

Faculty of Engineering & Technology

Reinforced Concrete 1

Information :

Course Code : SCM 315 **Level :** Undergraduate **Course Hours :** 3.00- Hours

Department : Department of Structural Engineering & Construction Management

Instructor Information :

Title	Name	Office hours
Professor	Tarek Kamal Hassan Mohamed	6
Professor	Ahmed Farouk Mohamed Hassan Deifalla	4
Professor	Ahmed Farouk Mohamed Hassan Deifalla	4
Assistant Lecturer	Mahmoud Mohamed Abdullah Abdulally	
Assistant Lecturer	Dina Yehia Zakaria Ewais	2
Assistant Lecturer	Nada Mohamed Abd El Hamid Ali Mohamed	12
Assistant Lecturer	Dina Yehia Zakaria Ewais	2
Assistant Lecturer	Nada Mohamed Abd El Hamid Ali Mohamed	12

Area Of Study :

- Overall Aims of Course: By the end of the course the students will be able to:
- Illustrate different structural systems and calculation of load intensity.
 - Illustrate different phases of concrete and design using limit state
 - Determine load distribution on beams
 - Design of beams subjected to bending moment, shear and torsion and check the deflection
 - Detailing of steel reinforcement of simple/continuous beams

Description :

Methods of design, Codes, Structural systems, Load distribution, Design using limit states method, Section subjected to bending moments, Section subjected to shear and torsion, Reinforced details for beams, Limit state of deflection.

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 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
3 -	Ability to assess the effect of live loading and moving loads

d. General and Transferable Skills: :

1 -	Ability to practice team work and present results
2 -	Manage time and meet deadlines

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Different structural systems and calculation of load intensity	4	4	1
Different phases of concrete and design using limit state	10	10	4
Load distribution on beams	8	8	2
Design of beams subjected to bending moment and bond length assessment	8	8	4
Design of section subjected to Shear and torsion	4	4	1
Detailing of steel reinforcement of beams	4	4	1
Check of deflection	4	4	1

Teaching And Learning Methodologies :

- Class Lectures
Tutorials

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Final Exam	40.00	15	
First Mid term Exam	25.00	6	
Quiz 1	5.00	3	
Quiz 2	5.00	9	
Second Mid-term Exam	25.00	11	

Course Notes :

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Recommended books :

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Periodicals :

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Web Sites :

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