Electrical and Electronic Engineering
Undergraduate study
Why study electrical and electronic engineering at Bristol?

Do you think green energy and transport are important? Did you know that electronic engineers develop life-saving medical instrumentation? Do you believe the internet and the growth of mobile communications have had a huge effect on society? Do you believe future cities will be smart with self-driving cars on the road? If you have answered ‘yes’ to any of these questions, you have already understood the impact electrical and electronic engineering has on our lives.

In fields as diverse as mechanical and aerospace engineering, power generation, transport, healthcare, quantum information, computing, artificial intelligence, cryptography and communications, electrical and electronic engineers are busy developing the technologies that will shape our future. This is why electrical and electronic engineering is one of the broadest of the engineering disciplines you could choose to study in terms of the range of career possibilities it offers.

Links with local industry help to make the University of Bristol an excellent place to study electrical and electronic engineering. Renewable energies and smart grids are two of the fastest growing UK sectors, with the world’s largest number of renewable energy related small and medium enterprises based in this region. Bristol is also home to Europe’s largest cluster of microelectronics industries, the UK’s biggest aerospace companies and a thriving creative media industry.

Our continuing investment in facilities forms part of the exceptional student experience at Bristol. The Engineering Growth Project is a £14 million investment that will equip the Faculty of Engineering well into the 21st century. From autumn 2017 this major expansion of our facilities will include state-of-the-art equipment and large, flexible teaching, design, study and workshops spaces, enabling interactive teaching and learning for our students. Our new atrium will act as a social learning and meeting place and there are future plans for a new cafe and bookable project and study rooms.

‘These new facilities will be transformative for students, academic colleagues, research students and staff. They will increase our capability to teach, collaborate and develop for the coming years.’

Professor Andrew Nix
Dean of the Faculty of Engineering

‘The University is prestigious, both in the UK and internationally, and its electrical and electronic engineering degrees are accredited by IET. Being part of the Russell Group, Bristol is committed to excellence in both its teaching and research.’

YangYang Chen (MEng Electrical and Electronic Engineering)
Our subject consists of several themes. Electrical engineering is concerned with the 'power' aspect of electricity, including topics such as renewable energy or high-performance electric drives for green vehicles. Electronic engineering uses electricity to convey signals, as in medical equipment, music systems or computers.

Communications is a branch of electronic engineering that covers the transmission of data, sound and images – possibly over long distances and in hostile conditions, or even just between a Wi-Fi router and your phone.

The normal route to becoming a chartered engineer is through our four-year MEng degrees, but we also offer three-year BEng degrees. The MEng provides more breadth and depth than the BEng and you take a major group project as well as your individual research project. We offer both three- and four-year courses in the broader electrical and electronic degree. All these courses are common for the first two years, so you can transfer between them until the start of the third year. By that stage you will know which areas of the subject particularly interest you.

The first laboratory sessions in year one ensure that you understand the basic concepts. Often, they will be delivered in conjunction with the Dynamic Laboratory Manuals, providing online resources to allow you to explore the laboratory activity online before you go into the lab.

From the middle of year one onwards you will be encouraged to start designing hardware and software solutions in collaboration with your laboratory partners. The project in year three of the MEng degrees will teach you about the challenges of team working as well as technical issues. Much of your final year will be spent on your individual project. Although we will suggest a wide range of possible project titles, you will be free to come up with your own idea.

If you would like to take part of your studies outside the UK, you should consider the MEng ‘with Study Abroad’ and the MEng ‘with Study in Continental Europe’. These involve spending your third year at an overseas institution studying in English or in a foreign language respectively. Destinations include France, Germany, Spain, the USA and Australia.

The MEng Electrical and Electronic Engineering with Innovation combines in-depth subject specialism in electrical and electronic engineering with interdisciplinary breadth, creative teamwork and entrepreneurial skills. You will study electrical and electronic engineering to gain a solid discipline strength while alongside this, applying your subject knowledge to innovate and translate your ideas into plans for digital and creative enterprises.

In conjunction with the Department of Computer Science we offer a Joint Honours BEng in Computer Science and Electronics. You can also choose a four-year MEng course, which incorporates an industry-based project as part of your third year.

In conjunction with the Department of Mechanical Engineering, we offer Joint Honours BEng/MEng Mechanical and Electrical Engineering. This degree enables students to work in a wide range of industries working at the interface of both disciplines. You could be designing the electric cars of the future, working on future electric aircraft, or working in sustainable energy businesses – just three examples of what is possible.

You will have an average of 20 to 25 timetabled hours per week in term time. Typically, half that time will be spent in lectures and the remainder on laboratory work, where you can try out what you have learnt in the lectures. Engineering is a creative subject and we try to reflect that in the curriculum. As you progress through your degree you will find that practical activities give you increasing freedom to make your own design decisions.

Throughout your degree you will be given feedback on your performance to help you improve. Your degree result will be based on a mixture of coursework marks and examination marks.

100 per cent of MEng Electrical and Electronic Engineering graduate are in work or further study six months after graduation.

Destinations of Leavers from Higher Education survey 2016.
Our graduates are highly sought after and find employment in a number of industries: broadcast, mobile and optical communications; alternative and green energy; integrated circuit design; medical engineering; avionics; consumer electronics and computer networking, to name but a few. Some of our graduates go into research while others pursue careers outside engineering.

As well as the support offered by the University’s Careers Service, our engineering students benefit from a dedicated Industrial Liaison Office, which develops engineering-specific industrial links for students.

Careers and graduate destinations

As an engineering student at Bristol, you will benefit from an outstanding range of activities designed to enhance your employability. These include our Inside Track lecture series, where industry insiders offer firsthand insight into the engineering industry. Our Industrial Mentoring and internships schemes provide opportunities to gain valuable experience and make important connections, and our regular newsletter highlights further opportunities and industry events. See our website for more information: bristol.ac.uk/engineering/ilo.

Making your application

Typical offer for BEng Electrical and Electronic Engineering*

Visit bristol.ac.uk/ug18-eleceng for Joint Honours and other qualifications.

A-levels AAA (contextual ABB†) including A in Mathematics, or A*AB including A in Mathematics.

IB Diploma 36 points overall (contextual 32!) with 18 at Higher Level (contextual 16!), including 6 at Higher Level in Mathematics.

English language Profile E††

GCSEs Mathematics and English at grade C or above.

†For information on contextual offers, visit bristol.ac.uk/ug-apply/#typical-contextual-offers.

††For details of English language profiles, visit bristol.ac.uk/ug-language-requirements.

Selection UCAS or Common Application.

Deferred entry Welcomed.

*The typical offer is indicative only and the University accepts a wide range of qualifications. The information is correct at the time of printing (June 2017); however, we recommend you check the University’s website for the most up-to-date information: bristol.ac.uk/ug-study.

The University of Bristol has one of the best employment records in the UK. We are rated sixth in the UK in the QS Graduate Employability Rankings 2016/17 and are the third most targeted university by top UK employers (High Fliers Research, 2017).
Contact us

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If you have any questions about courses, applications or any aspect of being a UK or international student at Bristol please contact the Enquiries Team.

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University guide to the city of Bristol  
bristol.ac.uk/citybristol

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