ESIROI
ÉCOLE D'INGÉNIEURS
UNIVERSITÉ DE LA RÉUNION

DEPARTMENT : *BE*
SEMESTER : *S6*

## IDENTIFICATION

| | |
|---|---|
| Course code : | E3B65PR2 |
| ECTS : | 2 |

## DURATION

| | |
|---|---|
| Lectures : | 4 |
| Tutorial classes : | 12 |
| Labs : | 8 |
| Total : | 24 |

Project :
Personnal work :

## ASSESSMENT

1 project grade + 1 continuous assessment grade

## TEACHING MATERIALS

Academic materials, technical documents, specific resources,...

## LANGUAGE

English

## CONTACT

David THERINCOURT
David-Pascal.Therincourt@ac-reunion.fr

Modifié le : 3 août 2026

UE : UE6.4-PROEN

COURSE : Electrical Conversion

# SCOPE OF THE COURSE

## OBJECTIVES

To acquire mastery of knowledge and practices for overseeing projects related to the distribution, use, and conversion of electrical energy in Low Voltage (LV) systems.

## COMPETENCE AND SKILLS

After this course, students should be able to determine electrical quantities and justify equipment selection in an LV installation.

# PROGRAM

- Electricity
  - Electrical fundamentals
  - Power quality
  - Electrical power
  - Three-phase alternating current circuits
  - Circuits under distorted conditions
  - Electrical networks
  - Protection of property and persons
  - Short-circuit current calculations
  - Excerpts from standards and schematic design rules
- Electrotechnics
  - Magnetic circuits and transformers
  - Alternators, synchronous and asynchronous machines

# BIBLIOGRAPHY

Technical handbooks, Schneider Electric Electrotechnics. L. Lasne (Dunod 2008) Electrical and electronic technology. Hughes (Pearson 2008) tenth edition NF C15-100 standard AFNOR Electrosystems. H. Ney (Nathan Technique 1996)

# REQUIREMENTS