

**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
Associate Professor	Mahmoud Sobhy Ahmed Shehata Khalil	9
Assistant Lecturer	Dina Muhammad Fathy Ors	17
Teaching Assistant	Mohamed Ahmed Reda Abas Ahmed	

**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: :**

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

**b.Intellectual Skills: :**

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| 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: :**

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

**d.General and Transferable Skills: :**

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| 1 - | Ability to practice team work and present results |
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**Course Topic And Contents :**

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

**Books :**

Book	Author	Publisher
Structural Analysis	R.C.Hibbeler	Prentice Hall

**Course Notes :**

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**Recommended books :**

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**Periodicals :**

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**Web Sites :**

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