

Multidisciplinary Project: Building Design, Foundations and Structures

1. **Course number and name:** 020PBAGS4 Multidisciplinary Project: Building Design, Foundations and Structures
2. **Credits and contact hours:** 3 credits, 3x1:15 contact hours
3. **Name(s) of instructor(s) or course coordinator(s):** Muhsin Elie Rahhal, Joanna Nseir
4. **Instructional Materials:**
 - a. Same textbooks used to complete the prerequisites courses
 - b. International codes (Eurocode 1 and 7)
 - c. Instructor's Class Notes
5. **Specific course information**
 - a. **Catalog description:** Provide the necessary methodology of work to accomplish a complete foundation design for a given building and balance between safety and economy to find the adequate solution for each problem encountered during the assessment.
 - b. **Prerequisites or co-requisites:** 020PARGS1 Architectural Project; 020BEAGS3 Reinforced Concrete
 - c. **Required:** Required major course for all students.
6. **Educational objectives for the course**
 - a. **Specific outcomes of instruction:**
 - Initiate students to teamwork by combining their efforts and skills
 - Know how to raise problems, allocate tasks and provide solutions to these problems
 - Propose a work plan according to a precise timetable and respect the deadlines
 - Apply the rules, standards and codes of constructions in a real case study
 - Prepare technical and calculation notes, develop drawings in accordance with engineering's guidelines and requirements
 - Learn how to accept or refuse a given solution by its practical, economical and safety sides
 - Enhance the students' writing and oral presentation skills in front of a jury

b. PI addressed by the course:

PI	1.1	1.2	1.3	1.4	2.1	2.2	2.3	3.1	3.2	4.1	4.2	5.1	5.2	7.1	7.2
Covered	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Assessed	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

7. Brief list of topics to be covered:

- Introduction
- Project presentation and data analysis of the given soil
- Excavation stability methods
- Foundation design
- Work execution plan