University College Dublin
Ireland's Global University

ME Electrical Energy Engineering
(Two Years Full Time)

The Electricity Research Centre (ERC) at University College Dublin leads research activity in Energy Systems Integration globally. The ME Electrical Energy Engineering programme is taught by world-renowned academics from the ERC. The professionally accredited programme addresses the challenge of transitioning towards sustainable power systems, integrating diverse generation and demand-side technologies while maintaining stable and economic operation. It provides strong training in various aspects of electrical engineering and enhances this through a major research project and professional work experience.

If you are a mathematically strong engineering student who is interested in power systems analysis and renewables integration, and you are seeking a professional career in the power system and smart grid sectors, then this programme is ideal for you.

Top international ranking

Delivered by a highly research active School holding a position of 101-150 in the QS World Subject Rankings, this programme is taught by academics from the world-leading Electricity Research Centre for the integration of renewables into power systems.

Why study at UCD?

Tradition
Established 1854, with 160 years of teaching & research excellence

Global profile
UCD is ranked in the top 1% of higher education institutions worldwide

Global community
Over 6,000 international students from over 120 countries study at UCD

Global careers
Degrees with high employability; dedicated careers support; 1 year stay-back visa (for non-EU students)

Safety
Modern parkland campus with 24 hour security, minutes from Dublin city centre

Course Content and Structure

120 credits	65 credits	25 credits	30 credits
taught masters	taught modules	research project	professional work experience

Core modules include:

- Applications of Power Electronics
- Control Theory
- Electrical Energy Thesis
- Electrical Machines
- Power Electronics and Drives
- Power System Dynamics and Control
- Power System Design
- Power System Engineering
- Power System Operation
- Professional Engineering (Management)
- Professional Work Experience (short/long)
- Renewable Energy Systems

Optional modules include:

- Advanced Signal Processing
- Analogue Electronics
- Applied Dynamics II
- Communication Systems
- Energy Economics and Policy
- Energy Systems & Climate Change
- Engineering Thermodynamics II
- Entrepreneurship in Engineering
- Fossil Fuels, Carbon Capture and Storage
- Networks and Internet Systems
- Numerical Algorithms
- Power Electronics Technology
- Power System Stability Analysis
- Signal Processing
- Wireless Systems
- Optimisation Techniques for Engineers

Six-month professional work experience opportunities are offered with national and international partners involving electrical utilities, manufacturers and research institutions.

Course code: T274

Career Opportunities

By completing the ME Electrical Engineering programme, you will become a graduate with power systems expertise, whose rare skills will be attractive to a wide variety of technical and managerial roles in the electrical utility and smart grid sectors on an international scale, e.g. Alstom, ABB, EPRI, EirGrid, ESB, GE, Siemens.

The ME programme also provides an excellent starting point for those aiming for a PhD programme and a research career within a university or specialised research institution.

Facilities and Resources

A wide range of modern industry standard software tools for power system analysis and laboratory facilities are integrated into the taught and project-based modules. A real time digital simulator is also available for hardware in the loop testing and development of prototypes.

Apply Now

This programme receives significant interest so please apply early online at www.ucd.ie/apply

Entry Requirements

- A 4-year bachelors degree with a minimum upper second class honours (NFQ level 8) or international equivalence in a relevant Engineering programme.
- Applicants whose first language is not English must also demonstrate English language proficiency of IELTS 6.5 (no band less than 6.0 in each element), or equivalent.

International Students

- Stay in Ireland after graduating for 12 months to seek employment
- Approved by US Dept. of Education for federally supported loans
- Apply for Non-EU Scholarships: www.ucd.ie/international/scholarships

Related Masters Programmes of Interest

- ME Energy Systems
- MSc Sustainable Energy & Green Technologies

Fees

Fee information is available www.ucd.ie/fees

Graduate Profile

Ruth Galvin, ESB International

Having completed my Bachelor of Engineering Science in UCD, the Electrical Energy Engineering Masters in UCD offered a natural progression to deepen my knowledge and skills for the Electrical Energy and Power Systems sector. For me, the Masters program struck the perfect balance between taught modules, self directed research, and an internship program. Within the two year course I got the opportunity to undertake a six month Internship with Arup Consulting Engineers in Dublin, which provided invaluable work place experience and facilitated networking in the industry.

The thesis is both a challenging and rewarding aspect of the program and provided me with the scope to tackle a very topical issue in the Power Electronics field, and work with members of the ERC. Having access to the Opal RT Real Time Digital Simulator in the ERC was a real plus when it came to testing my project design.

The Masters program provided a platform for a choice of graduate positions for 2015 graduates.

Contact Us

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