

# Transportation, Distribution & Logistics



Scan to Learn More About  
This Pathway!



Transportation, Distribution  
& Logistics  
Utah Career and Technical Education  
CAREER CLUSTERS

**Transportation, Distribution & Logistics** focuses on preparing students for employment in careers that relate to the planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.



## CAREER PATHWAYS

- > Auto Mechanics & Repairs
- > Aviation
- > Diesel

Each CTE Career Pathway culminates in an industry recognized credential of value.

## FACTS

- > The occupations of Automotive Service Technicians and Mechanics is projected to experience a high volume of annual job openings.<sup>1</sup>
- > 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.<sup>1</sup>
- > Employment of automotive service technicians and mechanics is projected to increase 6 percent nationwide through the year 2026.<sup>1</sup>
- > 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 should have the best prospects.<sup>1</sup>
- > In Utah, an aircraft mechanic, and aircraft service technician, and an aircraft pilot must be licensed.<sup>2</sup>

<sup>1</sup> Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*

<sup>2</sup> Utah Department of Commerce, Division of Occupational and Professional Licensing

*“The CTE courses at my high school were a huge part of my decision to become an automotive technician.”*

May 2020

# Manufacturing



Scan to Learn More About  
This Pathway!



**Manufacturing**  
Utah Career and Technical Education  
CAREER CLUSTERS

**Manufacturing** focuses on preparing students for employment in careers that relate to the planning and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.



## CAREER PATHWAYS

- > Manufacturing
- > Welding & Machining

Each CTE Career Pathway culminates in an industry recognized credential of value.

## FACTS

- > ATK and Hill Air Force Base are two of the largest aerospace employers in Utah.<sup>1</sup>
- > Aerospace and aviation companies located in Utah employ more than 42,000 workers.<sup>2</sup>
- > The Northern Utah region of Utah has a strong existing base of aerospace and composites companies, with more than 30 companies and an estimated 16,500 employers.
- > From residential to commercial construction, cabinetmakers and carpenters are in demand throughout Utah.<sup>2</sup>
- > Machine tool job prospects for will be best for highly skilled workers and those with knowledge of computerized machine tool operation.<sup>3</sup>
- > From construction sites to automotive body shops, to farms and manufacturing plants, welders are found in numerous industries throughout Utah.

<sup>1</sup> Governor's Office of Economic Development (GOED)

<sup>2</sup> Utah Department of Workforce Services

<sup>3</sup> Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*

*“CTE courses helped me find the desire and interest to explore and learn more about the field of welding.”*

May 2020

# Law, Public Safety, Corrections & Security



Scan to Learn More About  
This Pathway!



Law, Public Safety,  
Corrections & Security  
Utah Career and Technical Education  
CAREER CLUSTERS

**Law, Public Safety, Corrections & Security** focuses on preparing students for employment in careers that relate to the planning, managing and providing legal, public safety, protective services and homeland security, including professional and technical support services.



## CAREER PATHWAY

### > Protective Services

Each CTE Career Pathway culminates in an industry recognized credential of value.

## FACTS

> In Utah, there are 3,742 total agencies who employ police and sheriff's patrol officers.<sup>1</sup>

> Police and sheriff's patrol officers are found in local, state, and federal agencies throughout Utah.

> In Utah, the occupation projection for firefighters is 250 annual openings.

> Those who have completed some firefighter education at a community college and have an EMT certification will have an advantage.

> Police and sheriff's patrol officers are found in local, state, and federal agencies throughout Utah. There are 3,742 total agencies who employ police and sheriff's patrol officers.<sup>1</sup>

> Police candidates must be U.S. citizens, usually at least 21 years old, and able to meet rigorous physical and personal qualifications.<sup>2</sup>

> Most firefighters receive training at a fire academy, pass written and physical tests, and hold an emergency medical technician (EMT) certification.<sup>2</sup>

<sup>1</sup> Utah Department of Workforce Services

<sup>2</sup> Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*

*“The CTE program provided me with the opportunity to prepare myself for a career in law enforcement.”*

May 2020

# Human Services



Scan to Learn More About  
This Pathway!



Human Services  
Utah Career and Technical Education  
CAREER CLUSTERS

**Human Services** prepares individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care, and consumer services.



## CAREER PATHWAY

> Personal Care Services

Each CTE Career Pathway culminates in an industry recognized credential of value.

## FACTS

> There are more than 1,000 personal care services businesses throughout Utah, employing 88.1 percent of individuals practicing in this profession.<sup>1</sup>

> In Utah, more than 4,000 individuals are employed as a hairdresser, hairstylist, and cosmetologist.<sup>1</sup>

> In Utah, a hairdresser, hairstylist, barber, cosmetologist, electrologist, and nail technician must be licensed.<sup>1</sup>

> In Utah, employment for hairdressers, hairstylists, and cosmetologists, is projected to have 3.4 percent through the year 2026.<sup>1</sup>

> The licensing hour requirements for personal services professionals in Utah are:

- Barber: 1,000 hours or 1,500 apprenticeship hours
- Cosmetologist: 1,600 hours or 2,500 apprenticeship hours
- Electrologist and Esthetics: 600 hours
- Nail Technologist: 300 hours

<sup>1</sup> Utah Department of Workforce Services

*“The CTE Cosmetology/Barbering Career Pathway has saved me a lot of time and money.”*

May 2020

# Hospitality & Tourism



Scan to Learn More About  
This Pathway!



Hospitality & Tourism  
Utah Career and Technical Education  
CAREER CLUSTERS

**Hospitality & Tourism** focuses on preparing students for employment in careers that relate to the management, marketing and operations of restaurants and other food services, lodging, attractions, recreation events and travel related services.



## CAREER PATHWAYS

- > Culinary Arts
- > Hospitality & Tourism

Each CTE Career Pathway culminates in an industry recognized credential of value.

## FACTS

- > Utah restaurants employ more than 110,000 individuals.<sup>1</sup>
- > In Utah, restaurant and food service jobs represent 10 percent of employment in the state.<sup>1</sup>
- > Students participating in ProStart® can become industry certified while in high school.
- > In 2018, sales in Utah restaurants totaled \$5.5 billion.<sup>1</sup>
- > Nationwide, 21.4 percent of people employed as chef and head cooks are women.<sup>3</sup>
- > Travel and tourism is one of the largest and fastest growing industries in the world, with annual sales exceeding a half-trillion dollars.<sup>2</sup>
- > In Utah, 567 individuals are employed as travel agents, with 263 travel arrangement and reservation services businesses.<sup>4</sup>

<sup>1</sup> National Restaurant Association

<sup>2</sup> U.S. Department of Labor

<sup>3</sup> U.S. Department of Labor, Women's Bureau

<sup>4</sup> Utah Department of Workforce Services

*“My high school ProStart® CTE class was a stepping stone on my journey to becoming a chef.”*

May 2020

# Health Science



Scan to Learn More About  
This Pathway!



Health Science  
Utah Career and Technical Education  
CAREER CLUSTERS

**Health Science** focuses on preparing students for employment in careers that relate to the planning, managing, and providing therapeutic services, health informatics, support services, and biotechnology research and development.



## CAREER PATHWAY

> Health Science

Each CTE Career Pathway culminates in an industry recognized credential of value.

## FACTS

> Healthcare is one of the largest and fastest-growing industries in the U.S., employing over 18 million workers in more than 200 careers.<sup>1</sup>

> Women represent nearly 90 percent of the healthcare workforce.<sup>1</sup>

> Utah consistently ranks among the healthiest states in the nation.<sup>1</sup>

> Nationwide, employment of forensic science technicians is projected to grow 17 percent through the year 2026.<sup>2</sup>

> Healthcare occupations are expected to make up seven of the 20 fastest growing occupations by the year 2030.<sup>2</sup>

> Within the healthcare industry, Utah is highly specialized in drug and pharmaceuticals. Leading biotechnology and pharmaceutical research companies are based in Utah.

> Healthcare professionals must be licensed.<sup>3</sup>

<sup>1</sup> Centers for Disease Control and Prevention

<sup>2</sup> Utah Department of Workforce Service

<sup>3</sup> Utah Department of Commerce, Division of Occupational and Professional Licensing

*“CTE classes have really helped me gain a true knowledge of the medical field.”*

May 2020

# Engineering & Technology



Scan to Learn More About  
This Pathway!



Engineering & Technology  
Utah Career and Technical Education  
CAREER CLUSTERS

**Engineering & Technology** focuses on preparing students for employment in careers that relate to the planning, managing, and providing professional and technical services, including research and development services.



## CAREER PATHWAYS

- > Engineering
- > Mechanical Design (CAD)

Each CTE Career Pathway culminates in an industry recognized credential of value.

## FACTS

- > Nationally, engineering is the second largest of all professions.<sup>1</sup>
- > Engineering occupations are considered high skill, high wage, and high demand.
- > 13 percent of U.S. engineering jobs are held by women, with one in four jobs in technology, engineering, and mathematics.<sup>1</sup>
- > In Utah, 620 mechanical drafters are employed by more than 3,000 businesses throughout the state.<sup>2</sup>
- > Most robotics engineers are employed by private companies and work in laboratory or production settings.
- > According to the U.S. Department of Labor, 19 percent of U.S. engineering jobs are held by women, with one in four jobs in technology, engineering, and mathematics.
- > By 2024, Utah's workforce is expected to include a total of 29,260 people working as engineers, drafters, engineering technicians, and mapping technicians.<sup>2</sup>

<sup>1</sup> U.S. Bureau of Labor Statistics

<sup>2</sup> Utah Department of Workforce Services

*“My high school drafting and engineering instructor was an amazing person and influenced my love of this field.”*

May 2020

# Arts, Audio/Visual Technology & Communications



Scan to Learn More About  
This Pathway!



Arts, Audio/Visual  
Technology & Communications  
Utah Career and Technical Education  
CAREER CLUSTERS

**Arts, Audio/Visual Technology & Communications** focuses on preparing students for employment in careers that relate to the designing, producing, exhibiting, performing, writing, and publishing multimedia content, including visual and performing arts, design, journalism, and entertainment services.



## CAREER PATHWAYS

- > Broadcasting & Digital Media
- > Fashion Apparel & Textiles
- > Graphic Design & Communications

Each CTE Career Pathway culminates in an industry recognized credential of value.

## FACTS

- > The broadcasting industry in Utah employs more than 2,000 workers.<sup>1</sup>
- > The expanding electronic media and entertainment industries will offer opportunities for animators, illustrators, and graphic artists.
- > In Utah, the printing industry employs nearly 5,000 workers.<sup>1</sup>
- > 7.4 percent of women are employed as radio and television communications equipment installers and repairers.<sup>2</sup>
- > Employment of self-employed photographers is projected to grow 12 percent through the year 2026.<sup>3</sup>
- > Employment growth for fashion designers will stem from a growing population demanding more clothing, footwear, and accessories.<sup>3</sup>

<sup>1</sup> Utah Department of Workforce Services

<sup>2</sup> U.S. Department of Labor, Women's Bureau

<sup>3</sup> U.S. Bureau of Labor Statistics

*“Taking CTE courses in high school gave me hands-on experience and helped me to prepare for my career.”*

May 2020

# Education & Training



Scan to Learn More About  
This Pathway!



**Education & Training**  
Utah Career and Technical Education  
CAREER CLUSTERS

**Education & Training** focuses on preparing students for employment in careers that relate to the planning, managing, and providing education and training services, and related learning support services.



## CAREER PATHWAYS

- > Pre-K: Early Childhood Education
- > K-12: Teaching as a Profession

Each CTE Career Pathway culminates in an industry recognized credential of value.

## FACTS

- > Elementary, middle, and secondary school teachers are in high demand across the state of Utah.
- > In Utah, an elementary, middle, and secondary school teacher must be licensed.
- > The annual growth rate for childcare workers is projected to increase 4 percent through the year 2026.<sup>1</sup>
- > In Utah, seven under-graduate teacher prep programs rank in the top half of the 717 programs nationwide, as a Top Tier Secondary Teacher Prep Program.<sup>2</sup>
- > In 2018, there were 214,000 Career and Technical Education teachers in the U.S.<sup>3</sup>
- > Educators Rising is a Career and Technical Student Organization that cultivates highly skilled educators.

<sup>1</sup> Utah Department of Workforce Services

<sup>2</sup> National Council on Teacher Quality (NCTQ)

<sup>3</sup> Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*

*“I know teaching would be a good fit for me. I want to be an elementary teacher.”*

May 2020

# Computer Science & Information Technology



Scan to Learn More About  
This Pathway!



Computer Science &  
Information Technology  
Utah Career and Technical Education  
CAREER CLUSTERS

**Information Technology** focuses on preparing students for employment in careers related to building linkages in IT occupations for entry level, technical and professional careers that relate to the design, development, support and management of hardware, software, multimedia and systems integration services.



## CAREER PATHWAYS

- > Cybersecurity
- > Information Technology Systems
- > Programming & Software Development
- > Web Development

Each CTE Career Pathway culminates in an industry recognized credential of value.

## FACTS

- > IT occupations account for \$6.9 billion (14.3 percent) of Utah's total payroll.<sup>1</sup>
- > Tech occupations are high, skill, high wage, and are in high demand, especially in Utah.
- > In Utah, there are approximately 7,000 tech-focused companies.<sup>1</sup>
- > Utah has deep consumer software roots. Ancestry.com, Overstock.com, Backcountry.com, and Vivint.com all started in the Beehive State.
- > With more than 1 billion websites and 3.9 billion Internet users worldwide, the demand for individuals skilled in digital media is high.
- > "The talent pool of computer engineers, digital artists and animators in Utah is astounding," said WildWorks CEO Clark Stacey.

<sup>1</sup> Utah Technology Council

*"I've learned how computers talk to each other while receiving the IC3 and A+ certifications."*

May 2020

# Business, Finance & Marketing



Scan to Learn More About  
This Pathway!



Business, Finance  
& Marketing  
Utah Career and Technical Education  
CAREER CLUSTERS

**Business, Finance & Marketing** focuses on preparing students for employment in careers that relate to the planning, managing, organizing, directing and evaluating business functions essential to efficient and productive business operations.



## CAREER PATHWAYS

- > Accounting & Finance
- > Business Administration
- > Business Information Management
- > Marketing

Each CTE Career Pathway culminates in an industry recognized credential of value.

## FACTS

- > Professional and business services makeup nearly 13 percent of Utah's employment base.<sup>1</sup>
- > Since 2009, Forbes has ranked Utah a top-three Best State for Business, including six times in the number one spot.
- > In November 2019, Forbes named Utah the #1 Best State for Entrepreneurs.
- > In July 2019, CNBC named Utah the #4 Best State for Business.
- > In August 2019, Inc. named Utah the #2 Best Place in American to Start a Business.
- > Professional and business services makeup nearly 13 percent of Utah's employment base.<sup>1</sup>
- > There are more than 56,000 small businesses in Utah. (A small business is one with fewer than 500 employees.)<sup>2</sup>

<sup>1</sup> Utah Department of Workforce Services | <sup>2</sup> U.S. Small Business Administration

*“The CTE classes I was involved in helped prepare me for success in a business administrative program.”*

May 2020

# Architecture & Construction



Scan to Learn More About  
This Pathway!



Architecture & Construction  
Utah Career and Technical Education  
CAREER CLUSTERS

**Architecture & Construction** focuses on preparing students for employment in careers that relate to the designing, planning, managing, building, and maintaining the constructed environment.



## CAREER PATHWAYS

- > Architectural Design (CAD)
- > Construction & Structural Systems
- > Interior Design

Each CTE Career Pathway culminates in an industry recognized credential of value.

## FACTS

- > In Utah, employment of architects is projected to grow 2.4 percent through the year 2026.<sup>1</sup>
- > There are 10,467 construction companies in Utah that employ 93,584 workers.<sup>1</sup>
- > Carpentry, electrical, HVACR, and plumbing occupations are high skill, high wage, and high demand.<sup>1</sup>
- > Less than 25 percent of women are employed in carpentry, electrical, HVACR, and plumbing occupations.<sup>2</sup>
- > Nationwide, employment of interior designers in specialized design services firms is projected to grow 4 percent through the year 2026.<sup>2</sup>
- > In Utah, an architect and those employed in the building trades must be licensed.

<sup>1</sup> Utah Department of Workforce Services

<sup>2</sup> U.S. Department of Labor

*“I have gained a lot of confidence during the past two years of high school as a result of taking CTE courses.”*

May 2020

# Agriculture, Food & Natural Resources



Scan to Learn More About  
This Pathway!



Agriculture, Food  
& Natural Resources  
Utah Career and Technical Education  
CAREER CLUSTERS

**Agriculture, Food & Natural Resources** focuses on preparing students for employment in careers that relate to the production, processing, marketing, distribution, financing, and development of agricultural commodities and resources, including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.



## CAREER PATHWAYS

- > Agricultural Mechanics Systems
- > Agricultural Production Systems
- > Animal & Veterinary Science
- > Food Science, Dietetics & Nutrition
- > Natural Resource Science
- > Plant Science

Each CTE Career Pathway culminates in an industry recognized credential of value.

## FACTS

- > Agriculture is the nation's largest employer.<sup>1</sup>
- > Approximately 22 million Americans work in agriculture-related fields.<sup>1</sup>
- > Of the 2.2 million farms in the U.S., 98 percent are family-owned and -operated farms.<sup>1</sup>
- > Eighty-two percent of the U.S. agriculture products sold are produced on family-owned farms.<sup>1</sup>
- > Utah has more than 1,800 farms and ranches that sell directly to consumers.<sup>2</sup>
- > In Utah, the occupational growth rate for veterinarians through the year 2026 is 4.0 percent.
- > Nationwide, employment of dietitians and nutritionist is projected to increase 15 percent through the year 2026.<sup>3</sup>

<sup>1</sup> U.S. Department of Labor

<sup>2</sup> Utah Department of Agriculture and Food

<sup>3</sup> U.S. Bureau of Labor Statistics

*“I have taken many CTE courses and I have figured out that animals are my passion!”*

May 2020

**4+ YEAR COLLEGE** (Academic and Industry Pathways continue)

**2 YEAR COLLEGE** (Academic and Industry Pathways continue)



OVERVIEW



**ACADEMIC PATHWAY OPTIONS: Concurrent Enrollment Classes**



SCHOOL SPECIFIC

Home School, IVC Lab, Magnet School, CTE Catalyst Center: College Instructors & Credit - WSU, SLCC, USU, UVU & Davis Technical College

**STACKABLE, PORTABLE, CERTIFICATIONS; USBE & 3rd Party**

**INDUSTRY CERTIFICATE: JOB INTERVIEW OPPORTUNITIES**

SKILLS CERTIFICATES & CREDENTIALS WITH LABOR MARKET VALUE

TALENT READY OR UAEC PATHWAY CERTIFICATE



**WORK-BASED LEARNING**



**WBL**



APPRENTICESHIPS & **WORK-BASED LEARNING**



**CAREER CLUSTERS**



Job Skill Development and Certificate of Completion  
Skill Development, Explorer (.50), Concentrators (1.5), Completers (3.0)

INDUSTRY CERTIFICATIONS



**Talent Ready Utah**



Utah's, Architecture, Engineering & Construction Pathway Tracks  
Professional, Apprenticeship, Specialty Trades

YOUR HOME SCHOOL

MAGNET SCHOOL or VISTA 18 to 22

CATALYST CENTER

YOUR HOME SCHOOL

CATALYST CENTER

DAVIS TECHNICAL COLLEGE

PRE-EMPLOYMENT TRANSITION SERVICES (Pre-ETS)\*Career Guidance

**USBE PATHWAY OPTIONS**

**GOED TALENT READY PATHWAY OPTIONS**



**Career and Technical Education Classes for College and Career Readiness**



Career Exploration & Career Guidance



**BOUNTIFUL**



**CLEARFIELD**



**DAVIS**



**FARMINGTON**



**LAYTON**



**NORTHRIDGE**



**SYRACUSE**



**VIEWMONT**



**WOODS CROSS**



**MOUNTAIN**



## STACKABLE, PORTABLE, CERTIFICATIONS; USBE & 3rd Party



WORK-BASED LEARNING



WORK-BASED LEARNING

SKILLS CERTIFICATES & CREDENTIALS WITH LABOR MARKET VALUE



CAREER CLUSTERS

Skill Development, Explorer (.50), Concentrators (1.5), Completers (3.0)

PRE-EMPLOYMENT TRANSITION SERVICES (Pre-ETS)\* Career Guidance

## USBE PATHWAY OPTIONS

**TALENT READY OR UAEC INDUSTRY CERTIFICATE**

**GUARANTEED OPPORTUNITIES FOR JOB INTERVIEWS**

**APPRENTICESHIPS & WORK-BASED LEARNING**



WORK-BASED LEARNING

**INDUSTRY CERTIFICATIONS**

 **Talent Ready Utah**

 Utah's, Architecture, Engineering & Construction Pathway Tracks,  
Professional, Apprenticeship, Specialty Trades

**INDUSTRY PATHWAY OPTIONS**

## 4+ YEAR COLLEGE

Academic and UAEC Pathways can continue

## 2 YEAR COLLEGE

Academic and UAEC Pathways can continue



# Concurrent Enrollment Classes

College Instructors & Credit:

WSU, SLCC, USU, UVU & Davis Technical College

Home School, IVC Lab, Magnet School, CTE Catalyst Center

Undergraduate 2020-21  
Resident Tuition and Fees

Hours	Tuition *	Student Fees	Student Support Fee	Total
1.0	458.18	118.98	9.50	586.66
2.0	666.85	149.44	9.50	825.79
3.0	875.52	179.90	9.50	1064.92
4.0	1084.19	210.36	9.50	1304.05
5.0	1292.86	240.82	9.50	1543.18
6.0	1501.53	271.28	9.50	1782.31
7.0	1710.20	301.74	9.50	2021.44
8.0	1918.87	332.20	9.50	2260.57
9.0	2127.54	362.66	9.50	2499.70
10.0	2336.21	393.12	9.50	2738.83
11.0	2544.88	423.58	9.50	2977.96
12.0	2544.88	423.58	9.50	2977.96
13.0	2544.88	423.58	9.50	2977.96
14.0	2544.88	423.58	9.50	2977.96
15.0	2544.88	423.58	9.50	2977.96
16.0	2544.88	423.58	9.50	2977.96
17.0	2544.88	423.58	9.50	2977.96
18.0	2544.88	423.58	9.50	2977.96
19.0	2753.55	423.58	9.50	3186.63
20.0	2962.22	423.58	9.50	3395.30
21.0	3170.89	423.58	9.50	3603.97
22.0	3379.56	423.58	9.50	3812.64
23.0	3588.23	423.58	9.50	4021.31
24.0	3796.90	423.58	9.50	4229.98
25.0	4005.57	423.58	9.50	4438.65

## SAVED TUITION- Example

2 Three credit classes (6 credits) = \$1,751.04

2 Three Credit Classes a semester  
11<sup>th</sup> an 12<sup>th</sup> grade (24 credits) = \$7,004.16

10<sup>th</sup>, 11<sup>th</sup>, 12<sup>th</sup> (30 credits) - \$8,755.20 min