

IDENTIFICATION

Course code : E2CP3MT1
ECTS : 4.5

DURATION

Lectures : 24
Tutorial classes : 40
Labs : 0
Total : 64

Project :
Personnal work :

ASSESSMENT

Written exam : 1h00 weight : 1/3
Written exam : 1h00 weight : 1/3
Written exam : 1h00 weight : 1/3

TEACHING MATERIALS

Handout

LANGUAGE

English

CONTACT

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UE : MATHEMATIQUES

COURSE : Mathematics for Engineering III-a

SCOPE OF THE COURSE

OBJECTIVES

Study differential equations and systems of differential equations used to model physical phenomena and engineering processes.

COMPETENCE AND SKILLS

Solve differential equations and systems of differential equations corresponding to the most common mathematical models in engineering.

PROGRAM

- First-order differential equations
- Bernoulli differential equations
- Matrix diagonalization
- Matrix exponential
- Systems of differential equations
- Applications

BIBLIOGRAPHY

REQUIREMENTS

- Matrix calculus
- Complex numbers
- Differential calculus
- Integral calculus