Imperial College London
Department of Electrical and Electronic Engineering

Undergraduate degree courses in
ELECTRICAL AND ELECTRONIC ENGINEERING
ELECTRONIC AND INFORMATION ENGINEERING

Your journey starts here
WE ARE WORLD LEADERS

The Department of Electrical and Electronic Engineering at Imperial College London is among the very best in the world.

The latest QS World University Rankings (2019) places us 7th worldwide, and 2nd in the UK for Electrical and Electronic Engineering.

WE ARE INNOVATORS

The world is changing fast, and a 21st century engineering education needs to prepare our graduates for careers that may not even exist yet.

Research-led education
You’ll learn from an inspiring community of staff across their specialist disciplines – with projects inspired by their current research in electronics, electrical energy, computers and software engineering, control systems, communications, image processing, robotics, artificial intelligence and more.

Active learning
We’re making our teaching more interactive, more challenging, and more supportive. Pre-class homework means more time for learning activities in class such as problem-solving; and with faster feedback we can adapt our study classes to students’ needs.

WE ARE THE FUTURE

As electrical and electronic engineers, we are at the forefront of the global challenges to connect our world; to design more efficient and affordable technology; to build robust infrastructures and green energy networks; and to help us live better, healthier, smarter and more sustainably.

PERSONAL SHOPPER
Together with Waitrose & Partners, we are launching a clinical trial which aims to help people choose food which is compatible with their DNA and metabolism.

OUT OF THIS WORLD
Professor Tom Mike and his team have designed and fabricated silicon sensors on CMOS in-sight timely to detect irons below the Martian surface, and help build a picture of the planet’s interior structure.

HELPING HANDS
We use machine learning, computer vision and adaptive collaborative control to personalise the assistance that robots provide in healthcare and manufacturing environments.

WIRELESS MOUSE
Professor Esther Rodriguez-Villegas has developed an award-winning, ultra-lightweight wireless sensor system for recording brain activity in mice, recognised as a significant advance in laboratory animal welfare.

THE NEXT GENERATION
Our new ABB Digital Energy Demonstrator will help students design the low-carbon energy networks of the future.
CREATE YOUR COURSE

Electrical and Electronic Engineering is a broad field with a wide range of opportunities and specialisms. Our degrees are structured to help you choose a route to suit your developing skills and interests, with pathways that include advanced software and computer systems skills, or a combination of technical and management modules, and selected modules from other departments including entrepreneurship and languages.

Electrical and Electronic Engineering (EEE) or Electronic and Information Engineering (EIE)?

Our EEE degrees cover the entire spectrum of subjects from nano-devices in integrated circuits for signal processing to high power electronics for renewable energy within a smart power transmission grid. The EIE degree combines modules from electronic engineering, computer science, and information engineering, and teaches you to use software and hardware to design complex information processing systems, such as unmanned vehicles or robotic health-assistants.

The first year programme is shared, so you can make your final decision between the two streams at the end of year 1.

MEng EEE with Management

EEE students can specialise further via the EEE with Management degree: a programme of business modules combined with EEE subjects. Study time is split 50-50 between technical and business modules in years 3 and 4. You’ll study topics such as accounting, corporate finance and economics, delivered by Imperial College Business School.

MEng EEE or EIE with a Year Abroad

On the MEng stream, you can choose to spend your final year at one of our partner universities in Europe, Singapore or the USA. There’s no need to decide now, you can find out more when you are here.

OUR DEGREES GIVE YOU...

Theoretical knowledge: a thorough understanding of the fundamentals of electronics and mathematics.

A practical and professional engineering toolkit: hands-on lab work, hardware and software training, and projects reflective of real-world industry to develop your leadership, management, communication and presentation skills.

Cultural perspective: as future global problem-solvers, our graduates will be able to understand engineering challenges from multiple perspectives, and work effectively in multi-cultural and international teams.

BECOMING AN ENGINEER

Our degrees emphasise the skills and knowledge needed for a 21st century graduate engineer. You’ll apply them to increasingly ambitious project work, ultimately showcasing your imagination, creativity and independent engineering expertise in a substantial final year project of your choice.

FIRST YEAR

A shared first year programme gives you the solid grounding in the skills and theory you’ll need.

SECOND YEAR

All students follow a core programme tailored to either the EEE or the EIE degree.

THIRD YEAR

You’ll choose from a range of optional modules, and MEng students will undertake a 6-month paid industrial placement, or a group project. BEng students will take their final year individual project.

FOURTH YEAR

Design your own programme from around 45 specialist modules, and take on a major Individual project.

GAME ON

First year EIE project from initial design to prototype. Developing this game combines software and hardware engineering, together with signal processing and computer vision.

CAREER FOCUSED

Eugenie spent her 6-month industry placement with STMicrowaveelectronics in France.

A placement is an opportunity to explore your career choices and apply what you’ve learned to real-world problems. I have gained very specialist knowledge of the semiconductor industry, and experienced both the engineering and management sides of working life.

SMART HARDWERK

Third year embedded systems module. Real time monitoring of temperature and diagnostic aims to maximise collection for your hair.

Second year group project: this drone can be remotely controlled by medics to fly to the scene of an incident and apply a wound-sealing gel.
"EEE is integrated into almost everything — from medicine, to finance, to energy cars. The thing I really like about electronics is that there is so much creativity involved in its application — you can really make an impact."

**SVEN - MEng EEE**

"I wanted to come to Imperial as it’s so renowned for its diversity. Meeting friends from all over the world and studying with people from different backgrounds is a lot of fun."

One of the best things is the focus on practical teaching. I did my industrial placement with Mercedes-Benz Formula E Team and got the opportunity to work on cutting-edge technology designing new hardware boards and programming software to optimise the Formula E car. It was great to have the opportunity to apply the things we learnt on the course so soon, and learn from experienced engineers.

As a result of the placement, I was offered a final-year project by Mercedes, and I also have a job with them after graduation.

I did so much in the first year, I loved everything! I did a lot of football, I was heavily involved in the German and Swiss Societies. In my first two years, I was also really involved with Equinox — a student-led society with students from different departments working on technical solutions to help people without access to electricity in Rwanda."

**SIMONE - MEng EEE with Management**

"I always wanted to study engineering, but I didn’t know which area. I saw that electrical engineering was very good at Imperial, it’s a broad path, and I like electronics and innovation.

I received a Power Academy Scholarship and did a summer placement with Scottish and Southern Energy. Until you get into the industry you don’t really know anything, I learned a lot about the stakeholders and the organisation — I found it really useful discovering the bigger picture.

I’m a member of the basketball society, I always advise applicants to join the societies as they will be a big part of their lives.

You have to put a lot of work in, but don’t get overwhelmed by the pressure of having to be the best in the class, try to make the most out of it not just academically, and especially if you come from abroad, enjoy learning to live in this big new city."

**AFTER GRADUATION**

Our graduates are highly sought after worldwide for a wide range of careers in fields such as electrical energy, circuit design, computer gaming, telecommunications, software development, image processing, technical consultancy, finance and academic research.

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**FROM STUDENT PROJECT TO GLOBAL SUCCESS**

**BBOXX** — founded by three of our former undergraduates — designs, manufactures, distributes and finances Innovative plug and play solar powered systems to improve access to energy across the developing world. More than 150,000 BBOXX products have been sold in over 35 countries, improving the lives of more than 675,000 people.

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**CONNECT WITH US**

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