

Orange High School

Intro to Engineering Design Syllabus

Instructor: Ms. Sonya Noebels

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Remind: text @noebelspoe to 81010

Parents/Guardians are encouraged to contact me regarding any concerns with your child in my class. You can reach me at my email address or using Remind (text messaging app). I will do my best to return messages with 24 hours.

All parents are also encouraged to join their students' Google Classroom and see what we are doing in class. Please leave your email if you would like to be invited to Google Classroom.

Course Description:

Principles of Engineering (POE) is a high school level course that is appropriate for students who are interested in robotics and engineering. The major focus of the POE course is to expose students to the four major engineering disciplines (mechanical, electric, civil and chemical) as well as robotics and programming. Students will work individually and in teams to build, wire, and program machines using VEX parts. They will also apply math, science, and a variety of engineering tools, including 3D modeling software, to design, document, and communicate their engineering work.

The course assumes no previous knowledge, but students should be concurrently enrolled in college preparatory mathematics and science.

This course is a Project Lead the Way (PLTW) course and is followed by Design of Electronics (DE).

Course Objectives/Outline:

Unit 1: Energy and Power

Unit 2: Materials and Structures

Unit 3: Control Systems

Unit 4: Statistics and Kinematics

Course Materials:

PLTW.org

Required Supplies:

- Pencil, pen and eraser
- Engineering notebook (I will provide one to you)
- Class folder for handouts

Grading Policy:

Each nine weeks, grades will be based on quiz/test performance, homework, class work, class participation and authentic assessments.

Tests: 25% (at least 2 per marking period)

Authentic Assessments: 25% (at least 2 per marking period)

Quizzes: 20% (at least 3 per marking period)

Class Work: 20% (at least 9 per marking period)

Homework: 10% (at least 9 per marking period)

Grades are regularly updated in genesis and are available for review at any time.

Homework: Homework will be assigned regularly in this course. Homework is a way to practice concepts covered in class, as well as help you retain skills over the course. Without practice, without doing your homework, you will have a difficult time passing. It is your responsibility to turn in your homework on time. Homework will generally consist of 2-3 conclusion questions posted to Google Classroom and should take 15 minutes or less to complete. I might also assign a review before a quiz or a test.

Late Homework:

The assignments are much easier to do if you do them right away. All assignments for the current unit should be completed before the unit test. After the test, I won't accept late assignments unless you come to see me in Office Hours.

Class Work:

Students will have classwork during every class, including a "do now", an "exit ticket" and possible other work throughout the class period.

Whether it is individual work or group work, students are expected to actively work on these assignments. Students can get extra credit on classwork for answering questions and explaining to others.

Authentic Assessments:

As this class is about solving problems, there will be many projects graded as authentic assessments throughout the course. Students will receive a rubric ahead of time explaining how their projects will be graded. In group projects, students will receive both a group and an individual grade reflecting their contribution.

Quizzes/Tests:

Students will have at least one quiz and test in each topic. All quizzes will be announced at least one class period before and tests will be announced at least 4 days in advance.

Absence Policy:

In the event of missing class, you are responsible for getting all the information that was covered in class. You will not be able to make up do nows, exit tickets or classwork, BUT it will not count against you.

Homework can be made up for full credit in the event of missing class. If you miss a test or quiz, we will discuss your situation on a one-to-one basis to determine if and when a make-up test/quiz will be given.

Classroom Rules of Conduct (virtual and in person):

1. Bring your materials to class everyday: pencil, eraser, notebook and binder/folder.
2. Be on time and be prepared to begin as soon as the bell rings.
3. Be considerate of other people’s feelings, opinions and thoughts.
4. Pay attention and participate in class. Do not create an environment that distracts others from learning.
5. All cell phones/electronics will be on silent and put away during class. All ear buds will be removed.
6. Profane language will not be tolerated in the classroom.
7. Be polite and respectful to any visitors to our class.
8. Students will adhere to all OHS rules and policies.

This syllabus may be amended during the school year. I wish you and your child much success this school year! Please discuss this syllabus with your parent/guardian and sign it virtually.

Principles of Engineering Syllabus Agreement

Student’s Signature: _____

Students Printed Name: _____

Date: _____

Parent’s Signature: _____

Parent’s Printed Name: _____

Date: _____

Current Parent Phone Number(s): _____

Current Parent Email: _____

Would you like to be invited to your child’s Google Classroom? _____