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 :

ï Overall Aims of Course: By the end of the course the students will be able to:
ÅDistribute loads on beams
Design sections under pure moment using first principals & charts
Design sections under shear and torsion
Detail of beam reinforcement, Check the deflection of 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: :	
1 -	Address the load path down to supports.
2 -	List the different stages of section under bending up to failure
b.Intellectual Skills: :	
1 -	Calculate Loads on beams
2 -	Design sections under pure moment using first principals & charts
3 -	Design sections under shear and torsion
4 -	Calculate the deflection of beams
c.Professional and Practical Skills: :	
1 -	Draw native reinforcement details for beams

d.General and Transferable Skills: :	
1 -	Work in stressful environment and within constraints

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Different structural systems and calculation of load intensity	10	2	2
Different phases of concrete and design using limit state	10	2	2
Load distribution on beams	10	2	2
Design of beams subjected to bending moment and bond length assessment	15	3	3
Design of section subjected to Shear and torsion	10	2	2
Detailing of steel reinforcement of beams	10	2	2
Check of deflection	10	2	2

Teaching And Learning Methodologies :

Lecture

Class work

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Final exam	40.00		
First Mid Term Exam	25.00		
Performance	10.00		
Second Mid Term Exam	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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