



Introduction

Iowa CTE broadly encompasses six service areas: agriculture, food and natural resources; applied sciences, technology, engineering, and manufacturing; business, finance, marketing and management; health science; human services; and information solutions. Through HF 2392, all service areas were required to develop and adopt content specific standards. The CTE standards corresponding to each service area are required for Iowa schools that offer those programs.

The approved [CTE standards](#) are based on recommendations from Iowa program management teams in five of the six service areas. Currently, the standards for the sixth service area, applied sciences, technology, engineering and manufacturing are in a pilot phase. The Program Service Area Management Teams considered the important needs addressed in the charge from the Secondary CTE Taskforce and utilized those principles as guiding factors when developing and reviewing standards. Additionally, the following were important criteria for standards were considered:

- Be research-based
- Be rigorous
- Be relevant to industry
- Promote 21st century skills

The new CTE standards and benchmarks set clear and consistent foundational expectations for what students need to learn in high-quality CTE programs across the state. They also serve as a guide for Iowa educators as they develop curriculum, courses and classroom activities.

Universal Standards

A review of all Iowa CTE standards was conducted to ensure a cross-section of universal standards that would be included in all CTE areas. These Universal Career and Technical Education Standards are present and necessary in all CTE program service areas, clusters, and pathways.

21st Century Skills

The Iowa CTE standards have been crosswalked and aligned to Iowa's 21st Century Skills. All standards were reviewed for alignment to 21st century skills and a crosswalk was created to assist in implementation of standards.

Service Area Standards

CTE programs should include these standards as the core of the program of study setting the minimum of what those students who complete the program should learn. Courses should be sequenced and mapped to ensure coverage of the standards. Assessments of student learning should reflect the alignment of curriculum with the standards.



Agriculture, Food and Natural Resources

The National AFNR Career Cluster Content Standards were originally developed as part of the 2003 United States Department of Education (USDE) Career Clusters Project. In 2009 and again in 2015, the National Council for Agricultural Education undertook a rigorous, multi-stage review involving more than 270 business and industry representatives, educators, and state CTE leaders.

These standards are intended to help shape the design of all components of an agricultural education program including:

- Classroom and laboratory instruction
- Career and Technical Student Organization (CTSO) experiences through organizations such as the National FFA Organization and the Post-Secondary Agriculture Students Organization (PAS)
- Work-based learning experiences such as Supervised Agricultural Experience (SAE) Programs and internships

In addition, the standards have been reviewed to identify crosswalks to the following national academic standards:

- Common Core English Language Arts
- Common Core Mathematics
- Next generation Science Standards
- Green/Sustainability Knowledge and Skill Statements
- National Standards for Financial Literacy

Applied Sciences, Technology, Engineering, and Manufacturing

After feedback and revisions from numerous stakeholders, the initial pilot standards for Applied Sciences, Technology, Engineering, and Manufacturing (including Transportation, Distribution, Logistics, Architecture, and Construction) were approved by the state board of education in the fall of 2020. These standards are designed to help provide state and local education representatives with a framework to align educational programming with business, industry, and workforce needs. The standards are also connected through SkillsUSA and the Technology Student Association career and technical student organizations.

Business, Finance, Marketing and Management

Business and Marketing helps to prepare students master the knowledge and skills needed to function as citizens, consumers, employees, managers, business owners, and directors of their economic futures through the study of accounting, business law, career development, communication, computation, economics, personal finance, entrepreneurship, information technology, international business, management, and marketing. The Career Cluster Content Standards provide state and local education leaders and educators with a high-quality, rigorous



set of standards to guide what students should know and be able to do after completing a program of study in the following career pathways:

- Business, Management, and Administration
- Finance
- Marketing

The business, finance, marketing and management standards work well with the Iowa recognized CTSOs—Business Professionals of America (BPA), DECA, and Future Business Leaders of America-Phi Beta Lambda (FBLA-PBL).

Health Science

Health Science secondary education programs prepare students for careers and higher education in more than 200 occupations in the healthcare field, in a variety of settings, including clinics, home health, hospitals, insurance industry, laboratories and research, nursing homes, elder care facilities. The Iowa Health Science standards are based on the 2019 National Consortium for Health Science Education standards. The health science standards offer an answer to the question, “What does a worker need to know and be able to contribute to the delivery of safe and effective healthcare?” The standards represent core expectations most workers need to succeed in health careers.

The standards provide:

- Measurable accountability communicated in a user-friendly manner to educators and students
- A comprehensive curriculum framework for course designs and assessment construction
- Validation on timely basis by stakeholders: individuals representing business/industry, professional organizations, credentialing and state education agencies

The national standards can be integrated into the classroom and reinforced through student participation in the CTSO, HOSA-Future Health Professionals.

Human Services

The standards for Human Services pathways are based on the Family and Consumer Sciences National Standards 3.0. The standards have been reviewed and revised based on industry needs for Iowa. The essential knowledge and skills developed through Human Services/Family and Consumer Sciences programs prepare students for a successful future in many fields that include transferable skills that relate to any cluster as well as the support of a strong work/life balance.

Human Services/Family & Consumer Sciences programs allow students varied opportunities to experience classroom and laboratory components and instruction that meets industry validated standards, work-based learning in the form of internships or academies, and membership in the Family, Career and Community Leaders of America (FCCLA) the student-led organization that "enhances" the skills taught in FCS, and provides opportunities to build leadership and competitive skills necessary in the world of work and in the community.



The Human Services/Family & Consumer Sciences Career Cluster Content Standards provide state and local education leaders and educators with sets of high-quality, rigorous standards to guide what students should know and be able to do after completing a program of study. Each program should utilize the Foundational Standards in addition to the one specific standard area (from 2 - 5) that relates directly to the district program CIP (Comprehensive Instructional Program). The following career pathways are tied directly to the identified Program CIP:

- Foundational Standards for all Human Services/Family and Consumer Sciences Pathways
- Human and Family Services
- Hospitality, Food Production, and Nutrition Services
- Housing, Fashion and Design
- Education and Training

Information Solutions/Information Technology

Foundational standards and benchmarks have been updated and modernized by a team of IT experts from Iowa's community colleges, four-year public and private colleges and universities, Iowa STEM Council, the Technology Association of Iowa, and business and industry.

The team developed standards for the four career pathways within this cluster and service area – network systems, information support and services, web and digital communications, and programming and software development.

Standards developed by the Computer Science Teachers Association (CSTA) are integrated into Iowa's State Standards for Information Technology. They are identified by including the CSTA standards number at the end of the standards statement (in parentheses). These standards can connect to the competitive events and leadership experiences in the following CTSOs—Business Professionals of America (BPA), Future Business Leaders of America-Phi Beta Lambda (FBLA-PBL), and Technology Students of America (TSA).