

SYLLABUS
MENG 1132: Engineering Graphics
(Required Course)
Spring 2024

Instructor: Yu Guo

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Office Hours: T 12:00PM – 1:00PM, R 12:00PM – 3:00PM, F 2:30 PM-3:30 PM.

Course Schedule: T 1:00 - 3:50 PM

Location: MY 207

CATALOG DESCRIPTION

Essentials of drafting and blueprint reading: orthographic projections, sectional views, pictorial drawing, geometric and dimensional tolerancing, finishing symbols. Introduction to sketching, computer-aided-drafting, and technical graphs.

COURSE PRE-REQUISITES

None

REQUIRED TEXTBOOK

Introduction to Solid Modeling Using SolidWorks, by *Howard and Musto*, McGraw-Hill.

REFERENCE TEXTBOOK

Technical Drawing with Engineering Graphics, Giesecke, et al., Prentice Hall.

TOPICS COVERED

- Technical sketching
- Orthographic views
- Dimensioning and tolerance
- Standards
- Introduction to computer aided drafting
- A module dedicated to an introduction to SolidWorks
- Basic and advanced part modeling techniques
- Engineering drawings
- Parametric part modeling techniques
- Assembly drawings

Additional material may be covered as time permits.

**COURSE LEARNING OBJECTIVES AND RELATIONSHIP TO STUDENT
OUTCOMES**

Outcome-Related Course Learning Objectives	ABET Criteria										
	3a	3b	3c	3d	3e	3f	3g	3h	3i	3j	3k
Use SolidWorks software to design a 2-D model of a mechanical part			x		x		x				
Use SolidWorks software to design a 3-D model of a mechanical part			x		x		x				
Use SolidWorks to create a drawing sheet format software to design a mechanical part			x		x		x				
Use SolidWorks software to create mechanical assemblies			x		x		x				
Use parametric modeling techniques			x		x		x				
<p>3a: an ability to apply knowledge of mathematics, science, and engineering</p> <p>3b: an ability to design and conduct experiments, as well as to analyze and interpret data</p> <p>3c: an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.</p> <p>3d: an ability to function on multidisciplinary teams</p> <p>3e: an ability to identify, formulate, and solve engineering problems</p> <p>3f: an understanding of professional and ethical responsibility</p> <p>3g: an ability to communicate effectively</p> <p>3h: the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context</p> <p>3i: a recognition of the need for, and an ability to engage in life-long learning</p> <p>3j: a knowledge of contemporary issues</p> <p>3k: an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice</p>											

CONTRIBUTION OF COURSE TO PROFESSIONAL COMPONENT

This course contributes to the engineering design component of the Mechanical Engineering program.

COURSE ORGANIZATION AND ASSESSMENT

- Course Format

This course consists of one 50-minute sessions and one 110-minute lab per week. Typically, a session will begin with a lecture that covers the relevant topics and any examples/demonstrations for that particular class. Some class time may be provided for students to utilize available resources (library: books/journals/etc.) to learn how topics in this class are used in industry/academia and as an opportunity to be exposed to the process of conducting a literature/information search on their own (guidance will be provided by the instructor in the early portions of the course).

- Class Attendance

Attendance is required for each student. Absences of five or more lectures without acceptable excuses may result in a failing grade. Each absence result in one point off from class performance.

- Student Attitude

Once class starts, the use of cell phones, reading of newspapers, conducting private discussions, using the computer (unless requested by the instructor), working on anything that is not directly related to the course, and making derogatory remarks about your classmates or instructor will not be accepted and may result in your dismissal from the class.

- Late Assignments

Homework assignments must be turned in on the due day, at the beginning of class. Once class starts, late assignments will be graded 80% of the full grade. Each student is responsible for submitting his own individual personal homework copy written in his own words. No dual or group homework copy is accepted unless specified by the instructor.

- Exam Make-up

You are expected to take all exams on the scheduled date and time. Make up exams will only be given at the discretion of the instructor depending upon the nature of the circumstances.

- Exam Content

Although most of the exam problems are based on the material covered and have the same degree of difficulty as those assigned for homework or solved in class, some problems may involve concepts not necessarily covered in class.

- Evaluation Method

Your performance will be tested regularly throughout the semester by in-class exams and homework assignments. There will be three exams. While homework assignments may contain a number of problems, it may be the case that only a subset of problems will be graded. However, you must attempt all problems. Do not try to guess which (if any) problems will not be graded.

- Course Grade

2	Midterm	20%
1	Final	35%
	Home works	15%
	Attendance & Class performance	10%

*** Bonus point in any case will only apply to those with a final grade lower than C.**

GENERAL GUIDELINES

- Plan on spending time outside of class each week to study the material and to work on homework assignments. Do not wait until the last day to start the homework or to prepare for exams.
- Read the course material before coming to class.

GENERAL EDUCATION STATEMENT

Students in this course must demonstrate their proficiency in oral and written communication through written classwork assignments and exams, and solving problems. They must also demonstrate their ability to use the English language.

ACADEMIC INTEGRITY POLICY

Scholastic dishonesty will not be tolerated and will be prosecuted to the fullest extent. You are expected to have read and understood the current issue of the student handbook regarding student responsibilities & rights, and the intellectual property policy information about procedures and what constitutes acceptable on-campus behavior.

DISABILITY SUPPORT SERVICES

If you have a documented disability that will impact your work in this class, please contact me to discuss your needs.

DISCLAIMER STATEMENT

Information contained in this syllabus other than grading policies, may be subject to change with advance notice, as deemed appropriate by the instructor.

Senate Bill 11 passed by the 84th Texas Legislature allows licensed handgun holders to carry concealed handguns on campus, effective August 1, 2016. Areas excluded from concealed carry are appropriately marked, in accordance with state law. For more information regarding campus carry, please refer to the University's webpage at <http://mwsu.edu/campus-carry/rules-policies>.