

Faculty of Engineering & Technology

Reinforced Concrete 2

Information :

Course Code : SCM 412

Level : Undergraduate

Course Hours : 3.00- Hours

Department : Department of Structural Engineering & Construction Management

Instructor Information :

| Title | Name | Office hours |
|--------------------|--|--------------|
| Lecturer | Tarek Salah El Din Moustafa Ragheb | 8 |
| Lecturer | Tarek Salah El Din Moustafa Ragheb | 8 |
| Assistant Lecturer | Dina Yehia Zakaria Ewais | 19 |
| Assistant Lecturer | Ahmed Mohamed Abdel Moniem Mohamed Soliman | 2 |
| Assistant Lecturer | Ahmed Mohamed Abdel Moniem Mohamed Soliman | 2 |

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
- Design and draw neat details
- Apply Codes provisions

Regarding sections under eccentric loads short columns long columns large span concrete structures frames polygons & arches

Description :

Design and reinforcement details: solid slabs, ribbed slabs, paneled beams slab, flat slabs (beam less slabs), Stairs, Design of sections under axial loading.

Course outcomes :

a. Knowledge and Understanding: :

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|-----|---|
| 1 - | a1- List the main items of sections under eccentric load |
| 2 - | a2- List the main items of large span concrete structures |
| 3 - | a3- Describe the main concept of frames |
| 4 - | a4- Describe the main concept of polygons & arches |

b. Intellectual Skills: :

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|-----|---|
| 1 - | b1- Design the elements of sections under eccentric loads |
| 2 - | b2- Design the elements of short columns |
| 3 - | b3- Design the elements of long columns |
| 4 - | b4- Analyze the system of frames |
| 5 - | b5- Analyze the system of polygons & arches |

c. Professional and Practical Skills: :

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|-----|--|
| 1 - | c1- Apply Code provisions regarding short columns |
| 2 - | c2- Apply Code provisions regarding long columns |
| 3 - | c3- Prepare technical reports for large span concrete structures |
| 4 - | c4- Draw neat details of frames |
| 5 - | c5- Draw neat details of polygons & arches |

d. General and Transferable Skills: :

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|-----|-----------------------|
| 1 - | d1- Work under stress |
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Course Topic And Contents :

| Topic | No. of hours | Lecture | Tutorial / Practical |
|--------------------------------|--------------|---------|----------------------|
| sections under eccentric loads | 10 | 6 | 4 |
| short columns | 10 | 6 | 4 |
| long columns | 10 | 6 | 4 |
| large span concrete structures | 10 | 6 | 4 |
| frames | 20 | 12 | 8 |
| polygons & arches | 10 | 6 | 4 |
| Revision | 5 | 3 | 2 |

Teaching And Learning Methodologies :

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| Interactive Lecture |
| Discussion |
| Problem Solving |
| Lab Experiments |
| Project |
| Report / Presentation |

Course Assessment :

| Methods of assessment | Relative weight % | Week No | Assess What |
|-----------------------|-------------------|---------|-------------|
| Final Exam | 40.00 | | |
| Mid- Exam I, II | 30.00 | | |
| Project | 10.00 | | |
| Quizzes / Assignments | 10.00 | | |
| Report / Presentation | 10.00 | | |