

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 annual occupational growth rate for veterinarians is 7.3 percent through the year 2028.
- > Nationwide, employment of dietitians and nutritionist is projected to grow 11 percent through the year 2030.³

¹ U.S. Department of Labor

² Utah Department of Agriculture and Food

³ Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*



“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 2.7 percent through the year 2028.¹
- > In the U.S., the construction industry has more than 680,000 employers with more than 7 million employees.¹
- > Carpentry, electrical, HVACR, and plumbing occupations are high-skill, high-wage, and in-demand.¹
- > Less than 25 percent of women are employed in carpentry, electrical, HVACR, and plumbing occupations.²
- > Interior designers who keep up to date with the newest design tools, such as CAD software, will have improved job prospects.²
- > In Utah, an architect and those employed in the building trades must be licensed.

¹ Associated General Contractors of America

² Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*

“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 offer opportunities for animators, illustrators, and graphic artists.
- > In Utah, the printing industry employs nearly 5,000 workers.¹
- > Nationwide, 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 through the year 2029.³
- > 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 Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*



“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

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

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

FACTS

- > Nationwide, employment in business and financial occupations is projected to grow 8 percent through the year 2030.¹
- > Professional and business services makeup nearly 13 percent of Utah's employment base.²
- > For a decade, Forbes has ranked Utah a top-three Best State for Business, including six times in the number one spot.
- > In Utah, the annual occupational growth rate for accountants and auditors is 3.5 percent through the year 2028.²
- > In July 2021, CNBC named Utah the #3 Best State for Business.
- > In Utah, small businesses represent 99.3 percent of all businesses in the state. (A small business is one with fewer than 499 employees.)³

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

² Utah Department of Workforce Services

³ U.S. Small Business Administration, Office of Advocacy, *Utah Small Business Profile, 2020*

“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

- > Tech occupations are high-skill, high-wage, and in-demand, especially in Utah.
- > In Utah, there are 8,200 tech-focused companies.¹
- > Utah's tech sector supports as many as one in seven Utah jobs and as much as one-sixth of worker earnings in the entire state.²
- > IT occupations account for \$6.9 billion (14.3 percent) of Utah's total payroll.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 1.8 billion websites and 5.1 billion Internet users worldwide, the demand for individuals skilled in digital media is high.³

¹ Utah Technology Council

² University of Utah's Kem C. Gardner Policy Institute

³ [websitehostingrating.com/internet-statistics-facts/](https://www.websitehostingrating.com/internet-statistics-facts/)

“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-demand across the state of Utah.
- > Many schools report a high-demand for math, science, English as a second language, and special education teachers.
- > In Utah, an elementary, middle, and secondary school teacher must be licensed.
- > The annual growth rate for childcare workers is projected to grow 2 percent through the year 2029.¹
- > 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 2020, there were 198,100 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

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

FACTS

- > Engineering occupations are considered high-skill, high-wage, and in-demand.
- > Nationally, engineering is the second largest of all professions.¹
- > In Utah, the annual occupational growth rate for mechanical engineers is 3.3 percent through the year 2028.²
- > According to the U.S. Department of Labor, 14.1 percent of U.S. engineering jobs are held by women.
- > In Utah, architectural/engineering managers have strong employment opportunities and high wages through the year 2028.²
- > Most robotics engineers are employed by private companies and work in laboratory or production settings.
- > In Utah, a professional engineer and a professional structural engineer must be licensed.³

¹ U.S. Bureau of Labor Statistics

² Utah Department of Workforce Services

³ Utah Department of Commerce Division of Occupational and Professional Licensing

“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 more than 22 million workers in more than 200 careers.¹
- >Nationwide, women represent nearly 77.6 percent of the workforce in the healthcare and social assistance industry.²
- >Utah consistently ranks among the healthiest states in the nation.¹
- >Nationwide, employment in healthcare occupations is projected to grow 15 percent through the year 2029, adding more jobs than any other occupational group.²
- >Healthcare occupations are expected to make up seven of the 20 fastest growing occupations by the year 2030.³
- >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.⁴

¹ Centers for Disease Control and Prevention

² U.S. Bureau of Labor Statistics

³ Utah Department of Workforce Services

⁴ 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 100,000 individuals.¹ (Pre-pandemic data)
- > Nationwide, employment of chefs and head cooks is projected to grow 25 percent through the year 2030.²
- > Nationwide, 19.6 percent of people employed as chef and head cooks are women.³
- > Students participating in ProStart® can become industry certified while in high school.
- > Travel and tourism is one of the largest and fastest growing industries in the world, with annual sales exceeding a half-trillion dollars.² (Pre-pandemic data)
- > Nationwide, employment of lodging managers is projected to grow 9 percent through the year 2030.²
- > In 2019, travelers spent a record \$10.06 billion in Utah, generating an estimated \$1.34 billion in total state and local tax revenue.⁴

¹ National Restaurant Association | ² U.S. Department of Labor

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

⁴ University of Utah's Kem C. Gardner Policy Institute



“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

- > Family & Human Services
- > Personal Care Services

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

FACTS

- > Nationwide, employment of social workers is projected to grow 12 percent through the year 2030.¹
- > There are more than 1,500 personal care services businesses throughout Utah, employing 81.8 percent of individuals practicing in this profession.²
- > In Utah, 3,100 individuals are employed as a hairdresser, hairstylist, and cosmetologist.²
- > In Utah, a hairdresser, hairstylist, barber, cosmetologist, electrologist, and nail technician must be licensed.²
- > In Utah, employment for hairdressers, hairstylists, and cosmetologists, is projected to grow 3.6 percent through the year 2028.²
- > 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 Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*

² 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 4,252 total agencies who employ police and sheriff's patrol officers in local, state, and federal agencies throughout Utah.¹
- > Police candidates must be U.S. citizens, usually at least 21 years old, and able to meet rigorous physical and personal qualifications.²
- > Nationwide, employment of police and detectives is projected to grow 7 percent through the year 2030.²
- > Most firefighters receive training at a fire academy, pass written and physical tests, and hold an emergency medical technician (EMT) certification.²
- > Nationwide, employment of firefighters is projected to grow 8 percent through the year 2030.²
- > Nationwide, women represent 3.5 percent of firefighters, compared to 14.8 percent of women who are employed as police officers.³

¹ Utah Department of Workforce Services

² Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*

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

“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

- > 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.
- > ATK and Hill Air Force Base are two of the largest aerospace employers in Utah.¹
- > From residential to commercial construction, cabinetmakers and carpenters are in demand throughout Utah.²
- > Machine tool job prospects will be the 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.
- > Nationwide, women represent 5.9 percent of welders, solderers, and brazers.⁴

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*

⁴ U.S. Department of Labor, Women's Bureau



“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

- > Although the employment of automotive service technicians and mechanics is project to decline through the year 2030, the employment of diesel service technicians and mechanics is projected to grow 8 percent through the year 2030.¹
- > Employers prefer that automotive service technicians and mechanics and diesel service technicians and mechanics complete a program at a postsecondary institution. Industry certification is usually required once the person is employed.¹
- > Employment of airline and commercial pilots is projected to grow 13 percent through the year 2030.¹
- > Aerospace and aviation companies located in Utah employ more than 42,000 workers.²
- > 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.