

MENG104 Engineering Graphics

Department: Mechanical Engineering

Program Name: Mechanical Engineering

Program Code: 23

Course Number:
MENG 104

Credits:
(2,3,0) 3Cr.

Year/Semester:
2013-2014 Fall

Required Course Elective Course (click on and check the appropriate box)

Prerequisite(s): None

Catalog Description:

Introduction to graphical representation using free hand drawing and computer-aided drafting. Engineering graphics covers basic engineering drawing techniques such as Lines & Lettering, Geometrical Constructions, Principles of Tangency, Orthographic Projections, Sectional views, and Dimensioning.

Course Web Page:

<http://me.emu.edu.tr/kizilors>

Textbook(s):

Giasecke Mitchell Spencer Hill Loving Dygdon Novak, Pearson Ed. Inc.,2004, "Engineering Graphics"

Indicative Basic Reading List :

James M.Kirkpatrick, Prentice Hall,2003,"Basic Drafting Using Pencil Sketches and AutoCad"
Leendert Kersten ,McGraw-Hill,1991; "*Technical Drawing With Auto-cad*"

Topics Covered and Class Schedule:

(4 hours of lectures per week)

Week 1	Course objectives, course description, Introduction to Auto-Cad, Introduction to Engineering Graphic Language and design. Artistic and Technical drawings. Classification of Projections Introduction: Introduction to Engineering Graphic Language and design. Artistic and Technical drawings. Classification of Projections
Week 2 -3	Instrumental Drawing, Freehand sketching, and Lettering techniques Identifying the basic tools used for drafting and the types of lines and how they are used, drawing parallel, perpendicular and evenly spaced lines, arcs, and circles using drawing instruments. Reading and measuring the metric scale. Practicing the standard lettering and numbering.
Week 4-5	Geometrical Constructions: Drawing lines, angles, triangle, square, pentagon, hexagon, octagon. Dividing line into equal or proportional parts. Drawing lines and arcs tangent to each other. Constructing ellipse and parabola. Working with Line qualities practicing with line problems
Week 6-7	Technical Sketching and Shape Description Creating sketches of both two and three dimensional objects. Sketch an object on oblique grid papers
Week 8	Mid-Term Examination
Week 9- 10	Multiview Projection Drawing the three views using proper conventions, placement and alignment. Layout three view drawings centered on the drawing medium, transfer height, width and depth dimensions. Apply conventions of revolution of ribs, spokes, and webs. The concepts of first and third angle projections. The use of miter line or folding line.
Week11-12	Sectional views : Understand the meaning of sections and identify the type of sections. Draw a sectional view given the two-view drawing.
Week13-14	Dimensioning: Understanding and use of the conventional dimensioning techniques, Placing the dimension lines, extension lines, angles and notes correctly on the drawings.

Week 15:	Final Examination
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Course Learning Outcomes:

At the end of the course, student must be able to

1. Understanding the general projection theory, with emphasis on orthographic projection to represent three-dimensional objects in two-dimensional views
2. Dimension and annotate two-dimensional engineering graphigs
3. Understand the application of industry standards and best practices applied in engineering graphics.
4. Emphasize freehand sketching to aid in the visualization process and to efficiently communicate ideas graphically.
5. Introduce CAD software for the creation of 3D models and 2D engineering graphics.

Assessment	Method	No	Percentage
	Classwork + Homework	Classwork +Homework(min.2)+quiz + ACAD lab	30 %
	Midterm	1	30 %
	Final Examination	1	40 %

Contribution of Course to Criterion 5

Credit Hours For;

Mathematics & Basic Science :

Engineering Science and Design : 2

General Education :0

Relationship of Course to Program Outcomes

The course makes significant contributions to the following program outcomes:

(g) to communicate effectively

(k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Grading System

GRADE	PERCENTAGE	GPA
A	85-100	4.0
A-	80-84	3.7
B+	75-79	3.3
B	70-74	3.0
B-	66-69	2.7
C+	63-65	2.3
C	60-62	2.0
C-	57-59	1.7
D+	54-56	1.3
D	50-53	1.0
D-	45-49	0.7
F	0-44	0.0
NG	NO GRADE	
I	INCOMPLETE	
W	WITHDRAWN	

Course Policies

a) Attendance

Students are expected to attend lectures, tutorials and/or practical sessions regularly throughout the semester. Students are expected to be punctual for class, late comers are not accepted in the class for that period if he/she is late 5 minutes after the lecture starts. However, if a student is absent, he/she must present an official written document stating the reason for being absent.

An NG grade will be assigned to the student/s who have an absenteeism and classwork of more than 50% and missing exam.

b) Cheating

Cheating is a serious offence. The minimum penalty for students who are caught cheating in a quiz or an exam is a score of zero in the relevant assignment or exam and send to the university disciplinary committee.

c) Plagiarism

Students who carelessly present the work of other as one's own would be considered to have committed plagiarism. The minimum penalty for plagiarism is a score of zero in the relevant assignment or project paper.

d) Handing up of assignments /project papers

Students are required to hand in their classroom assignments on time in the class, after the assignments handed in by the instructor the other submissions will be consider as a late submission and will be evaluated with 50% discount, no submissions will be accepted after the end of the class hours. Home works will be submitted at the due date in the first class hour, submission at any other time until the end of the working period of the day will be considered as a late submission and evaluated with 50% discount, no submission accepted after the day.

e) Makeup and Reseat Exams

Makeup exam will be given for the missing midterm exam. The reseat exam will be given for the missing final exam or for the fail course (F, D-) or for the warning status.

Makeup and reseat exams will be given only for the following legitimate reasons with official documentation.

- Contacted a contagious disease
- Hospitalization
- Accident
- Death of immediate family members

No makeup exam will be given if no official documentation is presented or the lecturer is not informed within three days after the exams have taken place.

No reseat exam will be given to the NG grade

Prepared by: Sen.Ins.Cafer Kizilors

Date Prepared: 18 February 2013