

Buildings and Frames

1. **Course number and name:** 020OSBGS4 Buildings and Frames
2. **Credits and contact hours:** 4 ECTS credits, 2x1.25 hours
3. **Name(s) of instructor(s) or course coordinator(s):** Nadim CHOUERI
4. **Instructional Materials:**
 - a. André Coin : Ossatures des Bâtiments – Eyrolles -
 - b. Henri Thonier : Conception et calcul des structures de bâtiment – Presses Ponts et Chaussées –
 - c. Eurocodes
 - d. Instructor’s Class Notes
5. **Specific course information**
 - a. **Catalog description:** Design the reinforced concrete elements of a building; the courses focuses essentially on the actions on structures,, the calculation of reaction loads ,the loads rundown, the design of foundations, various types of slabs, stairs...
 - b. **Prerequisites or co-requisites:** 020BEAGS3 Reinforced Concrete.
 - c. **Required:** Required for all Civil Engineering students.
6. **Educational objectives for the course**
 - a. **Specific outcomes of instruction:**
 - The aim of the course is to link the mechanics of materials with reinforced concrete, in order to design building structures that are economical, durable, resistant and compatible with the architectural constraints...
 - In this course, actions on structures will be defined and designed, and the required calculations will be carried out for a good performance of the structure.
 - Remarks and notes mentioned during the lectures are based on discussions and deductions from actual execution projects.
 - b. **PI addressed by the course:**

PI	1.2	1.4	2.2	3.1
Covered	yes	yes	yes	yes
Assessed				

7. **Brief list of topics to be covered:**
 - a. Introduction : 2 h
 - b. Structural load calculations – Loads rundown – Dimensioning : 7 h
 - c. Foundations ...: 10 h

d. Slabs ...:	10 h
e. Stairs...:	4 h
f. Preparation of multidisciplinary project and final summary	2 h