Engineering Career Cluster

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 and research and development services.

Engineering Foundations
Statewide Program of Study

FBISD INSPIRE • EQUIP • IMAGINE | Career & Technical Education

The Engineering program of study focuses on the design, development, and use of engines, machines, structures, and automation processes, as well as rapid prototyping methods. Engineering pathway students will learn how to apply science, mathematical methods, and empirical evidence to the innovation, design, construction, operation, and maintenance of different operations and manufacturing systems. Engineering students endeavor to improve the state of the world in ethical, cost-effective, efficient, and innovative ways. If you enjoy identifying a problem, producing solutions, and turning ideas into reality, then Engineering may be the right career pathway for you.

Secondary Courses for High School Credit

9th Grade
- Principles of Applied Engineering

10th Grade
- Engineering Design and Presentation I

11th Grade
- Engineering Science

12th Grade
- Engineering Design and Problem Solving

Postsecondary Opportunities

Associates Degrees
- Electrical and Electronics Engineering
- Drafting and Design Technology/ Technician, General
- Engineering Technology

Bachelor's Degrees
- Electrical and Electronics Engineering
- CAD/CADD Drafting and/or Design Technology/ Technician
- Bioengineering and Biomedical Engineering
- Construction Engineering Technology/ Technician

Master's, Doctoral, and Professional Degrees
- Electrical and Electronics Engineering
- Mechanical Engineering
- Bioengineering and Biomedical Engineering

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
• Participate in SkillsUSA or TSA competitions	• Intern at an engineering firm

Industry-Based Certifications

- Autodesk Associate (Certified User) & Professional Fusion 360



Aligned Occupations

Occupations	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	105