AMCO2185 DESIGN OF PRESTRESSED CONCRETE STRUCTURES

[22.5h+15h exercises] 3 credits

This course is taught in the 2nd semester

Teacher(s): Jean-François Cap
Language: French
Level: Second cycle

Aims

The course introduces to the design of prestressed and post-tensioned concrete structural elements.

Main themes

Study of prestressed concrete and its application for the civil works

Content and teaching methods

- Features and performance of prestressed concrete
- Mechanical properties of prestressing steel.
- Description of ducts, sheats, anchorages, couplers and prestressing devices.
- Layout of cables.
- Analysis and design of prestressed beams subjected to flexure, axial force, shear and torsion.
- Hyperstaticity effects.
- Losses in cable tension.
- Design of anchorage zones of pos-tensionned members.

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

Prerequisite : Auce 1103

Other credits in programs

ARCH22	Deuxième année du programme conduisant au grade d'ingénieur civil architecte	(3 credits)	
GC22	Deuxième année du programme conduisant au grade d'ingénieur civil des constructions	(3 credits)	Mandatory
GC23	Troisième année du programme conduisant au grade d'ingénieur civil des constructions	(3 credits)	