

IDENTIFICATION

Course code : E1CP2MT1
ECTS : 2

DURATION

Lectures : 12
Tutorial classes : 20
Labs : 0
Total : 32

Project :
Personnal work :

ASSESSMENT

TEACHING MATERIALS

Resources available on the Moodle platform.

LANGUAGE

English

CONTACT

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UE : MATHEMATIQUES

COURSE : Mathematics for Engineering II-a

SCOPE OF THE COURSE

OBJECTIVES

“1. Elements of Linear Algebra The vector space model : definition and examples. The concept of a vector subspace : characterization and properties. Linear combinations of vectors : concepts and applications. Vector subspace spanned by a family of vectors. Linearly independent vectors : definition and criteria. Basis and dimension of a vector subspace. Kernel and image of a matrix : definition and properties. Rank and nullity of a matrix : rank theorem and applications.

2. Systems of m Linear Equations with n Unknowns Structure of the solution set of a linear system. Gaussian elimination method : principle and implementation. Elementary matrices : definition, properties, and applications.
3. Polynomials Euclidean division Roots of a polynomial. Multiplicity of a root. d'Alembert's theorem Factorization of a polynomial in the set of complex numbers”

COMPETENCE AND SKILLS

— Ability to solve systems of n equations with n unknowns

PROGRAM

BIBLIOGRAPHY

REQUIREMENTS