

FOR FUTURE ENGINEERS

UNDERGRADUATE
PROSPECTUS
22/23

TEDI LONDON
The Engineering
& Design Institute

Engineered by:

- Arizona State University
- King's College London
- UNSW Sydney



“From day one you start doing hands-on projects. You have the community feel of learning together with supportive tutors at hand. The mix of hands-on and online learning gives you a great building block of understanding engineering as a whole, and in the Makerspaces you’ve got everything at your disposal to bring projects to life.”

Rozanne Goonewardene
BEng Global Design Engineering student

THE ENGINEERING & DESIGN INSTITUTE LONDON: TEDI-LONDON

TEDI LONDON
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& Design Institute



FOR THE ENGINEERS OF THE FUTURE

“Welcome to TEDI-London. We believe it’s time to rethink engineering education. Not just to improve engineers’ futures, but to make life better for everyone. When we opened our doors in September 2021, we began training the engineers of the future; people with the ingenuity and enterprise to use engineering to leave the world a better, fairer place.”

Professor Judy Raper
Dean and CEO
TEDI-London

A NEW TYPE OF ENGINEER

Tomorrow's challenges won't be solved by yesterday's thinking. The great issues of the 21st Century will be answered by a new type of engineer. Globally focused, socially aware and from diverse backgrounds, the engineers of the future will work together to solve problems and improve lives. TEDI-London will train and inspire these engineers.

If you've these qualities and share our values of **inclusiveness, courage, inspiration, collaboration and integrity**, you'll find this is an engineering degree like no other.

Founding the future

TEDI-London is the brainchild of three leading names in global engineering education. Arizona State University, King's College London and UNSW Sydney were already working together to tackle global problems as part of the PLuS Alliance when they saw need for more diverse, creative-thinking engineering students. TEDI-London was the answer.

These founders have given TEDI-London the best possible start in life. Dating back to 1828, King's College London is one of the top 50 universities in the world. Arizona State University gets ranked ahead of MIT and Stanford for innovation in education. Indeed, it's a world leader in advancing the UN's sustainability goals around poverty, clean water, energy and gender equality. And UNSW Sydney is a top 50 global university with the world's No.1 engineering faculty according to the QS Rankings.

Why are our students unique?

From different backgrounds and with diverse experiences, our engineers all look at familiar problems in fresh ways and all want to make a difference.

As such, you could have studied any subject and come from any academic background. What we look for in every application is a combination of Attitude, Aptitude and Ability. It's about more than technical brilliance. It's also about your initiative and what motivates you.

Many of our projects support the UN's Sustainable Development Goals: good health and well-being, affordable and clean energy, climate action and sustainable communities. Sharing these values makes our students different, too.

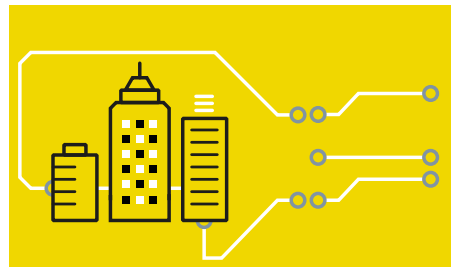
"You should consider TEDI-London if you are passionate and curious about engineering. TEDI-London naturally motivates you to explore topics that you normally would not have encountered, and the learning experience will push you further than you ever thought you could go!"

Sebastian Leonties
BEng Global Design Engineering student



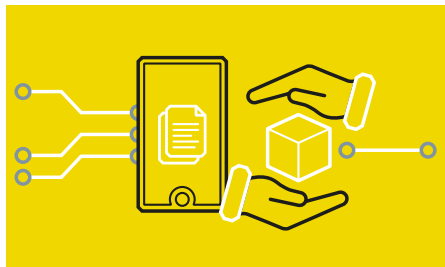
WHAT MAKES TEDI-LONDON DIFFERENT?

We're pushing the boundaries of engineering education. Forget the traditional idea of listening to lectures. Our engineering students learn by doing and exploring – by working together to solve problems and building their skills through workshops, masterclasses and digital sessions designed around them.



Making is the difference

At the heart of our engineering courses are real-world challenges, co-designed by industry leaders. These cover today's hottest topics. Think smart cities, robotics and sustainability. You'll build your engineering knowledge, business know-how and team skills by solving these problems. On each project, you'll gain the satisfaction of applying engineering thinking to make something that moves the world on. That's an unforgettable feeling.



Supported by experts from across engineering disciplines

You will learn from a diverse mix of academic and industry experts. The TEDI-London Teaching and Learning team comprise Chartered Engineers from the Institution of Engineering and Technology (IET), The Institution of Engineering Designers (IED), The Institution of Mechanical Engineers (IMechE), The Institution of Civil Engineering (ICE), The Chartered Institution of Building Services Engineers (CIBSE) and The Institution of Chemical Engineers (IChemE). TEDI-London is an affiliate organisation of the IET so, upon enrolment, you can begin your journey to Chartered Engineer from day one.



A new approach to admissions

Traditionally, students need A-level Maths or Physics to study an engineering degree. We're rethinking all the traditions in engineering education, including that one. We look beyond academic qualifications, recognising that it takes many qualities to make a good engineering student and that people study at different points in their lives. That's why all our offers are made after interviews and assessments.

OUR COURSES AT A GLANCE

DEGREE QUALIFICATION

- Bachelor of Engineering (BEng) with Honours
- Integrated Master of Engineering (MEng) with Honours

LEARNING MODE

- On campus

COURSE DURATION

- 3 years (BEng)
- 4 years (MEng)

STUDY TYPE

- Full-time – with one intake in September every year
- The course will be taught in three 10-week blocks
- In the first block there is a study skills week in your first year and an employability week in second year

LOCATION

- TEDI-London campus
Canada Water, London, UK

TUITION FEES*

- Home students: £9000 per year
- International students: £28,050 per year

COURSE CONTENT

You'll complete all the following modules:

YEAR ONE

- Introduction to Engineering Design
- Reverse Engineering for Design
- Prototyping
- Modelling and Simulation in Engineering
- Designing for Smart Cities 1
- Applied Professional Skills and Portfolio

YEAR TWO

- Design for Manufacture
- User-Centred Product Design
- The Living Lab
- Ecological Design
- Designing for Smart Cities 2
- Advanced Professional Skills and Portfolio

YEAR THREE

- Design for Advanced Manufacturing
- Innovation & Entrepreneurship in Design
- Professional and Personal Portfolio
- Global Design Engineering Individual Project

YEAR FOUR (MENG)

- User-Centred Global Design
- Professional and Personal Portfolio
- Engineering Design Master's Project

PUTTING PROJECTS IN THE SPOTLIGHT

All the projects you'll tackle in our Makerspaces throughout your studies will begin with real-life problems.



Our Makerspaces bring together ideas from science labs, machine workshops, art studios and community space to create an environment where students can experiment and learn imaginatively and safely.

Makerspaces are split between 'fabrication' and 'mechatronics.'

Fabrication includes both making things – prototyping, modelling – and breaking things – taking products apart to see how they work and then designing them better!

Our equipment includes manual (milling machines, drills, lathes) and computer-controlled production (CNC mills, 3D printers, laser cutters) as well as a universal testing machine for exploring the properties of materials and structures.

For mechatronics work, we have multi-meters, oscilloscopes, spectrum analyzers, soldering irons and development boards with a variety of microcontrollers, components and peripherals. This means you will be able to diagnose, fault-find, build sensors and control systems, programme actuators, robots and more.

This is all to develop the key skills you will need to be a Design Engineer:

- **Creative problem solving:** All TEDI-London projects, devised with industrial partners, involve reverse engineering, fault finding, prototyping and user-centred design. You will be actively solving problems from day one – just like in the workplace.
- **Ability to cope with setbacks and learning to learn:** Prototyping is a crucial part of learning how and why designs can fail. Our Makerspaces allow small-scale, low-cost versions to be tested and improved iteratively. The larger machines allow design to be taken beyond the prototyping stage but take practice, patience, mistakes and knowledge to use successfully.
- **Taking individual responsibility and operating safely together in a work-type setting:** Makerspaces are deliberately designed to show students how employers and employees work in the face of real industrial, construction and commercial risks.

WORKING WITH INDUSTRY

There are no 'ivory towers' at TEDI-London. We're shaped by the real world. As well as tackling 'live' projects, you'll learn from industry mentors with years of practical engineering experience. They'll work with our tutors to help you develop.

This means our engineers gain experience of working with multiple employers. So you'll build up a broad portfolio of real-world projects, which you can discuss at interviews. It will make standing out in the job market that much easier.

As well as gaining broad sector experience, you'll have the opportunity to complete a placement in a semester of your final year. Here, you could spend time on site with an industry partner helping them with a key challenge.



HOW WE'LL ASSESS YOUR APPLICATION

The following criteria is intended as a guide to help you gauge if TEDI-London is for you:

- If studying A Levels, IB, BTEC (or any post 16 education) you'll be on track for approximately 120 UCAS points or equivalent
- If studying A Level Maths qualification (or equivalent) you should be on track to achieve a grade C
- If you're not studying a Maths A Level (or equivalent) you will need to pass an online numeracy test
- You will need to pass our Assessment Centre task and interview

Are you an international student?

Have a look at our international entry requirements online: tedi-london.ac.uk/international-entry

If you are unsure you've got what you need to study here, please contact admissions@tedi-london.ac.uk. An admissions advisor will be able to answer all your questions. We particularly welcome applications from people in groups underrepresented on university programmes and/or in engineering, including mature applicants.



FRESH THINKING AT CANADA WATER

Canada Water is a special place

With a wildlife reserve and freshwater lake, the Rotherhithe neighbourhood has long had its own Docklands character. Yet it's only two stops from famous London Bridge and all the sights and sounds of one of the world's greatest cities: London. As a place to study in the Capital, there will be nowhere quite like it.

A purpose-built campus, purposefully different

The TEDI-London Campus will become one of the area's landmarks. It combines sustainable development with a unique modular design. It houses three makerspaces for students: places to come together to conceive, create and collaborate. From small prototyping and 3D printing through to large-scale equipment, you'll have everything you need to develop your ideas and grow your skills.

Meanwhile, the remaining spaces are for the other sides of student life. There's a double height cafeteria, event and exhibition space, conference and teaching rooms, plus places to socialise, worship, or reflect. All of which are skirted with outdoor terraces with striking views over the local area.



STUDENT LIFE AT TEDI- LONDON

Getting to the campus is straightforward

If you're cycling, there's an outdoor store for your bike, plus showers, lockers and changing rooms. And with Canada Water station less than 10 minutes' walk away, travelling from anywhere in London is simple. Equally, when it's time to relax, the city's bright lights are within easy reach.

Living and learning

At TEDI-London, we don't have our own accommodation. But the campus's excellent travel links mean you don't have to live locally and can look further afield. We also have strong relationships with well-respected providers of student accommodation. So we'll be able to help, whether you are looking for a room in halls, private student housing, a flat or house share. Our site has details of these providers and our Student Hub team can give you more advice on your choices: studenthub@tedi-london.ac.uk

London's largest student community

We know student life isn't just about your course. That's why we've arranged for the Students' Union at King's College London (KCLSU) to offer our students associate membership. This means you'll be able to join one of the biggest student communities in London. As such, you'll be able to join a wide range of over 300 KCLSU clubs and societies: for sports, hobbies, and networking. Plus, you'll have access to their study and social spaces, bars, cafes and information services (hubs).

GETTING THE RIGHT FINANCIAL SUPPORT

Bursaries

We award bursaries to students who are leaving care or from low-income families.

You could get a bursary of up to £2,000 for every year of your course if your household income is less than £35,000. Equally, you could be awarded a £2,000 annual bursary if you have been in full-time care for three months or longer at any time over the last five years. You'll find the full qualifying details on our website.

Scholarships

For students paying home fees, we offer a range of scholarships (some up to 100% of your tuition fees!) for black engineers, female engineers, local engineers and engineers looking to retrain or upskill. We also grant awards for exceptional performance in our assessment process for candidates paying home or international fees – for international students this can be as much as 50% of the fee.



FOR FURTHER DETAILS AND TO APPLY, VISIT
TEDI-LONDON.AC.UK

THINK YOU KNOW
ENGINEERING?
THINK AGAIN



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