

Faculty of Applied Sciences



AMCO2102 ELEMENTS OF PROJECT OF CIVIL ENGINEERING II

[30h] 2 credits

This course is taught in the 1st semester

Teacher(s): Jean-Louis Hilde, Alain Holeyman
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 works:
 - * metal sheeting piles with and without anchorings,
 - * reinforced concrete retaining wall,
 - * isostatic prestressed concrete beam,
 - * bridge tallies out of reinforced concrete.

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, active and passive 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

- Stability: isostatic structures; calculation of the internal efforts;
- Materials: concrete and steel;
- Geotechnics: bearing pressure of the ground, pushed and butted of the grounds, compressings, water in 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

FSA3DS/GC	Diplôme d'études spécialisées en sciences appliquées (génie civil)	(2 credits)	
GC22	Deuxième année du programme conduisant au grade d'ingénieur civil des constructions	(2 credits)	Mandatory