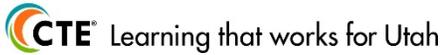


# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.  
 FFA is the CTSO for students in the Agricultural Mechanics Systems Career Pathway. FFA brings relevance to the classroom through industry-based competitive events and community service.

**Workforce Trends**  
 According to the U.S. Department of Labor, the growing interest in worldwide standardization of agricultural equipment should result in increased employment of agricultural engineers. Job opportunities should result from the increasing demand for agricultural products, the continued efforts for more efficient agricultural production, and the increasing emphasis on the conservation of resources.

Career Cluster: Agriculture, Food & Natural Resources			
Career Pathway: Agricultural Mechanics Systems			
CORE CODE	FOUNDATION COURSES (required)	CREDITS	
30.01.00.00.030	<a href="#">Agricultural Systems Technology 1</a>	1.00	2.00 credits
30.01.00.00.040	<a href="#">Agricultural Systems Technology 2</a>	1.00	
ELECTIVE COURSES			
30.01.00.00.020	<a href="#">Agricultural Machinery Technology</a>	1.00	1.00 credit
30.01.00.00.001	<a href="#">Agricultural Mechanics, Advanced</a>	1.00	
30.01.00.00.050	<a href="#">Agricultural Science 1</a>	1.00	
30.02.00.00.050	<a href="#">Biology-Agricultural Science</a>	1.00	
32.02.00.00.110	<a href="#">Business Communication 1</a>	.50	
32.02.00.00.111	<a href="#">Business Communication 2</a>	.50	
32.02.00.00.140	<a href="#">Business Management</a>	.50	
38.03.00.00.020	<a href="#">Industrial and Agricultural Technology (IAT)</a>	1.00	
37.01.00.00.150	<a href="#">Leadership Principles 1</a>	1.00	
40.10.00.00.110	<a href="#">Welding Technician, Entry Level</a>	1.00	
40.10.00.00.112	<a href="#">Welding Technician, Intermediate Level</a>	1.00	
40.10.00.00.114	<a href="#">Welding Technician, Advanced Level</a>	1.00	
	Summer Agriculture Program	.25	
	Supervised Agriculture Experience Program (capstone experience)		
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
		<b>3.00 credits for completion</b>	

**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.**

**Agricultural Mechanics Systems is:**  
 > High-skill  
 > In-demand

**Sample Occupations Requiring:**  
High School Diploma  
 > Heavy Equipment Operator  
 > Truck Driver  
 > Welder, Cutters, Solderers, and Brazers

Certificate  
 > Hydraulic Technician  
 > Maintenance Service Tech.  
 > Welder

Assoc. or Technical Degree  
 > Agricultural Engineer Tech.  
 > Diesel Mechanic  
 > Equipment Dealer Technician

Baccalaureate Degree  
 > Agricultural Engineer  
 > Career and Technical Education Teacher  
 > Welding Engineer

Graduate or Prof. Degree  
 > Geospatial Analytics Scientist  
 > Postsecondary Teacher  
 > Research Engineer

**Student Testimonial**  
 “The CTE classes I took in high school, such as agricultural systems and technology, animal science, and floriculture, have given me the basic skills, knowledge and abilities to allow me to obtain employment in any of those fields.”  
 Colton Zilles

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 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).		

**Utah Business and Industry Facts**  
 Utah agriculturists produce crops and livestock worth over \$1.8 billion annually.  
 Students enrolled in high school agricultural courses are looking to join a \$22 billion industry in Utah and a \$992 billion industry nationwide.  
 (Utah Department of Agriculture and Food)

**UtahFutures: College and Career Planning**  
 Visit [UtahFutures.org](http://UtahFutures.org) to explore occupations, search salary projections, access labor market information, investigate training options, and to create a plan.

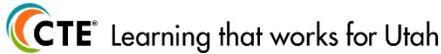
Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

**CTE Credentials of Value**  
 In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

FFA is the CTSO for students in the Agricultural Production Systems Career Pathway. FFA brings relevance to the classroom through industry-based competitive events and community service.

**Workforce Trends**  
 According to the U.S. Department of Labor, 1 in 7 Americans work in agriculture-related jobs.

According to the Utah Farm Bureau Federation, more than 100,000 people are employed by agriculture and agribusiness in the state of Utah.

### Career Cluster: Agriculture, Food & Natural Resources

#### Career Pathway: Agricultural Production Systems

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
30.01.00.00.050	<a href="#">Agricultural Science 1</a>	1.00	2.00 credits
30.01.00.00.060	<a href="#">Agricultural Science 2</a>	1.00	
<i>Or choose the following courses:</i>			
30.02.00.00.040	<a href="#">Animal Science 1</a>	1.00	2.00 credits
30.02.00.00.080	<a href="#">Plant and Soil Science 1</a>	1.00	
<b>ELECTIVE COURSES</b>			
30.02.00.00.001	<a href="#">Animal Science 2</a>	1.00	1.00 credit
30.01.00.00.116	<a href="#">Aquaculture, Introduction</a>	1.00	
30.02.00.00.050	<a href="#">Biology-Agricultural Science</a>	1.00	
32.02.00.00.140	<a href="#">Business Management</a>	.50	
32.02.00.00.110	<a href="#">Business Communication 1</a>	.50	
32.02.00.00.111	<a href="#">Business Communication 2</a>	.50	
37.01.00.00.150	<a href="#">Leadership Principles 1</a>	1.00	
	Summer Agriculture Program	.25	
	Supervised Agriculture Experience Program (capstone experience)		
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

Foundation courses taken beyond the required credits can be used as elective 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.**

**Agricultural Production Systems is:**

- > High-skill
- > High-wage
- > In-demand

**Sample Occupations Requiring:**

**High School Diploma**

- > Buyer and Purchasing Agent, Farm Products
- > Farm/Ranch Worker/Manager
- > Pesticide Handler, Sprayer, and Applicator

**Certificate**

- > Crop Scout
- > Pesticide Handler/Applicator
- > Storage and Hygiene Coord.

**Assoc. or Technical Degree**

- > Agricultural Engineer Tech.
- > Sales Representative
- > Slaughter/Processor

**Baccalaureate Degree**

- > Agricultural Inspectors
- > Career and Technical Education Teacher
- > Farm/Ranch Manager

**Graduate or Prof. Degree**

- > Biotechnology Research
- > Extension Specialist
- > Research Scientist

**Student Testimonial**

"My CTE classes and my leadership experience in 4-H and FFA have laid a strong foundation on which I can build upon. I have learned crucial values, including hard work, dedication, and responsibility. I plan to go college to complete a teaching degree. I like the idea of 'paying it forward.' I have had a wonderful education experience and I hope to provide that for the future students I will teach."

Kaitlin Hallam

### 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.

<b>12th Grade</b>	<b>1-Year Certificate</b>	<b>2-Year Associate or Technical Degree</b>	<b>4-Year Bachelor's Degree</b>	<b>More Graduate or Prof. Degree</b>
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 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).		

**Utah Business and Industry Facts**

In Utah, there are 18,100 farms with 11,000 acres in production. The poultry industry is huge with 7.5 million birds, layers, pullets, and turkeys.

Utah is also home to 777,000 head of cattle and 732,000 head of hogs.

Utah Agriculture contributes more than 15 percent to the state's economy.

**UtahFutures: College and Career Planning**

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**CTE Credentials of Value**

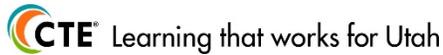
In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

FFA is the CTSSO for students in the Animal and Veterinary Science Career Pathway. FFA brings relevance to the classroom through industry-based competitive events and community service.

**Workforce Trends**  
 According to the U.S. Bureau of Labor Statistics, employment of veterinary assistants and laboratory animal caretakers is projected to grow 10 percent through the year 2026.

### Career Cluster: Agriculture, Food & Natural Resources

#### Career Pathway: Animal & Veterinary Science

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
30.02.00.00.040	<a href="#">Animal Science 1</a>	1.00	2.00 credits
<i>Choose one of the following courses:</i>			
30.02.00.00.001	<a href="#">Animal Science 2</a>	1.00	
30.01.00.00.005	<a href="#">Small and Companion Animal Science</a>	1.00	
30.02.00.00.090	<a href="#">Veterinary Assistant 1</a>	1.00	
ELECTIVE COURSES			
30.01.00.00.050	<a href="#">Agricultural Science 1</a>	1.00	1.00 credit
30.01.00.00.116	<a href="#">Aquaculture, Introduction</a>	1.00	
30.02.00.00.050	<a href="#">Biology-Agricultural Science</a>	1.00	
32.02.00.00.110	<a href="#">Business Communication 1</a>	.50	
32.02.00.00.111	<a href="#">Business Communication 2</a>	.50	
32.02.00.00.140	<a href="#">Business Management</a>	.50	
30.02.00.00.072	<a href="#">Equine Science 1</a>	.50	
30.02.00.00.074	<a href="#">Equine Science 2</a>	.50	
37.01.00.00.150	<a href="#">Leadership Principles 1</a>	1.00	
30.02.00.00.095	<a href="#">Veterinary Assistant 2</a>	1.00	
	Summer Agriculture Program	.25	
	Supervised Agriculture Experience Program (capstone experience)		
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

Foundation courses taken beyond the required credits can be used as elective 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.**

**Animal & Veterinary Science is:**  
 > High-skill  
 > High-wage

**Sample Occupations Requiring:**  
High School Diploma  
 > Livestock Handler  
 > Swine Farm Worker  
 > Veterinary Assistant and Laboratory Animal Caretaker

Certificate  
 > Artificial Inseminator  
 > Livestock Auctioneer  
 > Shipping Coordinator

Assoc. or Technical Degree  
 > Herdsman  
 > Livestock Buyer  
 > Veterinary Assistant/Technologist and Technician

Baccalaureate Degree  
 > Animal Nutrition Specialist  
 > Career and Technical Education Teacher  
 > Farm/Ranch Manager

Graduate or Prof. Degree  
 > Animal Scientists  
 > Extension Specialist  
 > Veterinarian

**Student Testimonial**

"I took many CTE classes in high school that were beneficial in preparation for my college education to become a veterinary technician. Biology, chemistry, animal science, and veterinary assisting helped me understand cells and how a body functions. I have a passion for animals and their well-being and want to pursue a career in agriculture."

Karlie Ault

### 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 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).		

**Utah Business and Industry Facts**

Agriculture is a vital industry to Utah's economy. There are 18,100 farms in the state, totaling approximately 11 million acres, where Utah agriculturists produce crops and livestock worth \$1.8 billion annually.

(Utah Department of Agriculture and Food)

**UtahFutures: College and Career Planning**

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**CTE Credentials of Value**

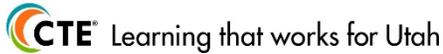
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Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

FCCLA is the CTSO for students in the Food Science, Dietetics and Nutrition Career Pathway. FCCLA provides students with opportunities to attain the knowledge, skills, and leadership characteristics necessary to succeed in life and careers.

**Workforce Trends**  
 According to the U.S. Department of Labor, dietitians and nutritionists held 68,000 jobs nationwide in 2016. Employment of dietitians and nutritionists is projected to increase 15 percent through the year 2026.

In Utah, a dietitian and a nutritionist must be licensed.

### Career Cluster: Agriculture, Food & Natural Resources

#### Career Pathway: Food Science, Dietetics & Nutrition

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
34.01.00.00.180	<a href="#">Food Science</a>	.50	1.00 credit
34.01.00.00.150	<a href="#">Food and Nutrition 1</a>	.50	
34.01.00.00.185	<a href="#">Foundations of Nutrition</a> *	.50	
ELECTIVE COURSES			
34.01.00.00.160	<a href="#">Food and Nutrition 2</a>	.50	2.00 credits
34.01.00.00.197	<a href="#">Human Development</a>	1.00	
36.01.00.00.110	<a href="#">Medical Anatomy and Physiology</a>	1.00	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.  
 Foundation courses taken beyond the required credits can be used as elective 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.**

**Food Science, Dietetics & Nutrition is:**  
 > High-skill

**Sample Occupations Requiring:**

**High School Diploma**  
 > Nutrition and Wellness Coach  
 > Food Product Technician  
 > Packaging Manager Product Grader

**Certificate**  
 > Food Protections Manager  
 > Food Inspector Assistant  
 > Food Sanitation Coordinator

**Assoc. or Technical Degree**  
 > Research and Development Technician

**Baccalaureate Degree**  
 > Career and Technical Education Teacher  
 > Dietitian/Nutritionist  
 > Food Scientist  
 > Nutrition Education Specialist  
 > Research Technician

**Graduate or Prof. Degree**  
 > Food Microbiologist  
 > Food Nutritionist  
 > Food/Research Scientist

**Student Testimonial**  
 "Participating in a CTE Internship helped me to experience the reality of being a dietitian. I participated in a number of activities, including recipe construction, consultations, and food preparation. I learned of the mandatory jobs and skills one must have, the schooling and preparation required."  
 Melissa DeFriez

### 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 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).	

**Utah Business and Industry Facts**

From hospitals to care facilities to grocery stores to schools, businesses and organizations in Utah utilize the expertise of dietitians and nutritionists.

According to the Utah Department of Workforce Services, there 790 licensed dietitians and nutritionists in the state. By the year 2026, the average annual growth rate for this occupation is projected to increase 3.0 percent.

**UtahFutures: College and Career Planning**  
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**CTE Credentials of Value**

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In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

FFA is the CTSSO for students in the Natural Resource Science Career Pathway. FFA brings relevance to the classroom through industry-based competitive events and community service.

**Workforce Trends**  
 With the multitude of natural resources in Utah there are a vast number of career opportunities within eight federal and state divisions.

### Career Cluster: Agriculture, Food & Natural Resources

#### Career Pathway: Natural Resource Science

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
30.03.00.00.001	<a href="#">Natural Resource Science 1</a>	1.00	2.00 credits
<b>Choose two of the following courses:</b>			
30.01.00.00.116	<a href="#">Aquaculture, Introduction</a>	1.00	
40.05.00.00.020	<a href="#">Environmental Technician</a>	1.00	
30.03.00.00.010	<a href="#">Natural Resource Science 2</a>	1.00	
ELECTIVE COURSES			
30.01.00.00.050	<a href="#">Agricultural Science 1</a>	1.00	1.00 credit
30.02.00.00.050	<a href="#">Biology-Agricultural Science</a>	1.00	
32.02.00.00.110	<a href="#">Business Communication 1</a>	.50	
32.02.00.00.111	<a href="#">Business Communication 2</a>	.50	
32.02.00.00.140	<a href="#">Business Management</a>	.50	
37.01.00.00.150	<a href="#">Leadership Principles 1</a>	1.00	
	Summer Agriculture Program	.25	
	Supervised Agriculture Experience Program (capstone experience)		
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

Foundation courses taken beyond the required credits can be used as elective 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.**

**Natural Resource Science is:**

- > High-skill
- > High-wage
- > In-demand

**Sample Occupations Requiring:**

**High School Diploma**

- > Forest/Conservation Worker
- > Logger
- > Truck Driver

**Certificate**

- > Firefighter
- > Heavy Equipment Operator
- > Pesticide Handler/Applicator

**Assoc. or Technical Degree**

- > Arborist
- > Fisheries Technician
- > Forestry Technician

**Baccalaureate Degree**

- > Career and Technical Education Teacher
- > Conservation Officer/Scientist
- > Wildlife Biologist

**Graduate or Prof. Degree**

- > Extension specialist
- > Forester
- > Marine Biologist

**Student Testimonial**

“I enrolled in all of the CTE courses in the Natural Resource Science Pathway. The courses added depth to my understanding. Summer Ag enhanced my practical knowledge in the field. All of this together helped me along my planned path to reach my personal and occupational goals.”

Cache Bisel

### HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING

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12th Grade	1-Year Certificate	2-Year Associate or Technical Degree	4-Year Bachelor's Degree	More Graduate or Prof. Degree
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**Utah Business and Industry Facts**

Utah has a wealth of natural resources, which includes five national parks, seven national monuments, seven national forests, two national recreation areas, 45 state parks, and millions of acres of Bureau of Land Management (BLM)—administered deserts and range land.

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Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

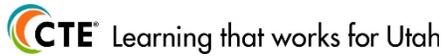
**CTE Credentials of Value**

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In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

FFA is the CTSSO for students in the Plant Science Career Pathway. FFA brings relevance to the classroom through industry-based competitive events and community service.

**Workforce Trends**  
 According to the U.S. Department of Labor, employment of conservation scientists and foresters is projected to grow 6 percent nationwide through the year 2026.

Nationwide, employment of landscape architects is projected to grow 6 percent through the year 2026.

### Career Cluster: Agriculture, Food & Natural Resources

#### Career Pathway: Plant Science

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
<i>Choose two credits from the following courses:</i>			
30.01.00.00.152	<a href="#">Floriculture</a>	.50	2.00 credits
30.01.00.00.150	<a href="#">Floriculture and Greenhouse Management</a>	1.00	
30.01.00.00.154	<a href="#">Greenhouse Management</a>	.50	
30.01.00.00.160	<a href="#">Landscape Management</a>	.50	
30.01.00.00.165	<a href="#">Nursery Operation</a>	.50	
30.02.00.00.080	<a href="#">Plant and Soil Science 1</a>	1.00	
30.02.00.00.010	<a href="#">Plant and Soil Science 2</a>	1.00	
ELECTIVE COURSES			
30.01.00.00.050	<a href="#">Agricultural Science 1</a>	1.00	1.00 credit
30.02.00.00.050	<a href="#">Biology-Agricultural Science</a>	1.00	
32.02.00.00.110	<a href="#">Business Communication 1</a>	.50	
32.02.00.00.111	<a href="#">Business Communication 2</a>	.50	
32.02.00.00.140	<a href="#">Business Management</a>	.50	
30.01.00.00.072	Landscape Architecture, Introduction	1.00	
37.01.00.00.150	<a href="#">Leadership Principles 1</a>	1.00	
30.01.00.00.095	Sustainable Urban Agriculture	1.00	
	Summer Agriculture Program	.25	
	Supervised Agriculture Experience Program (capstone experience)		
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
		<b>3.00 credits for completion</b>	

Foundation courses taken beyond the required credits can be used as elective 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.**

**Plant Science is:**  
 > In-demand

**Sample Occupations Requiring:**

**High School Diploma**  
 > Florist  
 > Greenhouse Worker  
 > Tree Trimmers and Pruners

**Certificate**  
 > Crop Scout  
 > Irrigation Specialist  
 > Pesticide Handler/Applicator

**Assoc. or Technical Degree**  
 > Arborist  
 > Landscape Technician  
 > Turf Manager

**Baccalaureate Degree**  
 > Career and Technical Education Teacher  
 > Crop Advisor  
 > Landscape Designer/Architect

**Graduate or Prof. Degree**  
 > Agronomist  
 > Extension Specialist  
 > Microbiologist

**Student Testimonial**

"I took my first agriculture class, which everyone assumes is strictly about farm animals, and it introduced me to plant biology. The classes took place mostly in the school greenhouse, where I learned to grow plants and flowers from seeds. This is where I found my passion."  
 Madysen Smith

### 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 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).		

**Utah Business and Industry Facts**

In Utah, the value of crops including nursery and greenhouse crops is \$575 million. Hay and forage has the highest values of sales at \$297 million.

**UtahFutures: College and Career Planning**  
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Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

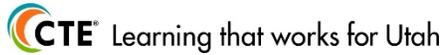
**CTE Credentials of Value**

In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.  
 TSA is the CTSO for students in the CAD Architectural Design Career Pathway. TSA fosters personal growth, leadership, and opportunities in science, technology, engineering, and mathematics (STEM).

**Workforce Trends**  
 Computer Aided Design (CAD) technologies have allowed architects to do more work without the help of drafters, making it easier to share the work with engineers, contractors, and clients.  
 According to the U.S. Department of Labor, employment of architects is projected to grow 4 percent through the year 2026. In Utah, projected growth is 2.6 percent.

### Career Cluster: Architecture & Construction

#### Career Pathway: CAD Architectural Design

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
38.01.00.00.041	<a href="#">CAD Architectural Design 1</a>	.50	1.50 credits
38.01.00.00.042	<a href="#">CAD Architectural Design 2</a>	.50	
38.01.00.00.043	<a href="#">CAD Architectural Design 3</a>	.50	
<i>Or choose the following course:</i>			
38.01.00.00.330	<a href="#">PLTW Civil Engineering and Architecture</a>	1.00	
ELECTIVE COURSES			
38.03.00.00.030	<a href="#">Construction Technology</a>	.50	1.00 credit
38.03.00.00.010	<a href="#">Engineering Technology</a>	.50	
38.01.00.00.211	<a href="#">Physics with Technology</a>	1.00	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>2.50 credits for completion</b>			

Foundation courses taken beyond the required credits can be used as elective 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.**

**CAD Architectural Design is:**  
 > High-skill  
 > High-wage  
 > In-demand

**Sample Occupations Requiring:**  
[High School Diploma](#)  
 > Surveying and Mapping Tech

[Certificate](#)  
 > N/A

[Assoc. or Technical Degree](#)  
 > Architectural Drafter  
 > Civil Drafter

[Baccalaureate Degree](#)  
 > Architect  
 > Architectural and Engineering Managers  
 > Career and Technical Education Teacher  
 > Civil Engineer  
 > Landscape Architect  
 > Secondary Education Teacher  
 > Surveyor

[Graduate or Prof. Degree](#)  
 > Architect

**Student Testimonial**  
 "As a freshman in high school, I was unsure what career path I should focus on. Because of this, I ended up taking a wide variety of courses and finding a passion in designing house plans using the computer. I have chosen to focus on structural and architectural design technology. I believe I will find pride in being part of the building process and seeing my designs go from ideas on paper to a beautiful, custom finished product in my community."  
 Jaxon Schiess

### 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 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).		

**Utah Business and Industry Facts**  
 From commercial to residential, Utah is home to more than 900 architects and building designers.  
 According to the Utah Department of Workforce Services, business expansion will provide the majority of job openings in the coming decade.  
 In Utah, an architect must be licensed.

**UtahFutures: College and Career Planning**  
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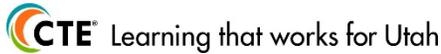
**CTE Credentials of Value**  
 In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

FCCLA is the CTSSO for students in the Interior Design Career Pathway. FCCLA provides students with opportunities to attain the knowledge, skills, and leadership characteristics necessary to succeed in life and careers.

**Workforce Trends**  
 According to the U.S. Department of Labor, employment of interior designers in specialized design services firms is projected to grow 4 percent nationwide through the year 2026. Economic expansion, growing homeowner wealth, and an increased interest in interior design will increase demand for interior designers.

Career Cluster: Architecture & Construction			
Career Pathway: Interior Design			
CORE CODE	FOUNDATION COURSES (required)	CREDITS	
34.01.00.00.210	<a href="#">Interior Design 1</a>	.50	1.00 credit
34.01.00.00.215	<a href="#">Interior Design 2</a> *	.50	
ELECTIVE COURSES			
38.01.00.00.041	<a href="#">CAD Architectural Design 1</a> *	.50	2.00 credits
38.01.00.00.042	<a href="#">CAD Architectural Design 2</a> *	.50	
40.13.00.00.020	<a href="#">Design and Visual Communications</a> *	.50	
34.01.00.00.090	<a href="#">Designer Sewing 1</a>	.50	
34.01.00.00.092	<a href="#">Designer Sewing 2</a>	.50	
34.01.00.00.080	<a href="#">Designer Sewing 3</a> *	.50	
32.02.00.00.220	<a href="#">Entrepreneurship</a>	.50	
40.10.00.00.130	<a href="#">Furniture Design and Manufacturing</a> *	.50	
34.01.00.00.010	<a href="#">Interior Design 3</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.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.**

**Interior Design is:**  
 > High-skill  
 > High-wage

**Sample Occupations Requiring:**

**High School Diploma**  
 > Interior Design Assistant  
 > Merchandise Displayer and Window Trimmer  
 > Sales Associate

**Certificate**  
 > N/A

**Assoc. or Technical Degree**  
 > Photo Stylist

**Baccalaureate Degree**  
 > Architect  
 > Career and Technical Education Teacher  
 > Interior Designer  
 > Sales Manager  
 > Set and Exhibit Designer

**Graduate or Prof. Degree**  
 > Interior Design Professor  
 > Textile Scientist

**Student Testimonial**

"The most influential decision I made during high school was to participate in a CTE Internship. The path towards interior design began with my quick start into the field through my internship. Because my decision was made during high school I didn't have to waste thousands of dollars in tuition trying to decide on a major. My high school education helped me in pursuing such a rigorous program."

Paige Kirschbaum

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 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).		

**Utah Business and Industry Facts**

According to the Utah Department of Workforce Services, there are 1,651 architectural and engineering services firms in Utah and 476 specialized design services firms.

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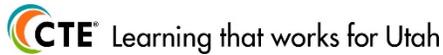
**CTE Credentials of Value**

In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 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 Carpentry Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

**Workforce Trends**  
 As construction continues to increase, in the public and private sector, demand for skilled carpenters will increase. Those individuals with the proper training and skills will have abundant job opportunities to choose from.  
 According to the U.S. Department of Labor, employment of carpenters is projected to increase 8 percent nationwide through the year 2026.

### Career Cluster: Architecture & Construction

#### Career Pathway: Construction & Structural Systems: Carpentry

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.08.00.00.010	<a href="#">Carpentry 1</a>	1.00	2.00 credits
40.08.00.00.015	<a href="#">Carpentry 2</a>	1.00	
ELECTIVE COURSES			
38.01.00.00.041	<a href="#">CAD Architectural Design 1</a> *	.50	1.00 credit
38.01.00.00.042	<a href="#">CAD Architectural Design 2</a> *	.50	
38.01.00.00.051	<a href="#">CAD Mechanical Design 1</a> *	.50	
40.08.00.00.035	<a href="#">Construction Trades Foundation</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.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.**

**Carpentry is:**  
 > High-skill  
 > High-wage  
 > In-demand

**Sample Occupations Requiring:**  
[High School Diploma](#)  
 > Cabinetmaker and bench carpenter  
 > Woodworkers

[Certificate](#)  
 > N/A

[Assoc. or Technical Degree](#)  
 > Carpenter

[Baccalaureate Degree](#)  
 > Career and Technical Education Teacher  
 > Construction Manager  
 > Secondary Education Teacher

[Graduate or Prof. Degree](#)  
 > Construction Manager

**Student Testimonial**  
 "The CTE classes I have taken have led me to see that I am interested in a career in construction. With the CTE classes I have taken I have learned many skills needed to go farther in my career. I have learned that I like framing, shingling, and now I found out I like doing the finish mud on sheet rock. Once I finish my schooling I will be able to get a job that I will enjoy and that I can improve throughout my life."  
 Tyler Stettler

### 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.

<b>12th Grade</b>	<b>1-Year Certificate</b>	<b>2-Year Associate or Technical Degree</b>	<b>4-Year Bachelor's Degree</b>	<b>More Graduate or Prof. Degree</b>
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 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).		

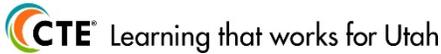
**Utah Business and Industry Facts**  
 According to the Utah Department of Workforce Services, there are 10,467 construction companies in Utah that employ 93,584 workers.  
 In Utah, a construction manager and a building inspector must be licensed.

**UtahFutures: College and Career Planning**  
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**CTE Credentials of Value**  
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 In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 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 CTSSO for students in the Electrical Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

**Workforce Trends**  
 As the population and economy grow, more electricians will be needed to install and maintain electrical devices and wiring in homes, offices, and other structures. Job opportunities are expected to be excellent, largely arising from the need to replace electricians who leave the occupation permanently.

### Career Cluster: Architecture & Construction

#### Career Pathway: Construction & Structural Systems: Electrical

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.08.00.00.050	<a href="#">Electrician 1</a>	1.00	2.00 credits
40.08.00.00.055	<a href="#">Electrician 2</a>	1.00	
ELECTIVE COURSES			
38.01.00.00.041	<a href="#">CAD Architectural Design 1</a> *	.50	1.00 credit
38.01.00.00.042	<a href="#">CAD Architectural Design 2</a> *	.50	
38.01.00.00.051	<a href="#">CAD Mechanical Design 1</a> *	.50	
40.08.00.00.035	<a href="#">Construction Trades Foundation</a>	.50	
38.01.00.00.021	<a href="#">Electronics 1</a> *	.50	
38.01.00.00.022	<a href="#">Electronics 2</a>	.50	
38.01.00.00.023	<a href="#">Electronics 3</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.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.**

**Electrical is:**

- > High-skill
- > High-wage
- > In-demand

**Sample Occupations Requiring:**

**High School Diploma**

- > Electrical Equipment Assembler
- > Electrician
- > Electrician Helper

**Certificate**

- > Electrical and Electronics Engineering Technician

**Assoc. or Technical Degree**

- > Electrical Drafter

**Baccalaureate Degree**

- > Career and Technical Education Teacher
- > Electrical Engineer
- > Secondary Education Teacher

**Graduate or Prof. Degree**

- > Electrical Engineer

**Student Testimonial**

“I have an occupational goal of becoming a journeyman electrician. I am currently working in this field and have two years of on-the-job training. The CTE courses I took in high school helped me with real life and they gave me skills that are useful in the real-world.”

Jason Manning

### 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 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).		

**Utah Business and Industry Facts**

According to the Utah Department of Workforce Services, the median salary for an electrician is \$52,600, which is roughly the same nationwide.

Employment of electricians fluctuates with the overall economy.

In Utah, an electrician must be licensed.

**UtahFutures: College and Career Planning**

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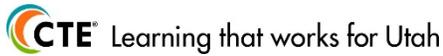
**CTE Credentials of Value**

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# Utah Career and Technical Education Career Pathway

## 2019-2020 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 CTSSO for students in the Plumbing Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

**Workforce Trends**  
 Demand for plumbers will stem from new construction and renovation, repair and maintenance of existing buildings.

### Career Cluster: Architecture & Construction

#### Career Pathway: Construction & Structural Systems: Plumbing

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.08.00.00.100	<a href="#">Plumbing 1</a>	1.00	2.00 credits
40.08.00.00.105	<a href="#">Plumbing 2</a>	1.00	
ELECTIVE COURSES			
38.01.00.00.041	<a href="#">CAD Architectural Design 1</a> *	.50	1.00 credit
38.01.00.00.042	<a href="#">CAD Architectural Design 2</a> *	.50	
38.01.00.00.051	<a href="#">CAD Mechanical Design 1</a> *	.50	
40.08.00.00.010	<a href="#">Carpentry 1</a>	1.00	
40.08.00.00.035	<a href="#">Construction Trades Foundation</a>	.50	
40.08.00.00.050	<a href="#">Electrician 1</a>	1.00	
38.01.00.00.021	<a href="#">Electronics 1</a> *	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.

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**Plumbing is:**

- > High-skill
- > High-wage
- > In-demand

**Sample Occupations Requiring:**

**High School Diploma**

- > Plumber/Pipefitter Helper
- > Steamfitter

**Certificate**

- > Pipefitter (Journey Level)
- > Plumber (Journey Level)

**Assoc. or Technical Degree**

- > N/A

**Baccalaureate Degree**

- > Career and Technical Education Teacher

**Graduate or Prof. Degree**

- > N/A

**Student Testimonial**

“The way I figured out the career path I wanted to take was back in 7th grade. I had a CTE class and learned that I liked to work with my hands. I decided to take a plumbing class. I learned that plumbing is not just about fixing clogged drains and toilets and putting in appliances, but also working on the drainage systems for a house. I plan to go to college for this trade.”

Cameron Cheney

### 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
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**Utah Business and Industry Facts**

According to the Utah Department of Workforce Services, workers with knowledge of Building Information Modeling (BIM) should have the best job opportunities, as integrated building-planning abilities increase in demand.

In Utah, a plumber, pipefitter, and steamfitter must be licensed.

**UtahFutures: College and Career Planning**

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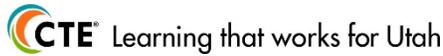
**CTE Credentials of Value**

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In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



### Career Cluster: Arts, Audio/Visual Technology & Communication

#### Career Pathway: Fashion, Apparel & Textiles

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
34.01.00.00.140	<a href="#">Fashion Design Studio</a>	.50	1.50 credits
<b>Choose one of the following courses:</b>			
34.01.00.00.090	<a href="#">Designer Sewing 1</a>	.50	
34.01.00.00.060	<a href="#">Sports and Outdoor Sewing 1</a>	.50	
<b>Choose one of the following courses:</b>			
34.01.00.00.092	<a href="#">Designer Sewing 2</a>	.50	
34.01.00.00.062	<a href="#">Sports and Outdoor Sewing 2</a>	.50	
ELECTIVE COURSES			
32.02.00.00.010	<a href="#">Accounting 1</a>	.50	1.50 credits
34.01.00.00.080	<a href="#">Designer Sewing 3 *</a>	.50	
32.02.00.00.220	<a href="#">Entrepreneurship</a>	.50	
34.01.00.00.145	<a href="#">Fashion Design Merchandising</a>	.50	
34.01.00.00.147	<a href="#">Fashion Design Merchandising, Advanced *</a>	.50	
40.10.00.00.048	<a href="#">Screen Printing Technology</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.

Foundation courses taken beyond the required credits can be used as elective 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.**

#### Fashion, Apparel & Textiles is:

- > High-skill
- > High-wage

#### Sample Occupations Requiring:

- High School Diploma**
- > Merchandise Displayer and Window Trimmer
  - > Retail Buyer
  - > Wholesale Buyer

**Certificate**

- > N/A

**Assoc. or Technical Degree**

- > Fashion Design and Merchandising

**Baccalaureate Degree**

- > Career and Technical Education Teacher
- > Fashion Designer
- > Fashion Illustrator
- > Textile Scientist

**Graduate or Prof. Degree**

- > Interior Design Professor
- > Textile Science Researcher

#### CTSO Information

Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

FCCLA is the CTSO for students in the Fashion, Apparel and Textiles Career Pathway. FCCLA provides students with opportunities to attain the knowledge, skills, and leadership characteristics necessary to succeed in life and careers.

#### Workforce Trends

Employment growth for fashion designers will stem from a growing population demanding more clothing, footwear, and accessories. The best job opportunities will be in design firms that design mass market clothing sold in department stores and retail chain stores, such as apparel wholesale firms.

#### Student Testimonial

"The information I learned from the CTE classes provided me with a knowledge base about the theories and application of fashion design. I found it exciting and motivating to be able to take classes in high school that fulfilled my passions. It not only satisfied my desire to learn about this field but the CTE classes also has made me more knowledgeable and more prepared for college and employment in my field of study."

Tyllar Hubbard

### 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 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).		

#### Utah Business and Industry Facts

From theater and dance to music and acting numerous performing arts companies call Utah home, employing individuals in fashion design, fashion merchandising, costuming, technical apparel design, and custom dressmaking.

#### UtahFutures: College and Career Planning

Visit [UtahFutures.org](http://UtahFutures.org) to explore occupations, search salary projections, access labor market information, investigate training options, and to create a plan.

Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

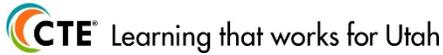
#### CTE Credentials of Value

In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



### Career Cluster: Arts, Audio/Visual Technology & Communication

#### Career Pathway: Broadcasting: Audio/Visual Production Professional

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.01.00.00.030	<a href="#">Video Production 1</a> *	.50	1.00 credit
40.01.00.00.035	<a href="#">Video Production 2</a> *	.50	
ELECTIVE COURSES			
40.13.00.00.015	<a href="#">Advanced Commercial Photography</a> *	.50	2.00 credits
40.13.00.00.012	<a href="#">Basic Digital Photography</a> *	.50	
35.02.00.00.030	<a href="#">Computer Programming 1</a>	1.00	
35.02.00.00.010	<a href="#">Digital Media 1</a>	.50	
38.01.00.00.021	<a href="#">Electronics 1</a> *	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.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.**

#### 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 Audio/Visual Production Professional Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

#### Workforce Trends

As businesses, schools, and radio and television stations demand new equipment, to improve their audio and video capabilities, the demand for broadcast and sound engineering technicians is expected to increase.

According to the U.S. Department of Labor, employment of film and video editors is projected to grow 17 percent nationwide through the year 2026.

#### Audio/Visual Production Professional is:

- > High-skill
- > High-wage
- > In-demand

#### Sample Occupations Requiring:

##### High School Diploma

- > Advertising Salesperson

##### Certificate

- > Video Editor

##### Assoc. or Technical Degree

- > Audio Video Equipment Technician
- > Broadcast Technician
- > Radio, Cellular, and Tower Equipment Installers and Repairers
- > Sound Engineering Technician

##### Baccalaureate Degree

- > Announcer
- > Camera Operator
- > Career and Technical Education Teacher
- > Film and Video Editor
- > Producer and Director

##### Graduate or Prof. Degree

- > Television Broadcaster

#### Student Testimonial

"I knew a lot about how to film, but I didn't know much about the technical aspects. The CTE classes helped me gain that understanding. Not only did I learn the technical aspects of cameras, as I enjoy cinematography, but I also learned the technical aspects of sound, lighting."

Morgan Taylor

### 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 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).		

#### Utah Business and Industry Facts

According to the Utah Department of Workforce Services, the broadcasting industry in Utah employs 2,091 workers.

#### UtahFutures: College and Career Planning

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#### CTE Credentials of Value

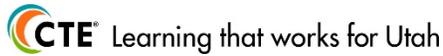
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Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



### Career Cluster: Arts, Audio/Visual Technology & Communication

#### Career Pathway: Broadcasting: Broadcasting Professional

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.01.00.00.040	<a href="#">Radio Broadcasting 1</a> *	.50	1.00 credit
40.01.00.00.045	<a href="#">Radio Broadcasting 2</a> *	.50	
<i>Or choose the following courses:</i>			
40.01.00.00.005	<a href="#">TV Broadcasting 1</a> *	.50	1.00 credit
40.01.00.00.010	<a href="#">TV Broadcasting 2</a> *	.50	
ELECTIVE COURSES			
32.02.00.00.010	<a href="#">Accounting 1</a>	.50	2.00 credits
32.02.00.00.140	<a href="#">Business Management</a>	.50	
35.02.00.00.030	<a href="#">Computer Programming 1</a>	1.00	
35.02.00.00.010	<a href="#">Digital Media 1</a>	.50	
38.01.00.00.021	<a href="#">Electronics 1</a> *	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.

Foundation courses taken beyond the required credits can be used as elective credit.

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**Broadcasting Professional is:**  
> High-skill

**Sample Occupations Requiring:**

- [High School Diploma](#)  
> Radio Announcer
- [Certificate](#)  
> Sound Engineering Technician
- [Assoc. or Technical Degree](#)  
> Audio Video Equipment Technician  
> Broadcast Technician  
> Communication Equipment Mechanic  
> Radio, Cellular, and Tower Equipment Installers and Repairers  
> Radio Broadcaster
- [Baccalaureate Degree](#)  
> Audio-Visual Specialist  
> Career and Technical Education Teacher
- [Graduate or Prof. Degree](#)  
> Radio Broadcaster

#### 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 Broadcasting Professional Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

#### Workforce Trends

Technological improvements in the industry mean greater efficiencies in the workplace. Growth is expected to stem from businesses, schools, and radio and television stations seeking new equipment to improve their audio and video capabilities.

According to the U.S. Department of Labor, employment of broadcast and sound engineering technicians is projected to increase 8 percent nationwide through the year 2026.

#### Student Testimonial

"The CTE courses have helped me focus, get experience, and gain an understanding of the dedication and work required to obtain my goal. These classes have also helped me make the right choice to continue my education."

Marian Vega

### 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 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).		

#### Utah Business and Industry Facts

According to the Utah Department of Workforce Services, there are 65 radio and television broadcasting firms in Utah. The annual median salary for a broadcast technician is \$35,500.

#### UtahFutures: College and Career Planning

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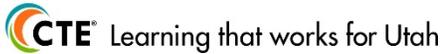
#### CTE Credentials of Value

In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



### Career Cluster: Arts, Audio/Visual Technology & Communication

#### Career Pathway: Graphic Design & Communication: Commercial Art

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.13.00.00.001	<a href="#">Commercial and Advertising Art</a> *	.50	2.00 credits
40.13.00.00.020	<a href="#">Design and Visual Communications</a> *	.50	
40.13.00.00.030	<a href="#">Industrial Design</a> *	1.00	
ELECTIVE COURSES			
35.02.00.00.075	<a href="#">3D Animation</a>	.50	1.00 credit
35.02.00.00.070	<a href="#">3D Graphics</a>	.50	
32.02.00.00.010	<a href="#">Accounting 1</a>	.50	
40.10.00.00.044	<a href="#">Advanced Production Graphics</a> *	.50	
40.13.00.00.012	<a href="#">Basic Digital Photography</a> *	.50	
32.02.00.00.140	<a href="#">Business Management</a>	.50	
35.02.00.00.010	<a href="#">Digital Media 1</a>	.50	
40.10.00.00.046	<a href="#">Digital Print Design</a> *	.50	
32.02.00.00.220	<a href="#">Entrepreneurship</a>	.50	
40.10.00.00.040	<a href="#">Digital Graphic Arts Introduction</a> *	.50	
40.10.00.00.048	<a href="#">Screen Printing Technology</a> *	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.

Foundation courses taken beyond the required credits can be used as elective 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.**

#### Commercial Art is:

- > High-skill
- > High-wage
- > In-demand

#### Sample Occupations Requiring:

##### High School Diploma

- > Fine Artist, including painters, sculptors, and illustrators
- > Photographer

##### Certificate

- > N/A

##### Assoc. or Technical Degree

- > N/A

##### Baccalaureate Degree

- > Art Director
- > Career and Technical Education Teacher
- > Commercial Designer
- > Fashion Designer
- > Graphic Designer
- > Multimedia Animator
- > Multimedia Artist

##### Graduate or Prof. Degree

- > Medical Illustrator
- > Postsecondary Teacher

#### 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 Commercial Art Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

#### Workforce Trends

The expanding electronic media and entertainment industries will offer opportunities for animators, illustrators, and graphic artists.

In Utah, the projected annual employment growth rate for graphic designers is 3.2 percent through the year 2026, with annual job openings of 470.

#### Student Testimonial

"All of my CTE teachers have been very informative and helpful in guiding me to an interest of study after my high school years. CTE classes have prepared me to be more self-sufficient, goal-oriented, and confident in my skills. CTE classes have helped me be a better student. I am very excited for my future."

Hannah Jensen

### 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 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).		

#### Utah Business and Industry Facts

According to the Utah Department of Workforce Services, graphic designers work in a variety of businesses. From public to private companies, graphic designers are in high demand, especially those who have skills in various types of media—websites and print publications.

#### UtahFutures: College and Career Planning

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Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

#### CTE Credentials of Value

In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



### Career Cluster: Arts, Audio/Visual Technology & Communication

#### Career Pathway: Graphic Design & Communication: Commercial Photography

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.13.00.00.012	<a href="#">Basic Digital Photography</a> *	.50	1.00 credit
40.13.00.00.015	<a href="#">Advanced Commercial Photography</a> *	.50	
ELECTIVE COURSES			
40.13.00.00.001	<a href="#">Commercial and Advertising Art</a> *	.50	2.00 credits
35.02.00.00.010	<a href="#">Digital Media 1</a>	.50	
40.10.00.00.040	<a href="#">Digital Graphic Arts Introduction</a> *	.50	
40.01.00.00.005	<a href="#">Television Broadcasting 1</a> *	.50	
40.01.00.00.030	<a href="#">Video Production 1</a> *	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.

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#### CTSO Information

Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

SkillsUSA is the CTSSO for students in the Commercial Photography Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

#### Workforce Trends

The number of portrait photographers is projected to increase along with the population. New opportunities should arise with Internet-based media companies, but keen competition is expected. Job candidates who possess skills in picture editing and taking digital video will have an advantage.

**Commercial Photography is:**  
> In-demand

#### Sample Occupations Requiring:

- [High School Diploma](#)  
> Photographer
- [Certificate](#)  
> Commercial Photographer
- [Assoc. or Technical Degree](#)  
> N/A
- [Baccalaureate Degree](#)  
> Camera Operator  
> Career and Technical Education Teacher
- [Graduate or Prof. Degree](#)  
> Photography Professor

### 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 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).		

#### Utah Business and Industry Facts

From television and newspaper, to event photos, photographers are needed in various industries across Utah.  
  
According to the Utah Department of Workforce Services, more than 1,000 individuals are employed as photographers.

#### Student Testimonial

"High school photography courses prepared me for college and career by not only teaching me the basics and foundations, but also giving me opportunities to put [what I learned] to use. It gave me real life experience that has shown me what the field is really like. I have loved learning more about photography and plan to accomplish all my goals of becoming a professional photographer."  
  
Camile Rhoades

#### UtahFutures: College and Career Planning

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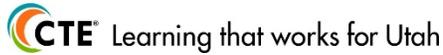
#### CTE Credentials of Value

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# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

Students who participate in the Digital Media Career Pathway choose among the following CTOS, depending upon what is available at their school:  
 FBLA | SkillsUSA | TSA

**Workforce Trends**  
 Digital media is the field of the future and is rapidly growing. Because our global economy is driven by technology digital media is one of the most in-demand fields. With more than 3 billion Internet users worldwide and more than 1 billion websites, the demand for individuals skilled in digital media is high.

### Career Cluster: Arts, Audio/Visual Technology & Communication

#### Career Pathway: Graphic Design & Communication: Digital Media

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
35.02.00.00.010	<a href="#">Digital Media 1</a>	.50	2.00 credits
40.10.00.00.040	<a href="#">Digital Graphic Arts Introduction *</a>	.50	
<b>Choose 1.00 credit from the following courses:</b>			
35.02.00.00.075	<a href="#">3D Animation</a>	.50	1.00 credit
35.02.00.00.070	<a href="#">3D Graphics</a>	.50	
35.02.00.00.011	<a href="#">Digital Media 2</a>	1.00	
<b>ELECTIVE COURSES</b>			
35.02.00.00.014	<a href="#">Augmented Reality and Virtual Reality</a>	.50	1.00 credit
37.01.00.00.001	<a href="#">Digital Marketing</a>	.50	
32.02.00.00.220	<a href="#">Entrepreneurship</a>	.50	
35.02.00.00.045	<a href="#">Game Development Fundamentals 1</a>	.50	
40.10.00.00.040	<a href="#">Digital Graphic Arts Introduction *</a>	.50	
35.02.00.00.005	<a href="#">Introduction to Information Technology</a>	.50	
35.02.00.00.012	<a href="#">UX/UI and Quality Assurance</a>	.50	
35.02.00.00.060	<a href="#">Web Development 1</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.  
 Foundation courses taken beyond the required credits can be used as elective 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.**

**Digital Media is:**  
 > High-skill  
 > High-wage  
 > In-demand

**Sample Occupations Requiring:**  
[High School Diploma](#)  
 > N/A  
[Certificate](#)  
 > N/A  
[Assoc. or Technical Degree](#)  
 > Web Developer  
[Baccalaureate Degree](#)  
 > Career and Technical Education Teacher  
 > Graphic Designer  
 > Multimedia Artist and Animator  
 > Software Developer  
 > Web Administrator  
[Graduate or Prof. Degree](#)  
 > Software Engineer

**Student Testimonial**  
 “To reach my goal of becoming a graphic designer and animator, I will need to gain both an education and extensive experience. I have begun my experience and education by taking multiple CTE classes while still in high school, that will prepare me for the fields of graphic design and animation. The CTE classes have given me the preparation and foundation for college that I will need to stay one step ahead in order to succeed.”  
 Lauren Yancey

### 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 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).			

**Utah Business and Industry Facts**  
 “The talent pool of computer engineers, digital artists and animators in Utah is astounding,” said WildWorks CEO Clark Stacey. “The workforce talent here is perennially refreshed not only by in-state colleges and universities, but by seasoned professionals fleeing the congestion and high cost of living in other hub cities like San Francisco and Seattle.”  
*Silicon Slopes Magazine, Spring 2017*

**UtahFutures: College and Career Planning**  
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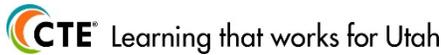
**CTE Credentials of Value**  
 In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

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In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah’s statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



### Career Cluster: Arts, Audio/Visual Technology & Communication

#### Career Pathway: Graphic Design & Communication: Graphics Printing

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
	<i>Choose two of the following courses:</i>		
40.10.00.00.040	<a href="#">Digital Graphic Arts Introduction</a> *	.50	1.00 credit
40.10.00.00.042	<a href="#">Graphic Communications, Intermediate</a> *	.50	
40.10.00.00.046	<a href="#">Digital Print Design</a> *	.50	
40.10.00.00.044	<a href="#">Advanced Production Graphics</a> *	.50	
ELECTIVE COURSES			
40.13.00.00.001	<a href="#">Commercial and Advertising Art</a> *	.50	2.00 credits
40.13.00.00.020	<a href="#">Design and Visual Communications</a> *	.50	
35.02.00.00.010	<a href="#">Digital Media 1</a>	.50	
40.13.00.00.030	<a href="#">Industrial Design</a> *	.50	
40.10.00.00.048	<a href="#">Screen Printing Technology</a> *	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.

Foundation courses taken beyond the required credits can be used as elective 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.**

#### Graphics Printing is:

- > High-skill
- > High-wage

#### Sample Occupations Requiring:

- High School Diploma**
- > Printing Press Operator
  - > Prepress Workers
  - > Production Helpers

**Certificate**

- > N/A

**Assoc. or Technical Degree**

- > N/A

**Baccalaureate Degree**

- > Career and Technical Education Teacher
- > Graphic Designer

**Graduate or Prof. Degree**

- > N/A

#### CTSO Information

Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

SkillsUSA is the CTSSO for students in the Graphics Printing Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

#### Workforce Trends

Working conditions in paper and printing manufacturing plants have become less hazardous as the industry has become more automated. Companies now use fewer chemicals and solutions resulting in fewer equipment related accidents.

#### Student Testimonial

“Without the graphic design class I wouldn’t know what I wanted to do in college and for the rest of my life. I think I love graphic design so much because I can work hard on an assignment and then print it, so I have the opportunity to see how my work has paid off.”

Dawson Carter

### 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 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).		

#### Utah Business and Industry Facts

According to the Utah Department of Workforce Services, the printing industry in Utah employs 4,975 workers.

#### UtahFutures: College and Career Planning

Visit [UtahFutures.org](http://UtahFutures.org) to explore occupations, search salary projections, access labor market information, investigate training options, and to create a plan.

Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

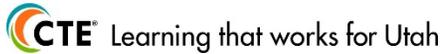
#### CTE Credentials of Value

In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah’s statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

FBLA is the CTSO for students in the Accounting and Financial Operations Career Pathway. FBLA provides students with opportunities for leadership, community involvement, and career development.

**Workforce Trends**  
 Accountants, those with a CPA, continue to be in demand in both public and private industry audit and tax specialties. Demand is especially high in the tax and healthcare areas.

In Utah, the average annual employment growth rate for accountants and auditors is 3.3 percent through the year 2026.

### Career Cluster: Business, Finance & Marketing

#### Career Pathway: Accounting & Financial Operations

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
32.02.00.00.010	<a href="#">Accounting 1</a>	.50	1.00 credit
32.02.00.00.020	<a href="#">Accounting 2</a>	.50	
32.02.00.00.030	<a href="#">Advanced Accounting</a>	1.00	
ELECTIVE COURSES			
32.02.00.00.110	<a href="#">Business Communication 1</a>	.50	2.00 credits
32.02.00.00.111	<a href="#">Business Communication 2</a>	.50	
32.02.00.00.130	<a href="#">Business Law</a>	.50	
32.02.00.00.140	<a href="#">Business Management</a>	.50	
32.01.00.00.001	<a href="#">Business Math and Personal Finance **</a>	1.00	
32.02.00.00.216	<a href="#">Business Office Specialist</a>	.50	
32.02.00.00.200	<a href="#">Economics</a>	.50	
32.02.00.00.070	<a href="#">Exploring Business and Marketing</a>	.50	
37.01.00.00.220	<a href="#">Real Estate</a>	.50	
37.01.00.00.240	<a href="#">Retailing</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	3.00 credits for completion
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	

\*\* This course satisfies the .50 Financial Literacy requirement.  
 Foundation courses taken beyond the required credits can be used as elective 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.**

**Accounting & Financial Operations is:**  
 > In-demand

**Sample Occupations Requiring:**  
[High School Diploma](#)  
 > Accounting and Audit Clerk  
 > Bookkeeper  
 > Tax Preparer

[Certificate](#)  
 > N/A

[Assoc. or Technical Degree](#)  
 > N/A

[Baccalaureate Degree](#)  
 > Accountant  
 > Auditor  
 > Career and Technical Education Teacher  
 > Financial Manager  
 > Loan Officer  
 > Tax Examiner

[Graduate or Prof. Degree](#)  
 > Certified Public Accountant

**Student Testimonial**  
 "Because of my CTE Internship, I am going to be more prepared when I go into the field of accounting. I will be able to understand and apply it to real hands-on learning experiences. To be taught and learn some of the basics of QuickBooks and apply it by doing real accounting for business and people has been an amazing learning experience."  
 Brayden Austin

### 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 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).		

**Utah Business and Industry Facts**  
 In Utah, a Certified Public Accountant (CPA) must have a master's degree in accounting and be licensed. The license must be renewed every two years.  
 According to the Utah Department of Workforce Services, the median hourly wage for an experienced auditor and an accountant is \$30.22.

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Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

**CTE Credentials of Value**  
 In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

Students who participate in the Consumer Service and Management Career Pathway choose among the following CTSOs, depending upon what is available at their school.

DECA | FBLA | FCCLA

**Workforce Trends**  
 During the next decade a growing number of personal financial advisors will be needed to assist the millions of workers who are expected to retire.

In Utah, the average annual employment growth rate for personal financial advisors is 2.4 percent through the year 2026.

### Career Cluster: Business, Finance & Marketing

#### Career Pathway: Customer Service & Management

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
37.01.00.00.025	<a href="#">Customer Service</a>	.50	1.00 credit
32.02.00.00.200	<a href="#">Economics</a>	.50	
ELECTIVE COURSES			
32.02.00.00.010	<a href="#">Accounting 1</a>	.50	2.00 credits
32.02.00.00.140	<a href="#">Business Management</a>	.50	
32.01.00.00.001	<a href="#">Business Math and Personal Finance **</a>	1.00	
32.02.00.00.220	<a href="#">Entrepreneurship</a>	.50	
37.01.00.00.240	<a href="#">Retailing</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\*\* This course satisfies the .50 Financial Literacy requirement.

**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.**

**Consumer Service & Management is:**  
 > In-demand

**Sample Occupations Requiring:**

**High School Diploma**  
 > Claims Correspondence Clerk  
 > Credit Checkers  
 > Customer Services Representative

**Certificate**  
 > N/A

**Assoc. or Technical Degree**  
 > Account Representative  
 > Consumer Advocate  
 > Dispute Resolution Analyst

**Baccalaureate Degree**  
 > Budget Analyst  
 > Career and Technical Education Teacher  
 > Credit Counselor  
 > Financial Manager  
 > Personal Financial Advisor

**Graduate or Prof. Degree**  
 > Economist

**Student Testimonial**

“Taking Business Management sparked my interest to pursue a business degree. Currently, I hold a management position at Utah’s Hogle Zoo while obtaining my Master of Business Administration (MBA). Taking advantage of the CTE program ultimately helped to pinpoint my career trajectory.”

Andrew Nadauld

### 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 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).		

**Utah Business and Industry Facts**

Economists are found in state and federal businesses throughout Utah. According to the Utah Department of Workforce Services, the annual median salary of an economist is \$78,260.

**UtahFutures: College and Career Planning**

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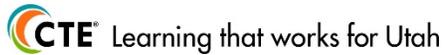
**CTE Credentials of Value**

In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah’s statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

FBLA is the CTSO for students in the Entrepreneurship Career Pathway. FBLA provides students with opportunities for leadership, community involvement, and career development.

**Workforce Trends**  
 There are 23 million small businesses in the U.S., with women owning about 9.1 million.

To be an entrepreneur you don't need to be a certain age. A lot of teens are successful entrepreneurs. The U.S. Small Business Administration (SBA) has a [Young Entrepreneur](#) webpage to help teens start, grow, and own a business.

### Career Cluster: Business, Finance & Marketing

#### Career Pathway: Entrepreneurship

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
32.02.00.00.130	<a href="#">Business Law</a>	.50	1.50 credits
32.02.00.00.140	<a href="#">Business Management</a>	.50	
32.02.00.00.220	<a href="#">Entrepreneurship</a>	.50	
ELECTIVE COURSES			
32.02.00.00.010	<a href="#">Accounting 1</a>	.50	1.50 credits
32.02.00.00.110	<a href="#">Business Communication 1</a>	.50	
32.02.00.00.111	<a href="#">Business Communication 2</a>	.50	
37.01.00.00.025	<a href="#">Customer Service</a>	.50	
32.02.00.00.150	<a href="#">Digital Business Applications</a>	.50	
32.02.00.00.070	<a href="#">Exploring Business and Marketing</a>	.50	
37.01.00.00.150	<a href="#">Leadership Principles 1</a>	.50	
37.01.00.00.155	<a href="#">Leadership Principles 2</a>	.50	
37.01.00.00.165	<a href="#">Marketing 1</a>	.50	
37.01.00.00.260	<a href="#">Sports and Entertainment Marketing</a>	.50	
35.02.00.00.060	<a href="#">Web Development 1</a>	.50	
35.02.00.00.065	<a href="#">Web Development 2</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

Foundation courses taken beyond the required credits can be used as elective 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.**

**Entrepreneurship is:**

- > High-skill
- > High-wage
- > In-demand

**Sample Occupations Requiring:**

[High School Diploma](#)  
 > Sales Representative

[Certificate](#)  
 > N/A

[Assoc. or Technical Degree](#)  
 > Web Developer

[Baccalaureate Degree](#)  
 > Career and Technical Education Teacher  
 > General Manager  
 > Marketing Manager  
 > Management Analyst  
 > Operations Manager  
 > Sales Manager

[Graduate or Prof. Degree](#)  
 > Business Administrator

**Student Testimonial**

“The Entrepreneurship class I took in high school gave me a burning desire to go out and start my own business. CTE courses helped me tremendously to prepare for life after high school, college, and a career.”

Austin Harvey

### HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING

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**Utah Business and Industry Facts**

In 2018, Forbes named Utah the #2 best state for business. Utah has been ranked #1 six out of the past nine years.

In 2017, Fit Small Business ranked Salt Lake City and Utah as one of the top three states (ranking second) to launch a business.

**UtahFutures: College and Career Planning**  
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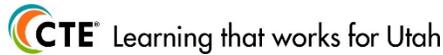
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In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

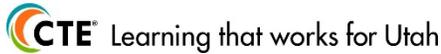
## 2019-2020 School Year



<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>FBLA is the CTSO for students in the Office/Administrative Support Career Pathway. FBLA provides students with opportunities for leadership, community involvement, and career development.</p> <p><b>Workforce Trends</b> According to the U.S. Department of Labor, secretaries and administrative assistants held about 4 million jobs in 2014, working in nearly every industry. This is one of the largest job categories in the U. S.</p> <p>About 9 out of 10 secretaries work in firms providing services. These services range from education and health care to legal and business services.</p>	<h3 style="margin: 0;">Career Cluster: Business, Finance &amp; Marketing</h3> <h3 style="margin: 0;">Career Pathway: Office/Administrative Support</h3>	<p><b>Office/Administrative Support is:</b> &gt; High-wage &gt; In-demand</p> <p><b>Sample Occupations Requiring:</b> <u>High School Diploma</u> &gt; Administrative Assistant &gt; Customer Service Rep. &gt; Executive Administrative Assistant &gt; Executive Secretary &gt; Legal Secretary &gt; Secretary</p> <p><u>Certificate</u> &gt; N/A</p> <p><u>Assoc. or Technical Degree</u> &gt; Desktop Publisher &gt; Legal Assistant/Paralegal</p> <p><u>Baccalaureate Degree</u> &gt; Career and Technical Education Teacher &gt; General and Operations Manager</p> <p><u>Graduate or Prof. Degree</u> &gt; Business Administrator</p>																																																																		
	<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #00a651; color: white;"> <th style="width: 15%;">CORE CODE</th> <th style="width: 55%;">FOUNDATION COURSES (required)</th> <th style="width: 15%;">CREDITS</th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td></td> <td style="text-align: center;"><i>Choose two of the following courses:</i></td> <td></td> <td></td> </tr> <tr> <td>32.02.00.00.110</td> <td><a href="#">Business Communication 1</a></td> <td style="text-align: center;">.50</td> <td rowspan="4" style="text-align: center; vertical-align: middle;">1.00 credit</td> </tr> <tr> <td>32.02.00.00.216</td> <td><a href="#">Business Office Specialist</a></td> <td style="text-align: center;">.50</td> </tr> <tr> <td>32.02.00.00.150</td> <td><a href="#">Digital Business Applications</a></td> <td style="text-align: center;">.50</td> </tr> <tr> <td>37.01.00.00.001</td> <td><a href="#">Digital Marketing</a></td> <td style="text-align: center;">.50</td> </tr> <tr style="background-color: #00a651; color: white;"> <th colspan="4" style="text-align: center;">ELECTIVE COURSES</th> </tr> <tr> <td>35.01.00.00.040</td> <td><a href="#">A+ Computer Maintenance and Repair</a></td> <td style="text-align: center;">1.00</td> <td rowspan="11" style="text-align: center; vertical-align: middle;">2.00 credits</td> </tr> <tr> <td>32.02.00.00.010</td> <td><a href="#">Accounting 1</a></td> <td style="text-align: center;">.50</td> </tr> <tr> <td>32.02.00.00.111</td> <td><a href="#">Business Communication 2</a></td> <td style="text-align: center;">.50</td> </tr> <tr> <td>32.02.00.00.140</td> <td><a href="#">Business Management</a></td> <td style="text-align: center;">.50</td> </tr> <tr> <td>35.02.00.00.035</td> <td><a href="#">Computer Science Principles</a></td> <td style="text-align: center;">.50</td> </tr> <tr> <td>35.02.00.00.010</td> <td><a href="#">Digital Media 1</a></td> <td style="text-align: center;">.50</td> </tr> <tr> <td>32.02.00.00.070</td> <td><a href="#">Exploring Business and Marketing</a></td> <td style="text-align: center;">.50</td> </tr> <tr> <td>40.10.00.00.040</td> <td><a href="#">Digital Graphic Arts Introduction *</a></td> <td style="text-align: center;">.50</td> </tr> <tr> <td>35.02.00.00.060</td> <td><a href="#">Web Development 1</a></td> <td style="text-align: center;">.50</td> </tr> <tr> <td>35.02.00.00.065</td> <td><a href="#">Web Development 2</a></td> <td style="text-align: center;">.50</td> </tr> <tr> <td>41.00.00.00.050</td> <td><a href="#">CTE Internship</a></td> <td style="text-align: center;">.50</td> </tr> <tr> <td>41.00.00.00.030</td> <td><a href="#">Workplace Skills</a></td> <td style="text-align: center;">.50</td> </tr> <tr> <td colspan="2" style="text-align: center;"><b>3.00 credits for completion</b></td> <td colspan="2"></td> </tr> </tbody> </table> <p style="font-size: small;">* Course can be taken up to 1.00 credit Foundation courses taken beyond the required credits can be used as elective credit.</p> <p style="text-align: center;"><b>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.</b></p>	CORE CODE	FOUNDATION COURSES (required)	CREDITS			<i>Choose two of the following courses:</i>			32.02.00.00.110	<a href="#">Business Communication 1</a>	.50	1.00 credit	32.02.00.00.216	<a href="#">Business Office Specialist</a>	.50	32.02.00.00.150	<a href="#">Digital Business Applications</a>	.50	37.01.00.00.001	<a href="#">Digital Marketing</a>	.50	ELECTIVE COURSES				35.01.00.00.040	<a href="#">A+ Computer Maintenance and Repair</a>	1.00	2.00 credits	32.02.00.00.010	<a href="#">Accounting 1</a>	.50	32.02.00.00.111	<a href="#">Business Communication 2</a>	.50	32.02.00.00.140	<a href="#">Business Management</a>	.50	35.02.00.00.035	<a href="#">Computer Science Principles</a>	.50	35.02.00.00.010	<a href="#">Digital Media 1</a>	.50	32.02.00.00.070	<a href="#">Exploring Business and Marketing</a>	.50	40.10.00.00.040	<a href="#">Digital Graphic Arts Introduction *</a>	.50	35.02.00.00.060	<a href="#">Web Development 1</a>	.50	35.02.00.00.065	<a href="#">Web Development 2</a>	.50	41.00.00.00.050	<a href="#">CTE Internship</a>	.50	41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	<b>3.00 credits for completion</b>				
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<b>3.00 credits for completion</b>																																																																				
<p><b>Student Testimonial</b> “The [Microsoft Office Specialist] certifications helped me land my current job at Lowe’s Home Improvement. I am the manager there and perform all of the administrative functions. I do all of the accounting, book-keeping, data entry, and reporting. I’m using Microsoft Office daily, especially Excel.”  Andrew McLay</p>	<h3 style="margin: 0;">HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING</h3> <p style="margin: 0; color: white;">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> According to the Utah Department of Workforce Services, professional and business services makeup nearly 13 percent of Utah’s employment base.</p>																																																																		
	<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <td style="width: 20%; background-color: #00a651; color: white; text-align: center; padding: 5px;"><b>12th Grade</b></td> <td style="width: 20%; background-color: #ff9900; color: white; text-align: center; padding: 5px;"><b>1-Year Certificate</b></td> <td style="width: 20%; background-color: #99cc33; color: white; text-align: center; padding: 5px;"><b>2-Year Associate or Technical Degree</b></td> <td style="width: 20%; background-color: #ffcc00; color: white; text-align: center; padding: 5px;"><b>4-Year Bachelor’s Degree</b></td> <td style="width: 20%; background-color: #999999; color: white; text-align: center; padding: 5px;"><b>More Graduate or Prof. Degree</b></td> </tr> </table> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <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.</p> <p>In high school a variety of certificates can be earned.</p> </div> <div style="width: 45%;"> <p>An academic degree is an award for the completion of a program or course of study over multiple years at postsecondary education institutions.</p> <p>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> </div> </div>	<b>12th Grade</b>	<b>1-Year Certificate</b>	<b>2-Year Associate or Technical Degree</b>	<b>4-Year Bachelor’s Degree</b>	<b>More Graduate or Prof. Degree</b>																																																														
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# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

DECA is the CTSSO for students in the Marketing and Sales Career Pathway. DECA prepares emerging leaders and entrepreneurs for careers in marketing, finance, hospitality, and management.

**Workforce Trends**  
 In Utah, the average annual employment growth rate projected for market research analysts and marketing specialists is 6 percent through the year 2026.

The Utah Department of Workforce Services lists the median salary for a public relations specialist as \$52,360.

### Career Cluster: Business, Finance & Marketing

#### Career Pathway: Marketing & Sales

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
<i>Choose two of the following courses:</i>			
37.01.00.00.001	<a href="#">Digital Marketing</a>	.50	1.00 credit
37.01.00.00.165	<a href="#">Marketing 1</a>	.50	
37.01.00.00.190	<a href="#">Marketing 2</a>	.50	
ELECTIVE COURSES			
32.02.00.00.140	<a href="#">Business Management</a>	.50	2.00 credits
37.01.00.00.025	<a href="#">Customer Service</a>	.50	
32.02.00.00.200	<a href="#">Economics</a>	.50	
32.02.00.00.070	<a href="#">Exploring Business and Marketing</a>	.50	
34.01.00.00.145	<a href="#">Fashion Design Merchandising</a>	.50	
37.01.00.00.150	<a href="#">Leadership Principles 1</a>	.50	
37.01.00.00.155	<a href="#">Leadership Principles 2</a>	.50	
37.01.00.00.220	<a href="#">Real Estate</a>	.50	
37.01.00.00.240	<a href="#">Retailing</a>	.50	
37.01.00.00.260	<a href="#">Sports and Entertainment Marketing</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

Foundation courses taken beyond the required credits can be used as elective 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.**

**Marketing & Sales is:**  
 > High-wage  
 > In-demand

**Sample Occupations Requiring:**  
[High School Diploma](#)  
 > Advertising Sales Agent

[Certificate](#)  
 > N/A

[Assoc. or Technical Degree](#)  
 > N/A

[Baccalaureate Degree](#)  
 > Art Director  
 > Career and Technical Education Teacher  
 > Editor  
 > Graphic Designer  
 > Marketing Manager  
 > Market Research Analyst  
 > Marketing Specialist  
 > Public Relations Specialist  
 > Sales Manager

[Graduate or Prof. Degree](#)  
 > Marketing Director  
 > Statistician  
 > Survey Researcher

**Student Testimonial**

"The business and marketing courses I have taken in high school have really influenced me in the direction I would like to go for my future education and career. These classes have prepared me for my future career and have also given me life skills that will help me achieve my goals and dreams."

Rory James Pollard

### 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 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).		

**Utah Business and Industry Facts**

In 2017, CNBC ranked Provo, Ogden, and Salt Lake City as one of the top twenty best places to start a business. Each metro area was hailed as a small-business hot spot.

According to the Utah Business magazine, the top three public relations firms in Utah are: Fusion 360, Penna Powers, and Method Communications.

**UtahFutures: College and Career Planning**

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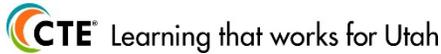
Visit [UtahCTE.org](#) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

**CTE Credentials of Value**

In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway 2019-2020 School Year



**CTSO Information**  
Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

FCCLA is the CTSSO for students in the Pre-K: Early Childhood Education Career Pathway. FCCLA provides students with opportunities to attain the knowledge, skills, and leadership characteristics necessary to succeed in life and careers.

**Workforce Trends**  
According to the Utah Department of Workforce Services, the annual growth rate for childcare workers is projected to increase 4 percent through the year 2026. Large concentrations of this occupation are found in the following industries: private households, social services, and educational services both public and private.

## Career Cluster: Education & Training

### Career Pathway: Pre-K: Early Childhood Education

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
34.01.00.00.020	<a href="#">Child Development</a>	.50	1.50 credits
34.01.00.00.040	<a href="#">Early Childhood Education 1</a>	.50	
34.01.00.00.045	<a href="#">Early Childhood Education 2</a>	.50	
ELECTIVE COURSES			
32.02.00.00.010	<a href="#">Accounting 1</a>	.50	1.50 credits
34.01.00.00.005	<a href="#">Adult Roles and Financial Literacy **</a>	1.00	
34.01.00.00.001	<a href="#">Adult Roles and Responsibilities</a>	.50	
34.01.00.00.050	<a href="#">Early Childhood Education 3 *</a>	.50	
34.01.00.00.095	<a href="#">Early Childhood Education Internship</a>	.50	
32.02.00.00.220	<a href="#">Entrepreneurship</a>	.50	
34.01.00.00.150	<a href="#">Food and Nutrition 1</a>	.50	
34.01.00.00.185	<a href="#">Foundations of Nutrition *</a>	.50	
34.01.00.00.197	<a href="#">Human Development</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.  
\*\* This course satisfies the .50 Financial Literacy requirement.  
Foundation courses taken beyond the required credits can be used as elective 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.**

**Pre-K: Early Childhood Education is:**  
> High-skill  
> In-demand

**Sample Occupations Requiring:**  
**High School Diploma**  
> Childcare Aide/Worker  
**Certificate**  
> Teacher Assistant  
**Assoc. or Technical Degree**  
> Education Administrator, Preschool  
> Preschool Teacher Assistant  
**Baccalaureate Degree**  
> Career and Technical Education Teacher  
> Elementary Education Teacher  
> Special Education Teacher  
> Social Worker  
**Graduate or Prof. Degree**  
> Counseling Psychologist  
> Guidance Counselor  
> Speech Therapist

**Student Testimonial**  
“The CTE classes I have taken throughout high school have introduced me to my dream career path. After taking child development my sophomore year, I decided I wanted a career working with children. CTE classes helped me figure out what career I want in the future.”  
Kayla Clopten

## 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 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).		

**Utah Business and Industry Facts**  
Elementary, middle, and secondary school teachers are in high demand across the state of Utah. There are four ways to earn a teaching license in Utah: 1) out-of-state licensure, 2) university licensure program, 3) ARL-alternative route to licensure program, and 4) the APT-academic pathway to teaching.  
  
In Utah, an elementary, middle, and secondary school teacher must be licensed.

**UtahFutures: College and Career Planning**  
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Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

**CTE Credentials of Value**  
In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

Students who participate in the K-12: Teaching as a Profession Career Pathway choose among the following CTOS, depending upon what is available at their school:

DECA | FFA | FBLA | FCCLA | HOSA | SkillsUSA | TSA Educators Rising \*

**Workforce Trends**  
 In Utah, individuals who would like to teach but don't have a Utah license can obtain one through the Alternative Route to Licensure (ARL). The ARL Program is a teacher preparation program for individuals who want to earn a Level 1 teaching license, or who are licensed and want to earn another type of teaching license.

### Career Cluster: Education & Training

#### Career Pathway: K-12: Teaching as a Profession

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
39.02.00.00.001	<a href="#">Teaching as a Profession 1</a>	.50	1.50 credits
39.02.00.00.002	<a href="#">Teaching as a Profession 2</a>	.50	
39.02.00.00.003	Teaching as a Profession 3	.50	
ELECTIVE COURSES			
32.02.00.00.110	<a href="#">Business Communication 1</a>	.50	1.50 credits
32.02.00.00.111	<a href="#">Business Communication 2</a>	.50	
32.02.00.00.216	<a href="#">Business Office Specialist</a>	.50	
06.02.22.13.070	<a href="#">English 1010 CE</a>	1.00	
34.01.00.00.197	<a href="#">Human Development</a>	.50	
07.04.00.13.020	<a href="#">Mathematics 1050 CE</a> (College Algebra/Precalculus)	1.00	
09.07.00.00.010	<a href="#">Psychology</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
		<b>3.00 credits for completion</b>	

Foundation courses taken beyond the required credits can be used as elective credit.

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\* [Educators Rising](#) is a Career and Technical Student Organization that cultivates highly skilled educators by guiding young people on a path to becoming accomplished teachers, beginning in high school and extending through college and into the profession. (At this time, Educators Rising is not currently an approved Utah CTSO.)

**K-12: Teaching as a Profession is:**

- > High-skill
- > High-wage
- > In-demand

**Sample Occupations Requiring:**

**High School Diploma**  
 > Self-Enrichment Education Teacher

**Certificate**  
 > Teacher Assistant/Para Professional

**Assoc. or Technical Degree**  
 > Preschool Teacher

**Baccalaureate Degree**  
 > Career and Technical Education Teacher  
 > Elementary School Teacher  
 > Kindergarten Teacher  
 > Middle School Teacher  
 > Secondary School Teacher  
 > Special Education Teacher

**Graduate or Prof. Degree**  
 > Education Administrator  
 > School Counselor

**Student Testimonial**

"My career goal is to become a high school welding teacher. My plan is to attend Utah Valley University and get a bachelor's degree in education. CTE classes have changed my life. All of these classes have taught me skills that I can apply in life, some of which I have already applied in the workforce."

Miguel Lopez

### 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 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).		

**Utah Business and Industry Facts**

According to the [National Council on Teacher Quality](#) (NCTQ), seven under-graduate teacher prep programs in Utah rank in the top half of the 717 programs nationwide, as a Top Tier Secondary Teacher Prep Program. The schools are: U of U, BYU, UVU, SUU, DSU, WSU, and USU.

In Utah, a teacher must be licensed.

**UtahFutures: College and Career Planning**

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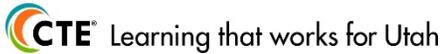
**CTE Credentials of Value**

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In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



### CTSO Information

Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

TSA is the CTSO for students in the Aerospace Engineering Career Pathway. TSA fosters personal growth, leadership, and opportunities in science, technology, engineering, and mathematics (STEM).

### Workforce Trends

According to the U.S. Department of Labor, employment of aerospace engineers is projected to grow 6 percent nationwide through the year 2026. Employment opportunities will be best for those trained in software, such as C++, or with education and experience in stress and structural engineering.

### Student Testimonial

"CTE classes have shown me a clear path for my future, because I have been able to experience more than just math and English. A CTE Internship, combined with my engineering classes, has given me a great insight to what the future holds for me. I believe an aerospace engineering and operations technician job is exactly what I want. I will be able to build, test, and maintain aircraft."  
Preston Henke

## Career Cluster: Engineering & Technology

### Career Pathway: Aerospace Engineering

CORE CODE	FOUNDATION COURSES (required)	CREDITS		
<b>Aeronautical Component</b>				
08.06.00.00.040	Aerospace	1.00	3.00 credits	
<i>Or choose the following course:</i>				
38.01.00.00.350	<a href="#">PLTW Aerospace Engineering</a>	1.00		
<b>Foundation Component</b>				
38.01.00.00.151	<a href="#">Engineering Principles 1</a>	.50		
38.01.00.00.152	<a href="#">Engineering Principles 2</a>	.50		
<i>Or choose the following course:</i>				
38.01.00.00.310	<a href="#">PLTW Principles of Engineering</a>	1.00		
<b>Capstone Component</b>				
38.01.00.00.990	<a href="#">Engineering Capstone</a>	1.00		
<i>Or choose the following course:</i>				
38.01.00.00.390	<a href="#">PLTW Engineering Design and Development</a>	1.00		
<b>ELECTIVE COURSES</b>				
38.03.00.00.010	<a href="#">Engineering Technology</a>	.50		
38.01.00.00.211	<a href="#">Physics with Technology</a>	1.00		
41.00.00.00.050	<a href="#">CTE Internship</a>	.50		
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50		
<b>3.00 credits for completion</b>				

Foundation courses taken beyond the required credits can be used as elective 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.**

### Aerospace Engineering is:

- > High-skill
- > High-wage
- > In-demand

### Sample Occupations Requiring:

- [High School Diploma](#)
- > N/A
- [Certificate](#)
- > N/A
- [Assoc. or Technical Degree](#)
- > Engineering Technician
- > Inspection Technician
- > Testing Technician
- [Baccalaureate Degree](#)
- > Aerospace Engineer
- > Architectural and Engineering Manager
- > Career and Technical Education Teacher

### Graduate or Prof. Degree

- > Aerospace Engineer

## 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
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### Utah Business and Industry Facts

Aerospace and aviation companies located in Utah employ more than 42,000 workers.  
  
Utah high school seniors have the opportunity to participate in the [Utah Aerospace Pathways program](#). The program was created by industry to open opportunities for young men and women who are interested in the aerospace.

### UtahFutures: College and Career Planning

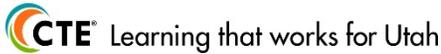
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### CTE Credentials of Value

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In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

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# Utah Career and Technical Education Career Pathway 2019-2020 School Year



**CTSO Information**  
Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

TSA is the CTSO for students in the CAD Mechanical Design Career Pathway. TSA fosters personal growth, leadership, and opportunities in science, technology, engineering, and mathematics (STEM).

**Workforce Trends**  
Industrial growth and increasingly complex designs will spur growth in drafting services. As technology advances, opportunities will be best for drafters with at least 2 years of postsecondary training, and computer-aided design systems experience.

## Career Cluster: Engineering & Technology

### Career Pathway: CAD Mechanical Design

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
38.01.00.00.051	<a href="#">CAD Mechanical Design 1</a>	.50	1.50 credits
38.01.00.00.052	<a href="#">CAD Mechanical Design 2</a>	.50	
38.01.00.00.053	<a href="#">CAD Mechanical Design 3</a>	.50	
<b>Or choose the following courses:</b>			
38.01.00.00.300	<a href="#">PLTW Introduction to Engineering Design</a>	1.00	
ELECTIVE COURSES			
38.03.00.00.010	<a href="#">Engineering Technology</a>	.50	1.00 credit
40.13.00.00.030	<a href="#">Industrial Design</a>	1.00	
38.01.00.00.211	<a href="#">Physics with Technology</a>	1.00	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>2.50 credits for completion</b>			

Foundation courses taken beyond the required credits can be used as elective 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.**

**CAD Mechanical Design is:**  
> High-skill  
> High-wage

**Sample Occupations Requiring:**  
[High School Diploma](#)  
> N/A

**Certificate**  
> N/A

**Assoc. or Technical Degree**  
> Engineering Technician  
> Mechanical Drafter  
> Mechanical Engineering Technician

**Baccalaureate Degree**  
> Aerospace Engineer  
> Career and Technical Education Teacher  
> Civil Engineer  
> Industrial Designer  
> Mechanical Engineer  
> Secondary Education Teacher

**Graduate or Prof. Degree**  
> Mechanical Engineer

**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

## 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
<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.</p> <p>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.</p> <p>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>		

**Utah Business and Industry Facts**

According to the Utah Department of Workforce Services, 620 mechanical drafters are employed by more than 3,000 businesses throughout the state.

The annual median salary for an experienced mechanical drafter is \$51,690.

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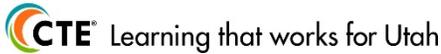
**CTE Credentials of Value**

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# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



### Career Cluster: Engineering & Technology

#### Career Pathway: Electrical Engineering

CORE CODE	FOUNDATION COURSES (required)	CREDITS
<b>Foundation Component</b>		
38.01.00.00.151	<a href="#">Engineering Principles 1</a>	.50
38.01.00.00.021	<a href="#">Electronics 1</a>	.50
38.01.00.00.022	<a href="#">Electronics 2</a>	.50
38.01.00.00.023	<a href="#">Electronics 3</a>	.50
<i>Or choose the following courses:</i>		
38.01.00.00.320	<a href="#">PLTW Digital Electronics</a>	1.00
38.01.00.00.310	<a href="#">PLTW Principles of Engineering</a>	1.00
<b>Capstone Component</b>		
38.01.00.00.990	<a href="#">Engineering Capstone</a>	1.00
<i>Or choose the following course:</i>		
38.01.00.00.390	<a href="#">PLTW Engineering Design and Development</a>	1.00
<b>ELECTIVE COURSES</b>		
38.03.00.00.010	<a href="#">Engineering Technology</a>	.50
38.01.00.00.211	<a href="#">Physics with Technology</a>	1.00
41.00.00.00.050	<a href="#">CTE Internship</a>	.50
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50
<b>3.00 credits for completion</b>		

Foundation courses taken beyond the required credits can be used as elective credit.

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#### Electrical Engineering is:

- > High-skill
- > High-wage
- > In-demand

#### Sample Occupations Requiring:

##### High School Diploma

- > Electronics Equipment Assembler

##### Certificate

- > Electronics Installer Repairer

##### Assoc. or Technical Degree

- > Electronics Drafter
- > Electronics Engineering Technician

##### Baccalaureate Degree

- > Career and Technical Education Teacher
- > Electrical Engineer
- > Electronics Engineer

##### Graduate or Prof. Degree

- > Electronics Engineer

#### CTSO Information

Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

TSA is the CTSSO for students in the Electrical Engineering Career Pathway. TSA fosters personal growth, leadership, and opportunities in science, technology, engineering, and mathematics (STEM).

#### Workforce Trends

Employment will be limited by computer-aided design and other technologies that increase productivity.

Job opportunities will be best for those individuals who have an associate degree or extensive job training.

#### Student Testimonial

“Engineering, electronics, an architectural design, I found joy in these courses. These CTE Pathways have shown me many careers that provide [income] and most importantly joy and well-being.”

Michael Contreras

### 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
<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.</p> <p>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.</p> <p>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>		

#### Utah Business and Industry Facts

According to the Utah Department of Workforce Services, the median annual salary for an experienced electronics engineering technician is \$60,660.

In Utah, more than 1,400 individuals are employed as electrical engineers.

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#### CTE Credentials of Value

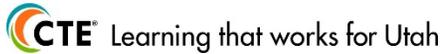
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# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



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 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.  
 TSA is the CTSO for students in the Manufacturing Engineering Career Pathway. TSA fosters personal growth, leadership, and opportunities in science, technology, engineering, and mathematics (STEM).

**Workforce Trends**  
 A manufacturing engineer designs, documents and standardizes manufacturing processes, along with related tooling, for companies where they are employed. This is a niche occupation where specialized skills are required.

### Career Cluster: Engineering & Technology

#### Career Pathway: Manufacturing Engineering

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
38.01.00.00.011	<a href="#">Manufacturing Principles 1</a>	.50	1.00 credit
38.01.00.00.012	<a href="#">Manufacturing Principles 2</a>	.50	
<i>Or choose the following course:</i>			
38.01.00.00.340	<a href="#">PLTW Computer Integrated Manufacturing</a>	1.00	
ELECTIVE COURSES			
40.10.00.00.140	<a href="#">Composites 1</a>	.50	2.00 credits
38.03.00.00.010	<a href="#">Engineering Technology</a>	.50	
40.10.00.00.072	<a href="#">Machining 1 *</a>	.50	
38.03.00.00.060	<a href="#">Manufacturing Technology</a>	.50	
40.11.00.00.100	<a href="#">Material Handling</a>	1.00	
40.10.00.00.085	<a href="#">Metalworking 1 *</a>	.50	
38.01.00.00.211	<a href="#">Physics with Technology</a>	1.00	
40.10.00.00.050	<a href="#">Plastics</a>	.50	
40.10.00.00.110	<a href="#">Welding Technician – Entry Level</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.  
 Foundation courses taken beyond the required credits can be used as elective credit.

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**Manufacturing Engineering is:**  
 > High-skill  
 > High-wage  
 > In-demand

**Sample Occupations Requiring:**  
[High School Diploma](#)  
 > Production Technician  
[Certificate](#)  
 > Production Technician  
[Assoc. or Technical Degree](#)  
 > N/A  
[Baccalaureate Degree](#)  
 > Career and Technical Education Teacher  
 > Manufacturing Engineer  
[Graduate or Prof. Degree](#)  
 > Manufacturing Engineer

**Student Testimonial**  
 “I would like a career as a manufacturing engineer and go on to pursue my own business in the manufacturing industry. CTE gave me experience for what my career will be like. CTE also [allowed me] to be able to work on the skills that I need to improve on in that specific area.”  
 Garret Maycock

### 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 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).		

**Utah Business and Industry Facts**  
 In 2017, Northrop Grumman purchased aerospace manufacturer Orbital ATK (who has a strong presence in Utah) for \$9.2 billion. The company has nearly 3,000 employees with a payroll of approximately \$250 million.  
 Northrop Grumman not only develops and tests propulsion systems for rockets and missiles, they manufacture advanced composite components for commercial and military aircraft.

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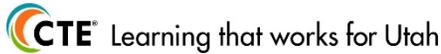
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# Utah Career and Technical Education Career Pathway 2019-2020 School Year



## Career Cluster: Engineering & Technology

### Career Pathway: Materials Science

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
38.01.00.00.281	<a href="#">Materials Science</a>	1.00	2.00 credits
38.01.00.00.211	<a href="#">Physics with Technology</a>	1.00	
ELECTIVE COURSES			
40.11.00.00.140	<a href="#">Composites</a>	.50	1.00 credit
38.03.00.00.010	<a href="#">Engineering Technology</a>	.50	
40.10.00.00.050	<a href="#">Industrial Plastics</a>	.50	
38.03.00.00.060	<a href="#">Manufacturing Technology</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

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#### CTSO Information

Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

TSA is the CTSO for students in the Materials Science Career Pathway. TSA fosters personal growth, leadership, and opportunities in science, technology, engineering, and mathematics (STEM).

#### Workforce Trends

The occupation of a material scientist is expected to experience faster than average employment growth. Business expansion will provide the majority of job openings in the coming decade. Material scientists with advanced degrees, particularly those with a Ph.D. and work experience are expected to have better job opportunities.

#### Materials Science is:

- > High-skill
- > High-wage

#### Sample Occupations Requiring:

- [High School Diploma](#)
- > Lab Tech
- [Certificate](#)
- > N/A
- [Assoc. or Technical Degree](#)
- > N/A
- [Baccalaureate Degree](#)
- > Career and Technical Education Teacher
- > Materials Engineer
- > Materials Scientist
- [Graduate or Prof. Degree](#)
- > Materials Engineer
- > Materials Scientist

## 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.

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#### Utah Business and Industry Facts

Utah is home to Hexcel Corporations largest carbon fiber and matrix manufacturing plant. The plant is located in West Valley City and is a worldwide supplier of carbon fiber.

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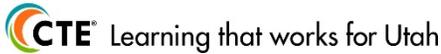
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# Utah Career and Technical Education Career Pathway 2019-2020 School Year



**CTSO Information**  
Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

TSA is the CTSSO for students in the Mechanical Engineering Career Pathway. TSA fosters personal growth, leadership, and opportunities in science, technology, engineering, and mathematics (STEM).

**Workforce Trends**  
Due to the expansion of jobs in the technical fields and the increasing number of engineers who are retiring, the number of job openings in technology and engineering are increasing.

According to the U.S. Department of Labor, 13 percent of U.S. engineering jobs are held by women, with one in four jobs in technology, engineering, and mathematics.

## Career Cluster: Engineering & Technology

### Career Pathway: Mechanical Engineering

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
<b>CAD Component</b>			
38.01.00.00.051	<a href="#">CAD Mechanical Design 1</a>	.50	1.00 credit
38.01.00.00.052	<a href="#">CAD Mechanical Design 2</a>	.50	
<i>Or choose the following course:</i>			
38.01.00.00.300	<a href="#">PLTW Introduction to Engineering Design</a>	1.00	
<b>Foundation Component</b>			
38.01.00.00.151	<a href="#">Engineering Principles 1</a>	.50	1.00 credit
38.01.00.00.152	<a href="#">Engineering Principles 2</a>	.50	
<i>Or choose the following course:</i>			
38.01.00.00.310	<a href="#">PLTW Principles of Engineering</a>	1.00	
<b>Capstone Component</b>			
38.01.00.00.990	<a href="#">Engineering Capstone</a>	1.00	1.00 credit
<i>Or choose the following course:</i>			
38.01.00.00.390	<a href="#">PLTW Engineering Design and Development</a>	1.00	
<b>ELECTIVE COURSES</b>			
38.03.00.00.010	<a href="#">Engineering Technology</a>	.50	3.00 credits for completion
38.01.00.00.211	<a href="#">Physics with Technology</a>	1.00	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	

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**Mechanical Engineering is:**  
> High-skill  
> High-wage

**Sample Occupations Requiring:**  
[High School Diploma](#)  
> N/A  
[Certificate](#)  
> N/A  
[Assoc. or Technical Degree](#)  
> Civil Engineer Technician  
> Engineering Technician  
> Industrial Engineering Technician  
> Mechanical Engineering Technician  
[Baccalaureate Degree](#)  
> Aerospace Engineer  
> Biomedical Engineer  
> Career and Technical Education Teacher  
> Civil Engineer  
> Electrical Engineer  
> Industrial Engineer  
> Mechanical Engineer  
[Graduate or Prof. Degree](#)  
> Civil Engineer

**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

## 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.

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**Utah Business and Industry Facts**  
The Engineering Initiative, established by the Utah State Legislature in 2001, aimed to triple engineering and computer science graduates. Since 2015, Utah state schools graduated 907 engineering and computer science students per year, 657 more than promised.  
According to Richard Brown, Dean of Engineering at the University of Utah, Utah's gross domestic product has more than doubled since the Engineering Initiative started.

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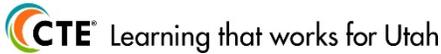
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# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



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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).

**Workforce Trends**  
 Most robotics engineers are employed by private companies and work in laboratory or production settings.

### Career Cluster: Engineering & Technology

#### Career Pathway: Robotics

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
38.01.00.00.031	<a href="#">Robotics 1</a>	.50	1.00 credit
38.01.00.00.032	<a href="#">Robotics 2</a>	.50	
ELECTIVE COURSES			
35.02.00.00.030	<a href="#">Computer Programming 1</a>	1.00	2.00 credits
38.01.00.00.021	<a href="#">Electronics 1</a>	.50	
38.03.00.00.010	<a href="#">Engineering Technology</a>	.50	
40.09.00.00.070	Industrial Maintenance Technician	1.00	
38.01.00.00.211	<a href="#">Physics with Technology</a>	1.00	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

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**Robotics is:**  
 > High-skill  
 > High-wage

**Sample Occupations Requiring:**  
[High School Diploma](#)  
 > N/A

**Certificate**  
 > Machine Operator

**Assoc. or Technical Degree**  
 > Electro-Mechanical Technicians

**Baccalaureate Degree**  
 > Automation Engineer  
 > Career and Technical Education Teacher  
 > Engineer  
 > Industrial Engineer  
 > Robotics Engineer

**Graduate or Prof. Degree**  
 > Engineer

**Student Testimonial**  
 "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

### HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING

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**Utah Business and Industry Facts**  
 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."  
 (Deseret News, March 9, 2015)

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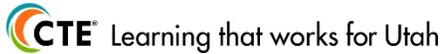
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# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

HOSA is the CTSO for students in the Emergency Medical Services Career Pathway. HOSA enhances the delivery of compassionate, quality health care by providing opportunities for knowledge, skill and leadership development of all health science education students.

**Workforce Trends**  
 A growing and urbanized population will demand more emergency services, increasing the demand for professional emergency medical technicians (EMT) and paramedics.

### Career Cluster: Health Science

#### Career Pathway: Emergency Medical Services

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
36.01.00.00.030	<a href="#">Emergency Medical Technician</a>	2.00	2.00 credits
ELECTIVE COURSES			
36.01.00.00.070	<a href="#">Emergency Medical Responder</a>	.50	1.00 credit
36.01.00.00.090	<a href="#">Health Science, Introduction</a>	.50	
36.01.00.00.001	<a href="#">Health Science, Advanced (capstone course) *</a>	.50	
36.01.00.00.110	<a href="#">Medical Anatomy and Physiology</a>	1.00	
36.01.00.00.150	<a href="#">Medical Math</a>	.50	
36.01.00.00.175	<a href="#">Medical Terminology</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.

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**Emergency Medical Services is:**  
 > High-skill  
 > High-demand

**Sample Occupations Requiring:**  
[High School Diploma](#)  
 > N/A

[Certificate](#)  
 > Emergency Medical Technician  
 > Paramedic

[Assoc. or Technical Degree](#)  
 > N/A

[Baccalaureate Degree](#)  
 > Career and Technical Education Teacher

[Graduate or Prof. Degree](#)  
 > N/A

**Student Testimonial**  
 "By taking the CNA and EMT courses in high school I'm better prepared to enter the workforce. These courses allowed me to gain hands-on learning and on-the-job training through CTE Internships and receive instruction from actual teachers who work in the field."  
 Taylor Brown

### 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
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**Utah Business and Industry Facts**  
 According to the Utah Department of Workforce Services, 2,390 individuals are employed as emergency medical technicians throughout Utah.

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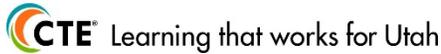
**CTE Credentials of Value**

In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.  
 HOSA is the CTSO for students in the Nursing Services Career Pathway. HOSA enhances the delivery of compassionate, quality health care by providing opportunities for knowledge, skill and leadership development of all health science education students.

**Workforce Trends**  
 According to the Utah Department of Workforce Services, healthcare occupations are expected to make up seven of the 20 fastest growing occupations by the year 2030.  
 In Utah, employment for nurse practitioners is projected to increase 5.1 percent annually through the year 2026.

### Career Cluster: Health Science

#### Career Pathway: Nursing Services

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
36.01.00.00.190	<a href="#">Nurse Assistant (CNA)*</a>	.50	.50 credit
ELECTIVE COURSES			
36.01.00.00.070	<a href="#">Emergency Medical Responder</a>	.50	2.50 credits
34.01.00.00.150	<a href="#">Food and Nutrition 1</a>	.50	
34.01.00.00.160	<a href="#">Food and Nutrition 2</a>	.50	
34.01.00.00.185	<a href="#">Foundations of Nutrition *</a>	.50	
36.01.00.00.090	<a href="#">Health Science, Introduction</a>	.50	
36.01.00.00.001	<a href="#">Health Science, Advanced (capstone course) *</a>	.50	
34.01.00.00.197	<a href="#">Human Development</a>	1.00	
36.01.00.00.110	<a href="#">Medical Anatomy and Physiology</a>	1.00	
36.01.00.00.150	<a href="#">Medical Math</a>	.50	
36.01.00.00.175	<a href="#">Medical Terminology</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.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.**

**Nursing Services is:**  
 > High-skill  
 > High-demand

**Sample Occupations Requiring:**  
[High School Diploma](#)  
 > N/A  
[Certificate](#)  
 > Certified Nurse Assistant (CNA)  
 > Licensed Practical Nurse (LPN)  
 > Medical Assistant  
[Assoc. or Technical Degree](#)  
 > Advanced Practice Nurse (APN)  
 > Registered Nurse (RN)  
[Baccalaureate Degree](#)  
 > Career and Technical Education Teacher  
[Graduate or Prof. Degree](#)  
 > Nurse Anesthetist  
 > Nurse Midwife  
 > Nurse Practitioner

**Student Testimonial**  
 “In the CNA class I learned many skills. Most importantly I learned how to interact with people from all walks of life and care for them in the ways I would want my loved ones to be cared for.  
 “It’s a requirement for many RN programs to have your CNA before applying to nursing school. I’m glad that CTE gave me the chance to complete that requirement in high school.”  
 Marie-Chantal Niwenshuti

### 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.

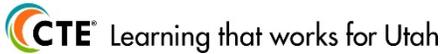
12th Grade	1-Year Certificate	2-Year Associate or Technical Degree	4-Year Bachelor’s Degree	More Graduate or Prof. Degree
Certificates are awarded upon the successful completion of a brief course of study, usually one year or less. Upon completion of a course of study, a certificate does not require 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 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).		

**Utah Business and Industry Facts**  
 According to the Utah Department of Workforce Services, 20,481 individuals are employed as registered nurses throughout Utah.  
 Nurses are employed in hospitals, outpatient care centers, physician offices.  
 In Utah, a nurse anesthetist (CRNA), a licensed practical nurse (LPN), and a registered nurse (RN) must be licensed.

**UtahFutures: College and Career Planning**  
 Visit [UtahFutures.org](http://UtahFutures.org) to explore occupations, search salary projections, access labor market information, investigate training options, and to create a plan.  
 Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

**CTE Credentials of Value**  
 In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.  
 In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah’s statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway 2019-2020 School Year



**CTSO Information**  
Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.  
HOSA is the CTSO for students in the Biotechnology Career Pathway. HOSA enhances the delivery of compassionate, quality health care by providing opportunities for knowledge, skill and leadership development of all health science education students.

**Workforce Trends**  
Biotechnology is a dynamic career field that is expanding by leaps and bounds. "Biotechnology has become the centerpiece of therapy of all ailments, from heart disease and cancers to the common cold," says Carl B. Feldbaum, former president of the Biotechnology Industry Organization (BIO).

## Career Cluster: Health Science

### Career Pathway: Clinical Laboratory Science: Biotechnology

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
36.01.00.00.080	<a href="#">Biotechnology</a>	1.00	1.00 credit
ELECTIVE COURSES			
36.01.00.00.090	<a href="#">Health Science, Introduction</a>	.50	2.00 credits
36.01.00.00.001	<a href="#">Health Science, Advanced (capstone course) *</a>	.50	
36.01.00.00.110	<a href="#">Medical Anatomy and Physiology</a>	1.00	
36.01.00.00.150	<a href="#">Medical Math</a>	.50	
36.01.00.00.175	<a href="#">Medical Terminology</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.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.**

**Biotechnology is:**  
> High-skill  
> High-demand

**Sample Occupations Requiring:**  
[High School Diploma](#)  
> N/A  
[Certificate](#)  
> Clinical Laboratory Technician  
> Medical Laboratory Technician  
[Assoc. or Technical Degree](#)  
> Clinical Laboratory Technologist  
> Medical Laboratory Technologist  
[Baccalaureate Degree](#)  
> Biological Scientist  
> Biotechnology Technician  
> Career and Technical Education Teacher  
> Chemist  
> Microbiologist  
> Sales Representative, Technical/Scientific Products  
[Graduate or Prof. Degree](#)  
> Biochemist  
> Biophysicist  
> Medical Scientist

**Student Testimonial**  
"Throughout the past four years of high school, I have been given the opportunity to take many Health Science [Education] CTE courses. Because of these classes, I have developed a love for the medical field. These courses impacted my education and career goals tremendously."  
Markelle Bradshaw

## 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 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).		

**Utah Business and Industry Facts**  
Utah is known for its medical innovations, such as the Kolff artificial heart and genetic research. The Utah Population Database (UPDB) is one of the world's richest sources of in-depth information supporting research on genetics, epidemiology, demography, and public health. (Governor's Office of Economic Development [GOED])

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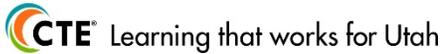
**CTE Credentials of Value**  
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In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



### CTSO Information

Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

HOSA is the CTSO for students in the Medical Forensics Career Pathway. HOSA enhances the delivery of compassionate, quality health care by providing opportunities for knowledge, skill and leadership development of all health science education students.

### Workforce Trends

With popular TV crime shows like Bones, CSI, Criminal Minds, and NCIS the interest of pursuing a career in forensic science has increased.

Clinical laboratory technicians and technologist are valuable in the field of forensic science.

## Career Cluster: Health Science

### Career Pathway: Clinical Laboratory Science: Medical Forensics

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
36.01.00.00.085	<a href="#">Medical Forensics</a>	1.00	1.00 credit
ELECTIVE COURSES			
36.01.00.00.090	<a href="#">Health Science, Introduction</a>	.50	2.00 credits
36.01.00.00.001	<a href="#">Health Science, Advanced (capstone course) *</a>	.50	
36.01.00.00.110	<a href="#">Medical Anatomy and Physiology</a>	1.00	
36.01.00.00.150	<a href="#">Medical Math</a>	.50	
36.01.00.00.175	<a href="#">Medical Terminology</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.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.**

### Medical Forensics is:

- > High-skill
- > High-wage
- > In-demand

### Sample Occupations Requiring:

[High School Diploma](#)

> N/A

### [Certificate](#)

- > Clinical Laboratory Technician
- > Medical Laboratory Technician

### [Assoc. or Technical Degree](#)

- > Clinical Laboratory Technologist
- > Medical Laboratory Technologist

### [Baccalaureate Degree](#)

- > Biological Scientist
- > Career and Technical Education Teacher
- > Chemist
- > Forensic Science Technician

### [Graduate or Prof. Degree](#)

- > Medical Scientist

### Student Testimonial

"My personal goal is to become a homicide detective. For my occupation I would have to work my way up through the ranks, I am prepared and would love the opportunity. I took a medical forensics class and a bio-technology class; both classes helped me immensely on what to do at a crime scene and how to process evidence. I learned a lot and could definitely use these skills in the career that I want to pursue."

Micayla Poulsen

## 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
<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.</p> <p>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.</p> <p>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>		

### Utah Business and Industry Facts

According to the Utah Department of Workforce Services, medical and clinical laboratory technicians are employed in 5,268 local, state, and federal businesses throughout the state, including 1,866 physicians' offices industry.

### UtahFutures: College and Career Planning

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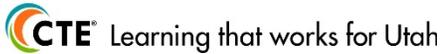
### CTE Credentials of Value

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# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



### CTSO Information

Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

HOSA is the CTSO for students in the Dental Assistant Career Pathway. HOSA enhances the delivery of compassionate, quality health care by providing opportunities for knowledge, skill and leadership development of all health science education students.

### Workforce Trends

The dental industry is in critical need of dental assistants. Dentists are hiring more assistants to perform routine tasks so that they may devote more time to complex procedures. According to the U.S. Department of Labor, the employment for dental assistants is projected to increase 19 percent nationwide through the year 2026.

## Career Cluster: Health Science

### Career Pathway: Therapeutic Clinical Services: Dental Assistant

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
36.01.00.00.020	<a href="#">Dental Assistant</a>	2.00	2.00 credits
ELECTIVE COURSES			
34.01.00.00.150	<a href="#">Food and Nutrition 1</a>	.50	1.00 credit
34.01.00.00.160	<a href="#">Food and Nutrition 2</a>	.50	
34.01.00.00.185	<a href="#">Foundations of Nutrition *</a>	.50	
36.01.00.00.090	<a href="#">Health Science, Introduction</a>	.50	
36.01.00.00.001	<a href="#">Health Science, Advanced (capstone course) *</a>	.50	
36.01.00.00.110	<a href="#">Medical Anatomy and Physiology</a>	1.00	
36.01.00.00.150	<a href="#">Medical Math</a>	.50	
36.01.00.00.175	<a href="#">Medical Terminology</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.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.**

**Dental Assistant is:**  
> In-demand

### Sample Occupations Requiring:

- [High School Diploma](#)
- > Dental Laboratory Technician
- [Certificate](#)
- > Dental Assistant
- [Assoc. or Technical Degree](#)
- > Dental Hygienist
- > Medical Equipment Repairer
- [Baccalaureate Degree](#)
- > Career and Technical Education Teacher
- > Health Services Administrators
- > Public Health Educators
- [Graduate or Prof. Degree](#)
- > Dentist
- > Orthodontist

### Student Testimonial

"The high school dental assisting program has helped me beyond measure. I always knew I wanted to be in the dental field and this [CTE Pathway] gave me the assurance I needed. The opportunity I had to gain this knowledge of my passion for the dental field, as a junior in high school, has greatly [impacted] my future."  
Sydney Dayley

## 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
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### Utah Business and Industry Facts

The University of Utah School of Dentistry provides dental-related clinical, research, and healthcare training.  
  
 According to the Utah Department of Workforce Services, more than 4,500 dental assistants are employed in 1,697 dental offices throughout the state.  
  
 In Utah, dental professionals must be licensed.

### UtahFutures: College and Career Planning

Visit [UtahFutures.org](http://UtahFutures.org) to explore occupations, search salary projections, access labor market information, investigate training options, and to create a plan.

### CTE Credentials of Value

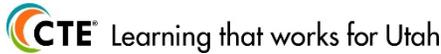
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In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

HOSA is the CTSO for students in the Exercise Science/Sports Medicine Career Pathway. HOSA enhances the delivery of compassionate, quality health care by providing opportunities for knowledge, skill and leadership development of all health science education students.

**Workforce Trends**  
 According to the U.S. Department of Labor, overall employment of physical therapist assistants and aides is projected to increase 30 percent nationwide through the year 2026.

Demand for physical therapy is expected to increase in response to the healthcare needs of an older population and individuals with chronic conditions, such as diabetes and obesity.

### Career Cluster: Health Science

#### Career Pathway: Therapeutic Clinical Services: Exercise Science/Sports Medicine

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
36.01.00.00.040	<a href="#">Exercise Science/Sports Medicine</a>	1.00	1.00 credit
ELECTIVE COURSES			
36.01.00.00.070	<a href="#">Emergency Medical Responder</a>	.50	2.00 credits
36.01.00.00.090	<a href="#">Health Science, Introduction</a>	.50	
36.01.00.00.001	<a href="#">Health Science, Advanced (capstone course) *</a>	.50	
36.01.00.00.110	<a href="#">Medical Anatomy and Physiology</a>	1.00	
36.01.00.00.150	<a href="#">Medical Math</a>	.50	
36.01.00.00.175	<a href="#">Medical Terminology</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.

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**Exercise Science/Sports Medicine is:**

- > High-skill
- > High-wage
- > In-demand

**Sample Occupations Requiring:**

**High School Diploma**

- > Occupational Therapy Aide
- > Physical Therapist Aide

**Certificate**

- > Message Therapist

**Assoc. or Technical Degree**

- > Occupational Therapy Assistant
- > Physical Therapist Assistant

**Baccalaureate Degree**

- > Athletic Trainer
- > Career and Technical Education Teacher

**Graduate or Prof. Degree**

- > Chiropractor
- > Occupational Therapist
- > Physical Therapist

**Student Testimonial**

“My occupational goal is to become a physical therapist. The CTE courses that I have taken have not only helped me to gain experience, but they have also helped me to figure out what I would like to study when I reach college.”

Tiffany Thacker

### HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING

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**Utah Business and Industry Facts**

Utah consistently ranks among the healthiest states in the nation. (United Health Foundation)

According to the Utah Department of Workforce Services, the average annual salary for an experienced physical therapist assistant is \$52,620.

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# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

HOSA is the CTSO for students in the Medical Assistant Career Pathway. HOSA enhances the delivery of compassionate, quality health care by providing opportunities for knowledge, skill and leadership development of all health science education students.

**Workforce Trends**  
 A growing and aging population, and technological advances in medicine, make the occupation of a medical assistant of the fastest growing occupations nationwide, having a projected job growth of 29 percent through the year 2026.

### Career Cluster: Health Science

#### Career Pathway: Therapeutic Clinical Services: Medical Assistant

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
36.01.00.00.120	<a href="#">Medical Assistant</a>	2.00	2.00 credits
ELECTIVE COURSES			
36.01.00.00.070	<a href="#">Emergency Medical Responder</a>	.50	1.00 credit
36.01.00.00.090	<a href="#">Health Science, Introduction</a>	.50	
36.01.00.00.001	<a href="#">Health Science, Advanced (capstone course) *</a>	.50	
36.01.00.00.110	<a href="#">Medical Anatomy and Physiology</a>	1.00	
36.01.00.00.150	<a href="#">Medical Math</a>	.50	
36.01.00.00.175	<a href="#">Medical Terminology</a>	.50	
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<b>3.00 credits for completion</b>			

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**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.**

**Medical Assistant is:**  
 > In-demand

**Sample Occupations Requiring:**  
[High School Diploma](#)  
 > Medical Secretary

**Certificate**  
 > Certified Nurse Assistant (CNA)  
 > Licensed Practical Nurse (LPN)  
 > Medical Assistant  
 > Medical Sonographer  
 > Medical Transcriptionist

**Assoc. or Technical Degree**  
 > Registered Nurse (RN)

**Baccalaureate Degree**  
 > Career and Technical Education Teacher  
 > Medical and Health Service Manager

**Graduate or Prof. Degree**  
 > Nurse Practitioner

**Student Testimonial**  
 "The CTE [medical assistant] course helped me get a head start in the medical field. It also helped me determine whether or not I actually loved it or not. I plan to work at a doctor's office as a medical assistant while I attend college to further my education."  
 Bronda Rigerod

### HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING

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12th Grade	1-Year Certificate	2-Year Associate or Technical Degree	4-Year Bachelor's Degree	More Graduate or Prof. Degree
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**Utah Business and Industry Facts**

According to the Utah Department of Workforce Services, 7,313 individuals are employed as medical assistants throughout Utah.

The median salary for a medical assistant is \$25,870.

In Utah, a medical assistant working as a radiology assistant must be licensed. A licensed practical nurse (LPN), and a registered nurse (RN) must also be licensed.

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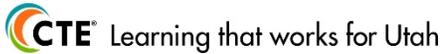
**CTE Credentials of Value**  
 In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

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In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



### CTSO Information

Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

HOSA is the CTSO for students in the Pharmacy Technician Career Pathway. HOSA enhances the delivery of compassionate, quality health care by providing opportunities for knowledge, skill and leadership development of all health science education students.

### Workforce Trends

According to the U.S. Department of Labor, employment of pharmacists is projected to grow 6 percent nationwide through the year 2026. As more people have access to insurance coverage, more pharmacist will be needed to fill their prescriptions and to consult with patients about their medications.

## Career Cluster: Health Science

### Career Pathway: Therapeutic Clinical Services: Pharmacy Technician

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
36.01.00.00.210	<a href="#">Pharmacy Technician</a>	2.00	2.00 credits
ELECTIVE COURSES			
36.01.00.00.090	<a href="#">Health Science, Introduction</a>	.50	1.00 credit
36.01.00.00.001	<a href="#">Health Science, Advanced (capstone course) *</a>	.50	
36.01.00.00.110	<a href="#">Medical Anatomy and Physiology</a>	1.00	
36.01.00.00.150	<a href="#">Medical Math</a>	.50	
36.01.00.00.175	<a href="#">Medical Terminology</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.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.**

### Pharmacy Technician is:

- > High-skill
- > In-demand

### Sample Occupations Requiring:

#### High School Diploma

- > Pharmacy Aide
- > Pharmacy Technician

#### Certificate

- > N/A

#### Assoc. or Technical Degree

- > N/A

#### Baccalaureate Degree

- > Career and Technical Education Teacher

#### Graduate or Prof. Degree

- > Pharmacist

### Student Testimonial

"I loved the opportunity to participate in CTE courses. These classes have given me the opportunity to plan and prepare. They have helped prepare me for life after high school by giving me the opportunity to experience a variety of life skills. Upon completion of high school, I plan on completing the 600 hour pharmacy technician course offered through Uintah Basin ATC."

Madison Lamb

## 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 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).		

### Utah Business and Industry Facts

Within the healthcare industry, Utah is highly specialized in drug and pharmaceuticals. Leading biotechnology and pharmaceutical research companies based in Utah include ARUP Laboratories, Myriad Genetics Laboratories, Inc., and USANA Health Sciences, Inc.

In Utah, a pharmacist and pharmacy technician must be licensed.

#### UtahFutures: College and Career Planning

Visit [UtahFutures.org](http://UtahFutures.org) to explore occupations, search salary projections, access labor market information, investigate training options, and to create a plan.

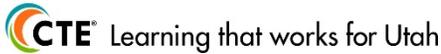
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#### CTE Credentials of Value

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# Utah Career and Technical Education Career Pathway 2019-2020 School Year



**CTSO Information**  
Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

FCCLA is the CTSO for students in the Culinary Arts Career Pathway. FCCLA provides students with opportunities to attain the knowledge, skills, and leadership characteristics necessary to succeed in life and careers.

**Workforce Trends**  
In Utah, job openings for chefs and head cooks are projected to increase 3.1 percent through the year 2026; however, competition should be fierce for jobs in the top kitchens of higher-end restaurants.

## Career Cluster: Hospitality & Tourism

### Career Pathway: Culinary Arts

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
	<i>Choose one of the following courses:</i>		
34.01.00.00.170	<a href="#">Culinary Arts</a>	1.00	2.00 credits
34.01.00.00.255	<a href="#">ProStart 1</a>	1.00	
	<i>Choose one of the following courses:</i>		
34.01.00.00.172	<a href="#">Culinary Management</a> *	1.00	1.00 credit
34.01.00.00.257	<a href="#">ProStart 2</a>	1.00	
ELECTIVE COURSES			
34.01.00.00.150	<a href="#">Food and Nutrition 1</a>	.50	1.00 credit
34.01.00.00.160	<a href="#">Food and Nutrition 2</a>	.50	
34.01.00.00.185	<a href="#">Foundations of Nutrition</a> *	.50	
37.01.00.00.100	<a href="#">Hospitality and Tourism</a>	.50	
32.02.00.00.220	<a href="#">Entrepreneurship</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.  
Foundation courses taken beyond the required credits can be used as elective credit.

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**Culinary Arts is:**

- > High-skill
- > High-wage
- > In-demand

**Sample Occupations Requiring:**

**High School Diploma**

- > Chef and Head Cook
- > First-Line Supervisor of Food Preparation and Serving Workers

**Certificate**

- > N/A

**Assoc. or Technical Degree**

- > Baker/Pastry Chef
- > Sous Chef
- > Restaurant Manager

**Baccalaureate Degree**

- > Career and Technical Education Teacher
- > Culinary Arts Instructor
- > Executive Chef

**Graduate or Prof. Degree**

- > Food Service Manager

**Student Testimonial**

"I'm going to further my education after high school and study how to become a pastry chef. One day I plan to open my own bakery. By taking culinary classes in high school, I will take the skills and knowledge of food that have learned to the next level and become the best pastry chef I can be."

Marissa Muhlestein

## 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 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).		

**Utah Business and Industry Facts**

According to the National Restaurant Association, in Utah restaurant and food service jobs represent 10 percent of employment in the state. Through the year 2026, growth is projected at 13.3 percent.

In 2016, sales in Utah restaurants totaled \$4.4 billion. Restaurant jobs represent 9 percent of employment in Utah.

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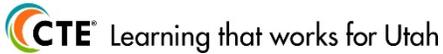
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**CTE Credentials of Value**

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In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway 2019-2020 School Year



**CTSO Information**  
Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

FBLA is the CTSO for students in the Hospitality and Tourism Career Pathway. FBLA provides students with opportunities for leadership, community involvement, and career development.

**Workforce Trends**  
According to the U.S. Department of Labor, travel and tourism is one of the largest and fastest growing industries in the world. Annual sales exceed a half-trillion dollars.

## Career Cluster: Hospitality & Tourism

### Career Pathway: Hospitality & Tourism

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
37.01.00.00.165	<a href="#">Marketing 1</a>	.50	1.00 credit
37.01.00.00.100	<a href="#">Hospitality and Tourism</a>	.50	
ELECTIVE COURSES			
32.02.00.00.010	<a href="#">Accounting 1</a>	.50	2.00 credits
32.02.00.00.110	<a href="#">Business Communication 1</a>	.50	
32.02.00.00.140	<a href="#">Business Management</a>	.50	
34.01.00.00.172	<a href="#">Culinary Management</a>	1.00	
37.01.00.00.025	<a href="#">Customer Service</a>	.50	
32.02.00.00.220	<a href="#">Entrepreneurship</a>	.50	
37.01.00.00.151	<a href="#">Event Planning and Management</a>	.50	
37.01.00.00.205	<a href="#">Lodging and Recreation</a>	.50	
34.01.00.00.257	<a href="#">ProStart 2</a>	1.00	
37.01.00.00.240	<a href="#">Retailing</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

**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.**

**Hospitality & Tourism is:**

- > High-wage
- > In-demand

**Sample Occupations Requiring:**

**High School Diploma**

- > Chef and Head Cook
- > Concierge
- > First-Line Supervisor of Housekeeping and Janitorial Workers
- > Hotel, Motel, and Resort Desk Clerk
- > Lodging Manager
- > Tour Guide and Travel Guide

**Certificate**

- > N/A

**Assoc. or Technical Degree**

- > N/A

**Baccalaureate Degree**

- > Career and Technical Education Teacher
- > Marketing Manager
- > Meeting, Convention, and Event Planner
- > Sales Manager

**Graduate or Prof. Degree**

- > Marketing Director

**Student Testimonial**

“The CTE courses I took prepared me for my chosen career path. I received knowledge and training in business management and restaurant fundamentals. I would like to open my own restaurant.”

Alexis Kingery

## 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.

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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.</p> <p>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.</p> <p>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>		

**Utah Business and Industry Facts**

According to the Utah Department of Workforce Services, 567 individuals are employed as travel agents throughout Utah, with 263 travel arrangement and reservation services businesses.

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**CTE Credentials of Value**

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# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national career clusters and all Utah CTE Career Pathways.

FCCLA is the CTSSO for students in the Community, Family and Social Services CTE Career Pathway. FCCLA provides students with opportunities to attain the knowledge, skills, and leadership characteristics necessary to succeed in life and careers.

**Workforce Trends**  
 According to the U.S. Department of Labor, employment of social workers is projected to increase 16 percent nationwide through the year 2026. Most social workers need a bachelor's degree in social work. However, clinical social workers must have a master's degree as well as experience.

**Career Cluster: Human Services**

**Career Pathway: Community, Family & Social Services**

CORE CODE	FOUNDATION COURSES (required)	CREDITS
ELECTIVE COURSES		

**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.**

**CAREER PATHWAY IN DEVELOPMENT**

**Community, Family and Social Services is:**  
 > In-demand

**Sample Occupations Requiring:**

**High School Diploma**  
 > Childcare Worker  
 > Community Health Worker  
 > Social and Human Service Assistant

**Certificate**  
 > N/A

**Assoc. or Technical Degree**  
 > Foster Care Social Worker  
 > Mental Health Technician

**Baccalaureate Degree**  
 > Career and Technical Education Teacher  
 > Social and Community Service Manager  
 > Social Worker

**Graduate or Prof. Degree**  
 > Clinical, Counseling and School Psychologist  
 > Community and Social Service Specialist  
 > Marriage and Family Therapist  
 > Mental Health Counselor

**Student Testimonial**  
 "I would like to be a child counselor . . . CTE courses helped me tremendously, not just for my occupational goal, but for life as well. I am very excited to begin my journey to become a child counselor and hope to be able to make a huge difference one day."  
 Tia Rae Shumway

**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.

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**Utah Business and Industry Facts**  
 Social workers are found in numerous industries throughout Utah, including local, state, federal agencies, schools, residential care facilities, and emergency/relief services, and social advocacy organizations.  
 In Utah, child, family, and school social workers, and marriage and family therapists must be licensed.

**UtahFutures: College and Career Planning**  
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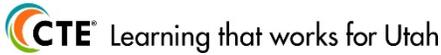
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**CTE Credentials of Value**

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# Utah Career and Technical Education Career Pathway 2019-2020 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 Cosmetology/Barbering Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

**Workforce Trends**  
According to the Utah Department of Workforce Services, employment for hairdressers, hairstylists, and cosmetologists is projected to grow 3.4 percent through the year 2026.

## Career Cluster: Human Services

### Career Pathway: Personal Services: Cosmetology/Barbering

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.03.00.00.001	<a href="#">Cosmetology</a> (Will include advanced Cosmetology courses.)	1.00	2.00 credits
<b>Or choose the following course:</b>			
40.03.00.00.003	<a href="#">Barbering</a> (Will include advanced Barbering courses.)	1.00	2.00 credits
ELECTIVE COURSES			
32.02.00.00.010	<a href="#">Accounting 1</a>	.50	1.00 credit
32.02.00.00.020	<a href="#">Accounting 2</a>	.50	
32.02.00.00.140	<a href="#">Business Management</a>	.50	
32.01.00.00.001	<a href="#">Business Math and Personal Finance **</a>	.50	
32.02.00.00.220	<a href="#">Entrepreneurship</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
		<b>3.00 credits for completion</b>	

**\*\* This course satisfies the .50 Financial Literacy requirement.**  
Foundation courses taken beyond the required credits can be used as elective 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.**

**Cosmetology/Barbering is:**  
> High-skill  
> In-demand

**Sample Occupations Requiring:**  
[High School Diploma](#)  
> N/A  
[Certificate](#)  
> Barber  
> Cosmetologist  
[Assoc. or Technical Degree](#)  
> N/A  
[Baccalaureate Degree](#)  
> Career and Technical Education Teacher  
[Graduate or Prof. Degree](#)  
> N/A

**Student Testimonial**  
“The cosmetology CTE courses I took in high school helped teach me the basic knowledge I need to continue in the field. I learned all the tips and tricks to methods and was taught that there is more than just one way to do task.”  
  
Alexas Walker

## 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
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**Utah Business and Industry Facts**  
According to the Utah Department of Workforce Services, 4,153 individuals in Utah are employed as a hairdresser, hairstylist, and cosmetologist.  
  
In Utah, a hairdresser, hairstylist, and cosmetologist or barber must be licensed.

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Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

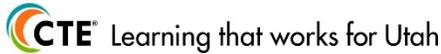
**CTE Credentials of Value**

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# Utah Career and Technical Education Career Pathway

## 2019-2020 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 Esthetician/Nail Technician Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

**Workforce Trends**  
 Population growth and expanding services are expected to create good job prospects among manicurists and pedicurists.

### Career Cluster: Human Services

#### Career Pathway: Personal Services: Esthetician/Nail Technician

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.03.00.00.002	<a href="#">Nail Technician</a>	1.00	1.00 credit
<i>Or choose the following course:</i>			
40.03.00.00.005	<a href="#">Basic Esthetician and Skin Care</a>	1.00	1.00 credit
ELECTIVE COURSES			
32.02.00.00.010	<a href="#">Accounting 1</a>	.50	2.00 credits
32.02.00.00.020	<a href="#">Accounting 2</a>	.50	
32.02.00.00.140	<a href="#">Business Management</a>	.50	
32.01.00.00.001	<a href="#">Business Math and Personal Finance **</a>	.50	
32.02.00.00.220	<a href="#">Entrepreneurship</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\*\* This course satisfies the .50 Financial Literacy requirement.  
 Foundation courses taken beyond the required credits can be used as elective credit.

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**Esthetician/Nail Technician is:**  
 > High-skill  
 > In-demand

**Sample Occupations Requiring:**  
[High School Diploma](#)  
 > N/A

[Certificate](#)  
 > Manicurists and Pedicurists  
 > Skincare Specialist (Esthetician)

[Assoc. or Technical Degree](#)  
 > N/A

[Baccalaureate Degree](#)  
 > Career and Technical Education Teacher

[Graduate or Prof. Degree](#)  
 > N/A

**Student Testimonial**  
 “My occupational goal is to become a master esthetician and own my own practice employing multiple estheticians and staff. CTE courses have developed skills enabling me to be a step ahead of my peers. I will graduate from high school and immediately be able to compete for desirable jobs in my chosen field.”  
 Madelyn Lundquist

### HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING

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**Utah Business and Industry Facts**  
 According to the Utah Department of Workforce Services, there are 1,097 personal care services businesses throughout Utah employing 88.1 percent of individuals practicing in this profession.  
  
 In Utah, an electrologist and nail technician (manicurist and pedicurist) must be licensed.

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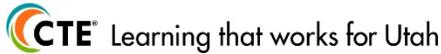
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**CTE Credentials of Value**  
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# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

Students who participate in the Cybersecurity Career Pathway choose among the following CTOS, depending upon what is available at their school:

FBLA | SkillsUSA | TSA

**Workforce Trends**  
 According to the U.S. Department of Labor, employment of information security analysts is projected to grow 28 percent nationwide through the year 2026. Demand is expected to be very high, as these analysts will be needed to create innovative solutions to prevent hackers from stealing critical information or causing problem for computer networks.

### Career Cluster: Information Technology

### Career Pathway: Cybersecurity

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
<i>Choose three of the following courses:</i>			
35.02.00.00.042	Cloud Computing	.50	1.50 credits
35.01.00.00.036	Cybersecurity Ethical Hacking	.50	
35.01.00.00.038	Cybersecurity Forensics	.50	
35.02.00.00.060	<a href="#">Web Development 1</a>	.50	
ELECTIVE COURSES			
35.02.00.00.021	<a href="#">Database Development</a>	1.00	1.50 credits
35.02.00.00.008	<a href="#">Exploring Computer Science 2</a>	.50	
35.02.00.00.005	<a href="#">Introduction to Information Technology</a>	.50	
35.01.00.00.025	<a href="#">Linux Fundamentals</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

Foundation courses taken beyond the required credits can be used as elective 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.**

**Cybersecurity is:**

- > High-skill
- > High-wage
- > In-demand

**Sample Occupations Requiring:**

[High School Diploma](#)

- > N/A

[Certificate](#)

- > N/A

[Assoc. or Technical Degree](#)

- > Computer Network Support Specialist

[Baccalaureate Degree](#)

- > Career and Technical Education Teacher
- > Computer and Information Systems Managers
- > Computer Programmers
- > Information Security Analyst

[Graduate or Prof. Degree](#)

- > Computer and Information Research Scientists

**Student Testimonial**

“Getting a degree will help me to pursue my goal of working as a computer programmer at a large company. CTE classes prepared me by showing me what I would actually be doing in the different job fields and how I would apply the information that I learned in class.”

Aaron Montoya

### 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 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).		

**Utah Business and Industry Facts**

In 2018, the Information Technology and Innovation Foundation (ITIF) ranked Utah's state government website (Utah.gov) #1 for security, and 17th overall. “Government websites should be fast, secure, mobile-friendly, and accessible to everyone, said Daniel Castro, ITIF vice president.

**UtahFutures: College and Career Planning**

Visit [UtahFutures.org](http://UtahFutures.org) to explore occupations, search salary projections, access labor market information, investigate training options, and to create a plan.

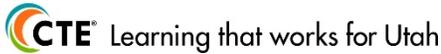
**CTE Credentials of Value**

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Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway 2019-2020 School Year



**CTSO Information**  
Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

Students who participate in the Information Technology Systems Career Pathway choose among the following CTOS, depending upon what is available at their school:  
FBLA | SkillsUSA | TSA

**Workforce Trends**  
Growth will be driven by rapid increases in the computer and data processing services industry.

In Utah, the average annual employment growth rate for computer systems analysts is 3.5 percent through the year 2026.

According to the Utah Technology Council, IT occupations account for \$6.9 billion (14.3 percent) of Utah's total payroll.

## Career Cluster: Information Technology

### Career Pathway: Information Technology Systems

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
<i>Choose 1.50 credits from the following courses:</i>			
35.01.00.00.040	<a href="#">A+ Computer Maintenance and Repair</a>	1.00	1.50 credits
35.01.00.00.010	Cisco Certified Network Administrator (CCNA)	1.00	
35.01.00.00.030	<a href="#">Network Fundamentals</a>	.50	
ELECTIVE COURSES			
35.02.00.00.021	<a href="#">Database Development</a>	1.00	1.50 credits
35.02.00.00.005	<a href="#">Introduction to Information Technology</a>	.50	
35.01.00.00.025	<a href="#">Linux Fundamentals</a>	.50	
35.01.00.00.020	Microsoft Certified Professional	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

Foundation courses taken beyond the required credits can be used as elective 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.**

**Information Technology Systems is:**  
> High-skill  
> High-wage  
> In-demand

**Sample Occupations Requiring:**  
[High School Diploma](#)  
> N/A

[Certificate](#)  
> N/A

[Assoc. or Technical Degree](#)  
> Computer Network Support Specialist

[Baccalaureate Degree](#)  
> Career and Technical Education Teacher  
> Computer Network Architect  
> Computer and Information Systems Manager  
> Computer Systems Analyst  
> Database Administrator  
> Network and Computer Systems Administrator

[Graduate or Prof. Degree](#)  
> Computer and Information Research Scientist

**Student Testimonial**  
"This program helped me earn many industry-level certifications including: CompTIA, IT Strata Fundamentals, IC3, Microsoft Technical Associate (MIT), OS Fundamentals, and Security and Academy of Information Technology certifications."  
Parker Kingsford

## 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 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).		

**Utah Business and Industry Facts**  
In 2017, Forbes named Utah "cloud computing's new capital." Forbes ranked six Utah tech companies in the top 100 and three of the Utah tech companies were ranked in the top 20—Qualtrics (No.6), Domo (15), Pluralsight (20), Workfront (58), Health Catalyst (64), and InsideSales (92).

**UtahFutures: College and Career Planning**  
Visit [UtahFutures.org](http://UtahFutures.org) to explore occupations, search salary projections, access labor market information, investigate training options, and to create a plan.

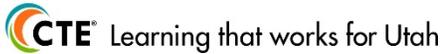
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**CTE Credentials of Value**  
In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



### Career Cluster: Information Technology

#### Career Pathway: Programming & Software Development

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
<b>Choose 1.00 credit from the following courses:</b>			
35.02.00.00.030	<a href="#">Computer Programming 1</a>	.50	
35.02.00.00.035	<a href="#">Computer Science Principles *</a>	.50	
35.02.00.00.036	Computer Science and Software Engineering	1.00	2.00 credits
<b>Choose 1.00 credit from the following courses:</b>			
35.02.00.00.041	<a href="#">AP Computer Science</a>	1.00	
35.02.00.00.032	<a href="#">Computer Programming 2</a>	.50	
35.02.00.00.040	<a href="#">Computer Programming 3</a>	1.00	
35.02.00.00.045	<a href="#">Game Development Fundamentals 1</a>	.50	
ELECTIVE COURSES			
35.02.00.00.037	<a href="#">Algorithms and Data Structures</a>	1.00	1.00 credit
35.02.00.00.021	<a href="#">Database Development</a>	1.00	
32.02.00.00.220	<a href="#">Entrepreneurship</a>	.50	
35.02.00.00.007	<a href="#">Exploring Computer Science 1</a>	.50	
35.02.00.00.008	<a href="#">Exploring Computer Science 2</a>	.50	
35.02.00.00.046	<a href="#">Game Development Fundamentals 2</a>	.50	
35.02.00.00.005	<a href="#">Introduction to Information Technology</a>	.50	
35.02.00.00.048	<a href="#">Mobile Development Fundamentals</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.

Foundation courses taken beyond the required credits can be used as elective 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.**

#### CTSO Information

Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

Students who participate in the Programming and Software Development Career Pathway choose among the following CTOS, depending upon what is available at their school:

FBLA | SkillsUSA | TSA

#### Workforce Trends

Demand continues for programmers who can help organizations keep up with changing technology. Prospects are best for those who have the knowledge of various programming languages.

In Utah, the average annual employment growth rate for software developers is 7.1 percent through the year 2026.

#### Programming & Software Development is:

- > High-skill
- > High-wage
- > In-demand

#### Sample Occupations Requiring:

[High School Diploma](#)

> N/A

[Certificate](#)

> N/A

[Assoc. or Technical Degree](#)

> Web Developer

[Baccalaureate Degree](#)

> Career and Technical

Education Teacher

> Computer Programmer

> Computer Systems Analyst

> Computer Systems

Engineers/Architect

> Software Developer

> Video Game Designer

[Graduate or Prof. Degree](#)

> Software Engineer

#### Student Testimonial

"My goal is to become a video game designer or programmer. The classes I took in high school taught me how to use the programs that I would be using in my career field and have given me a taste of what programming and design are like."

Jenny Whitecar

### 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
<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.</p> <p>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.</p> <p>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>		

#### Utah Business and Industry Facts

Silicon Slopes was formed to promote Utah's growing technology community and is home to more than 5,000 tech companies that has generated 142,500 jobs.

From Ogden to Provo, technology companies dot the landscape. Pluralsight, Insidesales.com, Qualtrics, Vivint, Entrata, HealthCatalyst all started in Utah.

#### UtahFutures: College and Career Planning

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Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

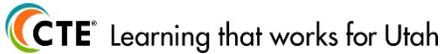
#### CTE Credentials of Value

In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 School Year



**CTSO Information**  
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

Students who want to participate in the Web Development Career Pathway choose among the following CTOS, depending upon what is available at their school:  
 FBLA | SkillsUSA | TSA

**Workforce Trends**  
 The World Wide Web has changed the way we communicate and consume information. With more than 1 billion websites the need for Web developers is high.

According to the Utah Department of Workforce Services, the average annual employment growth rate for Web developers is 4.2 percent through the year 2026.

### Career Cluster: Information Technology

#### Career Pathway: Web Development

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
35.02.00.00.060	<a href="#">Web Development 1</a>	.50	1.50 credits
<b>Choose 1.00 credit of the following courses:</b>			
35.02.00.00.055	<a href="#">HTML5 App Development Fundamentals</a>	.50	
35.02.00.00.065	<a href="#">Web Development 2</a>	.50	
35.02.00.00.067	<a href="#">Web Development Capstone</a>	1.00	
ELECTIVE COURSES			
35.02.00.00.021	<a href="#">Database Development</a>	1.00	1.50 credits
32.02.00.00.220	<a href="#">Entrepreneurship</a>	.50	
35.02.00.00.090	Geographic Information Systems (GIS) Remote Sensing	.50	
35.02.00.00.005	<a href="#">Introduction to Information Technology</a>	.50	
35.02.00.00.048	<a href="#">Mobile Development Fundamentals</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

Foundation courses taken beyond the required credits can be used as elective 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.**

**Web Development is:**

- > High-skill
- > High-wage
- > In-demand

**Sample Occupations Requiring:**

[High School Diploma](#)  
 > N/A

[Certificate](#)  
 > N/A

[Assoc. or Technical Degree](#)  
 > Web Developer

[Baccalaureate Degree](#)  
 > Career and Technical Education Teacher  
 > Computer and Information Systems Manager  
 > Computer Programmer  
 > Database Administrator  
 > Graphic Designer  
 > Multimedia Artists and Animators  
 > Software Developer

[Graduate or Prof. Degree](#)  
 > Web Developer

**Student Testimonial**

“My goal is to go to Utah Valley University and obtain an associate degree in computer technology with the focus on Web design. With the opportunity to receive an associate degree, it would allow me to apply and obtain work at any number of tech businesses across Utah County. CTE courses have provided experience in several areas that would not be available without CTE.”

Zachary Crocker

### 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 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).		

**Utah Business and Industry Facts**

Utah has deep consumer software roots. Ancestry.com, Overstock.com, Backcountry.com, and Vivint.com all started in the Beehive State.

“People in Utah want to contribute. Just walking down the street you can sense the desire to build and create, to make a mark. That kind of ‘beehive’ energy is exactly what a consumer startup needs . . .” said Chatbooks CEO Nate Quigley. *Silicon Slopes Magazine*, Spring 2017

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**CTE Credentials of Value**

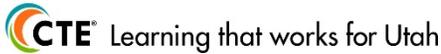
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In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah’s statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 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 CTSSO for students in the Protective Services Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

**Workforce Trends**  
 In Utah, the occupation projection for firefighters is 140 annual openings. Those who have completed some firefighter education at a community college and have an EMT certification will have an advantage.

### Career Cluster: Law, Public Safety, Corrections and Security

#### Career Pathway: Public Safety & Law Enforcement: Protective Services

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
36.01.00.00.070	<a href="#">Emergency Medical Responder</a>	.50	1.00 credit
<i>Choose one of the following courses:</i>			
40.06.00.00.010	Fire Science *	.50	
40.06.00.00.001	<a href="#">Law Enforcement</a> *	.50	
ELECTIVE COURSES			
40.06.00.00.105	Careers in Law Enforcement	.50	2.00 credits
40.06.00.00.108	<a href="#">Criminal Law</a> *	.50	
40.06.00.00.301	Homeland Security *	.50	
40.06.00.00.046	<a href="#">Introduction to Corrections</a>	.50	
40.06.00.00.103	<a href="#">Introduction to Criminal Justice</a>	.50	
36.01.00.00.085	<a href="#">Medical Forensics</a>	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.  
 Foundation courses taken beyond the required credits can be used as elective credit.

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**Protective Services is:**  
 > High-skill  
 > High-wage

**Sample Occupations Requiring:**  
[High School Diploma](#)  
 > Fire Inspector and Investigator  
 > Forest Fire Inspector and Prevention Specialist

[Certificate](#)  
 > Firefighter  
 > First-Line Supervisor of Fire Fighting and Prevention Workers

[Assoc. or Technical Degree](#)  
 > N/A

[Baccalaureate Degree](#)  
 > Career and Technical Education Teacher  
 > Criminal Justice and Law Enforcement Teachers, postsecondary

[Graduate or Prof. Degree](#)  
 > N/A

**Student Testimonial**  
 "Firefighting is in my blood. I love being on the scene with my grandfather and learning from him and my fellow firefighters. The pungent smell of smoke really gets me excited to get my career moving. I have never wanted anything more in my life than to be a firefighter."  
 Nate Buchanan

### 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.

<b>12th Grade</b>	<b>1-Year Certificate</b>	<b>2-Year Associate or Technical Degree</b>	<b>4-Year Bachelor's Degree</b>	<b>More Graduate or Prof. Degree</b>
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 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).		

**Utah Business and Industry Facts**  
 Police and sheriff's patrol officers are found in local, state, and federal agencies throughout Utah. According to the Utah Department of Workforce Services, there are 3,742 total agencies who employ police and sheriff's patrol officers.

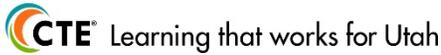
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**CTE Credentials of Value**  
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In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway 2019-2020 School Year



**CTSO Information**  
Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

Students who participate in the Welding Career Pathway choose among the following CTOS, depending upon what is available at their school:  
FFA | SkillsUSA

**Workforce Trends**  
In Utah, the occupation projection for welders, cutters, solderers, and brazers is 290 annual openings. Job prospects should be excellent for skilled candidates.

## Career Cluster: Manufacturing

### Career Pathway: Welding

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.10.00.00.110	<a href="#">Welding Technician, Entry Level</a>	1.00	2.00 credits
40.10.00.00.112	<a href="#">Welding Technician, Intermediate Level</a>	1.00	
ELECTIVE COURSES			
38.01.00.00.051	<a href="#">CAD Mechanical Design 1</a> *	.50	1.00 credit
38.01.00.00.052	<a href="#">CAD Mechanical Design 2</a>	.50	
40.10.00.00.072	<a href="#">Machining 1</a> *	.50	
40.10.00.00.070	<a href="#">Machining 2</a> *	.50	
40.04.00.00.001	Non-destructive Testing	.50	
40.04.00.13.001	Non-destructive Testing CE	.50	
40.10.00.00.114	<a href="#">Welding Technician, Advanced Level</a> *	1.00	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.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.**

**Welding is:**  
> High-skill  
> In-demand

**Sample Occupations Requiring:**  
[High School Diploma](#)  
> Welder, Cutter, Solderer, and Brazer  
> Welder and Solderer Machine Operator

[Certificate](#)  
> Welder

[Assoc. or Technical Degree](#)  
> N/A

[Baccalaureate Degree](#)  
> Career and Technical Education Teacher

[Graduate or Prof. Degree](#)  
> N/A

**Student Testimonial**  
"I took my first welding class in my sophomore year of high school and fell in love with it. Welding prepared me for college and my career by showing me I will have to continue on without giving up to reach my goals."  
Fillmore Tukuafu

## 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 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).		

**Utah Business and Industry Facts**  
From construction sites to automotive body shops, from farms to manufacturing plants, welders are found in numerous industries throughout Utah.

According to the Utah Department of Workforce Services, the median hourly wage for a welders, cutters, solderers and brazers is \$18.64.

**UtahFutures: College and Career Planning**  
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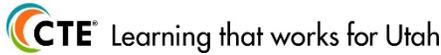
**CTE Credentials of Value**  
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Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 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 Cabinetmaking/Millwork Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

**Workforce Trends**  
 Job prospects will be best for highly skilled workers and those with knowledge of computerized machine tool operation.

### Career Cluster: Manufacturing

### Career Pathway: Advanced Manufacturing: Cabinetmaking/Millwork

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.10.00.00.020	<a href="#">Cabinetmaking</a>	1.00	1.50 credits
40.10.00.00.130	<a href="#">Furniture Design and Manufacturing</a> *	.50	
ELECTIVE COURSES			
38.01.00.00.041	<a href="#">CAD Architectural Design 1</a> *	.50	1.50 credits
38.01.00.00.051	<a href="#">CAD Mechanical Design 1</a> *	.50	
40.13.00.00.030	<a href="#">Industrial Design</a> *	1.00	
40.10.00.00.072	<a href="#">Machining 1</a> *	.50	
40.10.00.00.070	<a href="#">Machining 2</a> *	.50	
40.10.00.00.085	<a href="#">Metalworking 1</a> *	.50	
38.01.00.00.330	<a href="#">PLTW Civil Engineering and Architecture</a>	1.00	
38.01.00.00.390	<a href="#">PLTW Engineering Design and Development</a>	1.00	
40.10.00.00.120	<a href="#">Woodworking</a> *	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.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.**

**Cabinetmaking/Millwork is:**  
 > In-demand

**Sample Occupations Requiring:**  
[High School Diploma](#)  
 > Cabinetmaker  
 > Carpenter  
 > Supervisor of Construction Workers

**Certificate**  
 > Cabinetmaking and Furniture Construction

**Assoc. or Technical Degree**  
 > Cabinetry and Architectural Woodwork

**Baccalaureate Degree**  
 > Career and Technical Education Teacher

**Graduate or Prof. Degree**  
 > N/A

**Student Testimonial**  
 "Throughout my high school career, I focused on the Cabinetmaking/Millwork CTE Pathway. My CTE classes have prepared me in many ways such as teaching me the knowledge I need to know about woodworking, learning about all the tools and machines and how to use the, and how to create and read plans."  
 Kaydee Walters

### 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.

<b>12th Grade</b>	<b>1-Year Certificate</b>	<b>2-Year Associate or Technical Degree</b>	<b>4-Year Bachelor's Degree</b>	<b>More Graduate or Prof. Degree</b>
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 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).		

**Utah Business and Industry Facts**  
 From residential to commercial construction, cabinetmakers and carpenters are in demand throughout Utah.

According to the Utah Department of Workforce Services, the median hourly wage for cabinetmakers and bench carpenters in Utah is \$16.11.

**UtahFutures: College and Career Planning**

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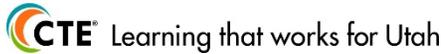
**CTE Credentials of Value**

In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.

# Utah Career and Technical Education Career Pathway

## 2019-2020 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	<a href="#">Machining 1</a> *	.50	1.00 credit
40.10.00.00.070	<a href="#">Machining 2</a> *	.50	
ELECTIVE COURSES			
38.01.00.00.051	<a href="#">CAD Mechanical Design 1</a> *	.50	2.00 credits
38.01.00.00.052	<a href="#">CAD Mechanical Design 2</a>	.50	
40.10.00.00.085	<a href="#">Metalworking 1</a> *	.50	
38.01.00.00.340	<a href="#">PLTW Computer Integrated Manufacturing</a>	1.00	
38.01.00.00.390	<a href="#">PLTW Engineering Design and Development</a>	1.00	
40.10.00.00.110	<a href="#">Welding Technician, Entry Level</a> *	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.

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**Machine Tool is:**

- > High-skill
- > High-wage
- > In-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
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**Utah Business and Industry Facts**

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 employees.

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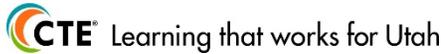
**CTE Credentials of Value**

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# Utah Career and Technical Education Career Pathway

## 2019-2020 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 CTSSO for students in the Aviation Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

**Workforce Trends**  
 Rising population and income will drive demand for airline travel and the need for commercial aviation workers. Those who have attended college for at least 2 years and have experience dealing with the public should have the best prospects.

### Career Cluster: Transportation, Distribution & Logistics

#### Career Pathway: Aviation

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.11.00.00.040	<a href="#">Private Pilot</a> *	.50	.50 credit
ELECTIVE COURSES			
40.11.00.00.042	<a href="#">Aircraft Systems</a> *	.50	2.50 credits
40.11.00.00.046	<a href="#">Air Transportation</a> *	.50	
40.11.00.00.044	<a href="#">Aviation History</a> *	.50	
38.01.00.00.021	<a href="#">Electronics 1</a> *	.50	
40.11.00.00.048	<a href="#">Flight Simulator</a> *	.50	
08.04.00.00.050	<a href="#">Meteorology</a> *	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.

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**Aviation is:**

- > High-skill
- > High-wage
- > In-demand

**Sample Occupations Requiring:**

**High School Diploma**

- > Aircraft Structure, Surfaces, Rigging, and System Assembler
- > Commercial Pilot

**Certificate**

- > Aircraft Mechanic
- > Aircraft Service Technician

**Assoc. or Technical Degree**

- > Air Traffic Controller

**Baccalaureate Degree**

- > Aircraft Co-pilot
- > Aircraft Pilot
- > Career and Technical Education Teacher
- > Flight Engineer

**Graduate or Prof. Degree**

- > Aviation Manager

**Student Testimonial**

"I plan to become a certified flight instructor and use that [credential] in order to build up my hours until I can get a job with a local airline. I learned everything I know about planes from Private Pilot Ground School [through CTE]. I even passed my written test from the information that I learn from that class."

Braden Ottley

### HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING

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**Utah Business and Industry Facts**

According to the Utah Department of Workforce Services, air transportation companies in Utah employ 6,316 workers.

In Utah, an aircraft mechanic, an aircraft service technician, and an aircraft pilot must be licensed.

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# Utah Career and Technical Education Career Pathway

## 2019-2020 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 CTSSO for students in the Aviation Maintenance Technology Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

**Workforce Trends**  
 According to the U.S. Department of Labor, the overall employment of aircraft mechanics and technicians is projected to increase 5 percent nationwide through the year 2026, as air traffic is expected to increase and will require additional aircraft maintenance.

### Career Cluster: Transportation, Distribution & Logistics

#### Career Pathway: Aviation Maintenance Technology

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.09.00.00.001	Aircraft Regulations	2.0	4.00 credits
40.09.00.00.080	Aircraft Electrical/Hardware	2.0	
ELECTIVE COURSES			
40.11.00.00.046	<a href="#">Air Transportation</a> *	.50	
40.11.00.00.042	<a href="#">Aircraft Systems</a> *	.50	
38.01.00.00.021	<a href="#">Electronics 1</a> *	.50	
40.09.00.00.020	<a href="#">Introduction to Automotive</a> *	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>4.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.

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**Aviation Maintenance Technology is:**

- > High-skill
- > High-wage
- > In-demand

**Sample Occupations Requiring:**

**High School Diploma**

- > Aircraft Structure, Surfaces, Rigging, and System Assembler

**Certificate**

- > Aircraft Mechanic
- > Aircraft Service Technician

**Assoc. or Technical Degree**

- > Air Traffic Controller

**Baccalaureate Degree**

- > Aviation Manager
- > Career and Technical Education Teacher

**Graduate or Prof. Degree**

- > Aviation Manager

**Student Testimonial**

“The CTE courses I’ve taken in high school have really shined a light on what I want to do with my life and how I want my future career to go. It has helped me learn what I liked and what I didn’t like to do. I learned from my automotive class that I love working with my hands and fixing things.”

Sidney Gray

### HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING

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**CTE Credentials of Value**

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# Utah Career and Technical Education Career Pathway

## 2019-2020 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 CTSSO for students in the Diesel Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

### Workforce Trends

Employment growth will result from the increased manufacturing of buses and trucks powered by durable, economical diesel engines. Opportunities are good for those with formal diesel mechanic training and experience with electronic and diagnostic equipment.

## Career Cluster: Transportation, Distribution & Logistics

### Career Pathway: Diesel

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.09.00.00.060	<a href="#">Diesel 1</a> *	.50	1.00 credit
40.09.00.00.065	<a href="#">Diesel 2</a> *	.50	
ELECTIVE COURSES			
32.02.00.00.010	<a href="#">Accounting 1</a>	.50	2.00 credits
40.09.00.00.022	<a href="#">ASE Brakes</a> *	.50	
40.09.00.00.021	<a href="#">ASE Chassis MLR</a> *	.50	
40.09.00.00.024	<a href="#">ASE Electrical/Electronics</a> *	.50	
40.09.00.00.026	<a href="#">ASE Engine MLR</a> *	.50	
40.09.00.00.025	<a href="#">ASE Engine Performance</a> *	.50	
40.09.00.00.023	<a href="#">ASE Steering and Suspension</a> *	.50	
40.09.00.00.005	<a href="#">Basic Automotive Collision Repair</a> *	.50	
32.02.00.00.140	<a href="#">Business Management</a>	.50	
38.01.00.00.021	<a href="#">Electronics 1</a> *	.50	
38.01.00.00.022	<a href="#">Electronics 2</a>	.50	
32.02.00.00.220	<a href="#">Entrepreneurship</a>	.50	
38.01.00.00.320	<a href="#">PLTW Digital Electronics</a>	1.00	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
		<b>3.00 credits for completion</b>	

\* Course can be taken up to 1.00 credit.

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### Diesel is:

- > High-skill
- > High-wage
- > In-demand

### Sample Occupations Requiring:

**High School Diploma**  
> Bus and Truck Mechanic  
> Diesel Engine Specialist  
> Mobile Heavy Equipment Mechanic

**Certificate**  
> Automotive Service Technician – ASE (Automotive Service Excellence) [www.ase.com/](http://www.ase.com/) is a national certification for automotive service technicians.

**Assoc. or Technical Degree**  
> N/A

**Baccalaureate Degree**  
> Career and Technical Education Teacher

**Graduate or Prof. Degree**  
> N/A

### Student Testimonial

"I completed a CTE Internship at a local garage in my community. Because of the courses I have taken, the safety certifications I have earned, and my internship, Jiffy Lube hired me on the spot. The CTE Pathways program helped me learn to set goals and make wise choices. CTE courses gave me real-life, marketable skills."

Trever Gardner

## HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING

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### Utah Business and Industry Facts

According to the Utah Department of Workforce Services, C.R. England Trucking is one of the major employers in the state of Utah. Founded in 1920, with headquarters in Salt Lake City, C.R. England employs more than 3,000 individuals.

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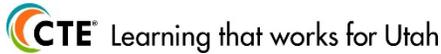
### CTE Credentials of Value

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# Utah Career and Technical Education Career Pathway

## 2019-2020 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 CTSSO for students in the Automotive Collision Repair Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

### Workforce Trends

Job opportunities in the automotive industry are very good for persons with formal training in automotive body repair and mechanics.

## Career Cluster: Transportation, Distribution & Logistics

### Career Pathway: Automotive: Collision Repair

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.09.00.00.005	<a href="#">Basic Automotive Collision Repair</a> *	.50	1.00 credit
<i>Choose one of the following courses:</i>			
40.09.00.00.010	<a href="#">Collision Non-Structural Repair</a> *	.50	
40.09.00.00.015	<a href="#">Collision Refinishing and Painting</a> *	.50	
40.09.00.00.013	<a href="#">Collision Structural Repair</a> *	.50	
ELECTIVE COURSES			
32.02.00.00.010	<a href="#">Accounting 1</a>	.50	2.00 credits
32.02.00.00.140	<a href="#">Business Management</a>	.50	
38.01.00.00.021	<a href="#">Electronics 1</a> *	.50	
32.02.00.00.220	<a href="#">Entrepreneurship</a>	.50	
40.09.00.00.020	<a href="#">Introduction to Automotive</a> *	.50	
40.10.00.00.072	<a href="#">Machining 1</a> *	.50	
40.10.00.00.085	<a href="#">Metalworking 1</a> *	.50	
40.09.00.00.090	<a href="#">Small Engine Repair</a> *	.50	
40.10.00.00.110	<a href="#">Welding Technician, Entry Level</a> *	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.

Foundation courses taken beyond the required credits can be used as elective credit.

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### Automotive Collision Repair is:

- > High-skill
- > High-wage
- > In-demand

### Sample Occupations Requiring:

- [High School Diploma](#)
- > Automotive Body and Related Repairer
- > Automotive Glass Installer and Repairer
- > Automotive Service Technician
- > Automotive Service Technician

### Certificate

- > N/A

### Assoc. or Technical Degree

- > N/A

### Baccalaureate Degree

- > Career and Technical Education Teacher

### Graduate or Prof. Degree

- > N/A

### Student Testimonial

"My overall goal of taking CTE courses was to become an automotive technician. I found my passion late during my sophomore year and ever since then I've been staying on track with the automotive industry. I took collision and refinishing and I love it. I found my passion in life and intend to make a full career out of it."

Tyerell Przybycien

## HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING

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### Utah Business and Industry Facts

According to the Utah Department of Workforce Services, more than 1,500 individuals are employed as automotive body and related repairers. Those employees with experience make an annual salary of \$41,950.

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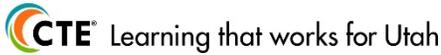
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# Utah Career and Technical Education Career Pathway

## 2019-2020 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 Automotive Service Technician Career Pathway. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development.

### Workforce Trends

Job opportunities in the automotive industry are expected to be very good for persons with formal training, strong diagnostic and problem-solving skills, and knowledge of electronics and mathematics.

According to the U.S. Department of Labor, employment of automotive service technicians and mechanics is projected to increase 6 percent nationwide through the year 2026.

## Career Cluster: Transportation, Distribution & Logistics

### Career Pathway: Automotive: Service Technician

CORE CODE	FOUNDATION COURSES (required)	CREDITS	
40.09.00.00.020	<a href="#">Introduction to Automotive</a> *	.50	1.50 credits
<b>Choose two of the following courses:</b>			
40.09.00.00.022	<a href="#">ASE Brakes</a> *	.50	
40.09.00.00.021	<a href="#">ASE Chassis MLR</a> *	.50	
40.09.00.00.024	<a href="#">ASE Electrical/Electronics</a> *	.50	
40.09.00.00.026	<a href="#">ASE Engine MLR</a> *	.50	
40.09.00.00.025	<a href="#">ASE Engine Performance</a> *	.50	
40.09.00.00.023	<a href="#">ASE Steering and Suspension</a> *	.50	
ELECTIVE COURSES			
32.02.00.00.010	<a href="#">Accounting 1</a>	.50	1.50 credits
40.09.00.00.005	<a href="#">Basic Automotive Collision Repair</a> *	.50	
32.02.00.00.140	<a href="#">Business Management</a>	.50	
38.01.00.00.021	<a href="#">Electronics 1</a> *	.50	
32.02.00.00.220	<a href="#">Entrepreneurship</a>	.50	
40.10.00.00.072	<a href="#">Machining 1</a> *	.50	
40.10.00.00.085	<a href="#">Metalworking 1</a> *	.50	
38.01.00.00.320	<a href="#">PLTW Digital Electronics</a>	1.00	
40.09.00.00.090	<a href="#">Small Engine Repair</a> *	.50	
40.10.00.00.110	<a href="#">Welding Technician, Entry Level</a> *	.50	
41.00.00.00.050	<a href="#">CTE Internship</a>	.50	
41.00.00.00.030	<a href="#">Workplace Skills</a>	.50	
<b>3.00 credits for completion</b>			

\* Course can be taken up to 1.00 credit.

Foundation courses taken beyond the required credits can be used as elective 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.**

### Automotive Service Technician is:

- > High-skill
- > High-wage
- > In-demand

### Sample Occupations Requiring:

- > [High School Diploma](#)
- > Automotive Body and Related Repairer
- > Automotive Glass Installer and Repairer
- > Automotive Service Mechanics
- > Automotive Service Technician

### Certificate

- > Automotive Service Technician – ASE (Automotive Service Excellence)
- [www.ase.com/](http://www.ase.com/) is a national certification for automotive service technicians.

### Assoc. or Technical Degree

- > N/A

### Baccalaureate Degree

- > Career and Technical Education Teacher

### Graduate or Prof. Degree

- > N/A

### Student Testimonial

"I focused on a CTE Pathway in high school. I took all of the automotive classes offered to me to help me pursue my career goal of an automotive technician. The automotive classes I took will help me with my training in college."

Thomas Jex

## 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
<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.</p> <p>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.</p> <p>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>		

### Utah Business and Industry Facts

According to the Utah Department of Workforce Services, there are 1,763 automotive repair and maintenance firms throughout Utah.

The occupations of Automotive Service Technicians and Mechanics is projected to experience a high volume of annual job openings.

### UtahFutures: College and Career Planning

Visit [UtahFutures.org](http://UtahFutures.org) to explore occupations, search salary projections, access labor market information, investigate training options, and to create a plan.

### CTE Credentials of Value

In 2017-2018, 112,867 CTE Skill Certifications were awarded to secondary students and 19,189 third-party certifications were earned by secondary students.

Visit [UtahCTE.org](http://UtahCTE.org) to access high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value.

In 2017-2018, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 87 percent.