



Electrical Engineering MSc

This course aims to provide a broad-based understanding of the subject and then a study of in depth topics covering modern technology for power systems, power electronics and related subjects. It will prepare students for a career as a professional engineer working in research, design or industrial applications.

The modular structure of this course offers students flexibility, allowing them to choose the modules that most reflect their interests and feed into their research project.

The modules cover the following subjects; power electronics, drives, power systems (including distributed generation and wind power), design of single and multi-variable control systems, motor and generator design, instrumentation and measurement.

This course is suitable for graduates of related disciplines who wish to convert to electrical engineering.

Students will develop:

- up-to-date knowledge of electrical engineering, including design and modelling techniques and applications
- the ability to plan and undertake an individual project
- interpersonal communication and professional skills
- the ability to communicate ideas effectively in written reports
- the technical skills to equip them for a leading career in electrical engineering, especially in the areas of power electronics, power systems, electrical machines and control





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Course structure

This course is taught on a full-time basis over one year and consists of 120 credits of taught modules and a 60 credit independent research project. Normally 60 credits of taught modules are taken per semester, however it is possible to take a 55/65 credit split. Please be aware modules may be subject to change. Modules are chosen from a wide range of electrical engineering topics according to students specific interests and requirements.

Autumn semester

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| Control Systems Design | 10/15 credits |
| Power Electronic Design | 10/15 credits |
| Power Networks | 10/15 credits |
| Electrical Machines | 10 credits |
| Instrumentation and Measurement with/without project | 20/10 credits |
| Advanced Control System Design with project | 20 credits |

Spring semester

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| Energy Conversion for Motor & Generator Drives | 10 credits |
| FACTS and Distributed Generation | 10 credits |
| Advanced AC Drives | 10/20 credits |
| Advanced Power Conversion | 10 credits |
| Technologies for Wind Generation | 10 credits |
| Power Systems for Aerospace, Marine & Automotive Applications | 10/15 credits |
| Advanced Electrical Machines | 10 credits |

Individual project

Following the successful completion of the taught modules, an individual research project is undertaken during the summer term. The project will demand the completion of a major piece of work on an advanced technical topic.

Previous projects have included:

- modular converter topologies for power system applications
- predictive control for an uninterruptable power supply
- power systems stability enhancement using Static Converter (STATCOM)
- sensorless permanent magnet motor drives for more electric aircraft applications

Funding Opportunities

Find out more about funding options at:

www.nottingham.ac.uk/graduateschool/funding

Employment prospects

Students of this course have entered into roles in design and development within major international companies or government agencies, obtained consultancy posts with leading contract consultant companies and moved into successful academic careers.

Entry requirements

Applicants should have at least a 2.2 honours degree (or international equivalent) in a related subject from a recognised university.

English language requirements:

- IELTS score of at least 6.0 with a minimum score of 5.5 in individual elements

Other qualifications are accepted and exceptions are sometimes made for students who have had their education entirely in the medium of English and where English is a well-established second language.

How to apply

Candidates are encouraged to apply online at:
<https://pgapps.nottingham.ac.uk>

Contact us

For further information, please contact:

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