

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year

<p><b>CTSO Information</b> Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.</p> <p>TSA is the CTSO for students in the Robotics Career Pathway. TSA fosters personal growth, leadership, and opportunities in science, technology, engineering, and mathematics (STEM).</p> <p><b>Workforce Trends</b> Most robotics engineers are employed by private companies and work in laboratory or production settings.</p>	<h3>Career Cluster: Engineering &amp; Technology</h3>					<p><b>Robotics is:</b> &gt; High skill &gt; High wage</p> <p><b>Sample Occupations Requiring:</b> <u>High School Diploma</u> &gt; N/A <u>Certificate</u> &gt; Machine Operator <u>Assoc. or Technical Degree</u> &gt; Electro-Mechanical Technicians <u>Baccalaureate Degree</u> &gt; Automation Engineer &gt; Career and Technical Education Teacher &gt; Engineer &gt; Industrial Engineer &gt; Robotics Engineer <u>Graduate or Prof. Degree</u> &gt; Engineer</p>																																								
<h3>Career Pathway: Robotics</h3>																																														
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<p><b>Student Testimonial</b> "I want to earn an AAS degree in mechatronics. After completing my degree I plan on finding work with a company designing production equipment. My high school engineering instructor was an amazing person and has influenced my love of this field and the path that I have chosen."  Connor Hendry</p>	<h3>HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING</h3> <p>There are a number of options for education and training beyond high school, depending on your career goals.</p>					<p><b>Utah Business and Industry Facts</b> From "smart" shoes to flying robots to self-driving cars, throughout Utah there are hundreds of companies that use robotics to streamline the manufacturing process, produce goods, and make daily tasks easier.  "We have this idea that robots will help us in the future," said Mark Minor, associate professor, University of Utah. "Well, the future is here. You just have to understand what they're doing." <i>(Deseret News, March 9, 2015)</i></p>																																								
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<p>Certificates are awarded upon the successful completion of a brief course of study, usually one year or less. Upon completion of a course of study, a certificate does not require any further action to retain.  In high school a variety of certificates can be earned.</p>		<p>An academic degree is an award for the completion of a program or course of study over multiple years at postsecondary education institutions.  In 2016-2017, 74 percent of secondary students who concentrated in a CTE Career Pathway placed in postsecondary education, advanced training, military service or employment (October 1-December 31).</p>																																												
<p style="text-align: center;"><b>CTE Skill Certificates</b></p> <p>Competency-based student assessments, measured by core standards and competencies, needed to be successful in the workforce.</p>			<p style="text-align: center;"><b>UtahFutures: College and Career Planning</b></p> <p>Visit <a href="http://UtahFutures.org">UtahFutures.org</a> for salary projections, labor market demand, and training options.</p>																																											
<p>In 2017-2018, 111,238 CTE skill certificates were awarded to high school students. Students' knowledge and performance is demonstrated as part of the Skill Certificate process.</p>			<p>In 2016-2017, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 86 percent.</p>																																											