

Engineering Applications

Teacher: Mr. Jourden

Classroom: B-32/B-34

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Course Description: The study of engineering design with the use of Computer Aided Drafting and Design and machine tooling to produce products for manufacture or architectural building. Creo and Archicad will be the primary software used. Students will apply engineering and architectural drafting to various real world problems. Topics include methods of creating and presenting design concepts with thumbnails, freehand drawing proposals, rendering of perspective and orthographic plans. The students will apply the design process using original thinking, invention, problem identification and solving. Students will continue to develop and apply visualization of 2D and 3D design, working drawings and presentation drawings to solve engineering problems. Students will also explore electrical engineer, material properties and structural analysis of designed parts. Maybe taken more than once for credit

Graduation Credits: Computer, VPAA, 4th Year Math, Computer Credit

Concepts that will be covered in class include:

- Dimensioning
- Assemblies and Fabrication
- Engineering Design Problems
- Material Properties
- Electronic Schematic and Layout
- Computer Programming
- Applied Mechanical Engineering Principles
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- Reverse Engineering
- Descriptive Geometry
- Manufacturing Processes
- Rapid Prototyping Products
- Engineering Systems
- Civil and Construction Engineering

Prerequisites: Basic Math and Computer Skills
Engineering Technology 1

Length of course: 2 Hour Block One Year open to 11-12 grades.

Computer Usage: Windows, Keyboarding, Mouse, CADD printer, and CADD plotter

Materials: Paper, computer and other drafting equipment will be provided. The student will be responsible for the proper care and up keep of this equipment. **Student should bring a pencil to class everyday.**

Minimum class requirements: A student will hand in all required assignments and task sheets on their due dates. Students will also participate with a **positive classroom attitude each day.**

Student Expectations: A student will work at assigned station without interfering with another Student's learning. Unless you are working in a team project, students will turn in only their work (copy and cheating will not be tolerated). Students are accountable to be at their workstations at all times unless Other wise notified. A student will be held accountable for any equipment that is purposefully damaged. Remember be respectful and responsible to all school equipment.

Absences and Tardiest: Are very critical in this class since it is a progression of learning and the work can only be done in the classroom at the individual computer station. See tardy and absences in the school handbook for rules and guidelines. Students will be responsible for any missed assignments. Work assigned while absent should be submitted in a timely fashion. Excessive absences and tardiness will result in a reduction of grade.

Grading

Classroom Readiness- 20%

Weekly Reflection- 25%

Drawings/Presentations- 55%

Grading Scale:

A	93% - 100%	D+	67% - 69%
A-	90% - 93%	D	64% - 66%
B+	87% - 89%	D-	60% - 63%
B	84% - 86%	E	59% and Below
B-	80% - 83%		
C+	77% - 79%		
C	74% - 76%		
C-	70% - 73%		

Passes and Restroom Usage: Will only be given at appropriate times and will be at the discretion of the teacher. Please only ask when extremely important at a proper time in class. Misuse or abuse of passes will result in the privileges being denied. Passes may not be used on days when substitutes are in the class. The restroom next to the classroom will remain locked at all times. To use the restroom the student must request the teacher to unlock the bathroom. Keys for the restroom will not be given to individual students.

Class Dismissal: Every minute is important. You will be in charge of keeping your station neat and orderly. The teacher will announce when clean up time will begin. The student should not start cleaning up before this time. Before leaving you must be sitting at your station quietly. Do not leave until the teacher allows you to leave. Any returned assignments, assignment sheets, or folders left on the desks will be recycled.

Teachers Availability:

Before School	6:50 am – 7:25 am (Earlier by appointment)	
1 st Hour	Engineering Tech 1	B-32/B-34
2 nd Hour	Engineering Tech 1	B-32/B-34
3 rd Hour	Engineering Tech 2	B-32/B-34
4 th Hour	Engineering Apps/Block	B-32/B-34
C-Lunch		
5 th Hour	Engineering Apps/Block/Architecture	B-32/B-34
6 th Hour	Prep	B-32/B-34
After School	2:27 pm – 3:30 pm (Later if by appointment; except Wed)	

School Respect Policy

The atmosphere on your campus contributes to the level and quality of learning that occurs. All appropriately expressed views and opinions will be treated with respect to everyone. It is the responsibility of the teacher AND the student to create an atmosphere free of harassment, insulting remarks, and ridicule.