



Faculty of Applied Sciences

AMCO2101 ELEMENTS OF PROJECT OF CIVIL ENGINEERING I

[30h] 2 credits

This course is taught in the 2nd semester

Teacher(s): Jean-Louis Hilde
Language: French
Level: Second cycle

Aims

To allow the students to establish the complete plans of execution of the simple elements of structure most frequently met in the professional life of an engineer of construction

Main themes

- Recall of the basic concepts of the statics and the passages of efforts in the structures.
- Exhaustive Study of the structural elements constituting the traditional reinforced concrete works:
 - * isostatic beam,
 - * column,
 - * direct foundation slab on ground,
 - * foundation slab on piles,
 - * short console.

Content and teaching methods

- Presentation by the holder of teaching:
 - * particular concepts relating to the studied element,
 - * assumptions relating to the actions and the supports retained for the studied element,
 - * method of resolution of the problem arising.
- Work to be carried out in the room of diagram, by group of 3 or 4 students:
 - * determination of the actions and reactions of supports,
 - * calculation of the efforts intern with the element (M, NR, T),
 - * dimensioning of the sections of concrete and reinforcements,
 - * layout of the complete plans of the element including the bill of quantities of the various components.

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Pre-necessary

- Geometry: characteristics of the plane surfaces
- Stability: isostatic structures; calculation of the internal efforts;
- Materials: concrete and steel;
- Geotechnics: bearing pressure of the ground.

Evaluation

- Each element of project gives place to the drafting of a full report (assumptions, actions, calculations, plans) submitted one or two weeks after the last meeting in room of diagram which is devoted to him.
- To the reception of the report/ratio, the holder of the course gives to each student a complete model document such as it would be established in the professional life.
- Each report is corrected and noted to be submitted to the students as early as possible.
- An individual oral examination makes it possible to check the asset.

Other credits in programs

GC21	Première année du programme conduisant au grade d'ingénieur (2 credits) civil des constructions	Mandatory
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