

# Professional Diploma in Power System Analysis

One Year Part Time (September/January start)



## Introduction

The Climate Action Plan launched in 2019 by the Irish Government defines a new growth strategy and roadmap to decarbonise the energy sector and renovate buildings and transportation to help cut energy bills and usage. The recent European Green Deal goes in the same direction and will have several implications for Ireland, in particular for the electrical power system.

There is, in particular, a need for training for electrical engineers who are currently in employment, or are expected to be recruited into the sector, in the field of electrical energy system security, control, stability analysis, resilience, renewable energy, converter-interfaced generation and low-inertia systems. This new Professional Diploma fills this gap.

## Course Highlight

The programme offers state-of-the-art modules in power system modelling, dynamics and control. Particular emphasis is given to renewable energy systems. The programme also offers modules on optimisation techniques and stability analysis of nonlinear systems, which are specifically designed for applications to power system problems.

## Course Content and Structure

The Professional Diploma in Power System Analysis comprises 20 credits of option Modules (four modules). These modules are selected from five modules which are offered across the Spring and Autumn Trimesters. All lectures are in the morning of weekdays and labs in the afternoon. Remote lectures & labs are available for those who cannot attend in person\*.

(\*Please note however, some attendance may be required as some modules may have in-person exams.)

### Spring Modules

- Power System Design
- Applications of Power Electronics

### Autumn Modules

- Renewable Energy Systems Power
- System Dynamics & Control
- Optimisation Techniques for Engineers

## Why study at UCD?



### Graduate education

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



### Global community

9,500 international students and a 300,000 alumni network across 165 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





## Career Opportunities

The programme represents an opportunity for those who have previous experience, or are currently employed, in the electrical engineering sector and wish to enhance their knowledge in the fields of electrical energy system security, control, stability analysis, resilience, renewable energy, converter-interfaced generation and low-inertia systems. This knowledge will be of particular interest to companies such as EirGrid, ESB, SSE, Energia, Arup, Enel X and PremiumPower into the future.

## Programme Director

Professor Federico Milano



A combination of technical innovation and the increasing presence of renewable and non-conventional generation in modern electrical networks all over the world highlights the necessity of studying several aspects related to the modelling, regulation, and dynamic of power systems. UCD has a long and well-known tradition in Electrical Engineering and offers a range of high-quality modules on electric power systems as part of its degree programmes. Traditionally, these modules have only been available to full-time students, although the content is of great interest to graduates working in industry. This new Professional Diploma targets specifically this category of students and includes a selection of modules that address the most urgent societal and technical challenges, such as emission reduction, efficient control and resilience, of the electric grid.

## Applicant Profile

- Applicants should hold a BE degree in Electrical Engineering or equivalent.
- 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.

### Tuition Fees

Tuition fee information is available on [www.ucd.ie/fees](http://www.ucd.ie/fees).

### Related Masters Programmes of Interest

- Professional Diploma in Electronic Design
- Professional Diploma in Operations Excellence

### CONTACT US

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### APPLY NOW

This programme receives significant interest so please apply early online at [www.ucd.ie/apply](http://www.ucd.ie/apply)