

## MG1960 Civil Engineering Laboratory

**Professor:** Jean-Marie Fleureau

**Language of instruction:** French – **Number of hours:** 30 – **ECTS:** 2

**Prerequisites:** Basic notions on Strength of Materials and Construction Processes

**Period:** S5      November to December      IN15DXP, FEP5DXP  
S6      between February and June      IN16DXP, SEP6DXP

### Course Objectives

- ◇ Provide an introduction to issues of construction: urbanism, architecture, design, economics.
- ◇ Teach how to build a rigorous scientific approach: analysis of the problem at stake, justification of the chosen solution.
- ◇ Teach how to conduct a relevant Internet data mining.

### On completion of the course, students should be able to

- ◇ understand the complexity of urban design and to manage a construction project
- ◇ gain notions of construction and civil engineering

### Course Contents

- ◇ Design a complex structure starting from a plane view, according to town-planning, architectural, functional criteria (with the help of a bibliographic search and a visit of illustrative examples in Paris).
- ◇ Build a model (real and possibly computerized) of the proposed design
- ◇ Verify the structural strength of the proposed design and design the main structural elements, including the foundation, by means of simple structural mechanics computer codes

### Course Organization

Labwork: 27 hr, Exam: 3 hr

### Teaching Material and Textbooks

Course reader in French

### Evaluation

Practical work (40%), behavior (10%), oral defense (25%) and scientific poster (25%).