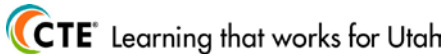


Utah Career and Technical Education Career Pathway

2018-2019 School Year



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

HOSA is the CTSSO 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	Biotechnology	1.00	1.00 credit
ELECTIVE COURSES			
36.01.00.00.090	Health Science, Introduction	.50	2.00 credits
36.01.00.00.001	Health Science, Advanced (capstone course) *	.50	
36.01.00.00.110	Medical Anatomy and Physiology	1.00	
36.01.00.00.150	Medical Math	.50	
36.01.00.00.175	Medical Terminology	.50	
41.00.00.00.030	Workplace Skills	.50	
3.00 credits for completion			

* 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 2015-2016, 73 percent of secondary students who concentrated in a CTE Career Pathway placed in postsecondary education, advanced training, military service or employment (October 1-December 31).		

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])

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

UtahFutures: College and Career Planning
 Visit UtahFutures.org for salary projections, labor market demand, and training options.

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

In 2016-2017, the graduation rate for students who concentrated in a CTE Career Pathway was 95 percent, compared to Utah's statewide graduation rate of 86 percent.