

High School to College and Career Pathway: Secondary

Career and Technical Education: Preparing Students for College and Career!



Area of Study: Technology and Engineering Education

Pathway: Project Lead the Way (National Pre-Engineering Program)

Get the Facts
Project Lead the Way is offered in over 45 states and the District of Columbia.

In Utah, an engineer, professional or structural, must be licensed.

Workforce Trends
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 2.2 percent through the year 2018, creating 17,200 jobs.

CAREER AND TECHNICAL EDUCATION
Recommended Pathway Courses

(Students may select individual courses for exploration, or a complete Pathway for an in-depth focus.)

CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL

Course #	Foundation Courses: (required)	Credit
21.0120	Engineering Design, Introduction (required)	1.00
21.0122	Principles of Engineering (required)	1.00
<i>Choose one of the following courses:</i>		
14.0201	Aerospace Engineering	1.00
21.0121	Digital Electronics	1.00
21.0123	Computer Integrated Manufacturing	1.00
21.0124	Engineering Design & Development *	1.00
21.0125	Civil Engineering & Architecture	1.00
Elective Courses:		
21.0105	Physics with Technology	1.00
32.0199	Student Internship (Critical Workplace Skills)	.50

* Recommended capstone course. However, Pathway may be completed by taking 1.00 credit from elective courses.

3.00 credits

Additional credits

3.00 credits for completion

Pre-Engineering is:

- > High skill
- > High wage
- > High demand
- > Nontraditional for females

Sample Career Occupations

- > Civil Engineer
- > Complex Analysis
- > Complex Design
- > Development Manufacturing Research
- > Electrical Engineer
- > Mechanical Engineer
- > Technology and Engineering Education Teacher

Middle School State Requirements High School Suggested Education Plan College and Career

7th Grade	8th Grade	Middle School	High School	9th Grade Suggested	10th Grade Suggested	11th Grade Suggested	12th Grade Suggested	Beyond High School
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts 4.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	Language Arts 12 1.00	There are a number of options for education and training beyond high school, depending on your career goals. <ul style="list-style-type: none"> > Certificate > Associate degree > Bachelor's degree > Professional degree > On-the-job training > Apprenticeship > Military training For more information on salary projections, labor market demand, and training options, visit www.utahfutures.org .
Math * 1.00	Math * 1.00	2.00	Math 3.00	Math * 1.00	Math * 1.00	Math * 1.00	Math * 1.00	
Science .50	Science 1.00	1.50	Science 3.00	Earth Systems 1.00	Biology 1.00	Chemistry 1.00	Physics or Physics with Technology 1.00	
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies 3.00	Geography for Life .50	World Civilizations .50	U.S. History II 1.00	U.S. Government and Citizenship .50	
P.E. 1.00	Health .50	1.50	P.E./Health 2.00	Participation Skills and Techniques .50	Fitness for Life .50 / Health Education .50 Lifetime Activities or Sport .50			
The Arts .50	The Arts .50	1.00	Fine Arts 1.50	Fine Arts Courses 1.50				
Keyboarding .50			Computer Tech. .50	Computer Technology .50				
CTE Intro 1.00		1.00	CTE 1.00	Refer to Career and Technical Education box above.				

* Talk to your school counselor about math requirements in the new common core curriculum. Core curriculum and elective requirements may vary district to district.

Concurrent enrollment course offerings vary by school and district. Many Utah postsecondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional postsecondary Pathways for details.