



**Level 1** Principles of Applied Engineering

**Level 2** Engineering Design and Presentation I

**Level 3** Engineering Science

**Level 4** Engineering Design and Presentation II

| HIGH SCHOOL/<br>INDUSTRY<br>CERTIFICATION                        | CERTIFICATE/<br>LICENSE*                | ASSOCIATE'S<br>DEGREE   | BACHELOR'S<br>DEGREE   | MASTER'S/<br>DOCTORAL<br>PROFESSIONAL<br>DEGREE |
|--|---|---|--|---|
| Autodesk Certified<br>Professional or<br>User (ACU)-<br>Inventor | Engineer,<br>Professional               | Electrical and<br>Electronics<br>Engineering                    | Electrical and<br>Electronics<br>Engineering                       | Electrical and<br>Electronics<br>Engineering    |
|  | Fluid Power<br>Systems<br>Designer      | Drafting and<br>Design<br>Technology/<br>Technician,<br>General | CAD/CADD<br>Drafting and/or<br>Design<br>Technology/<br>Technician | Mechanical<br>Engineering                       |
|  | Certified<br>Biomedical<br>Auditor      | Engineering<br>Technology                                       | Bioengineering<br>and Biomedical<br>Engineering                    | Bioengineering<br>and Biomedical<br>Engineering |
|  | Certified Cost<br>Estimator/<br>Analyst |   | Construction<br>Engineering<br>Technology/<br>Technician           |   |

| Occupations          | Median<br>Wage | Annual<br>Openings | % Growth |
|----------------------|----------------|--------------------|----------|
| Aerospace Engineers  | \$110,843      | 481                | 9%       |
| Industrial Engineers | \$97,074       | 1,263              | 10%      |
| Mechanical Engineers | \$91,107       | 1,535              | 11%      |
| Chemical Engineers   | \$112,819      | 474                | 9%       |
| Electrical Engineers | \$98,405       | 1,137              | 10%      |

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit [TXCTE.org](http://TXCTE.org).

### WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

| Exploration Activities:                     | Work Based Learning Activities:                  |
|---|--|
| Participate in competitions like Skills USA | Engineering internship<br>Job shadow a machinist |

The Engineering program of study focuses on the design, development, and use of engines, machines, and structures. CTE learners will learn how to apply science, mathematical methods, and empirical evidence to the innovation, design, construction, operation, and maintenance of different manufacturing systems.



The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing, scientific research and professional and technical services, including laboratory and testing services, and research and development services.

Successful completion of the Engineering program of study will fulfill requirements of the Business and Industry or STEM endorsement if the math and science requirements are met. Revised - July 2020