

# Principles of Applied Engineering

## (Home Campus Only)



**Prerequisite:** None

**Course:** 1610A/B

**Credits:** 1

**Length:** 36 weeks

**Placement:** 9-12

## Course Description

Principles of Applied Engineering provides an overview of the various fields of science, technology, engineering, and mathematics and their interrelationships. Students will develop engineering communication skills, which include computer graphics, modeling, and presentations, by using a variety of computer hardware and software applications to complete assignments and projects. Upon completing this course, students will understand the various fields of engineering and will be able to make informed career decisions.

Further, students will have worked on a design team to develop a product or system. Students will use multiple software applications to prepare and present course assignments.

<https://www.txcte.org/resource/science-technology-engineering-and-mathematics-college-and-career-planning-guide>

## Student Activities

- Research Designs – 3D Cube Puzzle
- Drawings/Digital Rendering
- Modeling, Testing & Final Outcomes
- Mechanical – Trebuchet
- Materials – Wooden Roller Coaster
- Electrical – Circuits
- Computer – Robotic Arm
- Aerospace – Glider, Rocket, Model Plane
- Chemical Engineering
- Bioengineering – Prosthetics Device
- Environmental – Green Energy
- Product Analysis & Development