
Science, Technology, Engineering & Mathematics Course Standards

The Background:

Rules, Regulations, and Minimum Standards of the State Board of Education 0520-01-03-.05(1) calls for the State Board of Education to adopt curriculum 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. Adopted textbooks are also to be aligned with the state curriculum standards. Section 3.205 Approved High School Courses of the State Board of Education Policy identifies those courses which have been approved by the Board for instruction across the state.

The Department of Education's Division of Career and Technical Education (CTE) is proposing changes to approved course standards in the Science, Technology, Engineering & Mathematics (STEM) career cluster. This item includes new and revised courses within this career cluster that are now better aligned with postsecondary pathways, incorporate instructional rigor by embedding Common Core State Standards for English Language Arts & Literacy in Technical Subjects, and reflect the competitive employment demands of our state.

Courses included in this item:

Energy and the Environment (PLTW)	New Course
Engineering Design I	New Course
Engineering Design II	New Course
Engineering Practicum	New Course
Flight and Space (PLTW)	New Course
Green Architecture (PLTW)	New Course
Magic of Electrons (PLTW)	New Course
Medical Detectives (PLTW)	New Course
Principles of Engineering and Technology	Revised course
Robotics and Automated Systems	New Course
Science of Technology (PLTW)	New Course
STEM Designers	New Course
STEM Explorers	New Course
STEM Innovators	New Course
STEM I: Foundation	New Course
STEM II: Applications	New Course
STEM III: STEM in Context	New Course
STEM IV: Practicum	New Course

Since first reading of the standards included in this item, the CTE Division has critically reviewed and accepted feedback from Tennessee educators, CTE Directors, and industry experts received via the CTE.Questions@tn.gov email address. The

following changes have been made to the standards since first reading, based on that feedback:

- Updated formatting for consistency across documents.
- Updated language to clarify examples based on industry vocabulary.
- Added reference to aligned industry certifications in engineering courses.
- Updated or added language to improve safety standards in all courses.
- Moved measurement standards from higher level course down to introductory course.

The Recommendation:

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