



# Introduction to Engineering Design

**Instructor:** Justin Robinson  
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**Room:** Computer Lab 605

## ***PROJECT LEAD THE WAY***

*Project lead the way* is a series of courses which introduce students to the scope, rigor, and discipline of engineering and engineering technology prior to entering college. Introduction at this level will attract more students to engineering, and will allow students, while still in high school, to determine if engineering is the career they desire. Students participating in PLTW courses are better prepared for college engineering programs and are more likely to be successful, thus reducing the attrition rate in these college programs, which currently exceeds 50% nationally. For more information about the program please go to [www.PLTW.org](http://www.PLTW.org)

## **Course Description:**

Introduction to Engineering Design (IED) is a high school level course that is appropriate for 9th or 10th grade students who are interested in design and engineering. The major focus of the IED course is to expose students to design process, research and analysis, teamwork, communication methods, global and human impacts, engineering standards, and technical documentation. IED gives students the opportunity to develop skills and understanding of course concepts through activity-, project-, and problem-based (APPB) learning. Used in combination with a teaming approach, APPB-learning challenges students to continually hone their interpersonal skills, creative abilities and understanding of the design process. It also allows students to develop strategies to enable and direct their own learning, which is the ultimate goal of education.

## **The course of study includes:**

- Design Process
- Modeling
- Sketching
- Measurement, Statistics, and Applied Geometry
- Presentation Design and Delivery
- Engineering Drawing Standards
- CAD Solid Modeling
- Reverse Engineering
- Consumer Product Design Innovation
- Marketing
- Graphic Design
- Engineering Ethics
- Virtual Design Teams

## **Required Supplies:**

- Engineering Notebook (Composition Notebook)
- Three ring binder (at least 1 ½")
- Mechanical Pencils (0.5 and 0.7)
- Flash Drive (at least 4GB)

- Filler paper.
- Plenty of graph paper

### **Computer Hardware/Software use**

- The computers are the property of the school district and are intended for student instruction, not personal use.
- Students will be assigned a computer and be responsible for its use during the class period.
- Treat computers with care and respect. They are for **your** use.
- Report any problems to teacher if/when they arise.
- Do not shut down a computer unless instructed by teacher to do so.
- Do not misuse computer hardware and software such as sending out unauthorized messages, vandalizing equipment, altering a software program, playing games, plagiarism, etc.
- Do not download **anything** to a school computer (games, programs, etc.).
- Use the Internet for appropriate school related activity.
- Do not change desktop screen.

### **Classroom Expectations:**

- Students are to be in class before the tardy bell rings.
- Students are to be prepared each day with the necessary materials.
- Students are to be attentive, involved and organized in class.
- Drawing assignments and notes MUST be done in pencil (0.5).
- Do not converse without permission.
- Treat everyone with consideration and respect. Disruptive behavior will not be tolerated.
- Students will not leave the class without teacher permission.
- Safety rules are to be followed at all times.
- **No food or drink during class.**

Students are to follow ALL school rules as outlined in the student handbook in your agenda books.

**Tardy Policy:** Students must be **IN** the classroom before the tardy bell rings. Only an administrator or I may excuse you from class, NO EXCEPTIONS!

### **Discipline Policy:**

Disciplinary rules are outlined in the student handbook. Students will be verbally warned the first time that a rule is broken. The parent(s) will be called if the behavior persists. A referral will be written as a last resort or for any major infraction.

### **Grading:**

Your assignments will be given a point total and your quarter grade will be based on the total number of points you achieve on tests, quizzes, and daily work.

### **Final Grade:**

Your final grade will be calculated as follows:

Semester 1:	1 <sup>st</sup> Quarter 50%	2 <sup>nd</sup> Quarter 50%	
Semester 2:	3 <sup>rd</sup> Quarter 50%	4 <sup>th</sup> Quarter 50%	
Course Grade:	Semester1 40%	Semester2 40%	EOC Exam 20%

**Introduction to Engineering Design**  
**Teacher: Justin Robinson**  
**2012-2013**

I have read the syllabus and understand what is required in this class.

Student's Name: (print clearly) \_\_\_\_\_

Student's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Parents' Names: (print clearly): \_\_\_\_\_  
\_\_\_\_\_

Parents' Signatures: \_\_\_\_\_ Date: \_\_\_\_\_  
\_\_\_\_\_ Date: \_\_\_\_\_

Daytime Phone#: \_\_\_\_\_ Evening Phone#: \_\_\_\_\_

Parents' Email Addresses: \_\_\_\_\_  
\_\_\_\_\_

Student's Email Address: \_\_\_\_\_

This information may also be completed and emailed to Coach Robinson. Please print, fill in information, sign, and scan in original document to be emailed. Only the signature page is needed. Thank you and I look forward to a great school year.