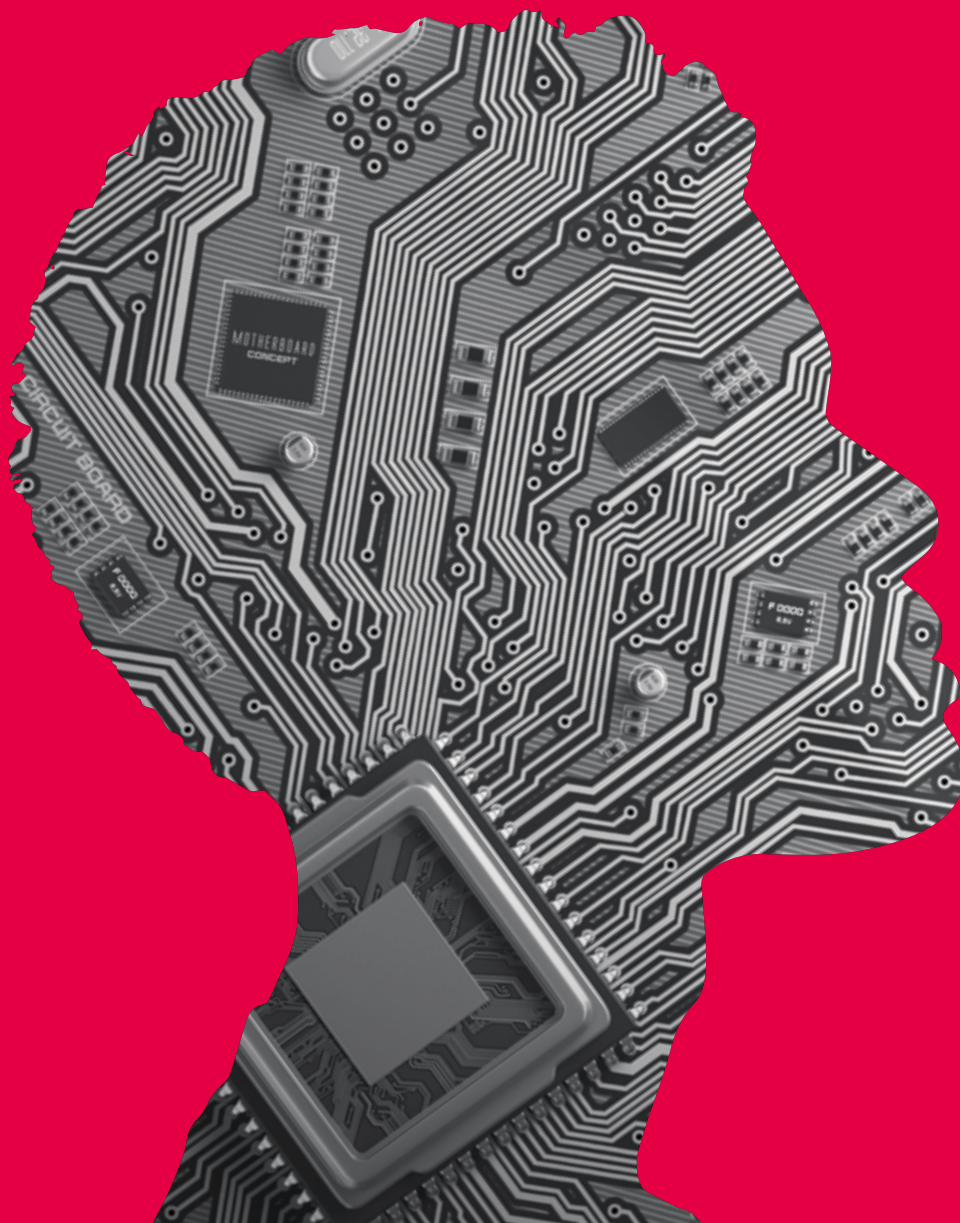


Imperial College
London



MAKE YOUR CONNECTION

START YOUR JOURNEY WITH THE
DEPARTMENT OF ELECTRICAL
AND ELECTRONIC ENGINEERING

Undergraduate degree courses in
Electrical and Electronic Engineering (EEE)
Electronic and Information Engineering (EIE)

THE  TIMES
THE SUNDAY TIMES

**GOOD
UNIVERSITY
GUIDE
2022**

**UNIVERSITY
OF THE
YEAR**

THE  TIMES
THE SUNDAY TIMES

**GOOD
UNIVERSITY
GUIDE
2022**

**UNIVERSITY
OF THE YEAR
FOR STUDENT
EXPERIENCE**

CREATE YOUR COURSE



GO YOUR OWN WAY

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

YEAR ONE

A common first year programme gives you the solid grounding in the skills and theory you'll need whichever route you choose next.

YEAR TWO

Your second year brings in the focus to 'electrical engineering' or 'information engineering' with a programme of modules specially tailored to your choice of degree course.

YEAR THREE

You'll choose from a range of optional modules to build your programme further. MEng students will also take a six-month paid industrial placement, or an industry-based group project. BEng students will take their final year individual project.

YEAR FOUR

Create your own programme from around 30 to 40 advanced specialist modules, and take on a major individual project.

YOU'RE READY TO FLY

Our degrees recognise the skills and knowledge you need for a 21st century engineering career. You'll apply them to increasingly ambitious project work throughout the course, ultimately showcasing your imagination, creativity and independent engineering expertise in a substantial final year project of your choice.



GAME ON

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

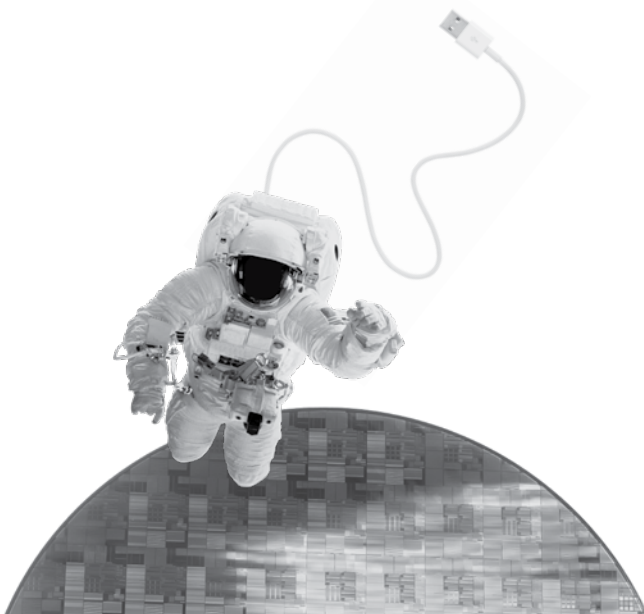
DRONE ZONE

This second year project is a drone that can be remotely controlled by medics to fly to the scene of an accident and apply wound-sealing gel.

SMART HAIRDRYER

Third year embedded systems module. Real-time monitoring of temperature and distance aims to maximise protection for your hair.

Front cover: **Silhouette** –
Karl, Electronic and Information Engineering (UK)



EXPLORE YOUR OPTIONS

Electrical and electronic engineers are at the forefront of the global challenges to connect our world, to design more efficient and affordable technology, to build secure and robust infrastructures and zero-carbon energy networks.

Join our community of talented engineers helping us live better, healthier, smarter and more sustainably.

ELECTRICAL AND ELECTRONIC ENGINEERING (EEE) 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 renewable energy systems in a smart power transmission grid. The EIE degree combines modules from electronic engineering with computer science and information engineering.

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

MEng EEE WITH MANAGEMENT

Enterprising EEE students can take the option to specialise further with this degree, which is a programme of business modules combined with EEE subjects. Study time is split 50:50 between technical and business modules in years three and four. 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

For an extra international perspective, eligible students can choose to spend their fourth 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.

INDUSTRY READY

Our third-year industrial placement option gives you the opportunity to spend six months in industry and experience engineering in action, or to be part of a group project working on a design challenge proposed by an industrial client.

SAY HELLO TO WALDO

A friendly elephant contains a camera that recognises Makaton – a sign-language enabling adults and children to communicate – and can translate commands into speech for carers and assistants. The pads of its feet are buttons that can be programmed with longer messages to help the user.



CLIMATE CULTURE

An immersive Italian language learning project developed with IBM lets users explore the city of Venice – without the negative environmental impact of travelling.



1 16 2 3 4 5 6 10 7 8 9 10 11

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

RESEARCH LED, **STUDENT FOCUSED**

Imperial College London is a research powerhouse, and ranks top in the UK overall in the most recent Research Excellence Framework, with a greater proportion of world-leading research than any other UK university.

ENTERPRISE, INNOVATORS, PIONEERS

You'll learn from an inspiring community of staff across their subject disciplines — with projects and coursework drawn from their current research in electronics, electrical energy, computers and software engineering, communications, robotics, image processing, control systems, artificial intelligence and more.

- We're designing 'lab-on-a-chip' technology providing rapid testing for Covid-19, and early detection of malaria.
- We joined up with the National Gallery to help visualise Leonardo da Vinci's hidden drawings under the surface of his paintings.
- We've engineered technology which has produced oxygen on Mars, a key step to help humans make future expeditions.
- We created non-invasive wearable electronic devices for the diagnosis and management of chronic respiratory conditions, such as sleep apnoea, COPD and asthma.
- We're developing highly efficient wireless-powered charging pads for electric vehicles to help our cities reduce environmental pollution and make effective use of public space.
- We use machine learning, computer vision and adaptive control to personalise the assistance that robots can provide in healthcare and manufacturing.

ACTIVE LEARNING

Teaching is becoming 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.

SUPPORT FOR YOUR LEARNING

Never be afraid to ask us questions. In fact, we love it when you do!

Our undergraduate programmes are designed to challenge even the top A* students, but a supportive learning environment aims to help you stay on track.

“My favourite project? A flap-your-hands live version of Flappy Bird we built for our first-year group project. We had to come up with many of the technical and UX ideas which was cool. The course develops you as an engineer because the open-ended nature of the deliverables forces you to find and put together different resources effectively. Being resourceful is key for an engineer!”

Jaafar

“It is tough, but you can get through it. There are a lot of difficult things to get your head around but they are pretty cool topics which actually makes it pretty fun. All your class-mates will be in the same boat and it's a great feeling when you come together to try and solve a problem.”

Rishil

“One of the best things is the focus on practical teaching. I did my industrial placement with Mercedes Petronas and got the opportunity to design new hardware boards and programming software to optimise the Formula 1 car. It was great to apply the things we learned on the course so soon, and learn from experienced engineers.”

Sven



HANDS-ON

A focus on practical lab work helps students get to grips with the theory.

THE STUDENT VIEW: **WHY SHOULD YOU CHOOSE IMPERIAL**

PRIYA

Although I liked the sound of engineering in general, I chose to study EEE because I wanted to understand the everyday devices we use, and what the future of technology could look like.

The EEE degree course went deeper than I realised, and I've loved exploring the various facets of it – whether its electronics projects in first year that emphasised how easy it is for anyone to create new things, or my optional modules in Biomedical Electronics and Sustainable Energy in years three and four. It's been super cool to learn about so many applications of engineering that are often at the cutting edge of innovation.

Outside of EEE, Imperial is such a unique place, so I'd encourage everyone to just get stuck in and maximise the opportunities you get!



UMUT

As a teenager, I used to spend my weekends repairing and disassembling faulty electronics – hi-fi systems, tape players, game consoles bought from local car boot sales. I wanted to be able to look at a circuit and understand how it operated, and knew that I would like to study something to do with circuit design and electronics.

I went to a summer school in the EEE department, and some public lectures including one by Professor Lucyszyn on Infrared Communication. It was clear that Imperial is at the forefront in research, and this feeds right back into the undergraduate lectures.

What I love about EEE is the flexibility and variety of courses to choose from. I chose to specialise in Analogue Circuit Design, but I also took modules in Digital Image Processing! The option to do a six-month placement is a great way to gain exposure to industry – I spent an immensely useful time at the chip company MediaTek.

I am now in my final year working on a major analogue design project on RF power amplifiers. The supporting modules have been amazing – I highly recommend Full Custom IC Design and Instrumentation in the fourth year!

“I was thinking: What skills do I need to become the female Iron Man? The course encompasses everything you need to build something cool, and that's what I was looking for.”

Mwana

“I always enjoyed science and the arts, so engineering seemed a good fusion: I liked creating physical things. I chose this course because of the opportunity to do both hardware and software which isn't that common in university degrees.”

Helen

“When I applied I was not particularly sure about what career I wanted, but I knew that I enjoyed solving complex maths problems for real-life scenarios.

“The most important thing is that you have a passion for problem solving and also a creative mindset.”

Arijit

FACTS AT YOUR FINGERTIPS

A WORLD-CLASS RESEARCH ENVIRONMENT.

Imperial is the top ranked research university in the UK, according to the Research Excellence Framework (REF).

A PRACTICAL AND PROFESSIONAL ENGINEERING TOOLKIT.

Hands-on lab work, hardware and software training, projects that reflect real world industry to develop your leadership, management and presentation skills.

AN INTEGRATED SIX-MONTH PLACEMENT OPTION.

Give your CV a head-start as part of your four-year course.

A CULTURAL PERSPECTIVE.

As future global problem solvers, our graduates understand engineering challenges from multiple perspectives, and work in diverse and international teams.

ENHANCE YOUR OPTIONS.

Combine your technical studies with business modules or a year's study overseas.

CAN WE HELP YOU?

[www.imperial.ac.uk/
electricalengineering](http://www.imperial.ac.uk/electricalengineering)

Email: admit.eee@imperial.ac.uk

 @imperialeee

 @imperialeee

 @imperial_eee

OUR COURSES 2023 ENTRY

Expected intake **170**
Applications: places **10:1**
Admission test will be introduced
for 2023 entry

imperial.ac.uk/study/ug

UCAS code

Length (years)

ELECTRICAL AND ELECTRONIC ENGINEERING

BEng Electrical and Electronic Engineering	H600	3
MEng Electrical and Electronic Engineering	H604	4
MEng Electrical and Electronic Engineering with a Year Abroad	---	4
MEng Electrical and Electronic Engineering with Management	H6N2	4
BEng Electronic and Information Engineering	HG65	3
MEng Electronic and Information Engineering	GH56	4
MEng Electronic and Information Engineering with a Year Abroad	---	4

--- Direct application not possible; apply to core course through UCAS.

A-LEVELS

Minimum entry standard

Typical offer

A*A*A or A*AAA:
A* in Mathematics
A*/A in Physics
A in a third subject

A*AA to A*A*A

INTERNATIONAL BACCALAUREATE

Minimum entry standard

Typical offer

40 points overall, including:
7 in Mathematics (Mathematics Analysis and Approaches syllabus preferred.)
7 in Physics

38–40 points

Our courses are accredited by the Institution of Engineering and Technology (IET)

