

**Faculty of Engineering & Technology**

**Graphics 1**

**Information :**

**Course Code :** GRA 141

**Level :** Undergraduate

**Course Hours :** 2.00- Hours

**Department :** Faculty of Engineering & Technology

**Instructor Information :**

Title	Name	Office hours
Associate Professor	Elsayed Mohamed Atta Elsayed	
Lecturer	Mohamed Hussien Bayomy Ahmed	
Assistant Lecturer	Mostafa Mohamed Reda Salah Eldin Rashed	
Assistant Lecturer	Dina Hosny Soliman Elnagar	
Assistant Lecturer	ALAA MOHAMMED ABDULLAH AHMED	5
Teaching Assistant	Omar Magdy Gamal Eldin Mahmoud	
Teaching Assistant	Seif El Din Mahmoud Ahmed Kamal El Din Mahmoud	
Teaching Assistant	Mohamed Hassan Abdel Ghany Elashqer	
Teaching Assistant	Amira Khaled Hasan Mohamed El Kodama	
Teaching Assistant	Amr Hassan Mohamed Mohamed Moussa Elgharbawy	
Teaching Assistant	Amira Khaled Hasan Mohamed El Kodama	
Teaching Assistant	Eman Mohamed Hammad Ahmed	2
Teaching Assistant	Osama Mohamed Mahmoud Mohamed	
Engineer	Cinderella Mohamed Okasha El Said Mostafa	

**Area Of Study :**

- 1- Build students' awareness of mechanical engineering drawing terms, methods, and techniques
- 2- Train students to express 3D engineering forms into 2D media.

**Description :**

Techniques and skills of engineering drawing: Geometrical constructions, Drawing of pictorial views (Isometry, Oblique), Orthogonal and auxiliary projections, deduction of missing views.

**Course outcomes :**

**a.Knowledge and Understanding: :**

1 -	a.1. List the fundamentals and components of mechanical engineering drawing.
2 -	a.2. List sketching technique to describe machine objects.
3 -	a.3. List different types of 3D isometry drawings.

**b. Intellectual Skills: :**

1 -	b.1. Predict 3D forms from 2D projections
2 -	b.2. Think imaginarily and creatively.

**c. Professional and Practical Skills: :**

1 -	c.1. Draw orthographic projection of mechanical drawings.
2 -	c.2. Apply drafting techniques to differentiate between drawing elements (section and elevation).

**Course Topic And Contents :**

Topic	No. of hours	Lecture	Tutorial / Practical
Lettering and kinds of lines	4	1	3
Geometrical constructions	16	4	12
Pictorial drawing	8	2	6
Orthographic projection of engineering bodies	16	4	12
Constructing missing third view	16	4	12

**Teaching And Learning Methodologies :**

Interactive Lecture
Class Work (Problem Solving)

**Course Assessment :**

Methods of assessment	Relative weight %	Week No	Assess What
11th week evaluation	25.00		
6th week evaluation	25.00		
Final-term examination	40.00		
Semester performance	10.00		

**Books :**

Book	Author	Publisher
Engineering Graphics	Frederick E.	Pearson

**Course Notes :**

Course and instructor notes
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**Recommended books :**

- Earle, J.H., " ENGINEERING DESIGN GRAPHICS", Pearson Prentice–Hall, 11th edition, 2004.
- Bertoline, G.R., and Wiebe, E.N. " FUNDAMENTALS OF GRAPHIGS COMMUNICATION" Mc Graw- Hill, 5th ed., 2007

