

CB354 Design Of Reinforced Concrete Str. I

COURSE INFORMATION

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Laborator y	
CB343	3	6	4	2	0	3

COURSE AIM

The aim of this course is to describe the behavior of reinforced concrete components and structures, which leads to analysis and design.

COURSE WEEKLY CONTENTS

- 1 Introduction to material properties.
- 2 Elastic method: analysis of beams considering flexure.
- 3 Elastic method: design of beams considering flexure.
- 4 Limit state design method: analysis of beams considering flexure.
- 5 Limit state design method: design of beams considering flexure.
- 6 Limit state design method: design of beams considering flexure (Cont.).
- 7 Limit state design method: design of beams considering flexure (Cont.) + Midterm Exam
- 8 Principle of shear and torsion.
- 9 Design of beams considering shear and torsion.
- 10 Development length according to ECP 2000.
- 11 Deflection.
- 12 Design of two-way slabs.
- 13 Design of two-way slabs (1,2).
- 14 Design of two-way slabs (1,2), Continued.
- 15 Design of short columns.

STUDENT GRADING & ASSESSMENT

Weeks	Exams	Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	20 Midterm	←	10	MARKS		→	30
To be freely distributed among possible assessments							
8 to 12	←		20	MARKS		→	20
13 to 15	←		10	MARKS		→	10
16 or 17	40 Final						40
Total	Exams	Assign.	Quizzes	Reports	Present.	Lab.	100

REFERENCES

- Textbook** Design of Reinforced Concrete Structures "Volume 1", Mashhour Ghoneim, and Mahmoud El-mihilmy, Al-Balagh, 3rd Edition, 2012.
Egyptian Code of Practice for Reinforced Concrete Structures, 2007
- Other** Reinforced Concrete Design, W.H.Moslay, R.Hulse, J.H.Bungey, MacMillan, 1999.
Reinforced Concrete Design, C. Wang and C.G.Salmon, Harpor Row, Latest Edition.
Design of Reinforced Concrete Structures by J.C.McCarmac, Harper Collins, 9th Edition, 2013.