



**2024-2025 SCHOOL YEAR**

# Engineering Design 1 Honors SPT

**Grades:** 9th Grade, 10th Grade, 11th Grade, 12th Grade

**Fees:** \$465 plus \$50 supply fee

**Prerequisites:**

Algebra 1 (completed or concurrent)

**Course Credit:** 1 science elective (STEM honors)

## REQUIRED MATERIALS

- A low-temp glue gun and glue sticks
- 12"/16cm Ruler (standard and metric)
- Small hand tools (needle nosed pliers, screwdrivers, coping saw, X-acto knife, soldering iron)
- Graph paper (engineering graph paper or standard ¼ inch)
- Three-ring binder with five tabbed dividers
- scientific calculator ([example](#)), ([example](#))
- [Geometry Kit](#)

- As an extra precaution this year, all students enrolled in a UHC science class will need to bring their own safety glasses to class. If you do not already have a pair in your home, you can purchase them [HERE](#). For students who wear glasses, [THESE](#) will work well.

## Course Description

This course is designed to give an in-depth study of engineering and design through hands-on projects. Units include team building, aerospace, transportation, architecture, construction, electronics, and various “out of the box” problem-solving projects with an emphasis on real-world applications.

## To be successful in this class:

Students must be able to work alone and in groups, follow directions, and complete in-class projects and assignments within the given time frame. Students must also be able to complete assignments to be done outside of class time by the given due date. Students must be able to learn various computer applications on their own, or seek help from the teacher, before assignments are due. Students can expect to work on homework 3-5 hours a week.

## Honors Addendum Summary

Students must notify the teacher of their intention to pursue the Honors option two weeks before the class begins.

Honors students will:

- Solve additional homework problems in each unit.
- Learn a CAD (Computer Aided Drafting/Design) program of their choice and complete required drawings in each unit using CAD. Sketchup or Fusion 360 are free programs that are recommended.
- Complete additional work in each of the six unit areas to be covered as well as one additional project each semester from a list provided by the teacher. Possible project options include completing a high school level competitive event, job shadowing and

reflection paper, subject-related field trip and reflection paper, subject related moving and reflection paper, or other teacher-approved project.

Specific assignments and details for honors work will be provided by the teacher.



## Meet Heidi Dannelly

**Education:** BA, Language & International Trade from Clemson University with 30 credits in Chemistry and Physics

**Teaching Experience:** Homeschooling own children 2 years.

### **UHC courses taught:**

- Physical Science

Began teaching at UHC in 2023

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