

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 two Utah Technology and Engineering Pathways are designed to give students a foundational understanding of the worlds of engineering and engineering technology.

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

Project Lead the Way (PLTW) pre-engineering pathways 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 4.7 percent through the year 2010, creating approximately 11,000 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. 2007-2008 marked the 30th anniversary of TSA. TSA plays a vital role in giving students an opportunity to compete and excel in their activities. The winners of the high school competitions are invited to compete at nationals each year.

- Nationally there are over 124,000 members with chapters in every state.
www.tsaweb.org
- Utah has over 4,900 members.
www.utahtsa.org

AREAS OF STUDY:

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



NATIONAL RECOGNITION

In 2004, Utah had over 350 students participate in the state TSA conference, where over 100 of these students were state winners. Seventy-five students went on to compete at the national conference, where three students placed first with an additional nine placing in the top ten. All students competed with dignity and represented the state of Utah extremely well.

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.

In 2003, two students from Northridge High School in Layton, Utah were recognized for their achievements in designing an open-ended ratchet wrench. Their project reinforced their academics and opened their eyes to the world of engineering.

CAREER PREPARATION/ECONOMIC DEVELOPMENT

Through PLTW, a four-year sequence of engineering courses is combined with traditional mathematics and science courses, which introduce students 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 still in high school.

In 2008-2009, 891 students were awarded a CTE Skill Certificate in Technology and Engineering, indicating a high level of performance.

STATE AND LOCAL PARTNERSHIPS

Engineering Education Wasatch Front South
Utah State 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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