Iowa Career and Technical Education CIP Codes

The following specific **classification of instructional programs (**CIP**)** codes should be used for Iowa **career and technical education (CTE)** approved programs. These CIP codes are to be used when reporting into the Secondary CTE Reporting Application (SCTERA). These codes are taken from the National Center for Educational Statistics Classification of Instructional Programs (CIP) manual.

The Bureau of Community Colleges and Postsecondary Readiness has selected this subset of CIP codes that are appropriate for secondary-level **CTE** programs. The list is provided in alphabetical order by CTE content area. Districts should select the appropriate CIP code based on the courses taught in a specific pathway, matching those courses to the CIP description.

Programs identified as a Model Program of Study have been developed as a starting point for school districts, new teachers and other educational stakeholders to view program examples that may serve as guideposts for new program implementation with fidelity. These model programs are not to take the place of high achieving CTE programming that is in compliance with current state and federal operation requirements, but rather to be best utilized by districts looking to create additional pathways or make updates to existing ones. Model programs may also be helpful to advisory committees when looking to make suggestions to course alignment.

If there are questions in regards to the pathway or you do not see your program on the list, contact the CTE team at 515-242-5034 or cte@iowa.gov.

Agriculture, Food and Natural Resources

Program of Study	CIP Code	Description
Agriculture, General **Model Program of Study**	01.0000	A program that focuses on the general principles and practice of agricultural research and production and that may prepare individuals to apply this knowledge to the solution of practical agricultural problems. Includes instruction in basic animal, plant, and soil science; animal husbandry and plant cultivation; soil conservation; and agricultural operations such as farming, ranching, and agricultural business.
Agricultural Business and Management	01.0101	A general program that focuses on modern business and economic principles involved in the organization, operation, and management of agricultural enterprises.
Agricultural Mechanization **Model Program of Study**	01.0201	A program that generally prepares individuals to sell, select, and service agricultural or agribusiness technical equipment and facilities, including computers, specialized software, power units, machinery, equipment structures, and utilities. Includes instruction in agricultural power systems, planning and selecting materials for the construction of support facilities, mechanical practices associated with irrigation and water conservation, erosion control, and agricultural data processing systems.
Applied Horticulture / Horticulture Operations, General	01.0601	A program that focuses on the general production and processing of domesticated plants, shrubs, flowers, foliage, trees, groundcovers, and related plant materials; the management of technical and business operations connected with horticultural services; and the basic scientific principles needed to understand plants and their management and care.

Program of Study	CIP Code	Description
Animal Sciences, General **Model Program of Study**	01.0901	A general program that focuses on the scientific principles that underlie the breeding and husbandry of agricultural animals, and the production, processing, and distribution of agricultural animal products. Includes instruction in the animal sciences, animal husbandry and production, and agricultural and food products processing.
Food Science **Model Program of Study**	01.1001	A program that focuses on the application of biological, chemical, and physical principles to the study of converting raw agricultural products into processed forms suitable for direct human consumption, and the storage of such products. Includes instruction in applicable aspects of the agricultural sciences, human physiology and nutrition, food chemistry, agricultural products processing, food additives, food preparation and packaging, food storage and shipment, and related aspects of human health and safety including toxicology and pathology.
Natural Resources/Conservation, General **Model Program of Study**	03.0101	A general program that focuses on the studies and activities relating to the natural environment and its conservation, use, and improvement. Includes instruction in subjects such as climate, air, soil, water, land, fish and wildlife, and plant resources; in the basic principles of environmental science and natural resources management; and the recreational and economic uses of renewable and nonrenewable natural resources.
Plant Sciences, General **Model Program of Study**	01.1101	A general program that focuses on the scientific principles that underlie the breeding, cultivation, and production of agricultural plants, and the production, processing, and distribution of agricultural plant products. Includes instruction in the plant sciences, crop cultivation and production, and agricultural and food products processing.
Other CIP Codes - As needed	01.XXXX	Contact the Agriculture Education Consultant for using a program CIP code that does not fit above.

Applied Sciences, Technology, Engineering, and Manufacturing

Program of Study	CIP Code	Description
Autobody/Collision and Repair Technology Technician **Model Program of Study**	47.0603	A program that prepares individuals to apply technical knowledge and skills to repair, reconstruct and finish automobile bodies, fenders, and external features. Includes instruction in structure analysis, damage repair, non-structural analysis, mechanical and electrical components, plastics and adhesives, painting and refinishing techniques, and damage analysis and estimating.
Automobile/Automotive Mechanics Technology/Technician **Model Program of Study**	47.0604	A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of automobiles. Includes instruction in brake systems, electrical systems, engine performance, engine repair, suspension and steering, automatic and manual transmissions and drive trains, and heating and air condition systems.
Construction Trades General **Model Program of Study**	46.0000	A program that generally prepares individuals to apply technical knowledge and skills in the building, inspecting, and maintaining of structures and related properties. May include instruction in masonry, carpentry, electrical and power transmission installation, building/construction finishing, management, inspection and other construction-related applications.

Program of Study	CIP Code	Description
Diesel Mechanics Technology/Technician	47.0605	A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain diesel engines in vehicles such as automobiles, buses, ships, trucks, railroad locomotives, and construction equipment; as well as stationary diesel engines in electrical generators and related equipment.
Drafting/Design Engineering Technologies/Technician **Model Program of Study**	15.1301	A program that prepares individuals to generally apply technical skills to create working drawings and computer simulations for a variety of applications. Includes instruction in specification interpretation, dimensioning techniques, drafting calculations, material estimation, technical communications, computer applications, and interpersonal communications.
Electrician **Model Program of Study**	46.0302	A program that prepares individuals to apply technical knowledge and skills to install, operate, maintain, and repair electric apparatus and systems such as residential, commercial, and industrial electric-power wiring; and DC and AC motors, controls, and electrical distribution panels. Includes instruction in the principles of electronics and electrical systems, wiring, power transmission, safety, industrial and household appliances, job estimation, electrical testing and inspection, and applicable codes and standards.
Engineering Technologies/Technicians, General	15.0000	A program that generally prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in a wide variety of projects. Includes instruction in various engineering support functions for research, production, and operations, and applications to specific engineering specialties.
Manufacturing Engineering Technology **Model Program of Study**	15.0613	A program that prepares individuals to apply basic engineering principles and technical skills to the identification and resolution of production problems in the manufacture of products. Includes instruction in machine operations, production line operations, engineering analysis, systems analysis, instrumentation, physical controls, automation, computer-aided manufacturing (CAM), manufacturing planning, quality control, and informational infrastructure.
Welding Technology/Welder **Model Program of Study**	48.0508	A program that prepares individuals to apply technical knowledge and skills to join or cut metal surfaces. Includes instruction in arc welding, resistance welding, brazing and soldering, cutting, high-energy beam welding and cutting, solid state welding, ferrous and non-ferrous materials, oxidation-reduction reactions, welding metallurgy, welding processes and heat treating, structural design, safety, and applicable codes and standards.
Other CIP Codes - As needed	XX.XXXX	Contact the Applied Sciences, Technology, Engineering, and Manufacturing Education Consultant for using a program CIP code that does not fit above.

Business, Finance, Marketing and Management

Program of Study	CIP Code	Description
Accounting and Finance **Model Program of Study**	52.0304	An integrated or combined program in accounting and finance that prepares individuals to function as accountants and financial managers or analysts.
Business Administration and Management, General **Model Program of Study**	52.0201	A program that generally prepares individuals to plan, organize, direct, and control the functions and processes of a firm or organization. Includes instruction in management theory, human resources management and behavior, accounting and other quantitative methods, purchasing and logistics, organization and production, marketing, and business decision-making.
Business/Commerce, General	52.0101	A program that focuses on the general study of business, including the processes of interchanging goods and services (buying, selling and producing), business organization, and accounting as used in profit-making and nonprofit public and private institutions and agencies. The programs may prepare individuals to apply business principles and techniques in various occupational settings.
Entrepreneurship/Entrepreneurial Studies **Model Program of Study**	52.0701	A program that generally prepares individuals to perform development, marketing and management functions associated with owning and operating a business.
Marketing/Marketing Management, General **Model Program of Study**	52.1401	A program that generally prepares individuals to undertake and manage the process of developing consumer audiences and moving products from producers to consumers. Includes instruction in buyer behavior and dynamics, principle of marketing research, demand analysis, cost-volume and profit relationships, pricing theory, marketing campaign and strategic planning, market segments, advertising methods, sales operations and management, consumer relations, retailing, and applications to specific products and markets.

Health Science

Program of Study	CIP Code	Description
Emergency Medical Technology/Technician (EMT Paramedic) **Model Program of Study**	51.0904	A program that prepares individuals, under the remote supervision of physicians, to recognize, assess, and manage medical emergencies in prehospital settings and to supervise Ambulance personnel. Includes instruction in basic, intermediate, and advanced EMT procedures; emergency surgical procedures; medical triage; rescue operations; crisis scene management and personnel supervision; equipment operation and maintenance; patient stabilization, monitoring, and care; drug administration; identification and preliminary diagnosis of diseases and injuries; communication and computer operations; basic anatomy, physiology, pathology, and toxicology; and professional standards and regulations.
Health Services/Allied Health/Health Sciences, General **Model Program of Study**	51.0000	A general, introductory, undifferentiated, or joint program in health services occupations that prepares individuals for either entry into specialized training programs or for a variety of concentrations in the allied health area. Includes instruction in the basic sciences, research and clinical procedures, and aspects of the subject matter related to various health occupations.

Human Services/Family and Consumer Sciences

Program of Study	CIP Code	Description
Apparel and Textiles, General **Model Program of Study**	19.0901	A general program that focuses on the development of textile products and their distribution and use in terms of the psychological, social, economic, and physical needs of consumers. Includes instruction in the production, distribution, marketing, and end use of various apparel and textile products.
Cooking and Related Culinary Arts, General **Model Program of Study**	12.0500	A program that focuses on the general study of the cooking and related culinary arts, and that may prepare individuals for a variety of jobs within the food service industry. Includes instruction in food preparation, cooking techniques, equipment operation and maintenance, sanitation and safety, communication skills, applicable regulations, and principles of food service management
Criminal Justice/Police Science.	43.0107	A program that prepares individuals to perform the duties of police and public security officers, including patrol and investigative activities, traffic control, crowd control and public relations, witness interviewing, evidence collection and management, basic crime prevention methods, weapon and equipment operation and maintenance, report preparation and other routine law enforcement responsibilities.
Early Childhood Education and Teaching **Model Program of Study**	13.1210	A program that prepares individuals to teach students ranging in age from infancy through eight years (grade three), depending on the school system or state regulations. Includes preparation to teach all relevant subject matter.
Education, General. **Model Program of Study**	13.0101	A program that focuses on the general theory and practice of learning and teaching, the basic principles of educational psychology, the art of teaching, the planning and administration of educational activities, school safety and health issues, and the social foundations of education.
Family and Community Services **Model Program of Study**	19.0707	A program that focuses on the development and implementation of public, private, and voluntary support services for individuals, families, and localities and that prepares individuals to function in a variety of occupations promoting family life, and family/community development. Includes instruction in family systems, human development, social services, community social and economic development, social policy, voluntary sector activities, and outreach and community education.
Family and Consumer Sciences, General **Model Program of Study**	19.0101	A general program that focuses on family and consumer sciences, including how individuals develop and function in family, work, and community settings and how they relate to their physical, social, emotional, and intellectual environments.
Hospitality Administration/Management, General **Model Program of Study**	52.0901	A program that prepares individuals to serve as general managers and directors of hospitality operations on a system-wide basis, including both travel arrangements and promotion and the provision of traveler facilities. Includes instruction in principles of operations in the travel and tourism, hotel and lodging facilities, food services, and recreation facilities industries; hospitality marketing strategies; hospitality planning; management and coordination of franchise and unit operations; business management; accounting and financial management; hospitality transportation and logistics; and hospitality industry policies and regulations.
Housing and Human Environments, General **Model Program of Study**	19.0601	A general program that focuses on the behavioral, social, economic, functional, and aesthetic aspects of housing, interiors, and other built environments. Includes instruction in analyzing, planning, designing, furnishing, and equipping residential, work, and leisure spaces to meet user needs and the study of related public policies.

Information Solutions/Information Technology

Program of Study	CIP Code	Description
Commercial Photography	50.0406	A program in the applied visual arts that prepares individuals to use artistic techniques to effectively communicate ideas and information to business and consumer audiences, and recording events and people, via digital, film, still and video photography. Includes instruction in specialized camera and equipment operation and maintenance, applications to commercial and industrial needs, and photography business operations.
Computer Programming/Programmer, General	11.0201	A program that focuses on the general writing and implementation of generic and customized programs to drive operating systems and that generally prepares individuals to apply the methods and procedures of software design and programming to software installation and maintenance. Includes instruction in software design, low- and high-level languages and program writing; program customization and linking; prototype testing; troubleshooting; and related aspects of operating systems and networks.
Computer Science **Model Program of Study**	11.0701	A program that focuses on computer theory, computing problems and solutions, and the design of computer systems and user interfaces from a scientific perspective. Includes instruction in the principles of computational science, computer development and programming, and applications to a variety of end-use situations.
Computer Systems Networking and Telecommunications **Model Program of Study**	11.0901	A program that focuses on the design, implementation, and management of linked systems of computers, peripherals, and associated software to maximize efficiency and productivity, and that prepares individuals to function as network specialists and managers at various levels. Includes instruction in operating systems and applications; systems design and analysis; networking theory and solutions; types of networks; network management and control; network and flow optimization; security; configuring; and troubleshooting.
Computer Technology/Computer Systems Technology	15.1202	A program that prepares individuals to apply basic engineering principles and technical skills in support of professionals who use computer systems. Includes instruction in basic computer design and architecture, programming, problems of specific computer applications, component and system maintenance and inspection procedures, hardware and software problem diagnosis and repair, and report preparation.
Graphic Communications, General	10.0301	A program that generally prepares individuals to apply technical knowledge and skills in the manufacture and distribution or transmission of graphic communications products. Includes instruction in the prepress, press, and postpress phases of production operations and processes such as offset lithography, flexography, gravure, letterpress, screen printing, foil stamping, digital imaging, and other reproduction methods.
Information Support & Services **Model Program of Study**	11.1006	A program that prepares individuals to provide technical assistance, support, and advice to computer users to help troubleshoot software and hardware problems. Includes instruction in computer concepts, information systems, networking, operating systems, computer hardware, the Internet, software applications, help desk concepts and problem solving, and principles of customer service.

Program of Study	CIP Code	Description
Radio and Television Broadcasting Technology/Technician	10.0202	A program that prepares individuals to apply technical knowledge and skills to the production of radio and television programs, and related operations, under the supervision of broadcast and studio managers, directors, editors, and producers. Includes instruction in sound, lighting, and camera operation and maintenance; power and feed control; studio operations; production preparation; broadcast engineering; related computer applications; and specialized applications such as news, entertainment, live talk, sports, commercials, and taping.
Web & Digital Communications **Model Program of Study**	11.0801	A program that prepares individuals to apply HTML, CSS, XML, JavaScript, graphics applications, and other authoring tools to the design, editing, and publishing (launching) of documents, images, graphics, sound, and multimedia products on the World Wide Web. Includes instruction in Internet theory, web page standards and policies, elements of web page design, user interfaces, vector tools, special effects, interactive and multimedia components, search engines, navigation, morphing, e-commerce tools, and emerging web technologies.