



Engineering Toolkit

THE TOP FIVE **UTAH** INDUSTRIES THAT OFFER HIGH DEMAND, HIGH WAGE JOBS ARE:

- CONSTRUCTION
- ENGINEERING
- HEALTH CARE
- INFORMATION TECHNOLOGY & COMPUTER SCIENCE
- MANUFACTURING

INFORMATION AND VIDEOS ARE INCLUDED IN THIS TOOLKIT FOR THE **ENGINEERING INDUSTRY**

Engineering Fast Facts:

- ▶ Engineers use advanced mathematics and science to solve world problems.
- ▶ Engineers are involved in almost everything you eat, wear, and use.
- ▶ Engineers need to be creative as they work in teams to develop computer layouts and design plans to create new machines, structures, technological devices, medical equipment, cars, bridges, etc.
- ▶ There are numerous engineering specialties offered at Utah Universities, including automotive, mechanical, aerospace, chemical, biomedical, petroleum, computer, manufacturing, electrical, nuclear, civil, agriculture engineering, etc.
- ▶ An engineering student will typically seek a bachelor's degree and then a master's degree in an even more specialized field.
- ▶ Engineers work in teams to plan, analyze, improve, and develop solutions.
- ▶ Utah has five universities that offer a B.S. in engineering: University of Utah, Utah State University, Utah Valley University, Weber State University, and Brigham Young University. The University of Utah, Utah State, and BYU offer advanced engineering degrees.
- ▶ In Utah, a level 1 engineer starts about \$60,000 a year. As they move up the career ladder they make about \$125,000 a year.

Hands-On, Minds-On Education

Utah State Office of Education | Career and Technical Education | Technology and Engineering Education



CTE Pathways

High School College Connection:

Architectural Design
Electronics
Engineering
Mechanical Design
Robotics

Technology

Certificate Programs:

Bridgerland ATC
Davis ATC
Dixie ATC
Mountainland ATC
Ogden-Weber ATC
Southwest ATC
Tooele ATC
Uintah Basin ATC

Engineering Technology

Associate or Transfer Degrees:

Dixie State University
Salt Lake Community College
Snow College
Southern Utah University
Utah State University Eastern
Utah Valley University
Weber State University

Engineering

Four-Year Degrees:

Brigham Young University
Southern Utah University
University of Utah
Utah State University
Utah Valley University
Weber State University

Technician

Career Options

Engineer

More Hands-On

Architectural Drafter
Test Technician
Electronics Assembler
Mechanical Drafter
ASSEMBLY TECHNICIAN
Welder
Composites Technician
CNC Machinist

Interior Designer
LANDSCAPE DESIGNER
Robotics Technician
Engineering Technician
QUALITY ASSURANCE TECHNICIAN
Industrial Designer
Technology & Engineering Educator

Aeronautical Engineer
Electrical Engineer
Architect
Bioengineer
Robotics Engineer
Mechanical Engineer
MANUFACTURING ENGINEER
Mining Engineer
Materials Engineer
Civil Engineer
Environmental Engineer
Chemical Engineer

More Analytical

Thinking of studying Engineering?

Take a look at what Engineers do!



Discover Engineering

- ▶ Engineers are changing the world all of the time. They dream up creative, practical solutions and work with other smart, inspiring people to invent, design, and create things that matter.
- ▶ Here is a great website to use if you want to research engineering occupations: [DISCOVER engineering webpage](#)



A Message
about
ENGINEERING
from the
International
space station:



Using [UtahFutures.org](https://utahfutures.org) to explore EDUCATION & CAREER options in ENGINEERING

- ✓ Find information about the program of study that interests you.

[Choosing a Program of Study](#)

- ✓ Connect your program of study to schools that provide education and training (e.g. majors and minors).

[Degree Finder - Programs of Study Search](#)

- ✓ Connect your program of study to careers!

[Occupations Search](#)



UTAHMAJORS.ORG

Click the link above to be taken to a website where you can research a college major in Engineering!

Exploring CAREERS in ENGINEERING



**Utah Department of Workforce Services
Website:**

[Utah Occupational Explorer Tool](#)

This tool can be used to easily explore, filter, and compare occupations in Utah and then view a detailed profile and list of current job openings for each one. There are 4 primary dimensions upon which occupations can be compared – demand, wages, growth, and education.



**United States Department of Labor –
Bureau of Labor Statistics Website:**

[Career Outlook Information](#)

Provides data on wages, projected job openings, and education and training required for the different career fields found in the United States.