SYLLABUS
MENG 1132: Engineering Graphics
(Required Course)
Spring 2026

Instructor: Yu Guo

Office No.: MY 137

Tel.: (940) 397-4586

E-mail: yu.guo@msutexas.edu

Office Hours: M 11:00 AM-1:00 PM, T 12:30PM – 1:00PM, R 12:30PM – 1:00PM.

Course Schedule: T 2:00 - 4:50 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

Course Objectives	ABET Criteria						
Outcome-Related Course Learning Objectives	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Students will be acquainted with primary and principal views, and the properties thereof, used in engineering graphics.	**X**	**X**	**X**			**X**	
Students will be able to use SolidWorks software to create 3-D models of parts.	**X**	**X**	**X**				
Students will be able to use SolidWorks to produce 2-D multi-view engineering drawings of mechanical parts.	**X**	**X**	**X**				
Students will be able to use parametric modeling techniques.	**X**	**X**	**X**				
Students will be acquainted with sectional views, and the properties thereof, used in engineering graphics.	**X**	**X**	**X**			**X**	
Students will be able to use SolidWorks to create mechanical assemblies and assembly drawings.	**X**	**X**	**X**				
Students will be introduced to the concepts of dimensioning and tolerance.	**X**	**X**				**X**	

1: an ability to identify, formulate, and solve complex engineering problems by applying the principles of engineering, science, and mathematics
2: an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety and welfare, as well as global, cultural, social, environmental, and economic factors
3: an ability to communicate effectively with a range of audiences
4: an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5: an ability function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6: an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgement to draw conclusions
7: an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

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.