

Introduction to Engineering Design **Course Syllabus**

Instructor: Craig Sucher and Laura Brugere

Room: 222

Phone: Craig Sucher (314) 629-6237

Laura Brugere (314) 854-6701

E-mail: craigsucher@claytonschoools.net

laurabrugere@claytonschoools.net

Course Description and Purpose:

Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3-D modeling software, and use an engineering notebook to document their work.

College Credit:

Students are able to receive college credit for PLTW courses from universities across the country if they receive a high enough grade in the course along with an acceptable EOC score (as determined by each university). Students should wait to apply for credit until they know what school they will be attending in order to maximize the benefit. More information can be found at: <https://www.pltw.org/experience-pltw/student-opportunities>

Course Units:

Unit 1 - Design and Problem Solving

Unit 2 - Assembly Design

Unit 3 - Thoughtful Product Design

Unit 4 - Making Things Move

Learning Management, Communication, and Email:

Mrs. Brugere and Mr. Sucher are **ALWAYS** open to helping students with questions or concerns, but cannot read minds. Students should **NOT HESITATE** to ask for help. Individual meetings can be scheduled during lunch or office hours if students prefer one on one help.

Much communication between the instructor and students will take place through email and Google Classroom. It is the responsibility of the **student** to check their Google Classroom announcements and emails daily. The Google Classroom link will be emailed by the instructor prior to the first day of class.

Academic Honesty:

The policies stated in Clayton Schools District's handbook will be followed. The document explains those types of behavior that would be considered academic dishonesty. You are responsible for reading this document and abiding by the guidelines described therein. Note that plagiarism includes, but is not limited to, failure to give credit for help received on a homework assignment. Also note that all assignments are to be done individually, unless specified otherwise. You may talk to classmates and other students about an assignment, but you must do

all the work yourself from beginning to end. Two or more students may sit down together and discuss an assignment as they are working on it, but each student must do his/her own work in completing the assignment.

Assignments/Projects/Problems:

The curriculum is structured using the APB Model, which stands for Activities, Projects, and Problems. Activities are smaller “skill building” activities that deliver new content or skills and generally build on one another. Projects are the culmination of a subunit that allows students to combine all their newly learned skills into use to design a solution to a problem. Problems are at the end of each unit and are large open ended problems. Students use knowledge and skills obtained from the entire unit to develop a solution to the Problem.

Due Dates:

All assignments must be turned in by the due dates listed in Google Classroom.

Assessment Modifications:

All modifications will be made on an individual basis. These will be based on any formal documentation provided by the school district.

Class Expectations:

Students are expected to act as professionals

- Treat the course as you would a job
- Be on time
- Be present and engaged - you are responsible for your learning
- Be a good coworker - do your part, respect opinion of others
- Be kind (positive attitude, respectful of others)
- Learn from failures
- Assume good will - everyone makes mistakes, give people the benefit of the doubt
- Maintain a safe working environment
- Clean up after yourself

Grade Distribution (each semester):

Activities/Projects/Problems	85%
Final Exam	15%

Grading Scale	
A+	98 - 100
A	93 - 97
A-	90 - 92
B+	87 - 89
B	83 - 86
B-	80 - 82
C+	77 - 79
C	73 - 76
C-	70 - 72
D+	67 - 69
D	63 - 66
D-	60 - 62
F	50 - 59
M (Missing)	49
FM (Final Missing)	48
INS	0
Assignments Eligible for Retakes	Not Eligible for Retake (INS)
Activities	Final Exams & Projects/Problems