



## Who can apply to i-MESC ?

Students from all over the world can apply for i-MESC.

Students who have previously obtained an EMJM scholarship are allowed to apply but are not eligible for an additional scholarship under the EMJM.

In order to guarantee a geographical diversity within i-MESC, we follow the Erasmus+ programme recommendations: **no more than 10% of the candidates selected with an EMJM scholarship will be nationals of the same country.**



## How to apply ?

Complete the application form on the i-MESC website:  
[i-mesc.eu/application/student](http://i-mesc.eu/application/student)



## When to apply ?

**FROM 4TH DECEMBER 2024  
TO 15TH FEBRUARY 2025.**

i-MESC  
full partners



UNIVERSITÉ DE PICARDIE JULES VERNE,  
Amiens (coordinating institution)



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WARSAW UNIVERSITY OF TECHNOLOGY,  
Warsaw



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UNIVERSITÉ TOULOUSE III PAUL SABATIER,  
Toulouse



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Univerza v Ljubljani

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UNIVERSITY OF THE BASQUE COUNTRY,  
Bilbao

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UNIVERSITY OF LJUBLJANA,  
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i-MESC  
associated partners



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*Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.*

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[i-mesc.eu](http://i-mesc.eu)



# What is i-MESC ?



**i-MESC (Interdisciplinarity in Materials for Energy Storage and Conversion) is an Erasmus Mundus Joint Master co-funded by the European Commission from 2023 to 2029.**

i-MESC is an ambitious, unique and much needed 2-year MSc. programme aiming to prepare and guide, in the most complete and efficient manner, the next generation of professionals to the new challenges of the energy field.

i-MESC offers a highly interdisciplinary curriculum, covering scientific and technological knowledge about electrochemical energy storage and conversion at multiple scales (from the materials to the devices). The programme has a major focus on batteries, and also covers supercaps and fuel cells, from multiple angles, such as materials synthesis, devices manufacturing, advanced characterization, artificial intelligence and digital twins. The programme also includes practices in the laboratories and in the pilot lines of the i-MESC consortium. The i-MESC curriculum also offers complementary soft skills, such as project management, communication, ethics and integrity, preparation for professional interviews, intellectual property and start-up creation. Innovative pedagogical methods based on Virtual Reality, Mixed Reality and the metaverse are implemented and deployed to maximize the engagement and learning efficiency of the students of the complex concepts involved in the electrochemical energy storage and conversion field.

i-MESC gathers internationally recognized academic leaders with complementary expertise from four European countries, USA and Australia, all with very strong connections with industry. The consortium will be complemented with invited scholars from other (academic and industrial) institutions who will be delivering lectures and training on specific topics.

## i-MESC Curriculum

### SEMESTER 1 IN POLAND Warsaw University of Technology

- TU1** Electrochemistry
- TU2** Solid State Chemistry
- TU3** Physics for Materials Engineering
- TU4** Ionics in Electrochemistry
- TU5** Calculations in Chemistry and Chemical Engineering
- TU6** English and scientific publications writing
- TU7** Laboratory Practice

### SEMESTER 2 IN FRANCE Université Toulouse III Paul Sabatier

- TU8** Advanced Electrochemistry
- TU9** Advanced Solid State Chemistry
- TU10** Advanced Physical Chemistry of Solids
- TU11** English and Scientific Conference Presentation
- TU12** Application of Surface Treatments to Energy Materials
- TU13** Energy Storage and Conversion Devices I

### SEMESTER 3 IN SPAIN Universidad del País Vasco SLOVENIA University of Ljubljana OR FRANCE Amiens, Université de Picardie Jules Verne

#### COMMON TUS

- TU14** Structural Characterization of Energy Materials
- TU15** Morphological techniques for Thermal Analysis of Energy Materials
- TU16** Modern Techniques for Synthesis of Energy Materials
- TU17** Energy Storage and Conversion Devices II
- TU18** Tools for Bibliography search, Fund Hunting, Intellectual Property – Soft skills and Professional Development

#### SPECIFIC TUS / Ljubljana

- TU19** Hydrogen Technologies and their Engineering
- TU20** Analytical (Electro-)Chemistry and Electrocatalysis

#### SPECIFIC TUS / Bilbao

- TU21** Thermal Energy Storage and Renewable Fuel Production
- TU22** Large Scale Facilities for In Operando Studies

#### SPECIFIC TUS / Amiens

- TU23** Battery Technologies and their Engineering
- TU24** Numerical Simulation, Artificial Intelligence and Digital Twins

### SEMESTER 4 MASTER THESIS

- TU25** Master Thesis within a Research or Company Laboratory



## Job opportunities

i-MESC students are strongly linked to numerous partner laboratories and companies members of the ALISTORE-ERI and RS2E networks, who offer them several topics for their 6-months research thesis (semester 4). It is a good way to put into practice the knowledge they acquire during their master course and find a position after graduation (e.g. PhDs, jobs in companies, etc...) in Europe and abroad.



## Registration fees

Covering: Tuition fees in each partner University; a worldwide comprehensive health insurance; accommodation and part of the activities during the integration week and graduation week; local language course in each partner University.

### Erasmus Mundus Joint Master Scholarships holders

**THEY BENEFIT FROM A FULL FEE WAIVER**

### All other enrolled students

**4 000 € PER ACADEMIC YEAR**



## Funding opportunities

### ★ SCHOLARSHIPS

Covering: travel, visa, installation and subsistence costs.

**Erasmus Mundus Joint Master Scholarships**

**1400 €/MONTH X 24 MONTHS = 33 600 €**

### Industrial Scholarships

**20 000€ FOR THE 2 YEARS**

### ★ FOR NON EMJM SCHOLARSHIP HOLDERS

**Erasmus + Mobility grant**

The students enrolled within i-MESC without EMJM scholarship may be eligible to this mobility grant offered by the Erasmus+ Programme, for a given semester, if they fulfill the requirements from the granting (i.e. sending) institution.

### Specific support measures

**FLAT RATE OF 2 300€ FOR 24 MONTHS**