



Level 1 Principles of Applied Engineering
Principles of Applied Engineering-
Women

Intro. To Computer Aided Design
and Drafting

Level 2 Engineering Design and
Presentation I (Eng. I)

Engineering Design and Problem
Solving (Eng. II)
Intermediate Computer Aided
Design and Drafting

Level 3

Practicum in STEM
Scientific Research and Design

Level 4

Industry-based certification information is available on
the website. For more information on postsecondary
program of study, visit TXCTE.org.

Autodesk Certified Professional or User (ACU)-Inventor	Engineer, Professional	Electrical and Electronics Engineering	Electrical and Electronics Engineering	Electrical and Electronics Engineering
Certified SolidWorks Associate (CSWA)	Fluid Power Systems Designer	Drafting and Design Technology/ Technician, General	CAD/CADD Drafting and/or Design Technology/ Technician	Mechanical Engineering
Certified Engineering Technician-Audio Systems	Certified Biomedical Auditor	Engineering Technology	Bioengineering and Biomedical Engineering	Bioengineering and Biomedical Engineering
	Certified Cost Estimator/ Analyst		Construction Engineering Technology/ Technician	

Occupation	Median Wage	Annual 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%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
Participate in competitions like Skills USA	Engineering internship 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



COURSE INFORMATION

COURSE NAME	SERVICE ID	PREREQUISITES (PREQ) COREQUISITES (CREQ)	Grade
Principles of Applied Engineering	13036200 (1 credit)	None	9-10
Computer Aided Drafting for Manufacturing	N1303769	None	10-12
Engineering Design and Presentation I (Engineering I)	13036500 (1 credit)	PREQ: Algebra I	10-12
Intermediate Computer Aided Design and Drafting	N1303770	PREQ: CAD for Manufacturing	11-12
Engineering Design & Problem Solving (Engineering II)	13037300 (1 credit)	PREQ: Algebra I and Geometry	11-12
Practicum in Science, Technology, Engineering, and Mathematics	13037400 (2 credits) 13037405 (3 credits) 13037410 (2 credits) 13037415 (2 credits)	PREQ: Algebra I and Geometry	12
Scientific Research & Design	13037200 (1 credit)	PREQ: Biology, Chemistry, Integrated Physics, and Chemistry (IPC), or Physics	11-12

FOR ADDITIONAL INFORMATION ON THE SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS CAREER CLUSTER, PLEASE CONTACT:

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<https://tea.texas.gov/cte>

(District) offers career and technical education programs in (types of programs offered). Admission to these programs is based on (admission standards). It is the policy of (District) not to discriminate on the basis of race, color, national origin, sex or handicap in its vocational programs, services or activities as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; and Section 504 of the Rehabilitation Act of 1973, as amended. It is the policy of (District) not to discriminate on the basis of race, color, national origin, sex, handicap, or age in its employment practices as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; the Age Discrimination Act of 1975, as amended; and Section 504 of the Rehabilitation Act of 1973, as amended. (District) will take steps to assure that lack of English language skills will not be a barrier to admission and participation in all educational and vocational programs. For information about your rights or grievance procedures, contact the Title IX Coordinator at (physical address of Coordinator) (email address of Title IX Coordinator), (phone number of Title IX Coordinator), and the Section 504 Coordinator at (physical address of Coordinator), (email address of Section 504 Coordinator), (phone number of Section 504 Coordinator)