

# DD 170 - CADD/COMPUTER MODELING

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- Understand how products all have an engineering design life cycle, and how those products impact all levels of society.

## Course Description

Graphic communication course using 3D parametric modeling techniques. Topics include 3D modeling using SolidWorks software in an engineering design environment. Students will also develop 2D drafting skills including proper organization and layout of component drawing views, dimensioning and tolerancing, sectioning and detailing, detail descriptive geometry and rapid prototyping. As part of this course, students will earn a CSWA Certified Solidworks Associate certification. Group 2 course.

## Credit Hours

4

## Contact Hours

5

## Lecture Hours

3

## Lab Hours

2

## Recommended Prerequisites or Skills Competencies

Placement into MTH 23 and ENG 99/108 recommended for entry.

## General Education Outcomes supported by this course

Critical Thinking - Direct

## Course Learning Outcomes

### Knowledge:

- Identify the correct terminology used within the CADD technology body of knowledge.

### Application:

- Develop 2D drafting skills.
- Create an initial part ideation.

### Integration:

- Demonstrate 3D parametric modeling techniques using SolidWorks software in an engineering design environment.
- Develop a working prototype based on their initial part ideation.

### Human Dimension:

- Engage the creative process of design and place their ideas into a shared format in CADD to be used by others in the complete manufacturing cycle.
- Assess how they individually, and collectively as a member of a population, impact the engineering environment by using the newest versions of Computer Aided Drafting and Design software, SolidWorks.

### Caring - Civic Learning:

- Develop empathy for the process of linking creativity and knowledge to better mankind.