University College Dublin
Ireland's Global University



ME ELECTRICAL POWER ENGINEERING (TWO YEARS FULL TIME)

The Energy Institute (EI) at University College Dublin is a global research leader in energy systems integration. The ME Electrical Power Engineering programme is taught by world-renowned academics from the Institute. The professionally accredited programme addresses the challenge of transitioning towards sustainable power systems, and 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.

The ME programme is professionally accredited by Engineers Ireland and recognised by the Washington Accord for Chartered Engineer status.

ENGINEERS IRELAND
ACCREDITED PROGRAMME

TOP INTERNATIONAL RANKING

Delivered by a highly research-active School composed of many internationally high-profile academics, including five IEEE Fellows. This programme is also taught by academics from the world-leading Energy Institute for the integration of renewables into power systems and energy systems.

WHY STUDY AT UCD?

Professional Work Experience
6-8 month Professional Work Experience internship opportunity

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

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

Global community
Over 8,500 international students from over 130 countries study at UCD

Global careers
Degrees with high employability; dedicated careers support; two-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 master's	taught modules	research project	professional work experience

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

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

Optional modules include:
- Applied Dynamics II
- Data Science in Python
- Energy Economics and Policy
- Energy Systems & Climate Change
- Engineering Thermodynamics II
- Entrepreneurship in Engineering
- Signal Processing
- Fossil Fuels, Carbon Capture and Storage
- Numerical Algorithms
- Optimisation Techniques for Engineers
- Power Electronics Technology
- Power System Stability Analysis



Course code: T335





CAREER OPPORTUNITIES

By completing the ME Electrical Power Engineering programme, you will become a graduate with power systems and power electronics 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. ABB, Alstom, EDF, EirGrid, EPRI, ESB, GE, LBNL, NREL, 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 and smart grid consumer laboratory (supported by EPRI) are 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 bachelor's degree with a minimum upper second class honours (NFQ level 8) or international equivalent in electrical engineering, electronic engineering, power systems, power electronics, and energy-related subjects.
- 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.
- Students who do not meet the IELTS requirement may wish to consider taking the Pre-Sessional or Pre-Masters Pathway. Full details https://www.ucd.ie/alc/programmes/pathways/

SCHOLARSHIPS

- Dedicated scholarships for non-EU students
  - Apply for University Scholarship www.ucd.ie/global/scholarships/
  - Apply for College scholarship www.ucd.ie/eacollege/study/noneuscholarships
- Approved by US Dept of Education for federally supported loans

WORK IN IRELAND

Option to stay in Ireland to seek employment and/or work for 2 years after graduating.

FEES

Fee information is available at www.ucd.ie/fees

RELATED MASTER'S PROGRAMMES OF INTEREST

- ME Energy Systems
- MSc Sustainable Energy & Green Technologies



GRADUATE PROFILE

Rachel Perkinson

SSE Renewables

I chose to study engineering at UCD as you did not have to commit to a particular discipline straight away. This proved a wise choice as I went in believing I wanted to be a chemical engineering but quickly discovered electrical engineering was actually the discipline for me, and so I first completed a 3 year BSc degree, focusing on electrical engineering. The ME in Electrical Power Engineering at UCD is a challenging but rewarding course.

I found that the course prepared me well for a career in renewable energy by making me aware of the opportunities and challenges facing the industry by mixing knowledge of the key technologies with how electricity markets and networks interact and operate. Throughout my 5 years at UCD I had the opportunity to spend a year studying in New Zealand and undertook two internships which provided invaluable experience. I am now working as an electrical engineer for SSE Renewables based in Scotland and find I use many of the skills I developed at UCD on a regular basis.

CONTACT US

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