

Engineering Drafting and Design 1

I. Course Description: Intro To Drafting / C.A.D.

The development of computer-assisted-design (CAD) has changed every facet of drafting in today's industry. Recognizing this, we have developed a drafting program that deals primarily with the subject of Computer Aided Drafting. In this introductory course, students will be introduced to basic computer operations, drafting practices, drawing types and file management. Beginning with geometric shape construction, the students will be assigned increasingly difficult tasks to be drawn using the latest CAD software. Mechanical 2-dimensional drafting using AutoCad 2022 will be the primary focus of this course with an introduction to 3D modeling and Autocad Inventor. The majority of class time will allow students to explore the power of the CAD system that Avon High School as well as most of the manufacturing industry uses. Independent work will comprise the majority of work to give the students a sense of independence and self-confidence in this area. Frequent changes in equipment and software will be made to reflect the changes made by industry.

Grades will be determined by the following formula:

Major Drawings	40%
Minor Drawings	20%
Tests	20%
Quizzes	10%
Homework	10%

II. Major Units:

- Introduction to me, school and cost of living
- Types of drafting and employment opportunities
- Design types and sketching
- The development of C.A.D. and the impact on manufacturing
- Software introduction and practice
- Multi-view drawings
- Dimensioning
- Sectional Views
- Pictorial Drawings
- Working Drawings
- Pattern Development
- Fasteners
- Cams and Gears
- **Introduction to Inventor**
- Intro To N.C. Code and Machining