

Charles H. Milby High School
Design and Presentation I Course Syllabus
2021 – 2022

Teacher Name: Ms. Mondesir

Room #: 1612

Email: rebecca.mondesir@houstonisd.org

Course Description

In Engineering Design and Presentation I, we will be following the PLTW Principles of Engineering (POE) curriculum. Below is a summary of the course outline:

Principles of Engineering (POE) is a foundation course of the high school engineering pathway. This survey course exposes students to some of the major concepts that they will encounter in a postsecondary engineering course of study. Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of materials and structures, automation, and kinematics. The course applies and concurrently develops secondary level knowledge and skills in mathematics, science, and technology.

Students have the opportunity to develop skills and understanding of course concepts through activity-, project-, and problem-based (APB) learning. By solving rigorous and relevant design problems using engineering and science concepts within a collaborative learning environment, APB learning challenges students to continually hone their interpersonal skills, creative abilities, and problem solving skills. Students will also learn how to document their work and communicate their solutions to their peers and members of the professional community. It also allows students to develop strategies to enable and direct their own learning, which is the ultimate goal of education.

Outline of Major Course Units

First Semester	Second Semester
<u>Unit 1: Energy and Power</u> Lesson 1.1: Mechanisms Lesson 1.2: Energy Sources Lesson 1.3: Energy Application Lesson 1.4 Design Project: Energy and Power	<u>Unit 3: Control Systems</u> Lesson 3.1: Machine Control Lesson 3.2: Fluid Power Lesson 3.3 Design Project: Control System
<u>Unit 2: Materials and Structures</u> Lesson 2.1: Statics Lesson 2.2: Material Properties Lesson 2.3: Material Testing Lesson 2.4 Design Project: Materials and Structures	

Grading Policy Summary:

Grades will be computed using a weighted grading scale. The number of assignments in each category may vary from cycle to cycle, but the final grade will always be computed in the same manner:

Daily Classwork:	45%
Homework:	10%
Quizzes:	15%
Tests:	30%

Submission of Late Work/Make-Up Work & Opportunities for Reassessment

In accordance with HISD Secondary School Guidelines, page XV-27, students must be given opportunities to make-up or redo a class assignment for which the student received a failing grade. Teachers shall provide students with an opportunity to redo/retake a test. Students will have one week (five school days) from the date the test is returned to the student and/or the grade is publicly posted. Students will receive the higher grade of the two tests. Teacher must document all opportunities given to students to make-up missing assignments and failing grades.

Extra Help:

I am available before or after school most days to answer questions or provide extra help if needed. Students should not hesitate to seek extra help if needed.