



Syllabus
Introduction to Engineering
(Principles of Engineering – Part 1)

Course description and goals:

Introduction to Engineering is a high school-level survey course of engineering and computer science. It is the first course offered as part of Tustin High School's T-Tech Engineering & Technology Academy. This STEM course exposes students to some of the basic concepts that they will encounter in technical and engineering classes down the line. This class will also give students the opportunity to develop skills and understanding of course concepts through activity- and project-based learning. In other words, it will feature many hands-on projects and activities which will enhance and illustrate each and every lesson. It will be a challenging yet fun class!

The course of study includes topics in Aerospace, Mechanisms, Alternative Energy Sources & Applications, Machine Control, Fluid Power, Material Properties, Robotics as well as an Introduction to computer science and coding.

We will be following California CTE *Engineering & Architecture* standards 1.0 - 11.5 and *Engineering Design Pathway* Standards C1.0 - C11.2.

Prerequisites: Introduction to Engineering is only offered to freshmen students accepted and enrolled in Tustin High School's T-Tech Engineering & Technology Academy.

Materials:

Recommended Supplies – Dedicated design notebook and pencil.

Grading Policy:

Semester grades will be computed by the following formula:

Classwork & Projects	60%
Tests, Quizzes & Presentations	20%
Class Participation & Group work	20%

Letter grades will be earned according to the following scale:

90% - 100%	A
80% - 89%	B
70% - 79%	C
60%- 69%	D
Below 60%	F

Grades are posted regularly online via the *Parent Portal*. All students and parents should be routinely checking progress online and notify me immediately if there is a discrepancy.

T-Tech Academy – It is imperative to remember that a student's grades will greatly impact his or her ability to continue within the academy and students may be required to re-apply for admission for next year.

Classwork, Projects & Attendance – POE is a both an academic and project-based class which means there will be very little homework in the traditional sense. However, attendance and class participation become very important. If a student is absent and does not make up the projects missed, his or her grade will be negatively affected.

Students will take notes daily and keep all notes, sketches and design ideas in a dedicated Engineering Notebook.

Behavior — All Tustin High School guidelines for behavior will be strictly enforced in class, including rules for attendance, tardiness and the use of electronic devices for non-academic purposes. Although students should feel free to work together and consult each other for extra help with their homework, outright cheating will not be tolerated. Each student will receive clarification on their expected behavior during the first days of school.

Office hours -- I am available every day before school, after school, and at other times by appointment. I encourage students to seek help at the first sign of difficulty. I also encourage parents to check their student's progress regularly via the Parent Portal and to contact me with any concerns. Email is the best and quickest way to get a hold of me but you can also leave a message for me at the office and I will get back to you as soon as possible. These communications are also excellent ways to obtain homework assignments when a student misses school.

Phone: 730-7414, Ext. 87421

Room: 421

E-mail: brice@tustin.k12.ca.us

Expected School-wide Learning Results

The Tiller Family is a “Team” that produces graduates who:

Think critically across the curriculum through:

Integrating WICOR strategies

Creating and developing high quality products

Analyzing multiple sources

Effectively communicate:

Using a wide range of media and technology

By taking personal, social, and civic responsibility

Fostering positive interactions with our diverse population

Advance literacy:

While innovating, discovering, and taking risks

Through synthesis and analysis of a rigorous curriculum

By exploring cultural, scientific, global, and visual competencies

Manage time and resources effectively by:

Prioritizing, planning and achieving results

Using real-world tools

Balancing physical and mental fitness

To the student: The Constitution of the State of California requires that we provide a public education to you free of charge. Your right to a free education is for all school/educational activities, whether curricular or extracurricular, and whether you get a grade for the activity or class. Subject to certain exceptions, your right to a free public education means that we cannot require you or your family to purchase materials, supplies, equipment or uniforms for any school activity, nor can we require you or your family to pay security deposits for access, participation, materials, or equipment. Under certain circumstances, students involved in extracurricular programs, clubs and/or sports may be required to attend fundraising events held by the program, sport or club just as you may be required to attend any other event put on by that program, club or sport. However, you will not be required to raise funds as a condition of participation.