
Career and Technical Education (CTE) Courses Standards

The Background:

T.C.A. § 49-1-302(a)(8) authorizes the State Board of Education to “set policies governing all academic standards and courses of study in the public schools.” Additionally, State Board Rule 0520-01-03-.05(1) calls for the State Board to adopt standards for each subject area, grades K-12. The approved standards are to be the basis for planning instructional programs in each local school system.

This item includes new and revised course standards for the following CTE career clusters:

- Advanced Manufacturing
- Agriculture, Food, and Natural Resources
- Arts, A/V, Technology, and Communications
- Business Management and Administration
- Health Science

The high school CTE course standards format has also been updated based on educator feedback for ease of use and to align more closely with competency-based industry and postsecondary standards. These new and revised standards have been reviewed by industry, secondary, and postsecondary partners. Changes within the Advanced Manufacturing career cluster include adding standards on safety, measurement, and additive manufacturing; removing standards relating to plant manager work, production rate, and the manufacturing process; adding standards related to physical computing; and revising a standard related to aluminum conducting heat. Proposed changes within Agriculture, Food, and Natural Resources include stronger focus on spreadsheet function to analyze business records; adding standards to address low voltage wiring; and revising standards to include consumer debt, loan calculation, and risk management. Changes in Business Management and Administration include updating standards related to desktop publishing, oral communication; and updating technology standards and expert level of Microsoft Office Suite exams. In Arts A/V Technology and Communications, the proposed change is the standard on the capstone project.

New courses are being proposed based upon educator and postsecondary feedback to prepare students for current workforce and postsecondary settings. In Agriculture, Food, and Natural Resources, new courses focus on careers, regulations, principles of animal science, business concepts, biotechnology, food processing, packaging, marketing, and food chemistry. In Business Management and Administration, new courses focus on higher level of computer applications, cloud computing and apps, and expert level of Microsoft Office Suite exams.

*Indicates a proposed new course

Advanced Manufacturing	
Advanced Industrial Maintenance	Revised standards

Advanced Manufacturing, continued)	
Digital Electronics	Revised standards
Manufacturing Practicum	Revised standards
Mechatronics I	Revised standards
Mechatronics II	Revised standards
Principles of Machining I	Revised standards
Principles of Manufacturing	Revised standards
Robotics & Automated Systems	Revised standards
Welding I	Revised standards
Welding II	Revised standards
Agriculture, Food, and Natural Resources Career Cluster	
Agricultural Business and Finance	Revised standards
Agricultural Fabrication and Biosystems Engineering	Revised standards
Agricultural Power and Equipment	Revised standards
Agriscience	Revised standards
Applied Environmental Science	Revised standards
*Exploring Agricultural Education	New course
*Foundational Supervised Agricultural Experience (SAE) I	Renamed course and moved to Level I
*Foundational Supervised Agricultural Experience (SAE) II	New course
Geographic Information Systems (GIS)	Revised standards
Introduction to Agricultural Education	Revised name and standards
*Introduction to Agricultural Sciences	Revised standards
*Meat Science I	New course
*Meat Science II	New course
*Meat Science III	New course
Organizational Leadership and Communications	Revised standards
Principles of Agricultural Mechanics	Revised standards
Principles of Farm and Agribusiness Management	Revised standards
Unmanned Aircraft Systems in Agriculture	Revised standards
Arts, A/V, Technology & Communications	
Advanced Fashion Design	Revised standards
Business Management & Administration	
*Advanced Office Applications	New course This course will replace Advanced Computer Applications
American Business Legal Systems	Revised Standards
Business and Entrepreneurship Practicum	Revised standards
Business Communications	Revised standards
Business Economics	Revised Standards
Business Management	Revised standards
Computer Applications	Revised standards Changed to middle school course
*Exploring Business and Marketing	New Course
Health Services Administration Practicum	Revised Standards
Introduction to Business & Marketing	Revised Standards

Business Management & Administration (continued)	
*Keyboarding Fundamentals	New course to replace Keyboarding Standards revised
*Principles of Office Applications	New course to replace Computer Applications
Health Science	
*Behavioral Health	New course
*Behavioral Health Practicum	New course

The Department held an open comment period between first and final reading on the proposed standards revisions, and no additional feedback was submitted on the course standards. Between first and final reading, the following minor changes were made:

- A minor clerical edit was made to all the course standards documents. The “a” was deleted in the heading “Using a Work-Based Learning (WBL) in your classroom.”
- In the Welding I course, a minor edit was made under Welding Procedure Specifications 8.3 to add the words “and how it” for clarity.
- In the Principles of Farm and Agribusiness Management course, an edit was made to the Sales and Marketing 5.4 standard to change the word “assemble” to “document” for clarity.

The Fiscal Analysis Impact:

T.C.A. § 49-1-212 requires that the Department prepare a fiscal analysis of any policy, rule, or regulation proposed to the State Board of Education. This item has no financial impact on an LEA.

Connection to the [Master Plan](#):

This item supports the State Board’s strategic focus on postsecondary and career outlined in the Master Plan by ensuring that students develop and demonstrate readiness for their postsecondary or career plans.

The Recommendation:

The Department of Education recommends approval of this item on final reading. The SBE staff concurs with this recommendation.