EMSNE

philosophy

The objectives of the European Master of Science in Nuclear Engineering framework are:

- to educate students towards analytic, resourceful and inventive nuclear engineers by combining the joint state-of-the-art know-how of the participating universities;
- to train these students by making full use of the unique nuclear research and industrial facilities throughout Europe;
- to develop a common safety culture throughout Europe;
- to develop an international network of nuclear engineers and scientists by participation of students of different nationalities, by contact and collaboration with local students, and by education in several countries with different educational views, different nuclear reactor concept and technologies, and different nuclear policies.

assuring quality

The *European Master of Science in Nuclear Engineering Certification* is acknowledged to students who have obtained a master degree in nuclear engineering, or equivalent, that meets the objectives and quality standards set by the ENEN Association. This certification is a guarantee that the master education received was of the highest quality in Europe.

application

All application info can be found at the website of the ENEN Association or contact your local ENEN representative.

www.enen-assoc.org

european nuclear education

nuclear know-how in Europe

The most familiar nuclear engineering application is the production of electricity by means of nuclear power. Over 30% of electricity production in the EU is provided by nuclear power. Moreover, Europe has developed a wide range of nuclear technologies and activities: power plants, fuel production, radio-element production, engineering, accelerator design and fabrication, waste management, safety management, nuclear medicine, research and… **higher education**.

European Nuclear Education Network

The European Nuclear Education Network (ENEN) is an international non-profit association of European universities and research centres, combining their knowledge and experience in nuclear education. Its mission is to further develop higher nuclear education and expertise in Europe. The ENEN Association acknowledges a European Master of Science in Nuclear Engineering Certification, encourages PhD studies in the nuclear field, promotes the exchange of teachers and students among its members, fosters the relations between universities and research centres, sets standards for the quality of academic nuclear engineering education, training and research.

contact

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European Master of Science in Nuclear Engineering

ENEN Certification

Nuclear Education by the European Nuclear Education Network

enen european nuclear education network

requirements

general

Students who have obtained a master degree in nuclear engineering, or equivalent, from an ENEN member institution can apply for the *European Master of Science in Nuclear Engineering Certification*, on the condition that their master programme fulfilled the following requirements.

scope and level

The total course load leading to the master degree in nuclear engineering, or equivalent, must be at least 300 ECTS credits (credits of the European Credit Transfer System) at university level, of which at least 60 ECTS credits must be in nuclear sciences and technologies, preferably engineering.

list of topics

The master programme must have been an equilibrated nuclear engineering programme consisting of at least a profound coverage of the following subjects:

- reactor engineering
- reactor physics
- nuclear thermal hydraulics
- safety and reliability of nuclear facilities
- reactor engineering materials
- radiology and radiation protection
- nuclear fuel cycle and applied radiochemistry

master thesis project

The applicant must have successfully defended a nuclear engineering master thesis project.

european dimension

At least 20 ECTS credits of nuclear engineering courses or a master thesis project must have been taken at an academic ENEN member situated in another country than the home institution.

international courses

purpose

To offer Master students, PhD students and professionals the possibility to take advantage of the nuclear engineering expertise present in Europe, the ENEN Association fosters international exchange courses, where the different ENEN members offer courses in their field of expertise while making use of the unique experimental and training nuclear infrastructure throughout Europe.

selection of offered courses

- Eugene Wigner Course on Reactor Physics Experiments
- Nuclear Thermal Hydraulics
- Nuclear Reactor Theory
- International Seminar on the Nuclear Fuel Cycle
- Radiation Protection and Nuclear Measurements
- Nuclear Reactors Systems
- Nuclear Power Plant Safety
- Fusion Reactor Engineering
- Neutronics
- Fluid Mechanics in Nuclear Reactors
- Reactor Dynamics and Kinetics
- Back-End of the Nuclear Fuel Cycle
- Reactor Design Study project
- Reactor Materials and Lifetime Behaviour
- Reactor Instrumentation
- Numerical Methods for Nuclear Reactors

more info

A full list of the international courses, together with all the necessary information, can be found on the website of the ENEN Association.

www.enen-assoc.org

ENEN members

- National Technical University of Athens
- Technical University of Catalonia
- University of Birmingham
- CIRTEN (Consortium of Italian Nuclear Universities)
- University "Politehnica" of Bucharest
- Budapest University of Technology and Economics
- Slovak University of Technology
- Delft University of Technology
- Ghent University (Universiteit Gent)
- Institut National Polytechnique de Grenoble
- Commissariat à l'Energie Atomique - INSTN
- Helsinki University of Technology
- Lappeenranta University of Technology
- Swiss Federal Institute of Technology Lausanne
- University of Leuven
- University of Ljubljana
- Université Catholique de Louvain
- Universidad Politécnica de Madrid
- Manchester University
- Technische Universität München
- Czech Technical University in Prague
- Royal Institute of Technology
- University of Stuttgart
- Uppsala Universitet
- Atom Institute of the Austrian Universities
- Swiss Federal Institute of Technology Zürich
- ETS Institut Quimíc de Sarrià
- Ruhr Universität Bochum
- Center of Techn. and Engineering for Nuclear Projects
- Frankfurt University (J.W. Goethe Universität)
- Institute for Safety and Reliability
- HMS Sultan
- Universität Hannover
- AGH-University of Science and Technology
- Université de Liège
- Institut Jožef Stefan
- Universidad Nacional de Educacion a Distancia
- SCK●CEN (Belgian Nuclear Research Centre)
- Nuclear Research Institute REZ
- Universidade de Santiago de Compostela
- Universidad de Sevilla

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