

BEng (Hons) Electrical and Electronic Engineering

Electrical and Electronic Engineering / Faculty of Science and Engineering

Year 1 Modules

The preliminary year is designed to help you develop your English language skills so that you can make the most of your degree programme.

This special English language programme designed by the English for Academic Purposes experts at the University's Centre for English Language Education is carefully integrated with academic content modules so that you are prepared fully for years two to four of your degree programme.

Module Code	Module Title	Credits
CELEF008	Introduction to Academic Skills	10
CELEN038	The Scientific Method	10
CELEF005	Foundation Algebra	20
CELEN056	Electricity and Magnetism	10
CELEN057	Foundation Mechanics	10
CELEF003	Foundation Calculus	20
CELEF006	English for Specific Academic Purposes: Science and Engineering	10
CELEN040	Foundation Science B: Chemistry	15
CELEN058	Further Foundation Mechanics	15

Year 2 Modules

It is standard in most of our courses; this gives you the flexibility to transfer to other courses within the department once you have better knowledge of the different specialist areas. You will gain an understanding of the principles and practices on which all specialisms within electrical and electronic engineering are founded. This is achieved through the study of analogue and digital electronics, circuits and systems, computing, communications and the application of electrical energy. Practical and fault-finding skills are developed through laboratory and project work. Your appreciation of the aspects of science and mathematics, which underpin the subject, will also be enhanced.

Module Code	Module Title	Credits
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EEEE1044	Introduction to Software Engineering and Programming	10
EEEE1037	Engineering Mathematics	20
EEEE1036	Information and Systems	20
EEEE1035	Power and Energy	20
EEEE1039	Applied Electrical and Electronic Engineering: Construction Project	40
EEEE1045	Contemporary Engineering Themes A	10

Year 3 Modules

Also called part 1. You will continue to improve your understanding of electrical and electronic engineering, and your design skills will be developed through a variety of laboratory-based subjects. This will prepare you to study, in the final years of your course, emerging and advanced technologies usually taught by internationally recognised researchers. Group projects, presentations and seminars enable you to gain the skills and understanding essential for the workplace.

Module Code	Module Title	Credits
EEEE2068	Contemporary Engineering Themes B	10
EEEE2056	Electrical Energy Conditioning and Control	20
EEEE2057	Electronic Processing and Communications	20
EEEE2058	Modelling: Methods and Tools	20
EEEE2059	Practical Engineering Design Solutions and Project Development	40
EEEE2067	Design and Implementation of Engineering Software	10

Year 4 Modules

Also called part 2. In year four, you will be able to choose from a range of specialist topics, with the flexibility to maintain a broad base or focus on specific technologies. Your individual project forms a significant part of the final year. Working in an area of your choosing, you will develop design, analysis, construction and fault-finding skills. Many of these projects support research or development carried out within industry.

Compulsory Modules

Module Code	Module Title	Credits
EEEE3102	Analogue electronics	20

EEEE3056	Third Year Project	30
EEEE3101	Professional studies	10

Optional Modules

Module Code	Module Title	Credits
EEEE3103	Power electronic applications and control	20
EEEE3104	Electrical machines, drive systems and applications	20
EEEE3069	Digital Communications	10
EEEE3070	Embedded Computing	10
EEEE3076	Robotics, Dynamics and Control	10
EEEE3107	Advanced engineering mathematics	10
EEEE3106	Integrated circuits and systems	20
EEEE3109	Mobile technologies	10
EEEE3110	Sensing systems and signal processing	10
EEEE3108	Optical networks	10
EEEE3123	Renewable Generation Technologies	10