	
Marketing Management	MK0420	Marketing	Marketing Management	Transition ELA for Seniors (Embedded Credit)
Masonry	AR1910	Architecture and Construction	Construction	
Metals Technology	MA2110	Manufacturing	Production	
Millwork and Cabinetmaking	MA2120	Manufacturing	Production	

Program of Study	Cluster #	Cluster	Pathway	Academic Embedded Credit OR Course Substitution (See Section Below)
Multimedia Publishing	AV1684	Arts, A/V Technology and Communications	Journalism & Broadcasting	
Nail Technology	HU2055	Human Services	Personal Care Services	
Natural Resources Management	AG0170	Agriculture, Food and Natural Resources	Natural Resources Systems	
Paralegal Assistant	LA1490	Law, Public Safety, Corrections and Security	Legal Services	
Personal Fitness and Wellness Training	HE1095	Health Science	Support Services	
Pet Grooming	AG0223	Agriculture, Food and Natural Resources	Animal Systems	
Plant Systems	AG0210	Agriculture, Food and Natural Resources	Plant Systems	Art –Floriculture course (0213)
Plumbing	AR2140	Architecture and Construction	Construction	
Power Equipment Systems	TR1960	Transportation, Distribution and Logistics	Facility & Mobile Equipment Maintenance	
Power, Structural and Technical Systems	AG0110	Agriculture, Food and Natural Resources	Power, Structural & Technical Systems	
Pre-Engineering – Project Lead the Way	ST2460	Science, Technology, Engineering and Math	Engineering & Technology	Advanced Math Modeling (Embedded Credit) 3rd Science - PRINCIPLES OF ENGINEERING Course 2463 OR HUMAN BODY SYSTEMS Course 0766
Prevention Support Specialist	HU1015	Human Services	Counseling & Mental Health Services	
ProStart Restaurant Management	HO1010	Hospitality and Tourism	Restaurants & Food/Beverage Services	
Rehabilitation Specialist	HU1080	Human Services	Family & Community Services	
Robotics	MA1630	Manufacturing	Manufacturing Production Process Development	
Social Services Assistant	HU1025	Human Services	Family & Community Services	

Program of Study	Cluster #	Cluster	Pathway	Academic Embedded Credit OR Course Substitution (See Section Below)
STEM	ST1790	Science, Technology, Engineering and Math	Engineering & Technology	
Support Services	HE0728	Health Science	Support Services	Transition ELA for Seniors (Embedded Credit)
Taxidermy	AG0224	Agriculture, Food and Natural Resources	Animal Systems	
Therapeutic Services	HE0723	Health Science	Therapeutic Services	Transition ELA for Seniors (Embedded Credit)
Transportation Technology	TR1625	Transportation, Distribution and Logistics	Transportation Systems / Infrastructure Planning, Management & Regulation	
Turf and Landscape Systems	AG0214	Agriculture, Food and Natural Resources	Plant Systems	
Virtual Accounting	BM1410	Business Management and Administration	Business Finance and Accounting	
Virtual Animal Science	AG0222	Agriculture, Food and Natural Resources	Animal Systems	
Virtual Childcare	HU2322	Human Services	Family & Community Services	
Virtual Counseling and Mental Health	HU2323	Human Services	Counseling & Mental Health Services	
Virtual Criminology	LA1021	Law, Public Safety, Corrections and Security	Law Enforcement Services	
Virtual Family Services	HU2321	Human Services	Family & Community Services	
Virtual Health and Safety Leadership	HU2320	Human Services	Family & Community Services	
Virtual Management and Administrative Support	BM1465	Business Management and Administration	Administrative Support	
Virtual Personal fitness and Wellness Training	HE1095	Health Science	Support Services	
Virtual Prevention Support Specialist	HU1015	Human Services	Counseling & Mental Health Services	
Virtual Simulation and Game Development	IT1445	Information Technology	Interactive Media	
Virtual Support Services	HE0728	Health Science	Support Services	

Program of Study	Cluster #	Cluster	Pathway	Academic Embedded Credit OR Course Substitution (See Section Below)
Virtual Wellness Coaching	HU1016	Human Services	Counseling & Mental Health Services	
Welding	MA1980	Manufacturing	Production	Transition Math for Seniors (Embedded Credit) Art - Ornamental Metalwork course (1982)

Career and Technical Education – State Approved Clusters, Pathways and Programs of Study – Cluster/Pathway

Agriculture, Food and Natural Resources

Agribusiness Systems

Agribusiness Systems - AG0120

Animal Systems

- Animal Systems - AG0220
- CASE Animal Science - AG0221
- Pet Grooming - AG0223
- Taxidermy - AG0224
- Virtual Animal Science - AG0222

Food Products & Processing Systems

Animal Processing - AG0230

Natural Resources Systems

- Chemical Energy and Mechanical Technologies - AG2185
- Environmental Technology and Management - AG2190
- Forest Industry - AG0130
- Natural Resources Management - AG0170

Plant Systems

- CASE Plant Science - AG0215
- Plant Systems - AG0210
- Turf and Landscape Systems - AG0214

Power, Structural & Technical Systems

Power, Structural and Technical Systems - AG0110

Architecture and Construction

Construction

Carpentry - AR1820

Electrical Technician - AR1760
Masonry - AR1910
Plumbing - AR2140

Design/Pre-construction

Drafting - AR1720

Maintenance/Operations

Building Maintenance and Operations - AR1800
HVAC Technician - AR1600

Arts, A/V Technology and Communications

Journalism & Broadcasting

Broadcast Journalism - AV1682
Broadcasting Technology - AV1680
Multimedia Publishing - AV1684

Printing Technology

Graphic Communications - AV1830

Visual Arts

Graphic Design - AV1850

Business Management and Administration

Administrative Support

Career and Work Skills Training (CWST) - BM0510
Management and Administrative Support - BM1465
Virtual Management and Administrative Support - BM1465

Business Finance and Accounting

Accounting - BM1410
Virtual Accounting - BM1410

Education and Training

Teaching/Training

Careers in Education - ED1300

Finance

Business Finance

Business Finance - FI1430

Government and Public Administration

National Security

JROTC - GO1070

Health Science

Biotechnology Research & Development

Biomedical Science (PLTW) - HE0780

Diagnostic Services

Diagnostics Services - HE0718

Health Informatics

Health Informatics (Advanced Career) - HE2220
Health Informatics-Pilot - HE0742

Support Services

- Food Science and Nutrition - HE1215
- Personal Fitness and Wellness Training - HE1095
- Support Services - HE0728
- Virtual Personal fitness and Wellness Training - HE1095
- Virtual Support Services - HE0728

Therapeutic Services

- Allied Health - HE0715
- Therapeutic Services - HE0723

Hospitality and Tourism

Restaurants & Food/ Beverage Services

- Baking and Pastry - HO1015
- ProStart Restaurant Management - HO1010

Travel & Tourism

- Hospitality and Tourism Concentration - HO1210

Human Services

Counseling & Mental Health Services

- Prevention Support Specialist - HU1015
- Virtual Counseling and Mental Health - HU2323
- Virtual Prevention Support Specialist - HU1015
- Virtual Wellness Coaching - HU1016

Early Childhood Development & Services

- Early Childhood Education - HU1000

Family & Community Services

- Health and Safety Leadership - HU2320
- Rehabilitation Specialist - HU1080
- Social Services Assistant - HU1025
- Virtual Childcare - HU2322
- Virtual Family Services - HU2321
- Virtual Health and Safety Leadership - HU2320

Personal Care Services

- Aesthetics - HU2315
- Barbering - HU2305
- Barbering Apprenticeship - HU2050
- Hair Stylist - HU2310
- Nail Technology - HU2055

Information Technology

Computer Programming & Software Development

- Computer Science (Project Lead the Way) - IT2215

Information Support & Services

- Informatics (Advanced Career) - IT2210

Interactive Media

- Coding, App and Game Design - IT1442

Information Management/Microsoft Computer Applications Specialist - IT1450
Virtual Simulation and Game Development - IT1445

Network Systems

Cisco Networking Academies - IT1640
Computer Systems Repair Technology - IT1680

Law, Public Safety, Corrections and Security

Emergency and Firefighting Management Services

Emergency and Firefighting Management Services - LA2200

Law Enforcement Services

Law and Public Safety - LA1020
Virtual Criminology - LA1021

Legal Services

Paralegal Assistant - LA1490

Manufacturing

Maintenance, Installation, & Repair

Electronics Technician - MA1780
Industrial Equipment Maintenance - MA1870

Manufacturing Production Process Development

Advanced Manufacturing (Advanced Career) - MA2235
Robotics - MA1630

Production

Machine Tool Technology - MA1900
Metals Technology - MA2110
Millwork and Cabinetmaking - MA2120
Welding - MA1980

Marketing

Marketing Management

Marketing Management - MK0420

Science, Technology, Engineering and Math

Engineering & Technology

Aerospace Engineering (Advanced Career) - ST2200
Clean Energy (Advanced Career) - ST2225
Energy, Power and Engineered Systems (Advanced Careers) - ST2175
Innovations in Science and Technology (Advanced Career) - ST2205
Pre-Engineering – Project Lead the Way - ST2460
STEM - ST1790

Transportation, Distribution and Logistics

Facility & Mobile Equipment Maintenance

Automotive Technology - TR1620
Collision Repair Technology - TR1670
Diesel Equipment Technology - TR1740
Power Equipment Systems - TR1960

Transportation Systems / Infrastructure Planning, Management & Regulation

Global Logistics and Supply Chain Management (Advance Career) - TR2215

Transportation Technology - TR1625

West Virginia Specific Career

Career Integrated Experiential Learning

Career Integrated Experiential Learning (CIEL) - WV5501

Individual Work Readiness Certificate