

EMMC STEPS

Erasmus Mundus Master Course in Sustainable Transportation and Electrical Power Systems

Duration: 24 months

Course description:

The Erasmus Mundus Master Course in Sustainable Transportation and Electrical Power Systems (EMMC STEPS) offers a highly specialized education in Electrical Engineering, focusing on two areas of the highest technological content and professional requirements in the energy sector. The EMMC STEPS is promoted by a partnership led by the University of Oviedo (ES), together with the University of Nottingham (UK), the University of Rome (IT) and the Polytechnic Institute of Coimbra (PT). Prestigious international universities, as the University of Wisconsin-Madison and the University of Illinois (USA), the University of Santa Maria (BR), the University of Yeungnam (KOR) and the University of Ghent (BE), and 18 global leading companies in energy and transportation sectors are associated members. Companies will be offering internships, and some senior staff will be teaching courses.

Graduates successfully completing the EMMC STEPS academic programme will be awarded with a **Joint Master Degree in Sustainable Transportation and Electrical Power Systems (STEPS)** by all the Consortium universities, fully recognized in the four partner countries. The course is structured in 2 academic years, with four 30 ECTS semesters for a total 120 ECTS workload. Students can build their own curriculum based on their previous background and their professional interest, although it offers 2 recommended study tracks: Sustainable Transportation (ST) and Electrical Power Systems (EPS).

The approach and content of the Master respond to main challenges faced by the energy sector:

- To master new energy sources and their implications to the power systems
- To reduce CO₂ emissions by increasing energy efficiency and the share of clean energies
- To gradually incorporate electrical transportation as an alternative to vehicles using combustion engines.

Students will carry out the courses in at least 3 different countries, with 2 alternative mobility tracks: Coimbra-Nottingham-Oviedo or Rome-Nottingham-Oviedo. Students will also have the opportunity of an internship in an associated university or company in Europe, America or Asia. Course will be taught in English but students will have the opportunity to work in at least other 3 EU official languages. Students will attend a 2-week introductory course at the University of Oviedo, to meet other colleagues, University coordinators, etc. Semester 1 will be a Levelling Course to compensate knowledge for different educational background. Students wishing to focus on ST strand will rather spend this first period in Rome, while the focusing on EPS will rather attend lectures in Coimbra. Semester 2 will be devoted to the study of advanced subjects on ST and EPS in Nottingham. During Semester 3 students will complete their specialization in either of the proposed strands in Oviedo. Finally, in semester 4 students will carry out an internship in one of the associated Universities or world leading company, and a guided research aimed at the preparation of the Master thesis.

Website: <http://emmcsteps.uniovi.es>

Partners:

UNIVERSITY OF OVIEDO, Spain (Co-ordinating institution)
SAPIENZA UNIVERSITY OF ROME, Italy
POLYTECHNIC INSTITUTE OF COIMBRA , Portugal
UNIVERSITY OF NOTTINGHAM, United Kingdom

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Maximum grant:

733 400 € (30 000 € consortium + 703 400 € scholarships), 2012
832 800 € (30 000 € consortium + 802 800 € scholarships), 2013