

# EXCHANGE PROGRAM: BUILDING GREEN

ESITC PARIS is a top ranked construction and civil engineering school which was created in 1992. It is a not-for-profit organization and a Higher Education Institution. It meets the expectations of the biggest construction and civil engineering companies, training highly skilled men and women for carrers in construction and civil engineering. With more than 17 partnerships around the world, ESITC PARIS offers a new program for exchange students based on sustainable building.



# Technical subjects:

HYDRAULIĆS WOOD CONSTRUCTION ENVIRONMENT BIM

## Innovation and Research:

GEOTECHNICAL EARTHQUAKE ENGINEERING RESEARCH PROJECT

# Communication and Management skills:

PROJECT MANAGEMENT
FRENCH
RISK MANAGEMENT



#### HYDRAULICS - Olof AKKERMAN & Eric BOËR

This 4 days' crash-course involves the student into the fluid mechanics of pressured systems. The student will be (re)designing a small town drinking water supply system in Scotland, UK. After an introduction into the features of such a system, the student is guided from basic hydraulics into the calculation of energy losses and pump performance of centrifugal pumps. Design calculations are performed for the water mains, the water storage capacity and the pumping station. Based on local information the student chooses the water source, the site of the water purification plant and the routing and elevation of the mains, the water storage and the distribution system in town and in the surrounding landscape. This is done on scale by satellite images and EPAnet, a drinking water modelling program.

#### WOOD CONSTRUCTION - Olli SAARINEN

This module enables the students to acquire a wide knowledge of timber strutures, to develop structural calculation skills and to plan a small housing building.

#### ENVIRONMENT - Joseph AKUNNA & Mariane AUDO

This lecture aims at sensibilizing student engineers to the general issue of water management (quality of water ressources in France, drinkable, grey water treatments) and to waste and polluted soils management (management practices, treatment technologies). Air pollution will also be dealt with.

This course includes a chemistry basics reminder to prepare the students to practical work in our laboratory, located in Caen. The main objective of these exercises is to study the environmental acceptability of contruction waste in building roads.

#### BUILDING INFORMATION MODELING - Hervé LEROY

Students learn how to use Revit Software to create and manage digital representations of buildings and their functional characteristics.

### GEOTECHNICAL EARTHQUAKE ENGINEERING - Chiara VARONE

The course "Geotechnical Earthquake Engineering" deals with both engineering seismology and seismic geotechnics. It provides the theoretical basis of the dynamic behavior of simple structures (1 and 2 D.O.F.) and of their dimensioning from a theoretical as well as a numerical (FEM Method) point of view. The knowledge gained will allow dynamic studying, numerical modelling and seismic structures designing taking into account the local seismic hazard of the site.

#### RESEARCH PROJECT - Mariane AUDO

The main objective of this industrial research project is to make students think about a research theme connected to Civil Engineering. They will carry out a scientific approach, including the study of a biography, the analysis of experimental findings or the suggestions of new ways of searching.

#### PROJECT MANAGEMENT - Hubert DULAUROY

This crash-course aims at studying various issues connected to building projects. In groups, the students will have study cases to solve. Each of them will have a specific role and to present his conclusions to his team.

FRENCH - Yolanda SANCHEZ

RISK MANAGEMENT - Xavier TOUZE

