

EUROPEAN School of Materials science And engineering

We imagine the materials of tomorrow and participate in the great technological adventures of the twenty-first century



TRAINING

High-level European engineers, generalists in materials engineering

Trained for five years after their baccalaureate, EEIGM students become multidisciplinary engineers, with a wide range of knowledge and expertise. They master design and eco-design, characterisation, properties, implementation and life cycle management of increasingly complex materials. They find jobs as technical managers in research & development or production in sectors as varied as aeronautics, automotive, rail and naval transport, chemistry, energy, sport, environment, building, health, assessment, auditing, etc.

OUR STRENGTHS

A state-funded élite school offering 5-year engineering degrees authorised by the French body issuing engineering qualifications

A State engineering diploma co-issued by European partner universities

A human-scale school: 100 graduates each year, 40 teacherresearchers and permanent teachers, 20 administrative and technical staff

Strong involvement of business in training and governance

Engineers speaking French, English, German and Spanish



INTERNATIONAL

A strong European culture

Through its international training path, the European School of Materials Science and Engineering is a unique institution, allowing students to forge their open-mindedness and adaptability. During the course of their studies, each EEIGM student spends at least one year abroad (as a student, research intern or industrial intern), supplemented by two language internships. For three years, they work with students from other countries. They therefore acquire a solid European culture and mastery of four languages (French, English, German, Spanish).

OUR STRENGTHS

A consortium of 7 European partner universities (UL Lorraine in France, UdS Saarbrücken in Germany, UPC Barcelona in Spain, LTU Luleå in Sweden, UPV Valencia in Spain, the Free University of Brussels in Belgium and Montanuniversität Leoben in Austria) covering all subjects in materials science and engineering

Up to 50% international students

At least one year spent abroad (classes and internships combined)

Two B2 level foreign language certificates

Possibility of double or triple degrees with consortium partners but also with universities in Brazil, Japan, Morocco, Tunisia and Canada

50% of graduates start their careers abroad



BUSINESS

Operational engineers in France and around the world, multi-material and quadrilingual experts who create added value within their company.

Unsurprisingly, 90% of graduates of the European School of Materials Science and Engineering are recruited within two months after their graduation. While their multi-material expertise and adaptability are major assets, these quadrilingual and multicultural engineers benefit from privileged industrial relations with large groups, small and medium-sized companies in France and abroad. This knowhow is reflected today in the development of partnerships with more than a hundred companies, some through specific agreements such as: Airbus, European Space Agency, Ceratizit, Institut de Soudure, IRT M2P and Riva.

OUR STRENGHTS

Training at the heart of strategic business challenges

Industrialist operators associated with EEIGM bodies and the engineering course

A strong and diversified network of industrial partners (small and medium-sized companies and large groups)

Regional, national and international presence

Very broad EEIGM-Enterprises partnerships: internships, ATI (transfer and innovation workshops) business projects, teaching slots reserved for industrialists in training, engineer by the traditional or the apprenticeship track, recruitment forum, Job-Dating, Career Day, Technology transfer unit

Support from all our partners in all actions

More than 30% of training in the form of internships

More than 40% of women engineers

A two-track diploma: traditional and through apprenticeship



RESEARCH

Training through research is an integral part of the curriculum of EEIGM students, whether they are engaged in formal training or apprenticeship training. EEIGM graduates have all completed a research internship in France or abroad. This experience has several advantages:

- it ideally prepares for the start of a career in the field of research & development,
- it makes it possible to acquire the methodology that supports the research process,
- it integrates students into a network of specialists,
- it encourages academic research vocations (15% of graduates pursue doctorates).

The complementarity and wealth of the research activities carried out within the universities of the EEIGM consortium are major assets for training.

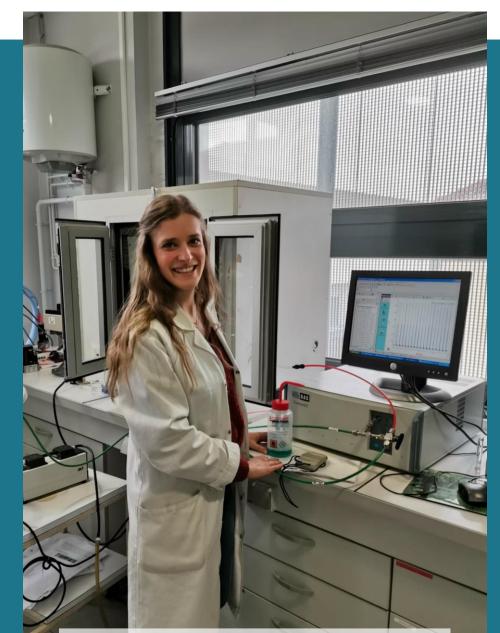
The thirty research laboratories supporting training offer a wide variety of research internship opportunities to engineering students who are integrated into scientific teams.

The research directions of the European laboratories of the member universities of the EEIGM Consortium deal in particular with mechanical properties, materials characterisation, physical metallurgy, biomaterials, materials for energy, nanomaterials, composites as well as modelling and simulation.

OUR STRENGTHS

Training through research based on the full research potential of the Consortium's 7 universities

A technology transfer unit with cutting edge facilities in terms of innovation and research: brazing furnace, heat treatment furnace, etc.



Mathilde François EEIGM engineer, Class of 2019, PhD thesis at the Laboratory of Reactions and Process Engineering (University of Lorraine – CNRS)

HALLE DES MATÉRIAUX (TECHNOLOGY TRANSFER UNIT)

A development and technology transfer platform

Experienced in the requirements of the world of industry (confidentiality, responsiveness, availability), the EEIGM Materials Hall team supports its partners in the fields of:

- material characterisation (chemical compositions, mechanical resistance, microstructures, internal health, etc.),
- expertise (research and analysis of the causes of corrosion or breakage, optimisation of industrial processes, technology watch, bibliographic studies, etc.),
- the assembly of complex structures by brazing (induction, vacuum, etc.)
- functionalisation of surfaces by coating through innovative processes: increase of operating life under aggressive conditions, modification of tribological properties, increased conductivity, etc.

Positioned around strategic markets such as transport (aeronautics, aerospace, automotive), energy (energy production and storage), defence and advanced manufacturing (additive manufacturing, etc.), its network includes local SMEs that wish to access research innovations but also major national and international groups.

The *Halle des matériaux* focuses on TRL range from 4 to 8 and frequently supports its customers through to process qualification and transfer stage.



OUR STRENGTHS

A dynamic and highly responsive team

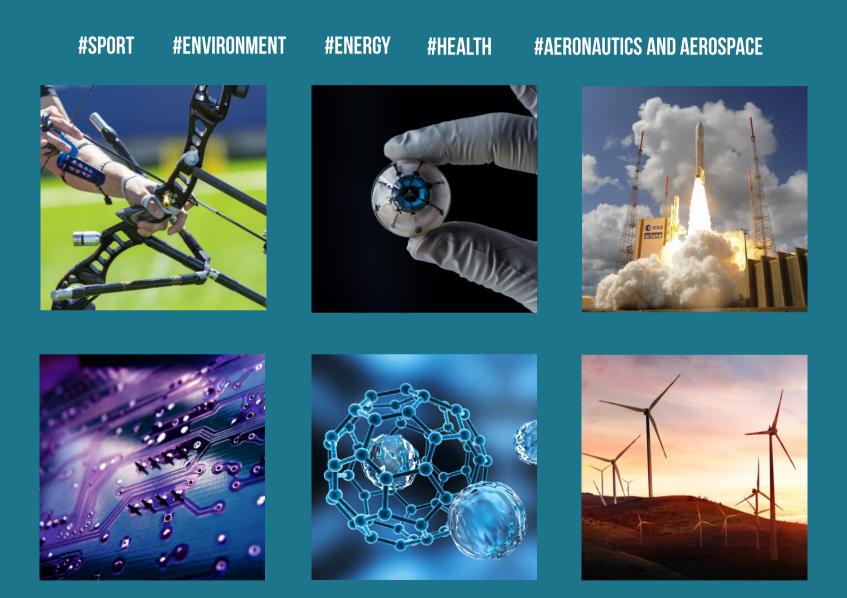
Unique know-how on metal and ceramic materials

Customised development of innovative processes related to surface assembly and functionalisation

Many forms of possible collaborations: services, studies, internships, multi-partner projects, doctoral thesis (associated with a research laboratory)



MATERIALS

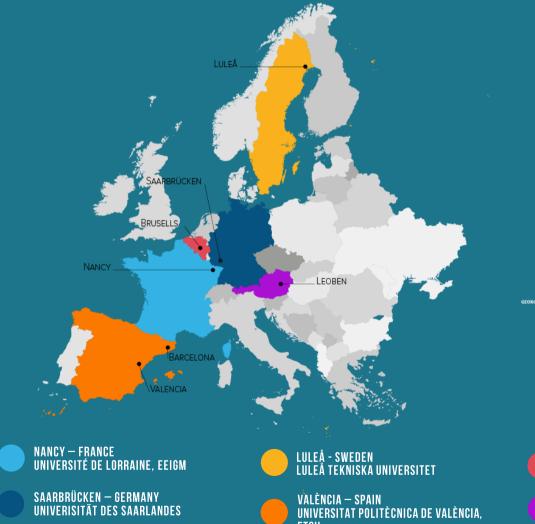


#NANOTECHNOLOGY #AUTOMOTIVE AND TRANSPORT #CITIES OF THE FUTURE #SUSTAINABLE DEVELOPMENT

THE EEIGM CONSORTIUM

AN INTERNATIONAL CURRICULUM TO DESIGN THE MATERIALS OF THE FUTURE

- Université de Lorraine, École Européenne d'Ingénieurs en Génie des Matériaux (EEIGM), Nancy, France
- Universitat Politècnica de Catalunya, Escuela de Ingeniería de Barcelona Este (EEBE), Barcelona, Spain
- Universität des Saarlandes, Saarbrücken, Germany
- Luleå Tekniska Universitet, Luleå, Sweden •
- Universitat Politècnica de València, Escuela Técnica Superior de Ingeniería Industrial (ETSII), Valencia, Spain
- Université Libre de Bruxelles, Brussels, Belgium
- Montanuniversität Leoben, Leoben, Austria



EEIGM AT A GLANCE:

- **A CONSORTIUM OF 7 EUROPEAN** • **UNIVERSITIES**
- **30 PARTNER RESEARCH** • LABORATORIES
- **A LEAST ONE YEAR SPENT** • ABROAD
- **4 LANGUAGES** •

BRUSSELS – BELGIUM UNIVERSITÉ LIBRE DE BRUXELLES

LEOBEN — AUSTRIA Montanuniversität leoben



BARCELONA - SPAIN UNIVERSITAT POLITÈCNICA DE CATALUNYA, EEBE

ETSII

OVERVIEW

EEIGM, an international engineering school in the heart of Europe

It was in Nancy that the European School of Materials Engineering was founded in 1991. Relying on a consortium of six universities in France, Germany, Spain, Sweden and Belgium, the EEIGM is also one of the components of Lorraine INP at the University of Lorraine. 1 hour 30 minutes from Paris by high speed train, the European School of Materials Science and Engineering is located in the heart of a ducal city, with an architectural and artistic heritage marked by the Age of Enlightenment and the artists of the Nancy School of Art Nouveau. This intellectual and cultural dynamism is expressed today in a metropolis entirely focused on excellence, which has 47,000 students, including 7,000 foreign students and 3,000 teacher-researchers and researchers.

EEIGM trains its engineers in five years. French and international students complete the first two years of study in their country (3 years for Spain) and then meet in Nancy for 3 semesters of study. Depending on their choice of specialisation, students continue their studies with 1 semester of study and 1 research project (6 months) in one of the partner universities of the Consortium. They round off their course with an industrial internship in a company anywhere in the world.

At the end of their course, all obtain the French diploma of European engineer in materials engineering recognised and co-issued by the partner universities and have the opportunity to obtain a double or even triple degree.





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UNIVERSITÉ DE LORRAINE



GERMANY

Universität des Saarlandes (UdS), Saarbrücken <u>www.uni-saarland.de</u>

SPAIN

Universitat Politècnica de Catalunya (UPC), Barcelona EEBE www.eebe.upc.edu

Universitat Politècnica de València (UPV), Valencia ETSII www.etsii.upv.es

SWEDEN Luleå Tekniska Universitet (LTU), Luleå <u>www.ltu.se</u>

BELGIUM Université Libre de Bruxelles (ULB), Brussels <u>www.ulb.be</u>

AUSTRIA Montanuniversität Leoben, Leoben www.unileoben.ac.at/