

## CFISD Principles of Applied Engineering

### Scope and Sequence

**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 have an understanding of 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

- Grades 7- 10
- A Lab fee will be required.

**TEKS**

Cluster: STEM (*Science Technology Engineering and Mathematics*)

Endorsement: STEM (*Science Technology Engineering and Mathematics*)

- Meets advanced course requirement (Y/N): *No*
- Meets foundation requirement for math, science, fine arts, English, LOTE (Y/N-area): *No*

Industry Certification/Credentials: *None*

Instructional Units	Pacing
<b>1<sup>st</sup> Semester</b> Safety in the Workplace Introduction to Engineering Engineering Design Process Technical Communication Teamwork Introduction to CAD	1 <sup>st</sup> Grading Pd     2 <sup>nd</sup> Grading Pd
<b>2<sup>nd</sup> Semester</b> Problem Solving, Design, and Modeling Engineering Systems Electronic/Electrical Systems Robotic Systems Alternative Energy Team Projects	3 <sup>rd</sup> Grading pd  4 <sup>th</sup> Grading Pd

Primary Instructional Materials: *Engineering Fundamentals-GW*