

## Career Cluster: Engineering & Technology

### Career Pathway: Engineering

JUNIOR HIGH / MIDDLE SCHOOL		
College and Career Awareness		
Exploring Technology		
HIGH SCHOOL		
<b>SUPPORTING COURSES:</b> Suggested high school courses that support the Career Pathway (Courses DO NOT count towards the Pathway)		
Chemistry	Physics	Secondary Math 2
<b>EXPLORER COURSES:</b> Choose one or more of the following courses.		
CAD Architectural Design 1 *	Engineering Principles 1 +	Plastics 1
CAD Mechanical Design 1 *	Engineering Technology	Robotics 1 +
CAM Automated Manufacturing	Machining 1 *	Robotics Technology
Composites 1	Manufacturing Principles 1 +	Welding Technician, Entry Level *
Electronics 1 * +	Metalworking 1	Woods 1
<b>CONCENTRATOR COURSES:</b> To be a concentrator you must pass one of the following courses AND one explorer course.		
Aerospace Engineering	Engineering Principles 2 *	Materials Science
Electronics 2 *	Manufacturing Principles 2 *	Robotics 2 *
<b>COMPLETER COURSES:</b> To be a completer you must pass a concentrator course and enough courses to equal 3.0 credits in this Pathway.		
Electronics 3 *		
Engineering Capstone		
CTE Internship	<a href="#">Apprenticeship</a>	
<b>POSTSECONDARY:</b> There are many options for education and training beyond high school.		
Utah System of Higher Education: <a href="http://ushe.edu">ushe.edu</a> (Utah's public colleges and universities)		UtahMajors.org: <a href="#">Majors Guide</a>

\* concurrent enrollment course + recommended explorer course

HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING			
There are several options for education and training beyond high school, depending on your career goals.			
	<b>1-2 Year Certificate</b>	<b>2-Year Associate Degree</b>	<b>4-Year Bachelor's Degree</b>
	> Machine Operator > Production Technician	> Electro-Mechanical Technicians > Electronics Equipment Assembler	> Automation Engineer > CTE Teacher > Electrical Engineer > Electronics Drafter

Career and Technical Education provides all students access to high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value. [Credentials of Value](#)

Utah CTE classes are open to all qualified students without regard to race, color, national origin, sex, disability, or age.

### Student Testimonial

"I have always liked doing hands-on projects and thinking of different ways to make something better. With the CTE classes I was able to see whole processes, from the design stage on paper to transferring that design and idea into a computer application, then all the way to building a prototype."

Hunter Okerlund  
 Fremont High School

### LEARN MORE ABOUT OCCUPATIONS AND WAGES

#### Engineering & Technology

UtahCTE.org: [Fact Sheet](#)

Department of Workforce Services  
[Utah Occupational Explorer](#)

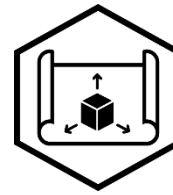
### TSA

is the Career and Technical Student Organization (CTSO) for students in the Engineering Career Pathway.

[TSAweb.org](http://TSAweb.org) | [UtahTSA.org](http://UtahTSA.org)

[Utah TSA flyer](#)





## Career Cluster: Engineering & Technology


### Career Pathway: Mechanical Design (CAD)

JUNIOR HIGH / MIDDLE SCHOOL		
College and Career Awareness		
Exploring Technology		
HIGH SCHOOL		
<b>SUPPORTING COURSES:</b> Suggested high school courses that support the Career Pathway (Courses DO NOT count towards the Pathway)		
Secondary Math 2		
<b>EXPLORER COURSES:</b> Choose one or more of the following courses.		
CAD Mechanical Design 1 * +	Engineering Technology	Plastics 1
CAM Automated Manufacturing	Machining 1 *	Welding Technician, Entry Level *
Composites 1	Metalworking 1	Woods 1
<b>CONCENTRATOR COURSES:</b> To be a concentrator you must pass the following course AND one explorer course.		
CAD Mechanical Design 2 *		
<b>COMPLETER COURSES:</b> To be a completer you must pass a concentrator course and enough courses to equal 3.0 credits in this Pathway.		
CAD Mechanical Design 3 *		
CTE Internship		<a href="#">Apprenticeship</a>
<b>POSTSECONDARY:</b> There are many options for education and training beyond high school.		
Utah System of Higher Education: <a href="https://ushe.edu">ushe.edu</a> (Utah's public colleges and universities)		UtahMajors.org: <a href="#">Majors Guide</a>

\* concurrent enrollment course + recommended explorer course

### HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING

There are several options for education and training beyond high school, depending on your career goals.

	1-2 Year Certificate	2-Year Associate Degree	4-Year Bachelor's Degree
	N/A	<ul style="list-style-type: none"> <li>&gt; Engineering Technician</li> <li>&gt; Mechanical Drafter</li> <li>&gt; Mechanical Engineering Technician</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Aerospace Engineer</li> <li>&gt; CTE Teacher</li> <li>&gt; Civil Engineer</li> <li>&gt; Industrial Designer</li> </ul>

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### Student Testimonial

“My training, in CTE courses in high school, prepared me for life after high school by helping me discover my love of drafting. I discovered the need for drafters in the world of engineering. I focused my CTE Pathway toward this career goal and have taken some advanced drafting classes to improve both my knowledge of the field and my employability in the field.”

Calvin Hill  
 Intech Collegiate High School

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#### Engineering & Technology

UtahCTE.org: [Fact Sheet](#)

Department of Workforce Services  
[Utah Occupational Explorer](#)

### TSA

is the Career and Technical Student Organization (CTSO) for students in the Mechanical Design (CAD) Career Pathway.

[TSAweb.org](https://tsaweb.org) | [UtahTSA.org](https://utahtsa.org)

[Utah TSA flyer](#)

