

Mechanical Engineering Courses (ME)

Mechanical Engineering Courses Group

ME 151 – Engineering Drawings & Descriptive Geometry

COURSE INFORMATION

Course Title: Engineering Drawings & Descriptive Geometry

Code: ME 151

Hours: Lecture – 2 Hrs. Tutorial – 2 Hrs. Credit –2.

Prerequisite: None

GRADING

Class Performance/Attendance: 10%

Midterm # 1/Assignments – (7th Week): 30%

Midterm # 2/Assignments – (12th Week): 20%

Final Exam: 40%

COURSE DESCRIPTION

Engineering Drawing: introduction –Types of lines-Size of drawing papers-Layouts of drawing sheets-Graphics instruments-Scales-Geometrical construction-Orthographic projection-Sectioning-Dimension-Pictorial drawing-Conventions.

Descriptive Geometry: Locus of a point-Monge's projection-Straight line(particular position)-The plane-Auxiliary planes-The positional problem-The projection of a circle-Curved surfaces-Intersection of surfaces of revolution-Helix-Helical surface-Perspective projection.

TEXT BOOK & REFERENCES

Engineering Drawing by S. Bogolyulov a. Voinor Publisher: Latest edition Mir publishers

Eng. Drawing & Graphics Techniques by Thomas E. French Publisher: Latest edition, McGraw – Hill.

A course in Descriptive Geometry. by V.O Gordon & M.a. Sementsobv Ogicuskii. Publisher: Moscow Mir Pub., 1980.

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An Introduction to Computer Aided Engineering by Andrew Tizzard, Publisher: N.Y., 1994.

COURSE AIM

E.D. To give the student the ability to communicate by means of engineering drawing and to relate the applications of drawing techniques to mechanical engineering practice.
D.G. Identify the fundamentals of descriptive Geometry. To develop three-dimensional imagination of forms and methods of presenting them in the plane. To acquire the skill of dealing with complex figures and study their geometrical properties.

SPECIFIC OUTCOMES OF INSTRUCTION

- The students will be able to communicate by means of engineering drawing and to relate the applications of drawing techniques to Construction engineering practice..

COURSE OUTLINE

<i>Week Number 1:</i>	E.D. Geometrical Construction
<i>Week Number 2:</i>	D.G. Projection of a Point
<i>Week Number 3:</i>	D.G. Projection & Traces of a Line
<i>Week Number 4:</i>	E.D. Three Views Projection
<i>Week Number 5:</i>	D.G. Particular Positions of Lines
<i>Week Number 6:</i>	D.G. Projection of a Plane
<i>Week Number 7:</i>	E.D. Third View Projection
<i>Week Number 8:</i>	D.G. Particular Positions of Planes
<i>Week Number 9:</i>	D.G. Auxiliary Planes
<i>Week Number 10:</i>	D.G. Positional Problems
<i>Week Number 11:</i>	Projection of a Circle
<i>Week Number 12:</i>	D.G. Surfaces of Revolution
<i>Week Number 13:</i>	E.D. Pictorial Drawing
<i>Week Number 14:</i>	D.G. Perspective
<i>Week Number 15:</i>	D.G. Melix and Helical Surfaces
<i>Week Number 16:</i>	Final Exam.

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COURSE COORDINATOR AND DEMAND

Course Coordinator: Dr Adel M.Belal .

Course Demand: *Required*