

IDENTIFICATION

Course code : ESI-SPI-CI-BE4-S7-UE3-EC1
ECTS : 1

DURATION

Lectures : 8
Tutorial classes : 12
Labs : 0
Total : 20

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 : UE7-EFFI

COURSE : Energy Storage

SCOPE OF THE COURSE

OBJECTIVES

Design and analyze complex energy systems

COMPETENCE AND SKILLS

Mastery of complex energy systems

PROGRAM

- Energy storage systems
 - Energy loads
 - Storage and various storage methods
 - Mechanical storage
 - Magnetic storage
 - Thermal storage
 - Hydrogen storage
- Comparison of different techniques

BIBLIOGRAPHY

- L. Borel *Thermodynamics and Energetics*
- M. Feidt. *Energetics*, DUNOD ISBN 2 10 049066 4
- *Traité de Génie Civil* from the École Polytechnique Fédérale de Lausanne, volume 21 : *Energy Systems* ISBN-13 : 978-2880744649

REQUIREMENTS

- Thermodynamics
- Heat and cold production
- Fluid mechanics
- Heat transfer