

IDENTIFICATION

Course code : ESI-SPI-CI-BE4-
S7-UE1-EC2
ECTS : 2

DURATION

Lectures : 8
Tutorial classes : 16
Labs : 0
Total : 24

Project :
Personnal work :

ASSESSMENT

2 continuous assessments

TEACHING MATERIALS

course material

LANGUAGE

English

CONTACT

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UE : UE7-STRUC

COURSE : Load analysis and bracing design

SCOPE OF THE COURSE

OBJECTIVES

Introduction to Eurocodes 0 and 1/ Determine applied loads on a simple structure (G, Q, W, Sn) Calculate various load combinations (ULS, SLS) – Concept of envelope curve Analyse and calculate load distribution in a building structure Analyse the bracing system of a metal-framed building : cross bracing, wind beam, strut, purlin, tie beam.

COMPETENCE AND SKILLS

STRUC Competency – Level 2

PROGRAM

Introduction to Eurocodes 0 and 1/ Applied loads on a simple structure (G, Q, W, Sn) – Calculation and modelling Load combinations (ULS, SLS) – Concept of envelope curve Load distribution, influence areas, reduction of imposed loads (EC1) Bracing of a metal structure (tie beam, cross bracing, wind beam)

BIBLIOGRAPHY

Eurocodes 0 and 1

REQUIREMENTS

3rd-year course : Construction Techniques (execution plans), isostatic structures, hyperstatic structures, SAe Struc 1