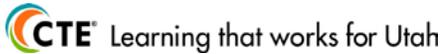


# Utah Career and Technical Education Career Pathway

## 2018-2019 School Year



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

### Career Cluster: Engineering & Technology

#### Career Pathway: Electrical Engineering

| CORE CODE                               | FOUNDATION COURSES (required)           | CREDITS |
|---|---|---------|
| <b>Foundation Component</b>             |   |         |
| 38.01.00.00.151                         | Engineering Principles 1                | .50     |
| 38.01.00.00.021                         | Electronics 1 *                         | .50     |
| 38.01.00.00.022                         | Electronics 2                           | .50     |
| 38.01.00.00.023                         | Electronics 3                           | .50     |
| <i>Or choose the following courses:</i> |   |         |
| 38.01.00.00.320                         | PLTW Digital Electronics                | 1.00    |
| 38.01.00.00.310                         | PLTW Principles of Engineering          | 1.00    |
| <b>Capstone Component</b>               |   |         |
| 38.01.00.00.990                         | Engineering Capstone                    | 1.00    |
| <i>Or choose the following course:</i>  |   |         |
| 38.01.00.00.390                         | PLTW Engineering Design and Development | 1.00    |
| <b>ELECTIVE COURSES</b>                 |   |         |
| 38.03.00.00.010                         | Engineering Technology                  | .50     |
| 38.01.00.00.211                         | Physics with Technology                 | 1.00    |
| 41.00.00.00.030                         | Workplace Skills                        | .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.**

**Electrical Engineering is:**  
 > High skill  
 > High wage  
 > High 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

**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 |
|---|--------------------|---|--------------------------|-------------------------------|
| 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.<br>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.<br>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**  
 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.

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

**UtahFutures: College and Career Planning**  
 Visit [UtahFutures.org](http://UtahFutures.org) for salary projections, labor market demand, and training options.  
 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.