

BEng (Hons) Electrical & Electronic Engineering

Electrical Engineering is a very wide discipline concerned with the study, design, and application of systems that use electricity, electronics, and electromagnetism. It covers several fields like Electronics, Telecommunications, Power Engineering, Signal Processing, Optics, Computer Engineering and Networks, Robotics, and others. Each of these fields has grown significantly over the years and can be studied as a separate University programme. Electrical Engineers should complete a general-scope undergraduate programme to establish a good understanding of the various specialisation options they will choose to pursue in their life either professionally or academically at a postgraduate level.

UCLan Cyprus, adopts this approach by offering a BEng (Hons) Electrical and Electronic Engineering programme that aims to develop Engineers with a broad understanding of current technology and practice trends in Electrical and Electronic Engineering, covering a wide range of topics related to power, electronics, and telecommunication systems. This discipline encompasses a wide range of skills, and the course equips graduates with the knowledge, skills, professionalism, and confidence to thrive in the always evolving field of Electrical and Electronic Engineering, as well as gaining the transferrable skills to find employment in a diverse set of industrial, commercial and research sectors.

Students study general topics related to Electrical and Electronic Engineering during their first three years to develop a holistic knowledge about the discipline and then depending on module choices they make in their fourth year, they specialise in either of two fields:

- > **Telecommunications and Mobile Technologies**
Students learn the operation, design, implementation, and configuration of various modern high-speed wireless, wired and fibre optic communication systems including computer networks.
- > **Renewable and Sustainable Energy Systems**
Students learn the operation, design, implementation, and configuration of systems that generate, transmit and distribute electricity. This specialization includes Electrical Power Systems, Power Electronics, Electrical Installations, Renewable Systems (e.g., solar, wind, etc.) and Electrical Storage.



BEng^(Hons) Electrical & Electronic Engineering

YEAR 1

S E

COMPULSORY

Calculus and Linear Algebra for Engineers	YL	10
Electrical Engineering Fundamentals	YL	10
Engineering, Research and Academic Skills	YL	10
Electronics and Instrumentation	YL	10
Introduction to Programming	1	10
Applied Physics	YL	10

YEAR 2

S E

COMPULSORY

Electronic Engineering Practice	YL	10
Digital Electronics	YL	10
Mechanics	YL	10
Computational Mathematics for Engineers	2	5
Probability Theory for Engineers	1	5

OPTIONAL (Choose 2)

Algorithms and Data Structures	YL	10
Computer Systems and Security	YL	10
Free University Elective	YL	10
Explorations in Computing	2	10

YEAR 3

S E

COMPULSORY

Digital Systems	YL	10
Data Communications	YL	10
Signals and Control Systems	YL	10
Electronic Systems	YL	10
Electronic Systems Applications	YL	10
Power Engineering	YL	10

YEAR 4

S E

COMPULSORY

Project	YL	15
Engineering Professionalism	YL	5

OPTIONAL (Choose 4)

TELECOMMUNICATIONS AND MOBILE TECHNOLOGIES OPTIONS

Wireless, Mobile and Fibre Optic Communication	YL	10
Mobile Technologies	YL	10
Digital Communications	YL	10
Digital Signals and Image Processing	YL	10

RENEWABLE AND SUSTAINABLE ENERGY SYSTEMS OPTIONS

Power Systems Operation and Control	YL	10
Renewable Energy Sources	YL	10
Power Electronics	YL	10
Electrical Services	YL	10

OTHER OPTIONS

Microcontroller Systems	YL	10
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CAREER OPTIONS

The diversity of the discipline and the various specialisation fields create numerous career options for Electrical and Electronic Engineers. Beyond these, and since engineers possess many transferable skills (e.g., Mathematics, Statistics, Project Management, etc.) they can find employment in various other fields as well. Employability is central to our degree provision and through this programme students will develop the necessary skills to ensure a successful career in this industry.

The programme has a practical focus, giving students the opportunity to get hands-on, experience and develop valuable skills. Industrial placements are also available for them to broaden their professional experience and consolidate their learning, as well as establishing a professional network which can provide them with a significant advantage in their early career development. Many career options unfold for our graduates including Electrical Power Engineers, Electronic Engineers, Electrical Installations Consultants, Telecommunication and Network Engineers, IT professionals, Computer Engineers etc.

LINK WITH PROFESSIONAL BODIES

Course Graduates are eligible to register to the Cyprus Scientific and Technical Chamber (ETEK) either as Electrical Engineers or Electronic or both depending on the module.



S: SEMESTER / E: ECTS / YL: YEAR LONG

The University reserves the right to make amendments to programmes in order to improve the quality of learning content and outcomes.

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