

TECHNOLOGY AND ENGINEERING EDUCATION

HANDS-ON, MINDS-ON EDUCATION

Our mission:

Technology and Engineering Education is committed to preparing students for employment and/or continuing education opportunities by teaching them to understand, design, produce, use, and manage the human-made world in order to contribute and function in a technological society.

TECHNOLOGY AND ENGINEERING PATHWAYS

The Utah Technology and Engineering Education Pathways are based on the national skills standards, where applicable, and established state standards.

The Utah Pre-Engineering Pathway is a set of four rigorous courses that introduce students to the world of engineering and engineering technology.

The Project Lead the Way (PLTW) Pathway is a nationally developed curriculum that puts students through four or five rigorous courses. The courses are designed to give students relevant engineering experiences where they use language arts, math, and science concepts in real-world applications and settings.

Nationally, engineering is the second largest of all professions. In Utah, it is one of the fastest growing industries, having a projected growth rate of 2 percent through the year 2018, creating approximately 14,000 jobs. Due to the expansion of jobs in the technical fields and the increasing numbers of engineers who are retiring, the number of job openings in technology and engineering is increasing. There is a critical shortage of engineers and engineering technologists entering the field at a time when technology is reinventing itself every few years.

Below are the two Pathways in Technology and Engineering Education:

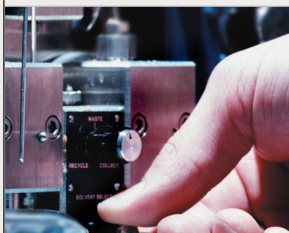
- Pre-Engineering (Utah Pre-Engineering Program)
- Project Lead the Way (National Pre-Engineering Program)

STUDENT LEADERSHIP ORGANIZATION

The Technology Student Association (TSA) is the student leadership organization for Technology and Engineering Education. TSA is the only student organization dedicated exclusively to students enrolled in Technology and Engineering classes in grades 7-12. TSA fosters personal growth, leadership training, career development, teamwork, community service, competitive events, and student recognition to supplement the curriculum in Technology and Engineering. Leadership opportunities are available at the local, state, and national levels.

AREAS OF STUDY:

- Agriculture
- Business
- Family & Consumer Sciences
- Health Science
- Information Technology
- Marketing
- Skilled & Technical Sciences
- Technology & Engineering



- Nationally there are over 124,000 TSA members, with chapters in every state.

www.tsaweb.org

- Like national TSA members on Facebook at http://tiny.cc/national_tsa_facebook
- Follow national TSA members on Twitter at <http://twitter.com/NationalTSA>

- Utah has approximately 1,600 TSA members in 22 chapters.

www.utahtsa.org

NATIONAL RECOGNITION

In 2010, eighteen Utah students placed in the top ten in the nation for their exceptional achievement in various Technology and Engineering events. Among these winners were three students who placed first in the nation in Computer Aided Design, Debating Technological Issues, and Future Technology Teacher.

In 2010, Technology and Engineering students competed in the first VEX robotics competition hosted by the College of Engineering at Utah State University. Seven schools fielded ten engineering teams who developed radio controlled vehicles to compete in a challenging robotic tournament. The winning teams competed in the 2010 National Vex Robotics Competition.

In June 2010, Matt Ettinger, of Westlake High School in Saratoga Springs, placed first at the national TSA "Swept Away" robotics competition, in partnership with VEX. Jeffrey, Matt's 12-inch robot, was recognized as superior to the other designs, winning each of its 14 competitions.

PROJECT LEAD THE WAY

Teaching Tomorrow's Technology Today

Project Lead The Way (PLTW) is a national program that creates dynamic partnerships with high schools to increase the quantity and quality of engineers and engineering technologists. PLTW prepares an increasing and more diverse group of students to be successful in engineering and engineering technology careers.

CAREER PREPARATION/ECONOMIC DEVELOPMENT

Through PLTW, a four-year sequence of engineering courses combined with traditional mathematics and science courses, students are introduced to the scope, rigor, and discipline of engineering. The high school certification program recognizes schools that have successfully implemented the PLTW curriculum, and provides an opportunity for students to receive college credit as well as increase their earning potential while in high school.

Last year 891 students were awarded a CTE Skill Certificate in Technology and Engineering, indicating a high level of performance.

STATE AND LOCAL PARTNERSHIPS

Associated General Contractors of Utah
National Energy Foundation
Utah Division of Risk Management
Utah Trade and Technology Educators (UTTE)

Our vision is to see that every student receives the academic knowledge and technical skills needed to be successful in the technology and engineering career of his or her choice, by combining engineering principles, mathematics, and science courses that result in a logical thought process. Technology and Engineering Education students will develop essential career preparation skills through technical and academic courses, as well as personal leadership opportunities.

FOR MORE INFORMATION:

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