Joint European Summer School on Fuel Cell, Electrolyser, and Battery Technologies

JESS 2025

15 – 19 September 2025

Vravrona, Athens, Greece

Basic Information

Participation fees:

2.100,- € per person,
Early Bird rate **until 31.03.2025** 2.000,- € per person.
Double room occupancy is 1.850,- € per person standard rate, and Early Bird rate € 1.750,-

This fee includes all tuition, as well as:

- full board for six nights,
- coffee breaks,
- a banquet on the Friday, and
- an excursion on the Wednesday.

Accompanying persons (in same double room, not attending lectures) pay 890 € including all of the above.

The local tourist tax of €15 / day will be payable at the hotel separately, due to Greek tax laws.

Arrival is expected on Sunday 14 Sept. and departure on Saturday 20 Sept., as we will have a Friday evening farewell dinner.

Please register by 31 July 2025 to secure your place on the School (cut-off date).

For regular updates and information, please go to our web site: https://www.jess-summerschool.eu

For registration, mail manuela@panhellas.gr

Contact for all other enquiries:

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JESS is organised by:

If you want to sponsor this event, please contact Prof Steinberger-Wilckens.

Organising committee:

Prof. Robert Steinberger-Wilckens, U Birmingham
Prof. Jens Oluf Jensen, DTU Energy
Prof. Rüdiger-A. Eichel, FZ Jülich GmbH

Scope and target:

The Joint European Summer School (JESS in short) dates back to 2004 when the first Summer School took place in Greece. By now, 21 events have been successfully organised with over 1.000 students attending.

The participants make their course choice from four parallel modules:

The week offers three comprehensive introductions aimed at graduate and PhD students and young professionals within the fields of low and high temperature fuel cells & electrolysis, and in battery technology.

In addition, an advanced module is offered for students and professionals with a few years of experience. It covers the essential field of Hydrogen Safety.

All lectures will be presented by highly acclaimed experts from universities, research centres, and industry with long-standing experience in teaching. All details of the courses and information on lecturers can be found on the JESS website.

The Introductory Modules are accredited at DTU, RWTH Aachen, and University of Birmingham. The Advanced modules at University of Birmingham only. Upon successfully taking the optional final exams, students will receive 3 ECTS credit points for their course.

Lecture language: English.

Slides and information will be available to participants via a dropbox folder during and after the Summer School.

The 22nd edition of the Joint European Summer School – JESS2025 - will again take place close to the beautiful city of Athens on the coast of the Aegean Sea.
It will provide four high level modules on selected topics in fuel cell, electrolyser, battery and related technologies.

JESS addresses newcomers to the field, graduate students, and young professionals working at the forefront of electrical energy and hydrogen technologies.

Summer School will include four parallel modules:

Introduction to Fuel Cell, Electrolyser, and Battery Technologies: starting from the fundamental principles of electrochemistry and thermodynamics the entire spectrum of materials, design and balance of plant will be covered both from a scientific and an engineering point of view. The courses will be augmented by more general lectures on various aspects of the technology.

The Advanced Module addresses students with one or two years of experience and participants from industry and covers **H_2 Safety**, introducing issues encountered in hydrogen handling, accident prevention, and hydrogen releases and fires.

All lecturers are highly experienced and include senior researchers from the fields of fuel cell, electrolyser, battery, and hydrogen research.

In addition to the lectures, the participants will be asked to join in student projects, applying the course content to case studies to be presented at the end of the week.

Programme Schedule

JESS offers four independent course modules, as shown below.
During registration, students choose the specific module they want to attend.

Introductory Modules:

<table>
<tr><td colspan="3">Introduction to Electrochemistry and Thermodynamics
Introduction to Solid State Chemistry and Ionics</td></tr>
<tr><td>Introduction to SOFC / SOE</td><td>Introduction to LT Fuel Cells & Electrolysers</td><td>Introduction to Batteries</td></tr>
<tr><td>• materials: electrolytes & electrodes
• cell and stack design
• stack materials
• manufacturing
• characterisation
• degradation
• system technology</td><td>• materials: electrolytes & electrodes
• cell and stack design
• manufacturing
• characterisation
• degradation
• system technology</td><td rowspan="2">• materials: electrolytes & electrodes
• cell and stack designs
• manufacturing
• characterisation
• modelling
• degradation
• system technology
• beyond Lithium
• metal-air & solid state batteries</td></tr>
<tr><td colspan="2">• power to gas, power to fuel</td></tr>
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Advanced Module:

Hydrogen Safety
• *introduction to hydrogen safety* • *hydrogen storage* • *materials and hydrogen* • *incident handling* • *incident prevention* • *standards*