Knowledge & Innovation Community KIC InnoEnergy

# KIC InnoEnergy Master School MSc SELECT — ENVIRONOMICAL PATHWAYS FOR SUSTAINABLE ENERGY SYSTEMS

MSc SELECT's focus on sustainable energy technologies attracts engineering students and teachers who are true enthusiasts. The programme's integration of engineering skills, innovation and entrepreneurship is as natural to us as its close cooperation with industry. Everyone involved in MSc SELECT is convinced that its programme commitment and modern learning environment foster thinking on global responsibilities and sustainable development for all.

# **PROGRAMME DESCRIPTION**

Sustainable energy services are a key issue for humanity; before any service is delivered, its complete environmental footprint must be considered. MSc SELECT starts from the concept of basic renewable energy sources and considers the pathways towards a future sustainable energy system. The target is always minimal environmental impact, whatever the kind, throughout the whole energy conversion chain from primary source (sun, moon, geothermal) to delivered service. SELECT provides you with the high competence and gualified engineering skills you need to make a difference in this vital field. Close interaction with industry is a hallmark of the entire programme.

MSc SELECT is one of few engineering master programmes with a clear focus on entrepreneurship and business. Clear evidence of this is the SELECT student teams' second place in the 2012 Hult Global Case Challenge Energy Track and the award received at the final of the Philips Innovation Award 2013.

MSc SELECT prepares you for direct industrial engagement thanks to thorough training in:

- Multi-disciplinary problem analysis and solving
- Advanced team-building in a multi-national setting
- Novel, multi-dimensional ways of learning
  involving real and virtual classrooms
- Collaboration with industry throughout,
  in particular during thesis work

# **PROGRAMME CONTENT**

MSc SELECT delivers a unique education characterised by high academic achievement. As a final graduate, you are ready for immediate engagement in industry as well as important leadership roles. MSc SELECT curriculum and pedagogical philosophy is:

 Designed for active participation, putting you in the 'driving seat' of your own learning experience Structured for you to learn problem solving with confidence

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Organised to show how you can use acquired facts and methods outside the programme, and how to combine known principles in 'new' methods – the Enjoyable Learning Process

MSc SELECT is a cooperation between seven universities and their associated industrial partners. These universities are:

- KTH Royal Institute of Technology (KTH), Sweden
- Politecnico di Torino (PoliTo), Italy
- Eindhoven University of Technology (TU/e), the Netherlands
- Technical University of Catalonia (UPC), Spain
- Aalto University School of Science and Technology (Aalto), Finland
- AGH University of Science and Technology (AGH), Poland
- Instituto Superior Técnico (IST), Portugal

MSc SELECT also features mandatory mobility. You spend your first two terms at KTH, UPC or TU/e on courses in sustainable energy conversion, renewable energy and environomical pathways. A project introduced at the start of the year provides advanced training in problem solving and group dynamics for mastering complex energy systems analyses.

Further in-depth knowledge is acquired during your second year via individually chosen focus areas plus related thesis work. These focus areas are:

- Biomass/Biorefineries (Aalto)
- Polygeneration (KTH and UPC)
- Renewable Energy (IST) · Solar Systems (UPC and TU/e)
- Electrical Systems (TU/e)
- Energy Efficiency (PoliTo)
- Fuel Cells (PoliTo)
- Sustainable Fuels Economy (AGH)

At the beginning of the academic year, all MSc SELECT students get the opportunity to meet at a kick-off arranged by one of the organizing universities. During the spring term, all students come together again, this time at seminars to introduce them to the cutting-edge research found in the curricula, and to practice group discussions in an international setting.



#### **CAREER OPPORTUNITIES**

The MSc SELECT programme gives you the best possible foundation for a career in sustainable energy. After graduation, you will be able to analyze, develop and implement the advanced innovations needed to realize a sustainable path towards our future energy system. In addition, the built-in mobility enhances the cultural awareness and adaptability of all participating students. These are highly sought-after attributes in the global job market of today.

As an MSc SELECT graduate, you are employable within a wide range of industries, you possess the potential to start your own innovative business venture, and you have the investigative skills to continue your research studies towards a PhD. Whatever path you choose, you will be able to show strong leadership and benefit humankind in key areas of sustainability.

#### **APPLICATION PERIODS**

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

### REQUIREMENTS

MSc SELECT master programme is for outstanding students with an aboveaverage 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 MSc SELECT, 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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For more information: www.kic-innoenergy.com/select



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