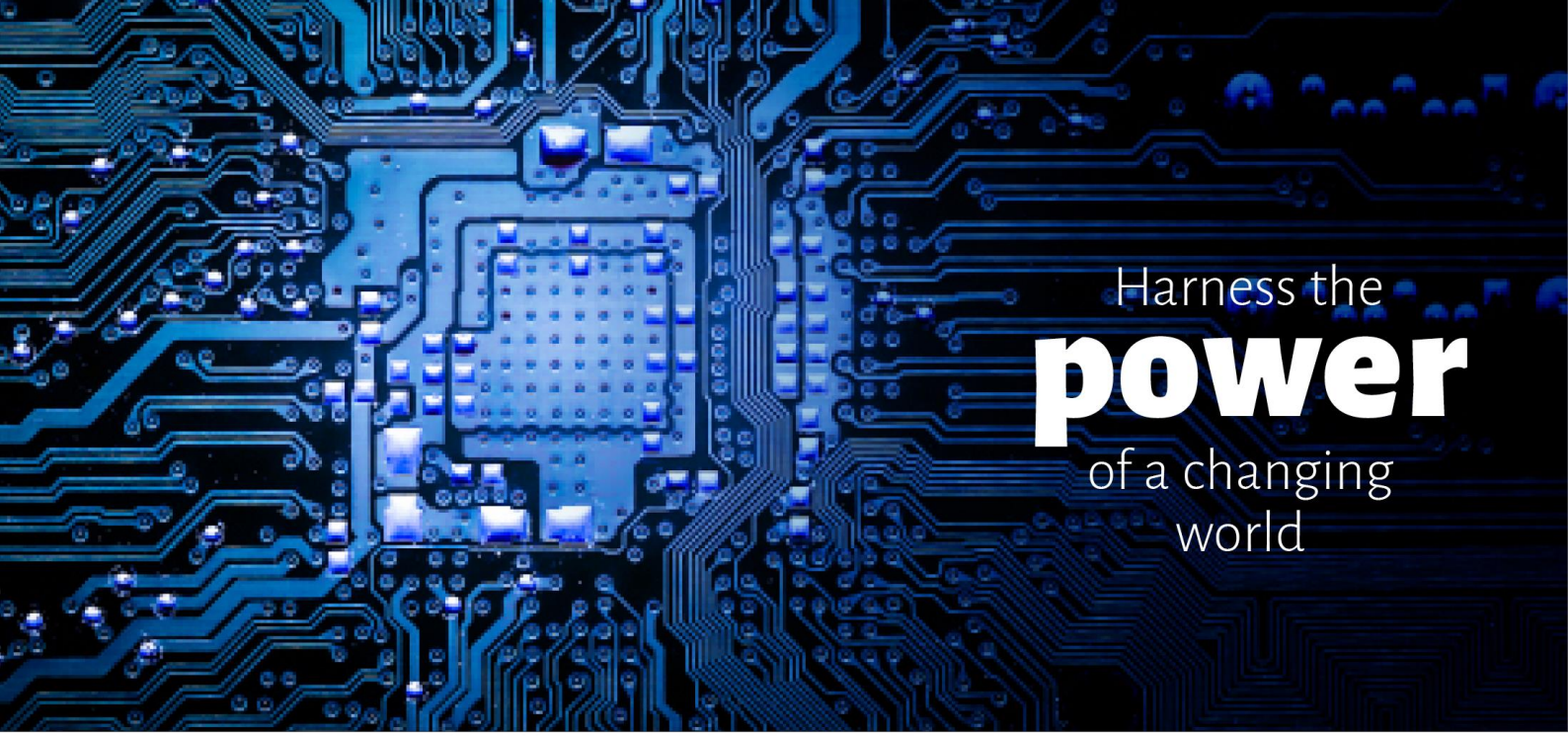

Bachelor of Engineering (Electrical and Electronic) (Honours)

Electrical and electronic engineers play a role in almost every aspect of modern life, from the circuits inside your smartphone to the energy systems that power our cities. This degree teaches you how to design, develop and maintain electrical and electronic systems of all shapes and sizes, and qualifies you to commence practice as a professional electrical and electronic engineer.

In this degree you will:

- Study the fundamentals of engineering, including applied maths, physics, statics and systems design
- Develop in-depth skills in electrical and electronic engineering theory, standards and practice
- Complete specialist courses in circuit design and analysis, electrical power systems (including renewable energy), robotics and automation, computer programming and more
- Understand the social, economic and environmental dimensions of engineering, and the importance of sustainable development
- Develop advanced problem solving, communication and project management skills

Exemption for first year Mathematics

Students who enter the program having achieved a 'Very High Achievement' in Maths C in secondary school may be eligible for an exemption for the courses **MTH103** Introduction to Applied Mathematics and **MTH104** Introductory Calculus. On application, and approval, to Student Services and Engagement, students may substitute two engineering-relevant courses in order to fulfil the requirements of the degree. Students are advised to consult with the program coordinator when selecting substitute courses.

Post-admission requirements

Students must complete 60 days of suitable engineering work experience.

Career opportunities

Electrical and electronic engineers work on the design, manufacture, testing and maintenance of electrical and electrical systems across a range of industries, including infrastructure construction, data communications, aviation, mining, power generation and transmission (including renewable energy and smart grids), automotive, automation, robotics and domestic appliances.

Membership

Engineering students are eligible for free membership to Engineers Australia. Once their degree is completed they are eligible for Graduate membership.

Accreditation

This program is currently undergoing provisional accreditation by Engineers Australia.

MORE INFORMATION

Contact the International Office
study@usc.edu.au
+61 7 5430 2843

usc.edu.au/sc404 | CRICOS code: 0100794

University of the Sunshine Coast | CRICOS Provider Number: 01595D | Correct as at 28 October 2021
Note: Study options and semester of offer can vary depending on the study location. For full details, visit usc.edu.au.

USC
Rise, and shine.

PROGRAM STRUCTURE

Introductory courses (8) 96 units

ENG101 Foundations of Engineering
ENG102 Engineering Statics
ENG103 Introduction to the Internet of Things
ENG104 Introduction to Engineering Design
MTH103 Introduction to Applied Mathematics
MTH104 Introductory Calculus
SCI107 Physics
SCI110 Science Research Methods

Developing courses (8) 96 units

ELC200 Digital Logic and Computer Programming
ELC201 Analog Electronic Circuits
ELC202 Electrical Circuits and Systems
ELC203 Power Systems
ELC204 Analogue and Digital Electrical Systems
ELC205 Control Systems
MTH201 Calculus II and Linear Algebra
MTH203 Numerical Analysis

Graduate courses (12) 144 units

ELC300 Electronic Design and Analysis
ELC301 Communications Engineering (Hardware and protocols)
ELC302 Digital Signal Processing
ELC303 Electronic Measurement and Instrumentation
ELC304 Embedded System Design
ELC400 Robotics and Autonomous Systems
ELC401 Advanced Digital Communications
ELC402 Power System Design and Analysis
ENG302 Engineering Project Management
ENG304 Engineering Research Methodology
ENG401 Engineering Project 1
ENG402 Engineering Project 2

Minor courses (4) 48 units

Students must select one of the following minor study areas:

- Civil Engineering (for Electrical and Electronic Engineers)
- Climate Change and Coastal Zone Studies
- Entrepreneurship
- Environmental Studies for Engineers^
- Management for Engineers^
- Mechanical Engineering (for Electrical and Electronic Engineers)
- Mechatronic Engineering (for Electrical and Electronic Engineers)
- Wider Engineering Studies

^Not available at Moreton Bay campus.

Honours

The Bachelor of Engineering (Electrical and Electronic) (Honours) may be awarded with a class of Honours to a student:

- with the percentage results achieved in twelve courses as specified in the table below; and
- achieving at least 65% in **ENG402** Engineering Research Project 2.

COURSES

MTH203 Numerical Analysis

ELC300 Electronic Design and Analysis

ELC301 Communications Engineering (Hardware and protocols)

ELC303 Electronic Measurement and Instrumentation

ENG302 Engineering Project Management

ELC302 Digital Signal Processing

ENG304 Engineering Research Methodology

ELC304 Embedded System Design

ENG401 Engineering Project 1

ENG402 Engineering Project 2

ELC401 Advanced Digital Communications

ELC402 Power System Design and Analysis

- The minimum levels of achievement normally required for each class of honours are shown in the following table:

HONOURS RESULTS CLASSIFICATION	OVERALL PERCENTAGE ATTAINED IN SPECIFIED COURSES*
Honours Class I	80% - 100%
Honours Class IIA	70% - 79%
Honours Class IIB	60% - 69%

*The percentage result shall be rounded up if ≥ 0.5 or rounded down if < 0.5.

Note: Program structures are subject to change. Not all USC courses are available on every USC campus.

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