ESIROI
ÉCOLE D'INGÉNIEURS
UNIVERSITÉ DE LA RÉUNION

DEPARTMENT : *BE*
SEMESTER : *S5*

IDENTIFICATION

Course code : E3BE5QE6
ECTS : 1

DURATION

Lectures :	8
Tutorial classes :	24
Labs :	0
Total :	32

Project :
Personnal work :

ASSESSMENT

The UE is assessed through continuous assessments (CC) including written and oral exams, group evaluations (group work : integrating the APP approach) and individual evaluations. Group deliverables are required.

TEACHING MATERIALS

The UE includes theoretical courses, supervised practical work based on case studies, and individual assignments. The UE is supported by teaching materials (PPT, handouts, tables, abacuses, etc.) provided by the instructors.

LANGUAGE

English

CONTACT

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Modifié le : 3 août 2026

UE : UE5.2-QEB

COURSE : Mathematics Complements

SCOPE OF THE COURSE

OBJECTIVES

Review and revision of the mathematical tools necessary for a successful start to the Building and Energy engineering program.

COMPETENCE AND SKILLS

The skills targeted through the learning in this module are to :
- know the basics of theory and mathematical tools applied to the disciplinary field, particularly in mechanics (fluid and solid) and energetics (thermodynamics, mass and heat transfers)
- initiate modeling and problem-solving (simple and complex scientific problems)
- be able to analyze a dataset (linear or non-linear modeling methods, model validation, etc.)

PROGRAM

Common functions, differentiation and integration. Differential equations (basic review). Linear algebra, matrix algebra.

BIBLIOGRAPHY

REQUIREMENTS