

KIC InnoEnergy Master School

MSc EMINE – EUROPEAN MASTER IN INNOVATION IN NUCLEAR ENERGY

MSc EMINE helps tomorrow's nuclear engineers take up the challenges that the nuclear energy industry faces in terms of safety, social acceptability and waste management. By offering outstanding technical training and addressing the economic, social and political issues of nuclear energy, the programme broadens the scope of traditional nuclear education.

PROGRAMME DESCRIPTION

As a significant contributor to energy supply security and diversity, the nuclear industry is a key component of EU energy policy. For example, the price of nuclear electricity is competitive and predictable, and carbon emissions are low and comparable with the best renewable. Nuclear energy is also a potential low-carbon substitute for fossil-fuel-based combined heat and power production.

MSc EMINE will help provide the industry, which already employs around 400,000 people in Europe, with the highly-qualified engineers required to meet the ambitious nuclear expansion plans that many countries are now drawing up. As an MSc EMINE student, you receive the high-level technical education required to master the engineering complexities of nuclear power generation, as well as business training related to

innovation issues and energy management. The programme thus helps you integrate the technical aspects of the nuclear industry with key political, economic and social issues.

The uniqueness of MSc EMINE lies in the involvement of its industrial partners. Four major players of nuclear energy, AREVA, EDF, ENDESA and Vattenfall, take active part in the master programme. The CEA is also actively involved in EMINE, thus contributing its expertise as one of the most important research centres in nuclear energy in Europe.

PROGRAMME CONTENT

The two-year MSc EMINE programme teaches you about energy management issues and provides in-depth knowledge of the nuclear industry. Your first year is spent learning the fundamentals of nuclear engineering plus safety and radiation protection as well as the design and management of power plants (all mandatory for any nuclear engineer) at either of the following locations:

- Royal Institute of Technology (KTH), Stockholm, Sweden
- Technical University of Catalonia (UPC), Barcelona, Spain

At the end of this first year, students from both UPC and KTH gather at a summer school at Grenoble Ecole de Management (Grenoble, France) to discuss and dissect innovation issues in energy markets in general and nuclear in particular.

MSc EMINE also includes mandatory international mobility among recognized universities in Europe. Your second year is spent at either of the following:

- Grenoble Institute of Technology (Grenoble INP), France
- ParisTech, France

Grenoble INP offers specialization in Materials Science for Nuclear Energy with two options:

- Fuel
- Components

At ParisTech, five options are available:

- Nuclear Reactor Physics and Engineering
- Nuclear Plant Design
- Operations
- Fuel Cycle
- Decommissioning and Waste Management

Your second specialization year also gives you the opportunity to gain a closer insight into innovation issues through a live case study where you apply a methodological 'learning-by-doing' approach in projects coached by KIC InnoEnergy.

As a result of this approach, you gain a deep knowledge of what innovation is all about and you acquire the soft skills very much appreciated by employers, e.g. creating problem-solving solutions or developing fresh initiatives. Furthermore, the involvement of leading actors from the European nuclear industry helps you benefit from professional conferences and lectures as well as in-house training at key research centres.

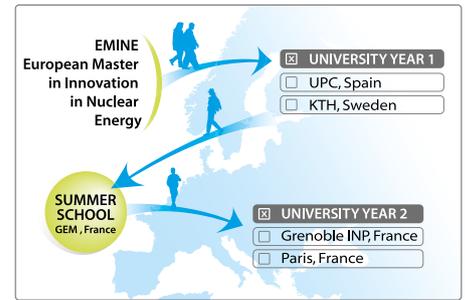
THESIS PROJECT

After completing your second year, you perform a master thesis at an industrial group or research laboratory.

CAREER OPPORTUNITIES

MSc EMINE gives you a comprehensive understanding of the stakes of the nuclear business. It opens a path towards a wide range of positions in the industry, from design and construction, to operation and maintenance, decommissioning and waste management.

As an MSc EMINE engineering graduate trained in soft skills, you are also able to evolve in management positions. In addition to a career in industry, you can also pursue a research career leading to a PhD degree.



Partners



APPLICATION PERIODS

Application Round 1
January 2nd - February 28th, 2014
Application Round 2
March 1 - April 30, 2014

REQUIREMENTS

MSc EMINE master programme is for outstanding students with an above-average Bachelor's degree in Mechanical Engineering, Electrical Engineering or Chemical Engineering. Admission of students with a different background in a related field may be possible after careful assessment. To qualify for EMINE, applicants need to fulfil the admission requirements related to previous studies.

ENGLISH PROFICIENCY

All applicants must provide proof of their English language proficiency, which is most commonly established through an internationally recognised test such as TOEFL, IELTS or University of Cambridge/ University of Oxford Certificates

Detailed information on the application procedure and requirements can be found on our website:
www.kic-innoenergy.com/application

CONDITIONAL ACCEPTANCE

Students in their final year of undergraduate education may also apply and if qualified, receive a conditional offer. If you have not completed your studies, please include a written statement from the degree administration office (or equivalent department), confirming that you are enrolled on the final year of your education and giving your expected completion date. If you receive a conditional offer, you should present your degree certificate to the KIC InnoEnergy Admissions Office before your admission in a specific programme can be formalized. The KIC InnoEnergy Admission Office will forward this to your programme, and appointed Year 1 university, such that your admission can be completed.

PARTICIPATION FEES AND SCHOLARSHIPS

See info on website.

ACCREDITATION

Having successfully completed the programme (120 ECTS), you will be awarded the Master of Science (M.Sc.) as a double-degree of the two universities you have attended.

CONTACT

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