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UNIVERSITÉ
MARIE & LOUIS
PASTEUR

UFR STGI
BELFORT-MONTBÉLIARD

BAC+5
EUR-ACE LABEL

EUROPEAN ENGINEER

CMI H3E

Master Course of Engineering (CMI)
Hydrogen-Energy and Energy Efficiency



●What is CMI H3E ?

The «Hydrogen-Energy and Energy Efficiency» CMI (CMI H3E), is a university degree (DU: diplôme universitaire). It is an excellent, selective and demanding program spanning 5 years (from Bachelor 1 to Master 2) linked to the Bachelor's in Engineering Sciences and the Master's in Energy.

Students admitted to the CMI, selected based on their application file and interview, will follow the curriculum of both Bachelor's and Master's programs, as well as «specific CMI H3E» courses designed to provide them with the autonomy and skills required for careers in the field of energy.

This training program relies on a strong industrial area and is built in cooperation with internationally recognized research centers (FEMTO-ST, FCLAB). From the first year of Bachelor, this partnership allows students to be involved in projects combining **Innovation** and **Research**.

●Training objectives

Building on a strong disciplinary foundation in Electrical and Thermal Energy, the CMI H3E trains expert engineers in the fields of energy flow management and energy efficiency, with a focus on hydrogen energy for:

- Road, rail, maritime, and aeronautical transport
- Stationary applications: buildings, centralized energy production, off-grid energy production, etc.

Training program open to apprenticeship during Master



UFR STGI

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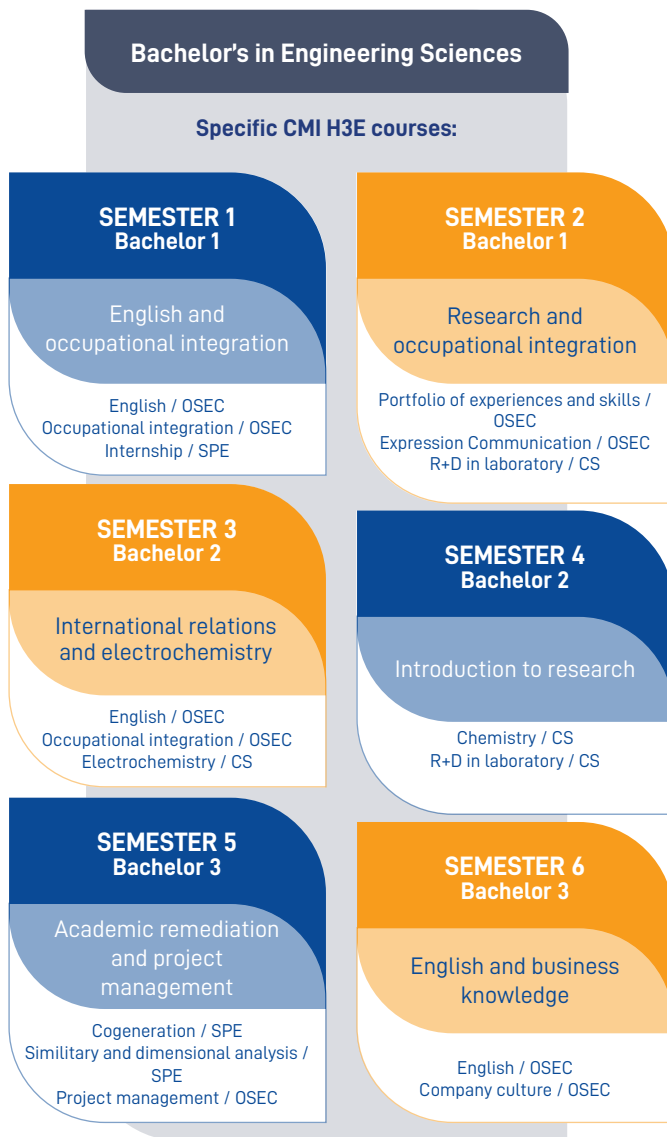
Contact
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THE CMI H3E TRAINING PROGRAM
RECEIVES SUPPORT FROM INTHY.

● Our courses

In addition to the modules from the regular programs, additional modules will be taught to CMI H3E students from Bachelor's 1 to Master's 2.





Master Energy

Specific CMI H3E courses:

SEMESTER 7 Master 1



Hydrogen Energy &
Energy systems

Fuel Cell / SPE
Thermal Management of Electric
Machines / SPE
Energy Branch / SPE

The company / OSEC

SEMESTER 8 Master 1



Hydrogen Energy &
Energy Efficiency

Conversion and Energy Efficiency / CS
Energy Grids / CS
Energy Storage / CS

SEMESTER 9 Master 2



Clean Sustainable
Energy Production

Advanced Cogeneration / SPE
Advanced Fuel Cell Technologies / SPE
Electrolysis Hydrogen
Production / SPE

SEMESTER 10 Master 2

Management, Engineering,
Environment, Society

Management / OSEC
Engineering, environment,
society / OSEC

Internship



Source : GE Courtesy

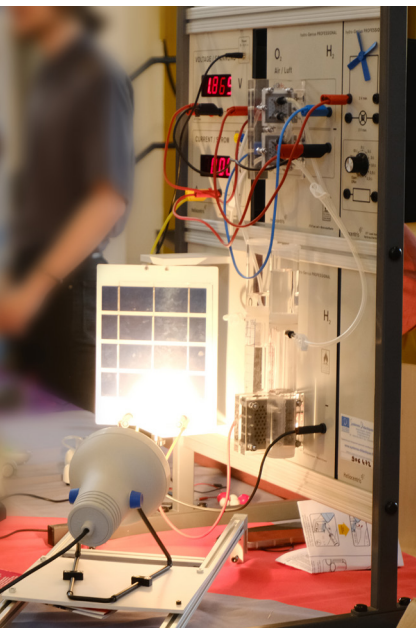
OSEC : Societal, economic and cultural introduction
SPE : Specialized teaching
CS : Scientific complement
 Courses taught in English

● Profile

- Holder of a Baccalaureat in the field of Science
- Admission based on application file and motivational interview

● Organization and hours

- Lectures, tutorials, practical work, projects, internships
- R+D in the laboratory
- Important and regular personal study



● Skills

- Analyzing and designing electrical and/or thermal systems
- Mastering electrical and/or thermal energy basis
- Mastering a certified English level (TOEIC)
- Having experience in the industrial and research area (projects, workshops, 4 to 6-month internships)

● International mobility

- International mobility through bachelor's or master's internships
- Desired mobility over a semester within 5 years of the program (or long-term internship)

● Career opportunities

Career opportunities typically include:

- R+D engineer (in private or public area)
- PhD
- Expert-engineer
- Industrial and/or research engineer
- Project manager
- Head of a testing and/or qualification laboratory



Find all the information
on our website:
stgi.umlp.fr



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