

Agriculture, Food & Natural Resources



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.¹
- > Approximately 22 million Americans work in agriculture-related fields.¹
- > Of the 2.2 million farms in the U.S., 98 percent are family-owned and -operated farms.¹
- > Eighty-two percent of the U.S. agriculture products sold are produced on family-owned farms.¹
- > Utah has more than 1,800 farms and ranches that sell directly to consumers.²
- > 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 2026.³

¹ U.S. Department of Labor

² Utah Department of Agriculture and Food

³ U.S. Bureau of Labor Statistics



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

Participation in and completion of a CTE Career Pathway will provide you with the academic knowledge and technical skills to successfully compete in a global economy. Learn about Career and Technical Education and the **Agriculture, Food & Natural Resources Career Cluster** at UtahCTE.org.

Architecture & Construction



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 2026.¹
- > There are 10,467 construction companies in Utah that employ 93,584 workers.¹
- > Carpentry, electrical, HVACR, and plumbing occupations are high skill, high wage, and high demand.¹
- > Less than 25 percent of women are employed in carpentry, electrical, HVACR, and plumbing occupations.²
- > Nationwide, employment of interior designers in specialized design services firms is projected to grow 4 percent through the year 2026.²
- > In Utah, an architect and those employed in the building trades must be licensed.

¹ Utah Department of Workforce Services

² 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.”

Participation in and completion of a CTE Career Pathway will provide you with the academic knowledge and technical skills to successfully compete in a global economy. Learn about Career and Technical Education and the **Architecture & Construction Career Cluster** at UtahCTE.org.

Arts, Audio/Visual Technology & Communications



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.¹
- > 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.¹
- > 7.4 percent of women are employed as radio and television communications equipment installers and repairers.²
- > Employment of self-employed photographers is projected to grow 12 percent through the year 2026.³
- > Employment growth for fashion designers will stem from a growing population demanding more clothing, footwear, and accessories.³

¹ Utah Department of Workforce Services

² U.S. Department of Labor, Women's Bureau

³ 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.”

Participation in and completion of a CTE Career Pathway will provide you with the academic knowledge and technical skills to successfully compete in a global economy. Learn about Career and Technical Education and the **Arts, Audio/Visual Technology & Communications Career Cluster** at UtahCTE.org.

Business, Finance & Marketing



**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.¹
- > 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.¹
- > There are more than 56,000 small businesses in Utah. (A small business is one with fewer than 500 employees.)²

¹ Utah Department of Workforce Services | ² U.S. Small Business Administration

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

Participation in and completion of a CTE Career Pathway will provide you with the academic knowledge and technical skills to successfully compete in a global economy. Learn about Career and Technical Education and the **Business, Finance & Marketing Career Cluster** at UtahCTE.org.

Computer Science & Information Technology



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.¹
- > 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.¹
- > 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.

¹ Utah Technology Council

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

Participation in and completion of a CTE Career Pathway will provide you with the academic knowledge and technical skills to successfully compete in a global economy. Learn about Career and Technical Education and the **Information Technology Career Cluster** at UtahCTE.org.

Education & Training



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 2026.¹
- > 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.²
- > In 2018, there were 214,000 Career and Technical Education teachers in the U.S.³
- > Educators Rising is a Career and Technical Student Organization that cultivates highly skilled educators.

¹ Utah Department of Workforce Services

² National Council on Teacher Quality (NCTQ)

³ 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.”

Participation in and completion of a CTE Career Pathway will provide you with the academic knowledge and technical skills to successfully compete in a global economy. Learn about Career and Technical Education and the **Education & Training Career Cluster** at UtahCTE.org.

Engineering & Technology



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.¹
- > 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.¹
- > In Utah, 620 mechanical drafters are employed by more than 3,000 businesses throughout the state.²
- > 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.²

¹ U.S. Bureau of Labor Statistics

² Utah Department of Workforce Services

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

Participation in and completion of a CTE Career Pathway will provide you with the academic knowledge and technical skills to successfully compete in a global economy. Learn about Career and Technical Education and the **Engineering & Technology Career Cluster** at UtahCTE.org.

Health Science



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.¹
- > Women represent nearly 90 percent of the healthcare workforce.¹
- > Utah consistently ranks among the healthiest states in the nation.¹
- > Nationwide, employment of forensic science technicians is projected to grow 17 percent through the year 2026.²
- > Healthcare occupations are expected to make up seven of the 20 fastest growing occupations by the year 2030.²
- > 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.³

¹ Centers for Disease Control and Prevention

² Utah Department of Workforce Service

³ Utah Department of Commerce, Division of Occupational and Professional Licensing



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

Participation in and completion of a CTE Career Pathway will provide you with the academic knowledge and technical skills to successfully compete in a global economy. Learn about Career and Technical Education and the **Health Science Career Cluster** at UtahCTE.org.

Hospitality & Tourism



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

¹ National Restaurant Association

² U.S. Department of Labor

³ U.S. Department of Labor, Women's Bureau

⁴ Utah Department of Workforce Services

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

Participation in and completion of a CTE Career Pathway will provide you with the academic knowledge and technical skills to successfully compete in a global economy. Learn about Career and Technical Education and the **Hospitality & Tourism Career Cluster** at UtahCTE.org.

Human Services



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.¹

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

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

> In Utah, employment for hairdressers, hairstylists, and cosmetologists, is projected to have 3.4 percent through the year 2026.¹

> 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

¹ Utah Department of Workforce Services



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

Participation in and completion of a CTE Career Pathway will provide you with the academic knowledge and technical skills to successfully compete in a global economy. Learn about Career and Technical Education and the **Human Services Career Cluster** at UtahCTE.org.

Law, Public Safety, Corrections & Security



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.¹
- > 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.¹
- > Police candidates must be U.S. citizens, usually at least 21 years old, and able to meet rigorous physical and personal qualifications.²
- > Most firefighters receive training at a fire academy, pass written and physical tests, and hold an emergency medical technician (EMT) certification.²

¹ Utah Department of Workforce Services

² 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.”

Participation in and completion of a CTE Career Pathway will provide you with the academic knowledge and technical skills to successfully compete in a global economy. Learn about Career and Technical Education and the **Law, Public Safety, Corrections & Security Career Cluster** at UtahCTE.org.

Manufacturing



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.¹
- > Aerospace and aviation companies located in Utah employ more than 42,000 workers.²
- > 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 employees.
- > From residential to commercial construction, cabinetmakers and carpenters are in demand throughout Utah.²
- > Machine tool job prospects for will be best for highly skilled workers and those with knowledge of computerized machine tool operation.³
- > From construction sites to automotive body shops, to farms and manufacturing plants, welders are found in numerous industries throughout Utah.

¹ Governor's Office of Economic Development (GOED)

² Utah Department of Workforce Services

³ 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.”

Participation in and completion of a CTE Career Pathway will provide you with the academic knowledge and technical skills to successfully compete in a global economy. Learn about Career and Technical Education and the **Manufacturing Career Cluster** at UtahCTE.org.

Transportation, Distribution & Logistics



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.¹
- > 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.¹
- > Employment of automotive service technicians and mechanics is projected to increase 6 percent nationwide through the year 2026.¹
- > 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.¹
- > In Utah, an aircraft mechanic, and aircraft service technician, and an aircraft pilot must be licensed.²

¹ Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*

² 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.”

Participation in and completion of a CTE Career Pathway will provide you with the academic knowledge and technical skills to successfully compete in a global economy. Learn about Career and Technical Education and the **Transportation, Distribution & Logistics Career Cluster** at UtahCTE.org.