

Faculty of Engineering & Technology

Structural Analysis 1

Information :

Course Code : SCM 211 **Level :** Undergraduate **Course Hours :** 3.00- Hours

Department : Department of Structural Engineering & Construction Management

Instructor Information :

Title	Name	Office hours
Lecturer	Dina Muhammad Fathy Ors	23
Assistant Lecturer	Nada Mohamed Abd El Hamid Ali Mohamed	4

Area Of Study :

- Determine the reactions at the supports.
- Determine of the Internal Forces Diagrams for the statically determinate structures (Beams-Frames-Trusses-Arches) under applied static loads.
- Determine the stability and determinacy of structures.

Description :

Types of structures, Loads, Supports, Desemesterination of reactions, Internal forces, Analysis of beams, Frames and plane trusses.

Course outcomes :

a. Knowledge and Understanding: :

- 1 - Define basic concepts of structural modeling.
- 2 - Understand the behavior of structures

b. Intellectual Skills: :

- 1 - Ability to analyze the engineering problems
- 2 - Ability to derive different solution alternatives for engineering problems
- 3 - Ability to assess the obtained results accuracy

c. Professional and Practical Skills: :

- 1 - Ability to handle different types of structures
- 2 - Ability to handle different structural systems

d. General and Transferable Skills: :

- 1 - Ability to practice team work and present results

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Review of plane statics	4	4	1

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Types of loads and supports	8	8	2
Stability of structures and degree of determinacy	8	8	2
Determination of internal forces in Beams	8	8	1
Determination of internal forces in Frames	10	10	4
Determination of internal forces in Plane Trusses	4	4	1

Teaching And Learning Methodologies :

Lectures

Tutorials

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
final exams	40.00		
mid term exams	25.00		
oral exam	10.00		
semester work	25.00		

Course Notes :

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Recommended books :

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Periodicals :

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Web Sites :

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