

## Faculty of Engineering & Technology

#### **Reinforced Concrete 4**

#### Information:

Course Code: SCM 511 Level: Undergraduate Course Hours: 2.00- Hours

**Department :** Department of Structural Engineering & Construction Management

<u>Instructor Information :</u>		
Title	Name	Office hours
Professor	AHMED FAROUK MOHAMED HASSAN DEIFALLAH	4
Professor	AHMED FAROUK MOHAMED HASSAN DEIFALLAH	4
Assistant Lecturer	SARAH SALAH SAYED HUSSIEN ALI ELSHISHTAWY	6
Assistant Lecturer	Nada Mohamed Abd El Hamid Ali Mohamed	18

### **Area Of Study:**

- "ÁGet familiar with water pressure distribution on tank elements
- Áusing moment distribution method to calculate straining action in tank elements
- "ÁDesign of un-cracked concrete members.
- Éstimate the earthquake and wind loads on supporting structure of elevated towers the structure.
- "ÁRe-bars detailing of each element of tank

# **Description:**

Design and reinforcement details: arches, vierendeal girders, trusses, deep beams and short cantilever, Wind and earthquake loads resistant structures, Design of reinforced concrete walls, Fundamentals of pre-stressed concrete.

Course ou	tcomes:		
a.Knowled	lge and Understanding: :		
1 -	Understanding the principals of liquid hydrostatic pressure		
2 -	Understanding the design concepts of liquid tight RC sections		
b.Intellect	ual Skills: :		
1 -	Ability to calculate the applied external forces on tank elements		
2 -	Ability to find the internal straining action in each element		
3 -	Ability to design each section according to its tightness condition		
4 -	Arranging the re-bars in correct & applicable manner		
d.General	and Transferable Skills: :		
1 -	The skill of analyzing problems		
2 -	Presenting the solution in clear & proper form.		



Course Topic And Contents :			
Topic	No. of hours	Lecture	Tutorial / Practical
Load distribution & Structural analysis	8	4	4
Design of un-cracked sections	8	4	4
Design of rectangle tanks elevated, rested & underground	16	8	8
Design of circular tanks elevated, rested & underground	16	8	8

# **Teaching And Learning Methodologies:**

Class Lectures

Tutorials

Course Assessment :						
Methods of assessment	Relative weight %	Week No	Assess What			
Final Examination	40.00					
Homework & Quizzes	15.00					
Attendance & performance	15.00					
Mid Term Examinations	30.00					

Course Notes:
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Recommended books:
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Periodicals:
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Web Sites:
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