

Faculty of Engineering & Technology

Mechanical Engineering Drawing

Information :

Course Code : MAN 241

Level : Undergraduate

Course Hours : 2.00- Hours

Department : Department of Petroleum Engineering

Instructor Information :

Title	Name	Office hours
Professor	Hisham Ali Abdelhamid Sonbol	12
Lecturer	Mostafa Mohamed Reda Salah Eldin Rashed	1
Teaching Assistant	Mostafa Mahmoud Sabry Sadek	
Teaching Assistant	Muhanned Ashraf Kamer El dawla Ibrahem Salem	1
Teaching Assistant	Mariam Esmat Danial Doss	

Area Of Study :

- Understand the fundamental of engineering drawing using computer software.
- Identify various technical drawings with necessary views and dimensions using computer software.
- Recognize the rules of drawing engineering metal sections and details.
- Recognize the rules of different mechanical drawing and assembling parts

Description :

Computer aided drafting, detailed working drawing, Dimensioning and geometrical tolerance symbols, Permanent joints details (riveting, welding, soldering), Fasteners, Threading, Drawing of standardized parts; bearings, gears, springs, Different assembly drawings (simple gear box, fixtures, vices, valves... etc).

Course outcomes :

a.Knowledge and Understanding: :

1 -	Define the fundamental of assembly drawings.
2 -	Identify the principles of AUTOCAD.
3 -	Identify suitable welding symbols.
4 -	Estimate suitable standardized parts.

b.Intellectual Skills: :

1 -	Develop skills in visualizing the various mechanical assembly drawings.
2 -	Create own design ideas expressed in mechanical assembly drawings.

c.Professional and Practical Skills: :

1 -	Gain skills of drawing using AUTOCAD.
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2 -	Select standardized parts.
3 -	Construct mechanical parts and assembly drawing.
d.General and Transferable Skills: :	
1 -	Develop skills related to creative thinking, imagination, oral and written communications and teamwork.
2 -	Effectively manage tasks, times and resources.

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction to the fundamental of assembly drawing	4	1	3
Types of bolts and its represented drawing	8	2	6
Transmission shaft assembly	8	2	6
Bearing assembly (sliding bearing)	8	2	6
Valves assembly (non-return valves)	4	1	3
Valves assembly (Safety valves)	8	2	6
Power screw assembly (Screw Jack)	4	1	3
Coupling assembly (Rigid flange) and flexible	8	2	6
Machine vise assembly	8	2	6

Teaching And Learning Methodologies :

Interactive Lecture
Discussion
Problem-based Learning
Experiential Learning

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignment	20.00		
Final Exam	40.00		
Mid- Exam I	15.00		
Mid- Exam II	15.00		
Participation	10.00		

Recommended books :

- Thomas, E.F., "Fundamentals of Engineering Drawing", McGraw-Hill
- Thomas, E.F. and Vierck, C.J., "Engineering Drawing and Graphic Technology", McGraw-Hill
- Hart, K.R., "Engineering Drawing", The English Universities Press Ltd
- Dobrovolsky, Machine elements, MIR Publisher Co. 2007

