

Faculty of Engineering & Technology
Special Reinforced Concrete Structures 2

Information :

Course Code : SCM 593

Level : Undergraduate

Course Hours : 3.00- Hours

Department : Department of Structural Engineering & Construction Management

Area Of Study :

Upon successful completion of this course, the student should be able to:

- Understand the basic concepts and main principles
- Calculate the values of the essential terms

Regarding indeterminate pre-stressed structures slab type bridges girder type bridges box section type bridges segmental type bridges RC silos

Description :

Pre-stressed concrete, Concrete bridges, Design of concrete raft foundation, Computer application in design of reinforced concrete structures.

Course outcomes :

a. Knowledge and Understanding: :

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|-----|--|
| 1 - | Define the main terms of slab type bridges |
| 2 - | Define the main terms of girder type bridges |
| 3 - | Define the main terms of box section type bridges |
| 4 - | Describe the main concept of segmental type bridge |

b. Intellectual Skills: :

- | | |
|-----|---|
| 1 - | Analyze the system of indeterminate pre-stressed structures |
| 2 - | Design the elements of slab type bridges |
| 3 - | Design the elements of girder type bridges |
| 4 - | Design the elements of RC silos |

c. Professional and Practical Skills: :

- | | |
|-----|---|
| 1 - | Apply Code provisions regarding indeterminate pre-stressed structures |
| 2 - | Draw neat details of slab type bridges |
| 3 - | Draw neat details of girder type bridges |
| 4 - | Draw neat details of box section type bridges |
| 5 - | Prepare technical reports for segmental type bridges |
| 6 - | Draw neat details of RC silos |

d. General and Transferable Skills: :

- | | |
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| 1 - | Search for information and self-learning discipline |
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Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
indeterminate pre-stressed structures	16	12	4
slab type bridges	8	6	2
girder type bridges	8	6	2
box section type bridges reinforced concrete structures.	8	6	2
segmental type bridges	8	6	2
RC silos	8	6	2
Revision	4	3	1

Teaching And Learning Methodologies :

Interactive Lec.

Problem Solving

Report / Present

Discussion

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Final exam	40.00		
First Mid Term Exam	15.00		
Quizzes / Assig.	15.00		
Report / Presentation	15.00		
Second Mid Term Exam	15.00		

Course Notes :

Lecture Notes on Moodle

Recommended books :

" Design of reinforced concrete structures" Vol. 3-Dr. Mashhour Ghoniem- El-Mehilmy- Cairo University