

IDENTIFICATION

Course code : E3B65PR1
ECTS : 2.5

DURATION

Lectures : 5
Tutorial classes : 15
Labs : 8
Total : 28

Project :
Personnal work :

ASSESSMENT

- In-class assignments - Homework assignments - Practical Work

TEACHING MATERIALS

- Course and tutorial handouts - Past exam papers - In-house calculation tools

LANGUAGE

English

CONTACT

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UE : UE6.4-PROEN

COURSE : Solar Thermal 1 : Technology and Sizing

SCOPE OF THE COURSE

OBJECTIVES

At the end of this course, students should master the technical, environmental, and regulatory aspects related to solar thermal renewable energies.

COMPETENCE AND SKILLS

To be able to analyze and size a solar thermal system

PROGRAM

- Solar Thermal
 - Technical aspects
 - Solar collector technology (flat plate, evacuated tube, unglazed)
 - Individual and collective solar domestic hot water (DHW) production systems
 - Environmental aspects
 - Benefits of solar energy, contribution of renewable energies
 - Energy bill, social and economic impact, Réunion-specific features
 - Regulations
 - Case studies from industry

BIBLIOGRAPHY

- Soteris A. Kalogirou. *Solar Energy Engineering. Processes and Systems*, 2nd Edition, 2013 ISBN : 9780123972569
- John A. Duffie, William A. Beckman. *Solar Engineering of Thermal Processes*, 4th Edition, 2013, ISBN : 978-0-470-87366-3

REQUIREMENTS