

ME Electrical Power Engineering

Two Years Full Time (September start)

Introduction

The ME Electrical Power Engineering programme is taught by world-renowned academics from the Energy Institute (EI) at University College Dublin, which is a global research leader in energy systems integration. This 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 system 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.

Course Highlight

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.

Course Content and Structure

- 120 credits taught master's
- 65 credits taught modules
- 25 credits Research Project
- 30 credits Work Experience

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
- Renewable Energy Systems

Optional modules may include:

- Applied Dynamics II
- Data Science in Python
- Energy Economics and Policy
- Energy Systems & Climate Change
- Entrepreneurship in Engineering
- Fossil Fuels, Carbon Capture and Storage
- Machine Learning for Engineers
- Numerical Algorithms
- Optimisation Techniques for Engineers
- Power Electronics Technology
- Professional Engineering (Finance)
- Signal Processing

Why study at UCD?



Graduate education

12,800 graduate students; 17% graduate research students; structured PhDs



Global community

Over 11,000 international students from more than 152 countries



Global profile

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



Global careers

Dedicated careers support; 2-year stayback visa to work in Ireland



ENGINEERS
IRELAND

ACCREDITED PROGRAMME



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. Potential employers include ABB Cylon, Alstom, Eaton, EDF, EirGrid, EPRI, ESB, NREL, Premium Power, Siemens, Smart Wires, SSE, and SuperNode. 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.

Graduate Profile

Treisa Sahaya
EirGrid Group



Choosing University College Dublin (UCD) for my postgraduate studies has proven to be a pivotal decision, and the programme has significantly contributed to my professional growth. I had chosen UCD for its reputation and international standing. During my course I discovered that the curriculum is well-structured, offering modules which played a crucial role in developing a profound understanding of the intricate world of electrical engineering. The 8-month internship at the Electric Power Research Institute (EPRI) was instrumental in preparing me for industry exposure, and this practical experience allowed me to apply theoretical knowledge to real-world situations, enhancing my technical skills. In addition, the programme has also instilled in me a passion for continuous learning, which has benefited me in my current employment with EirGrid. The education and exposure received during my time on the course was pivotal in securing a position in this prestigious organisation. I am confident that the foundations laid by UCD in its students will continue to inspire and guide more engineering aspirants.

Applicant Profile

- Applicants must hold a 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-Master's Pathway. Full details www.ucd.ie/alc/programmes/pathways/

International Fees and Scholarships

Tuition fee information is available on www.ucd.ie/fees. Please note that UCD offers a number of graduate scholarships for full-time, self-funding international students, holding an offer of a place on a UCD master's programme. Please see www.ucd.ie/global/scholarships/ for further information.

Related Master's Programmes of Interest

- MEngSc Electrical Power Networks
- ME Energy Systems

CONTACT US

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