

CB558 Special Topics In Reinforced Concrete St

COURSE INFORMATION

| Prerequisites | Academic Year & Level | | Teaching Methods | | | Credit Hrs. |
|---------------|-----------------------|----------|------------------|----------|----------------|-------------|
| | Year | Semester | Lecture | Tutorial | Laborator y | |
| CB455 | 5 | 9 – 10 | 4 | 2 | 0 | 3 |

COURSE AIM

This course aims to provide an introduction for the students to the design of special structures for transportation as bridges, as well as special structures for workshops in factories or halls in administration buildings or theatres. In addition to the design of special structures for water or grain storage.

COURSE WEEKLY CONTENTS

- 1 Design of north light (saw-tooth) structures (1,2).
- 2 Design of north light (saw-tooth) structures (1,2), continued.
- 3 Design of shell roof and dome Structures (1,2).
- 4 Design of shell roof and dome Structures (1,2), continued.
- 5 Design of arched frame structures.
- 6 Design of elevated circular tanks (1,2).
- 7 Design of elevated circular tanks (1,2), continued. + Midterm Exam
- 8 Design of ground tanks (1,2).
- 9 Design of ground tanks (1,2), continued.
- 10 Design of silos structures (1,2).
- 11 Design of silos structures (1,2), continued.
- 12 Design of Pre-stressed Bridges (Working stress method/ Ultimate strength method) (1,2,3).
- 13 Design of Pre-stressed Bridges (Working stress method/ Ultimate strength method)
- 14 Design of Pre-stressed Bridges (Working stress method/ Ultimate strength method) (1,2,3), continued.
- 15 Design of Pre-stressed Bridges (Working stress method/ Ultimate strength method) (1,2,3), continued.

STUDENT GRADING & ASSESSMENT

| Weeks | Exams | Assign. | Quizzes | Reports | Present. | Lab. | Total |
|---|--------------|----------------|----------------|----------------|-----------------|-------------|------------|
| 1 to 7 | 20 Midterm | ← | 1 0 | M A R K K S | | → | 30 |
| To be freely distributed among possible assessments | | | | | | | |
| 8 to 12 | ← | | 2 0 | M A R K K S | | → | 20 |
| 13 to 15 | ← | | 1 0 | M A R K K S | | → | 10 |
| 16 or 17 | 40 Final | | | | | | 40 |
| Total | Exams | Assign. | Quizzes | Reports | Present. | Lab. | 100 |

REFERENCES

- Textbook** Concrete Structures: Stresses and Deformations, Ghali, R. Favre, and M. Elbadry, Taylor and Francis, 4th Edition, 2012.
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- Other** Design of Reinforced Prestressed Concrete: Analysis and Design, A.E. Naaman, McGraw-Hill, 3rd Edition, 2012.