# Engineering Graphics with CAD

# Spring 2021

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## **Description:**

## An introductory course in engineering graphics focusing on graphical communication. Topics include descriptive geometry elements, visualization, engineering drawing techniques, orthographic projection, pictorial representation, auxiliary and section views, and basic dimensioning. The course incorporates computer aided drafting (CAD) with engineering applications using 2-D drawing and 3-D modeling techniques.

## **Text:**

## Tools for Design Using AutoCAD 2021 and Autodesk Inventor 2021 by Randy Shih

**Course Website:**

We will be using Canvas for the website in the course. The URL is [https://www.uwsp.edu/canvas](https://www3.uwsp.edu/canvas) and you login using your UWSP username and password. The labs can be found there as well as the grades.

**Free Software:**

Go to http://students.autodesk.com to download AutoCAD and Inventor for free. All you need is a school-issued email address from a college or university.

## **Grading:**

* 70% - Labs: Labs are due nearly every week. All CAD labs must be uploaded to Canvas by the time posted. **Late assignments will not be accepted.**
* 30% - Exams: 2 equally weighted in-class exams will be given for each AutoCAD and Inventor. The exams will consist of a small project that will be completed during a fixed time.

**Academic Misconduct:**

Academic misconduct is an act in which a student seeks to claim credit for the work or efforts of another without authorization or citation. Examples of academic misconduct include submitting a paper or assignment as one's own work when a part or all of the paper or assignment is the work of another or knowingly and intentionally assisting another student in an arrangement whereby any work, classroom performance, examination or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed.

Any student found engaging in academic misconduct on an assignment will receive the disciplinary sanction of receiving a failing grade on the assignment. If such an academic misconduct occurs again during the semester, the student will receive a failing grade in the course.

**Course Schedule:**

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| **Date** | **Topics** |
| 29-Jan | Sketching Multiviews and Dimensions |
| 5-Feb | AutoCAD Fundamentals Chapter 1 |
| 12-Feb | AutoCAD Object Construction Chapter 2 |
| 19-Feb | AutoCAD Geometric Construction Chapter 3 |
| 26-Feb | AutoCAD Multiviews Chapter 4 |
| 5-Mar | AutoCAD Dimensioning Chapter 5 |
| 12-Mar | Inventor Parametric Modeling Chapter 7 |
| 19-Mar | Inventor Constructive Solid Geometry Chapter 8 |
| 26-Mar | Spring Break |
| 2-Apr | Inventor Model History Tree Chapter 9 |
| 9-Apr | Inventor Parametric Constraints Chapter 10 |
| 16-Apr | Inventor Geometric Construction Chapter 11 |
| 23-Apr | Inventor Parent/Child Relationships Chapter 12 |
| 30-Apr | Inventor Part Drawings Chapter 13 |
| 7-May | Inventor Symmetrical Features Chapter 14 |
| 14-May | Inventor Assembly Modeling Chapter 16 |
| 21-May | Inventor Final Exam |