

MG2920 Sustainable Buildings and Architecture Laboratory

Professor: François Cointe

Language of instruction: French – **Number of hours:** 36 – **ECTS:** 3

Prerequisites: Ideally, students should have some basic notions on Energy, Strength of Materials and Construction Processes

Period: S8 Elective 13, One-week module 1 21-25 March IN28IS1, SEP8IS1
S8 Elective 13, One-week module 2 16-20 May IN28IS2, SEP8IS2

Course Objectives

- ◇ Provide an introduction to issues of urbanism and sustainable development

On completion of the course, students should be able to

- ◇ understand the complexity of the design and building in civil engineering
- ◇ understand the notions of construction, civil engineering, architectural design and energy issues of buildings

Course Contents

Construction, which consumes and discards resources and energy in great quantities, is one field where architects, contractors and engineers act urgently to develop and promote techniques and policies able to assist the drive towards sustainability.

During this five-day workshop, students will work in teams of 3-4 students to design a campus building in response to a recent international design competition, and will provide an analysis of their design in terms of the energy and environmental performance of the building.

Course Organization

Labwork: 36 hr (plus a half-day site visit)

Students enrolled in this course during the booked weeks will also attend two sessions positioned on Tuesday outside the booked weeks.

Students enrolled in this course during the booked week 1 will must attend the SH3300 Module design in booked week 2.

Teaching Material and Textbooks

- ◇ Reference documents provided in class
- ◇ Documents on the buildings seen during the half-day site visit in Paris
- ◇ Compilation of documents on contemporary campuses, to be used as a documentary basis

Resources

Instructors: François Cointe, Mike Nikaes, Clément Rigot

Evaluation

Oral defense + reports.