

IDENTIFICATION

Course code : E3BE5ST2
ECTS : 2

DURATION

Lectures : 7
Tutorial classes : 25
Labs : 0
Total : 32

Project :
Personnal work :

ASSESSMENT

2 continuous assessments

TEACHING MATERIALS

course material

LANGUAGE

English

CONTACT

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UE : UE5.1-STRUC

COURSE : Continuum Mechanics

SCOPE OF THE COURSE

OBJECTIVES

By the end of this course, students will be able to use tensor analysis and algebra tools to describe deformations and stresses in a simple continuous medium.

COMPETENCE AND SKILLS

Use tensors to describe deformations (strain tensor) and stresses (stress tensor). Describe motions and deformations in a continuous medium. Determine principal strains and stresses. Understand and use Mohr's circle. Determine stresses using strain gauges (rosettes).

PROGRAM

BIBLIOGRAPHY

Mécanique des milieux continus, Jean Coirier, Carole Nadot-Martin.

REQUIREMENTS

Matrix calculus, diagonalization (and corresponding linear algebra), vector calculus, differential calculus at L2 level. Basic trigonometry.