

Bridge Project & Conferences



ECTS
7 credits



Component
INSTITUT
NATIONAL
DES SCIENCES
APPLIQUEES
TOULOUSE



Number of
hours
115h

Presentation

Description

Programme (detailed contents):

Lecture

Technical regulations – Loading: Eurocode 1 part 2 – Foundations: volume 61 part V of the general technical clauses notebook; soil-structure interaction modelling – Concrete-steel composed and steel bridge decks: French regulation and Eurocodes; accounting for fatigue effects – Concrete bridge decks: transversal load distribution and transversal flexure of girder and slab bridges; special verification and provisions for bridges constructed by incremental launching or segmental cantilever.

Project:

Defining the main components from plan (spans and footings type) – Calculation of applied loads – Calculation of the minimum prestress force according to Fauchart method – Verification of the deck under SLS and ULS – Minimum reinforcement – Calculating forces on piles – Design and calculation of foundations – Cost estimate.

Organisation:

Lecture, project in 3 parts (deck, foundations, cost estimate)

Objectives

At the end of this module, the student will have understood and be able to explain (main concepts):

Main steps in design and calculation of a prestressed concrete bridge.

The student will be able to:

Define and calculate the main structural components of a concrete bridge.

Pre-requisites

Prestressed Concrete Structures & Bridges

Useful info

Place

➤ Toulouse