Content

- Context

- Overall Educational concept

- MSc in RENewable Energy (RENE)
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The EIT was set up in March 2008 by the European Parliament and Council with a view of increasing Europe’s innovation impact and of becoming a key driver of sustainable European growth and competitiveness.

The EIT’s mission:

To increase European sustainable growth and competitiveness by reinforcing the innovation capacity of the EU, facilitating transitions: from idea to product, from lab to market, from student to entrepreneur.
We are a commercial company, incorporated as Societas Europea, with 29 shareholders, all of them key players in the energy field, with top rank industries, research centres, universities and business schools.
KIC InnoEnergy Mission

To become the leading engine for innovation and entrepreneurship in Sustainable Energy
KIC InnoEnergy Thematic Areas

- Clean Coal Technologies
- European Smart Electric Grids & Electric Storage
- Intelligent, energy-efficient buildings and cities
- Energy from chemical fuels
- Renewable energies
- Sustainable Nuclear & Renewable Energy Convergence

InnoEnergy interpretation:

Research

Money

Knowledge

Innovation
KIC InnoEnergy Uniqueness
Integration of the Knowledge Triangle

**Business Creation Services**
- Focus on Market Impact
- Transform an idea to business
- Financial Nurturing

**Education**
- Master of Sciences, PhD Schools or Long Life Learning for professionals in their mid careers
- Will deliver 1200 students, 55 new products, 37 patents registered, 20 spin-offs/start-ups

**Innovation Projects**
- Dedicated Research, Development & Innovation teams
- Deliver the incremental and disruptive innovation
KIC InnoEnergy Iberia
Barcelona, Lisboa

Managing thematic field Renewable Energy at a global level Innovation, Business creation and Education initiatives in the field of sustainable energy

Education
- MSc in Renewable Energy (RENE)
- MSc in Innovation and Entrepreneurship (MIE)
- PhD track on Sustainable Energy Systems for Renewables

Innovation projects
- ENTHIPV – Encapsulation Technologies for Thin-Film Solar
- OTS – Offshore Test Station
- OFFWINDTECH – Offshore Wind Enabling Technology
- NEPTUNE - Offshore Metocean Data Measuring Equipment and Wind, Wave and Current Analysis and Forecasting Software
- TESCONSOL – Thermal Storage for Solar Concentrating Plants
- LH03-IEE, Lighthouse Innodriver: Processes and Living Lab for Industrial Energy Efficiency

Core partners
- ESADE
- gasNatural Fenosa
- IREC
- UPC

Associate partners
- Ciemat
- Tecnalia
- IBERDROLA
- eDP
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KIC InnoEnergy Education

MSc Programmes
Executive Education
PhD Schools

Learning modules
MOOCs/MOOP

Scholarships available for intake 2015
KIC InnoEnergy MSc Programmes

MSc Clean Coal Technologies (CCT)
(Executive) MSc in Energy Engineering and Management
MSc (one year) Innovation and Entrepreneurship (MIE)
MSc European Master on Innovation in Nuclear Energy (EMINE)
MSc Environment Pathways for Sustainable Energy Systems (SELECT)
MSc Smart Electrical Networks and Systems (SENSE)
MSc Energy Technologies (ENTECH)
MSc Renewable Energy (RENE)
MSc Smart Cities
KIC InnoEnergy Post Master
PD ENG in Smart Energy Buildings and Cities SEBC (two years)

KIC InnoEnergy PhD Schools
Track “Sustainable Nuclear and converging technologies”
Track “Smart cities”
Track “Energy from Chemical Fuels”
Track “Sustainable Energy Systems for Renewables”
Track “Small Electric Grids and Storage”
Track “Clean Coal Technologies”
Who is the MSc School for?

Bachelor’s Students:

▪ From electrical, mechanical, chemical or energy engineering
▪ Who want to develop their skills in the field of sustainable energy
▪ Who want to become entrepreneurs or work with research and development
▪ Who are looking for an international career
▪ Who want to contribute to a more sustainable future
Where you will study

1. Aalto University School of Science and Technology, Finland
2. Eindhoven University of Technology (TU/e), The Netherlands
3. ESADE Business School, Spain
4. Grenoble Ecole de Management, France
5. Grenoble Institute of Technology (INP), France
6. Instituto Superior Técnico (IST), Portugal
7. Karlsruhe Institute of Technology (KIT), Germany
8. KU Leuven (KUL), Belgium
9. Paris Institute of Technology (Paris Tech), France
10. Politecnico di Torino (PoliTo), Italy
11. Royal Institute of Technology (KTH), Sweden
12. Silesian University of Technology, Poland
13. Technical University of Catalonia (UPC BarcelonaTech), Spain
14. AGH University of Science and Technology (AGH), Poland
15. Uppsala University (UU), Sweden
Our Uniqueness

✓ **Top Ranked Universities** – gathering of the best technical universities and business schools in Europe.

✓ **Industry Involvement** – close connection to and involvement of energy industry.

✓ **Double degree** – one from KIC InnoEnergy and one from partner university.

✓ **International mobility** – a unique mobility programme that allows the students to travel and learn during two entire years.

✓ **Sustainable Energy Focus** – all our masters are designed to give the student the latest insight in conventional and alternative energy sources.

✓ **Entrepreneurial Approach** – close connection between engineering skills, innovation and entrepreneurship.
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MSc Renewable Energy

Possibilities and use of renewable energy sources:

- Wind energy
- Solar PV
- Solar Thermal Power
- Biofuels
- Marine Energy
- Polygeneration
- Grid Engineering
- Energy Vectors and Storage
- Hydropower
MSc Renewable Energy (RENE)

RENE: Competences Obtained

RENE: The concept of “learning by doing”

- Perform problem solving in academic and industrial environments
- Develop new concepts, products and services in-company, by patenting or creating a start-up.
- Organize and pursue a scientific or industrial research & technology Project under the frame of the MSc thesis
- Break down economic analysis of the research & technology concepts in the renewable energy engineering field
MSc Renewable Energy

Year 1

KTH

ParisTech

IST

UPC
MSc Renewable Energy

RENE First Year:
École Polytechnique (ParisTech), IST, KTH or UPC

Engineering courses
(Mechanical Engineering, Electrical Engineering, Electronic Engineering, Thermodynamics, Industrial Engineering)

Engineering courses and transversal courses
(Training in entrepreneurship, oral and written communication, team working, etc.)

Thesis and Internship

RENE Second Year:
École Polytechnique (ParisTech), IST, KTH or UPC

courses on renewable energy engineering and specialization
What is a KIC InnoEnergy Master Programme?

MSc RENE value chain

- Incorporation of creativity, innovation and entrepreneurship.
- Continuous improvement of the program.
- Industry involvement project.
Industry engagement in all the life cycle of the master programme

Universities

Students’ selection

Promotion

Graduates

Internships

Life-Long Learning

Skills are a key input in innovation

Knowledge of new market developments and needs

Curriculum design

Teaching

Companies

Scholarships for selected students

Human Resources

Knowledge and expertise transfer

No funding from the industry is needed, just collaboration.

Candidates holding a high GPA in a degree in Engineering (e.g. mechanical, electrical or chemical) or Science (e.g. physical or chemical), fluent in English, and with entrepreneurial and innovative talent
Link between RENE ILO and the Knowledge Triangle

Making Value Judgements
Appreciation of ethical, scientific and sustainability challenges

Creativity
Ability to think beyond boundaries and systematically explore and generate new ideas.

Innovation
Ability to use knowledge, ideas or technologies to create new or significantly improved products, services, processes or new business models.

Leadership
Leadership and decision-making

Entrepreneurship
Ability to transform innovations into feasible business solutions

Research
Knowledge and understanding of cutting-edge research methods, processes and techniques; and their application, within their study field

Higher Education

Students' development of skills and competences in the MSc RENE environment
Hear more about RENE and KIC InnoEnergy Education

https://kic.upc.edu/training/msc-rene/

http://www.kic-innoenergy.com/education/

Prof. Enrique Velo, UPC
BarcelonaTECH
Programme Director, RENE
KIC InnoEnergy Students Activities

KIC InnoEnergy SELECT MSc students place second in the finals of the HULT GLOBAL CASE CHALLENGE Energy Track
¡¡Gracias por su atención!!