

61v Michigan Career and Technical Education (CTE) Expansion Grant

Appropriate Endorsements for State-Approved CTE Middle School Cluster Programs

All teachers in a state-approved middle school CTE program must be credentialed with at least one of the following to be assigned to teach the courses within a state-approved CTE middle school cluster program.

- Michigan teaching certificate with any endorsement at the grade level in which the course is offered
- Michigan teaching certificate with a CTE Classification of Instructional Program (CIP) code endorsement aligned to the cluster.
- Annual Career Authorization (ACA) with a CIP code aligned to the cluster
 - The use of an Annual Career Authorization (ACA) to teach a middle school cluster program does not grant permission to teach all CIP codes within that cluster at the high school level. High school instruction requires appropriate CIP-specific endorsements or credentials as defined by state policy.

Additional Requirement:

For any course that involves the use of specialized equipment associated with a CIP code for which the instructor does not hold a specific endorsement, the instructional staff must complete and document focused training on the safe and effective use of the CIP-specific equipment prior to assignment.

Advanced Manufacturing (M48)

The Advanced Manufacturing Career Cluster blends innovative technologies and practices to enhance design and production. It covers areas such as engineering, research and development, automation and artificial intelligence, equipment maintenance, safety protocols, and quality control. This Cluster aims to increase efficiency, reduce waste, ensure safety, and produce high-quality goods, driving the industry's growth and adapting to modern demands.

CIP Code	CIP Code Name
14.4201	Mechatronics
15.0000	Engineering Technology
15.1306	Mechanical Drafting
47.0101	Electrical/Electronics Equipment Installation and Repair
48.0501	Machine Tool Technology/Machinist
48.0508	Welding, Brazing and Soldering

Agriculture (M01)

The Agriculture Career Cluster concentrates on scientific advancement of agriscience, cultivation, processing, and distribution of agricultural products, employing advanced technologies and sustainable practices to optimize global food systems. This Cluster also supports other plant- and animal-based industries including regenerative agriculture, sustainable logging, and fisheries. This Cluster has meaningful connections with the Energy and Natural Resources Cluster, highlighting a symbiotic relationship that emphasizes stewardship and resilient communities.

CIP Code	CIP Code Name
01.0000	Agriculture, Agricultural Operations and Related Sciences
01.0601	Applied Horticulture and Horticultural Operations
01.0903	Animal Health & Veterinary Sciences
03.0000	Natural Resources and Conservation
26.1201	Biotechnology

Arts, Entertainment, & Design (M50)

The Arts, Entertainment, & Design Career Cluster combines creative roles in visual and performing arts, film, journalism, fashion, interior design, and creative technologies. This Cluster focuses on creating, producing, and sharing artistic and design work across multiple platforms, aiming to entertain, inform, beautify, and inspire.

CIP Code	CIP Code Name
10.0202	Radio & Television Broadcasting Technology
10.0301	Graphics and Printing Technology and Communications
19.0605	Home Furnishings Equipment Installers and Consultants
19.0906	Fashion Design
50.0101	Visual & Performing Arts

Construction (M46)

The Construction Career Cluster focuses on professions involved in designing, planning, managing, and executing projects in the built environment. It emphasizes sustainable building practices to ensure that structures are both environmentally responsible and resilient. Careers in this Cluster are pivotal in creating durable infrastructure that meets present needs without compromising future generations' ability to meet their own, covering a range of roles from architects and engineers to construction managers and skilled tradespeople.

CIP Code	CIP Code Name
15.1301	Drafting & Design Technology/Architectural
46.0000	Construction Trades
46.0301	Electrical and Power Transmission Installation
46.0503	Plumbing Technology
47.0201	Heating, Air Conditioning, Ventilation and Refrigeration
47.0399	Heavy/Industrial Equipment Maintenance Technologies
48.0701	Woodworking General

Digital Technology (M11)

The Digital Technology Career Cluster focuses on developing digital systems for communication and data storage using critical technologies such as artificial intelligence (AI), data analytics, and cybersecurity. This Cluster builds skills necessary for all careers to navigate and lead in the constantly evolving tech landscape and drives innovation across all industries to tackle complex challenges and opportunities in communities and economies.

CIP Code	CIP Code Name
11.0201	Computer Programming/Programmer
11.0801	Digital/Multimedia and Information Resources Design
11.0901	Computer Systems Networking and Telecommunications
11.1001	System Administration/Administrator
11.1003	Computer and Information Systems Security/Information Assurance

Education (M13)

The Education Career Cluster spans careers aimed at fostering learning from early childhood to adulthood, including teaching, instructional design, counseling services, community engagement, learner support, and educator training. This Cluster emphasizes quality education standards and lifelong learning, preparing individuals for success through all life stages by nurturing knowledge, skills, and critical thinking and encouraging personal and societal growth in a constantly evolving world.

CIP Code	CIP Code Name
13.0000	Education General

Energy and Natural Resources (M57)

The Energy & Natural Resources Career Cluster spans careers in traditional and renewable fuel production, power generation and energy conversion, utilities, environmental preservation, ecological research, and resource extraction. These industries focus on efficient and responsible resource management, including conservation, transmission, distribution and storage, to minimize environmental impacts and meet global energy needs. Careers in this Cluster are dedicated to creating a sustainable future, innovating cleaner energy solutions, and preserving our planet's natural resources for generations to come.

CIP Code	CIP Code Name
NA	No aligned CIP codes

Financial Services (M58)

The Financial Services Career Cluster encompasses careers in managing and advising financial transactions, including banking, lending, corporate finance, debt management, accounting, insurance, and real estate. These careers contribute to economic stability and growth by supporting the financial health of individuals and organizations.

CIP Code	CIP Code Name
52.0800	Finance and Financial Management Services
52.1701	Insurance

Healthcare & Human Services (M51)

The Healthcare & Human Services Career Cluster promotes whole health in individuals and communities through a diverse array of services. This sector includes technical, mental, and therapeutic services and personal care, supported by medical and social sciences. By addressing social determinants of health and leveraging health data and science, this Cluster aims to enhance the overall health and resilience of individuals, families, and communities.

CIP Code	CIP Code Name
26.0102	Biomedical Sciences, General
51.0000	Health Sciences/Allied Health/Health Sciences, General
51.1000	Clinical/Medical Laboratory Science/Research and Allied Professions

Hospitality, Events & Tourism (M12)

The Hospitality, Events, & Tourism Career Cluster encompasses a broad range of services and experiences related to food and beverage, lodging, travel, events, and conferences. This Cluster focuses on delivering quality customer service, memorable experiences, and seamless logistics to cater to the needs and preferences of guests, tourists, and event participants. The Cluster is characterized by its diversity, including everything from luxury hotels and international travel to local dining, cultural events, and business conferences, aiming to enhance the overall experience of visitors and attendees.

CIP Code	CIP Code Name
12.0500	Cooking and Related Culinary Arts, General
52.0901	Hospitality Administration/Management, General

Management & Entrepreneurship (M52)

The Management & Entrepreneurship Career Cluster involves skills and occupations that are essential across all industries, focusing on business administration, operations optimization, strategic planning, workforce management, and entrepreneurship. It merges key areas such as data management and analysis, human resources, general operations, administrative support, project management, and organizational leadership. This Cluster ensures that businesses across all industries efficiently meet their goals, adapt to market changes, and maintain competitive advantage. By emphasizing entrepreneurship, this Cluster supports the creation of new ventures, driving economic growth and innovation and making it a cornerstone of modern economies.

CIP Code	CIP Code Name
52.0299	Business Administration Management and Operations

Marketing & Sales (M56)

The Marketing & Sales Career Cluster focuses on promoting products, understanding consumer needs, engaging with communities, and driving sales. It integrates digital marketing, data analysis, brand promotion, customer relationship management, strategic communications, human-centered design, and retail strategies to build strong customer connections and support business growth. This Cluster is essential in all industries for creating value, effectively reaching and engaging target audiences, and achieving commercial success in a competitive marketplace.

CIP Code	CIP Code Name
52.1999	Specialized Merchandising, Sales, and Marketing Operations, Other

Public Service & Safety (M43)

The Public Service & Safety Career Cluster encompasses roles in local, state, and federal government; legal and justice systems; security; and military operations, all aimed at promoting civic responsibility and ensuring the well-being, security, functionality, and resilience of communities, states, and countries.

CIP Code	CIP Code Name
43.0100	Public Safety/Protective Services

Supply Chain & Transportation (M47)

The Supply Chain & Transportation Career Cluster encompasses the transfer, coordination, and management of goods from production to consumption, ensuring efficient movement across various modes of transportation including air, ground, and water, as well as maintenance of the respective transport modes. This Cluster integrates logistics and distribution networks to facilitate the seamless flow of materials and products, playing a crucial role in global commerce, economic development, and community health.

CIP Code	CIP Code Name
47.0603	Collision Repair Technician
47.0604	Automobile Technician
47.0606	Small Engine & Related Equipment Repair
47.0607	Airframe Technology
47.0608	Power Plant Technology (Aircraft)
47.0609	Avionics Maintenance Technology
47.0613	Medium/Heavy Truck Technician
49.0101	Aeronautics/Aviation/Aerospace Science and Technology
49.0102	Airline/Commercial/Professional Pilot and Flight Crew