

Course Syllabus

020COSGS5 - Design of Buildings Structures

1. **Course Number and Name:** 020COSGS5 - Design of Buildings Structures
2. **Credits and Contact Hours:** 4 credits, 35 hours.
3. **Instructor's or Course Coordinator's Name:** Nadim CHOUERI
4. **Textbook And Other Supplemental Material:**
 - a. André Coin : Ossatures des Bâtiments – Eyrolles - 1998
 - b. Henri Thonier : Conception et calcul des structures de bâtiment – Presses Ponts et Chaussées.
 - c. Marius Diver : Calcul pratique des tours en béton armé.
 - d. Eurocodes
 - e. Instructor's Class Note
5. **Specific Course Information**
 - a. **Catalog Description:** The design of structures is an essential phase prior to any calculation; its aim is to teach students the techniques of design and analysis of real structures...
 - b. **Prerequisites:** 020OSBGS4 Buildings and Frames
 - c. **Required/Elective/Selected Elective:** 020PBAGS6 Final Year Project.
6. **Specific Goals For The Course:**
 - a. **Specific Outcomes of Instruction:**
 - The aim of the course is to treat the detailed elements of a structure (walls, short consoles, deep beams, tanks...)
 - A detailed approach to the calculation of wind bracing of buildings in order to design the structures under the effect of wind and earthquakes...
 - Remarks and notes mentioned during the lectures are based on discussions and deductions from actual execution projects.

b. KPIs Addressed By The Course:

KPI	a2	c2	e1	e3	g1	k2	k3
Covered	x	x	x	x	x	x	x
Assessed							
Give Feedback							

7. Brief List of Topics To Be Covered And Approximate Number of Lectures:

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|--|------|
| 1. Retaining Walls | 4 h |
| 2. Bearing Walls | 4 h |
| 3. Short Consoles | 4 h |
| 4. Beams | 4 h |
| 5. Wind Bracing | 10 h |
| 6. Tanks | 3 h |
| 7. Fire Calculation of Structures | 2 h |
| 8. Random Slabs – Shell Principle | 2 h |
| 9. Preparation of Final Year Project and Final Summary | 2 h |