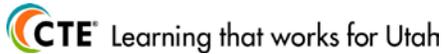


# Utah Career and Technical Education Career Pathway

## 2018-2019 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.  
 SkillsUSA is the CTSO for students in the Machine Tool Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

**Workforce Trends**  
 Despite rising productivity that is expected to limit employment growth, opportunities should be excellent because not enough qualified people are attracted to production-related occupations.

### Career Cluster: Manufacturing

#### Career Pathway: Advanced Manufacturing: Machine Tool

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.10.00.00.072	Machining 1 *	.50	1.00 credit
40.10.00.00.070	Machining 2 *	.50	
ELECTIVE COURSES			
38.01.00.00.051	CAD Mechanical Design 1 *	.50	2.00 credits
38.01.00.00.052	CAD Mechanical Design 2	.50	
40.10.00.00.085	Metalworking 1 *	.50	
38.01.00.00.340	PLTW Computer Integrated Manufacturing	1.00	
38.01.00.00.390	PLTW Engineering Design and Development	1.00	
40.10.00.00.110	Welding Technician, Entry Level *	.50	
41.00.00.00.030	Workplace Skills	.50	
		<b>3.00 credits for completion</b>	

\* Course can be taken up to 1.00 credit.

**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.**

**Machine Tool is:**  
 > High skill  
 > High wage  
 > High demand

**Sample Occupations Requiring:**  
High School Diploma  
 > Industrial Machinery Mechanic  
 > Machinist  
 > Tool and Die Makers

Certificate  
 > N/A

Assoc. or Technical Degree  
 > N/A

Baccalaureate Degree  
 > Career and Technical Education Teacher

Graduate or Prof. Degree  
 > N/A

**Student Testimonial**  
 "I took machine tool because I heard it was a great program, and that machinist make good money. I'm a hands-on worker and like to make stuff and see the finished product. If I'm going to work I want it to be something I want to do every day and enjoy doing it. I love being a machinist and I could see myself doing this for the rest of my life."  
 Gates Hadley

### HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING

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

12th Grade	1-Year Certificate	2-Year Associate or Technical Degree	4-Year Bachelor's Degree	More Graduate or Prof. Degree
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.	An academic degree is an award for the completion of a program or course of study over multiple years at postsecondary education institutions.  In 2015-2016, 73 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).	Many businesses in Utah rely on the expertise of machinists, and their skilled knowledge of using precise measurements, as technologically advanced materials and equipment are manufactured and assembled.  According to the Governor's Office of Economic Development (GOED), the Northern Utah region has a strong existing base of aerospace and composites companies, with more than 30 companies and an estimated 16,500 employers.		

**CTE Skill Certificates**

Competency-based student assessments, measured by core standards and competencies needed to be successful in the workforce.

**UtahFutures: College and Career Planning**

Visit [UtahFutures.org](http://UtahFutures.org) for salary projections, labor market demand, and training options.

In 2016-2017, 105,691 CTE skill certificates were awarded to high school students. Students' knowledge and performance is demonstrated as part of the Skill Certificate process.

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.