



Engineering

Undergraduate degree programmes

cardiff.ac.uk/engineering



Hands-on learning, real-world impact

Our students work on hands-on projects just like in the real world.

We emphasise practical skill-building and provide all students with access to an open lab where they can experiment freely.

You'll work closely with industry professionals and student engineers from various disciplines, tackling global challenges while taking on the responsibilities of a qualified engineer.

Plus, with a designated tutor, student mentors and informal learning sessions there is a variety of support to help you

with your studies, personal development and well-being.

Through our collaborative workspaces, leading facilities, and industry-led teaching, we create engineers of the future.



**Find
out
more**



Cardiff

We are based in Queen's Buildings, right in the heart of the city. You can benefit from easy access to the city centre, main transport hubs, the rest of the University, student halls of residence and the Students' Union.



Cardiff University has excellent engineering facilities, and the new Cardiff Racing paddock has been a standout feature for me. Having a dedicated space for the team has made it much more enjoyable to collaborate in the office space, work on car development projects, and integrate theory with hands-on experience.”

Timi, Mechanical Engineering (MEng)



Find out more

Cardiff Racing paddock

Our award-winning Cardiff Racing team has a new facility to design, build, and compete in Formula Student events across the UK and internationally. Engineering students from all disciplines are invited to get involved.

Collaborative laboratory and teaching spaces

We've recently built new learning spaces to encourage project-based learning. Students can benefit from collaborative teaching spaces, an open access laboratory and a collective study area.



Civil engineering laboratories

Our laboratories in civil engineering help students develop real-world skills in areas like flood mitigation, building integrity, and infrastructure development.

Electrical laboratories

The electrical power system simulator helps our students simulate and test power grid operations, including modern power station setups and configurations.

Our students also work within our high voltage laboratory. Engineers use these extensive facilities to improve their understanding of high voltage systems and phenomena, from the National Grid to alternative insulation gases to lightning strikes on aircraft.

Environmental laboratories

Our environmental engineering laboratories are designed for environmental analysis and experimentation, providing students with the opportunity to study waste and pollution management.

Field surveying and testing

Students have access to field surveying and testing, where our civil, environmental, and architectural engineers develop practical skills in the field, making the most of the Welsh landscape and surrounding areas.

Mechanical and manufacturing laboratories

Our mechanical and manufacturing laboratories provide students with practical experience in testing, diagnostics, and access to 3D printing technologies.

Medical facilities

The Musculoskeletal Biomechanics Research Facility is a one-of-a-kind centre in the UK, offering our students the opportunity to work on cutting-edge projects focused on musculoskeletal health.

Our student spaces

Our student spaces are perfect for studying, group learning and socialising. The Trevithick Library provides IT facilities and information resources for all of our engineering students.



Our degree programmes

MEng (Hons) programme

- an engineering degree leading to a higher qualification than the traditional BEng programme and takes four years to complete. The MEng programme offers a more direct route to achieving the status of a Chartered Engineer.

BEng (Hons) programme

- the traditional way of studying engineering and involves three years of study in your chosen subject.

Year in industry programme

- a sandwich programme enhancing either the MEng or the BEng programme with an additional year of industrial placement. This placement takes place after your second year and you will be paid a salary.

Year of study abroad

- a study option which you won't see available on UCAS, but is an opportunity that you have the chance to transfer to during your studies. The year abroad would take place after your second year.



**Find
out
more**

Foundation year

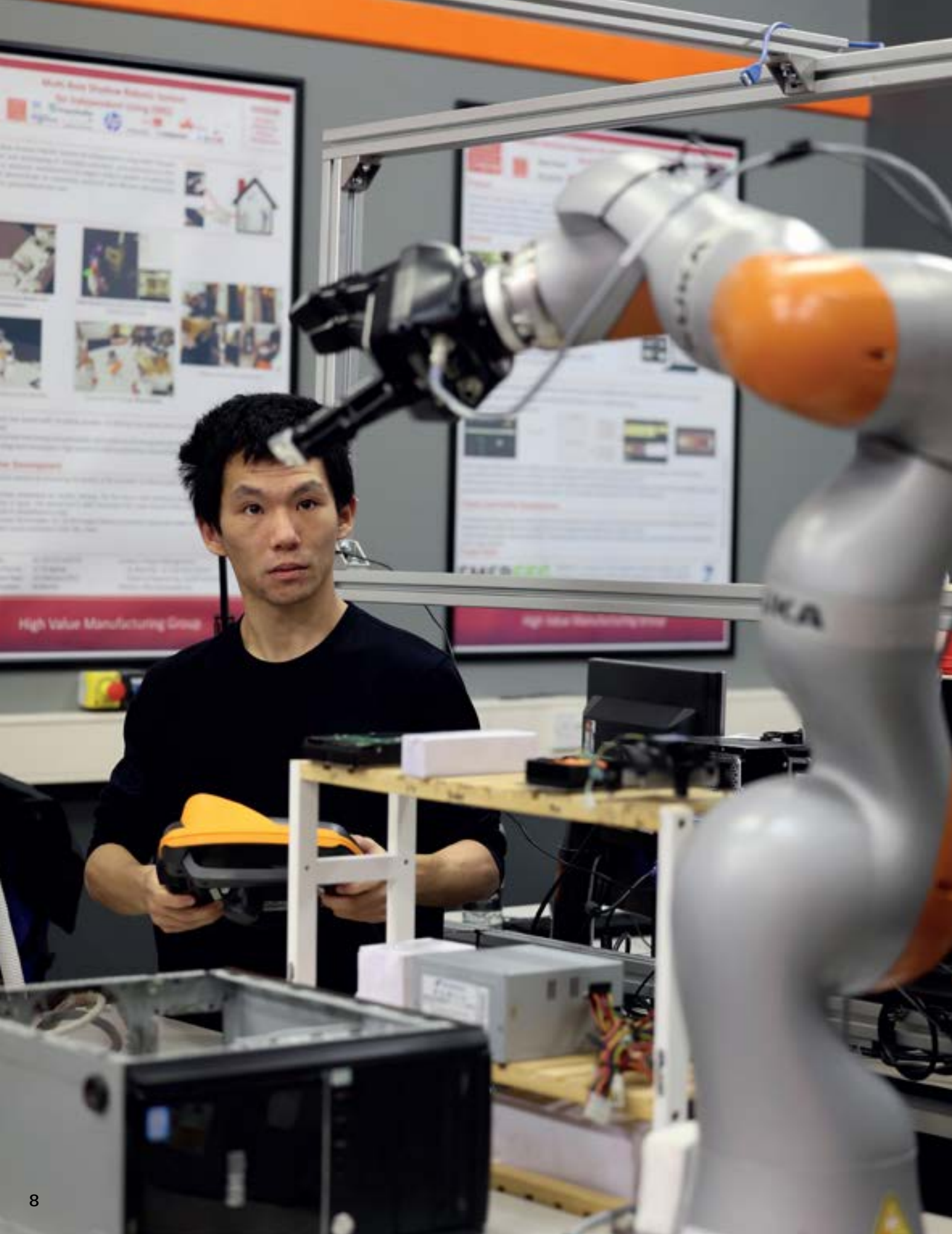
If you would like to become an engineer, but you do not have the appropriate mathematical qualifications, or have a Maths A-level (or equivalent) at a grade C or below, we have a programme to suit your needs.

The foundation year lasts for one year and is designed to give you the necessary basic knowledge to enable you to cope with an engineering degree programme.

The programme will expose students to a broad spectrum of engineering through modules consisting of lectures, tutorials, and case studies. This includes aspects of mathematics, physics and information technology that are relevant to engineering.

Assessment is by project work, continuous assessment and end of semester examinations.

If you are a home fee-paying student on the foundation year, you will qualify for mandatory student support (means tested assistance with tuition fees and student loan) to cover all years of study at Cardiff.





Architectural engineering

Architectural Engineering (MEng), UCAS code: **H294**

Architectural Engineering (BEng), UCAS code: **H292**

Architectural Engineering with a Year in Industry (MEng),
UCAS code: **H295**

Architectural Engineering with a Year in Industry (BEng),
UCAS code: **H293**

We push the boundaries of imagination and construction.

Our architectural engineering degrees provide an in depth understanding of civil engineering with a specific focus on structural engineering and the built environment.

You will discover the essential elements of structural engineering and an understanding of the interaction between engineering design, architectural requirements, and environmental factors.

You will also learn more about architecture, urban engineering, building services, construction technology, and management with particular emphasis on studio work, design projects and case studies.

Our degree programmes are accredited by the Institution of Civil Engineers, the Institution of Structural Engineers, the Chartered Institution of Highways and Transportation and the Institute of Highway Engineers on behalf of the Engineering Council. MEng graduates will meet the academic requirement for registration as a Chartered Engineer. BEng graduates will meet the requirements for registration as an Incorporated Engineer and partly meeting the academic requirement for registration as a Chartered Engineer.



“The course exceeded my expectations.

There are so many opportunities, and if you take advantage of them there is limitless potential on what you can achieve.”

Giorgio,
Architectural Engineering (MEng)



Civil engineering

Civil Engineering (MEng), UCAS code: **H207**

Civil Engineering (BEng), UCAS code: **H200**

Civil Engineering with a Year in Industry (MEng),
UCAS code: **H208**

Civil Engineering with a Year in Industry (BEng),
UCAS code: **H201**

We construct and improve the physical environment across the globe.

Our courses provide the knowledge, skills and hands-on experience you need to become a work-ready civil engineer.

Through laboratory sessions, field trips, individual projects and design classes, you will embed the knowledge from your lectures and tutorials and develop your practical abilities in surveying and design.

Designed with input from leading organisations, this course will ensure you gain hands-on experience using current commercial tools and techniques.

Our degree programmes are accredited by the Institution of Civil Engineers, the Institution of Structural Engineers, the Chartered Institution of Highways and Transportation and the Institute of Highway Engineers on behalf of the Engineering Council. MEng graduates will meet the academic requirement for registration as a Chartered Engineer. BEng graduates will meet the requirements for registration as an Incorporated Engineer and partly meeting the academic requirement for registration as a Chartered Engineer.



“I am deeply passionate about building designs and chose to study civil engineering as I wanted to understand the world around us through science! This degree lets me contribute to society while providing meaningful and exciting problems to solve.”

Azan,
Civil Engineering (BEng)

Civil and environmental engineering

Civil and Environmental Engineering (BEng), UCAS code: **H221**
Civil and Environmental Engineering (MEng), UCAS code: **H226**
Civil and Environmental Engineering with a Year in Industry (BEng), UCAS code: **H222**
Civil and Environmental Engineering with a Year in Industry (MEng), UCAS code: **H224**



We forge careers at the forefront of sustainable development.

Our civil and environmental engineering degrees provides you with the core engineering skills of design and analysis and a thorough understanding of ways to integrate economic and practical solutions. You will learn about the legal, social, and ethical aspects of engineering, with the emphasis being firmly placed upon environmental responsibility and control.

You will have the opportunity to apply what you learn in lectures in practical design classes, research projects, laboratory classes and field courses. Your learning is also developed through site visits, presentations, and specialist speakers from industry.

Our degree programmes are accredited by the Institution of Civil Engineers, the Institution of Structural Engineers, the Chartered Institution of Highways and Transportation and the Institute of Highway Engineers

on behalf of the Engineering Council. MEng graduates will meet the academic requirement for registration as a Chartered Engineer. BEng graduates will meet the requirements for registration as an Incorporated Engineer and partly meeting the academic requirement for registration as a Chartered Engineer.

“Every week there is something new and exciting to learn and I love that no week is the same. It really teaches you a different way of thinking and learning and I love that I get to figure that out with my classmates.”

Amber,
Civil and Environmental Engineering (BEng)



Electrical and electronic engineering

Electrical and Electronic Engineering (MEng), UCAS code: **H601**

Electrical and Electronic Engineering (BEng), UCAS code: **H605**

Electrical and Electronic Engineering with a Year in Industry (MEng), UCAS code: **H600**

Electrical and Electronic Engineering with a Year in Industry (BEng), UCAS code: **H606**

We transform lives through electrical advancements.

Our electronic and electrical engineering degrees explore the small-and large-scale science and applications of electricity.

You will study information technology and professional engineering studies, which will help you to develop your analytical, computational, and experimental skills, as well as vital oral and written communication skills.

You will also be eligible to apply for external scholarships from the UK Power Academy and UK Electronic Skills Foundation UKESF.

Our degree programmes are accredited by the Institution of Engineering and Technology on behalf of the Engineering Council. MEng graduates will meet the academic requirement for registration as a Chartered Engineer. BEng graduates will meet the requirements for registration as an Incorporated Engineer and partly meeting the academic requirement for registration as a Chartered Engineer.



“Not only is it a course that provides opportunities all over the world but the number of well-paying jobs available straight after university is huge.”

**Aaron,
Electrical and Electronic
Engineering (BEng)**

Mechanical and electrical engineering



Mechanical and Electrical Engineering (MEng), UCAS code: **H213**

Mechanical and Electrical Engineering (BEng), UCAS code: **H210**

Mechanical and Electrical Engineering with a Year in Industry (MEng), UCAS code: **H214**

Mechanical and Electrical Engineering with a Year in Industry (BEng), UCAS code: **H211**

We are versatile engineers with a competitive edge in the job market.

Our multidisciplinary course, built around electrical, electronic, and mechanical engineering, aims to produce experts in the areas of manufacturing, mechatronics, computer-aided design, and renewable energy. Your broad knowledge of engineering will ensure you can interact with engineers across the disciplines, as well as being familiar with the business environment.

Throughout the course, you will have the opportunity to explore a range of authentic engineering problems and industry-focused scenarios, to work on both individually and with student engineers from other degree programmes.

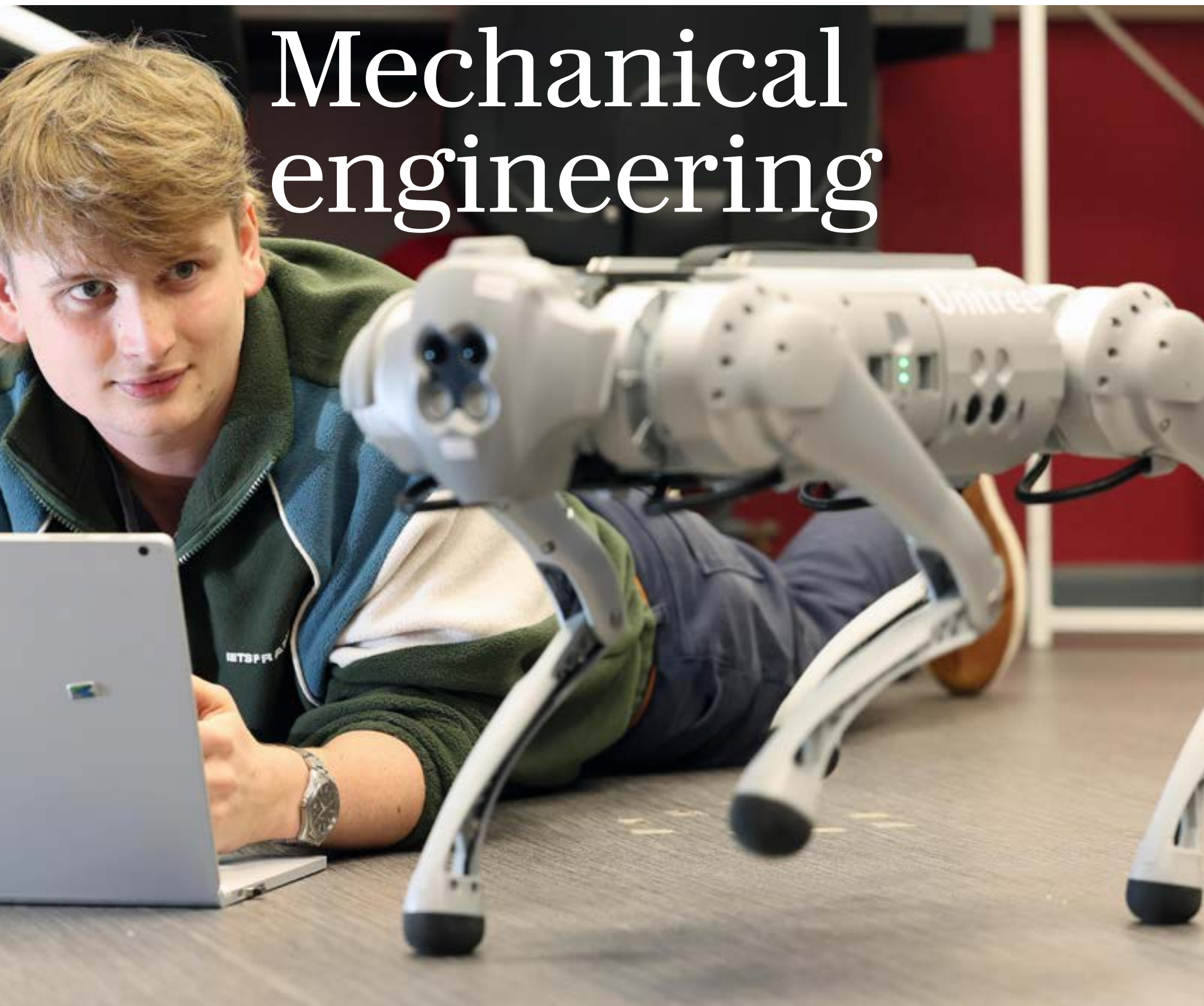
Our degree programmes are accredited by the Institution of Engineering and Technology and the Institution of Mechanical Engineers on behalf of the Engineering Council. MEng graduates will meet the academic requirement for registration as a Chartered Engineer. BEng graduates will meet the requirements for registration as an Incorporated Engineer and partly meeting the academic requirement for registration as a Chartered Engineer.



I was unsure whether I wanted to study solely electrical engineering or mechanical engineering.

I wanted to study a degree that encompassed my interests incorporating sustainability, renewables as well as electronics and robotics, this course was the perfect fit!”

**Jack,
Mechanical and Electrical
Engineering (MEng)**



Mechanical engineering

Mechanical Engineering (MEng),
UCAS code: **H302**

Mechanical Engineering (BEng),
UCAS code: **H300**

**Mechanical Engineering with
a Year in Industry (MEng),**
UCAS code: **H307**

**Mechanical Engineering with
a Year in Industry (BEng),** UCAS code: **H301**

**We shape the
future through
solving real world
challenges.**

Our mechanical engineering degrees explore areas such as thermodynamics, engineering dynamics, fluid mechanics, solid mechanics, and business management.

You will gain transferable skills in areas such as communication, experimentation, computing, laboratory work and design.

You will also have the opportunity to join Cardiff Racing and participate in the design, development, construction, and testing of our Formula Student racing car.

Our degree programmes are accredited by the Institution of Mechanical Engineers and the Energy Institute on behalf of the Engineering Council. MEng graduates will meet the academic requirement for

registration as a Chartered Engineer. BEng graduates will meet the requirements for registration as an Incorporated Engineer and partly meeting the academic requirement for registration as a Chartered Engineer.



“If you have an interest in engineering and applied math, I recommend studying this course! The course has ample opportunities to get stuck in and is broad enough that the skills can be applied to a very wide variety of engineering roles.”

Lewis,
Mechanical Engineering (MEng)

Medical engineering



Medical Engineering (MEng), UCAS code: **H1BV**

Medical Engineering (BEng), UCAS code: **H1B8**

Medical Engineering with a Year in Industry (MEng),
UCAS code: **HB99**

Medical Engineering with a Year in Industry (BEng),
UCAS code: **BH99**

We revolutionise healthcare solutions to improve the lives of people across the world.

As a medical engineering student, you will acquire fundamentals in a broad range of engineering disciplines, including mechanical, electrical and electronic engineering, and anatomy and physiology.

You will be introduced to modules designed to apply engineering principles to the medical field, such as biomechanics, materials, and manufacture. You will study clinical engineering and biomechanics and will use fundamental engineering skills to solve medical engineering problems.

Teaching is delivered by a dedicated team of research-active academic staff, and some lectures will also be delivered by colleagues from Cardiff University's School of Biosciences and the School of Medicine, as well as the Cardiff & Vale NHS Trust.

You will have the opportunity to engage with professionals from healthcare providers such as the Cardiff and Vale Orthopaedic Centre, Cardiff and Vale University Health Board, and the Medical Physics Department.

Our course content is informed by industrial collaborations with organisations like Zimmer Biomet, Simpleware and Arthritis Research UK.

Our degree programmes are accredited by the Institution of Mechanical Engineers on behalf of the Engineering Council. MEng graduates will meet the academic requirement for registration as a Chartered Engineer. BEng graduates will meet the requirements for registration as an Incorporated Engineer and partly meeting the academic requirement for registration as a Chartered Engineer.



“I enjoyed the group projects the most during my course. You work with likeminded people, who all have an interest in creating something good that could make a difference to someone's life.”

Bethan,
Medical Engineering (MEng)

Unlock a world of career opportunities

Meet Peter

Graduate in Electrical and Electronic Engineering - now working as a HV Power Systems Engineer at Arup.

“I encourage pursuing a career in electrical and electronic engineering. The field offers a multitude of opportunities for personal and professional growth, as well as the chance to make a real impact on society. The skills acquired are highly sought after in today's job market, opening doors to a truly wide range of industries. It also intersects with other engineering disciplines enabling interdisciplinary collaborations and a variety of work.”



Meet Jordan

Graduate in Mechanical Engineering - now working as a Graduate Engineer at Jaguar Land Rover.

“Cardiff University was really good at providing meaningful opportunities. The mechanical engineering degree with year in industry was structured to develop key skills that are highly sort after in the working world. Since graduating from Cardiff University, I'm now on a graduate scheme with Jaguar Land Rover and have completed my first placement under the Chassis team and I am currently on my second placement in Off-Road Capability.”



Meet Arij

Graduate in Civil Engineering - now working as a Structural Engineer.

“There is a distinctive approach to teaching at Cardiff University. I was encouraged to look beyond the syllabus and understand how the theory translates into real-world applications and was given the freedom to shape my own learning, incorporating sustainability into my work. There is also an emphasis on team-working, particularly with such a diverse cohort. Cardiff taught me how to bridge gaps without compromising on quality of work.”



Applications

To be considered for entry onto one of our undergraduate courses, please apply through UCAS.

Typical entry requirements

These typical requirements are for guidance. Please check our website for the latest information: www.cardiff.ac.uk/ugcourses

A-levels

BEng: AAB-BBC.

MEng: AAA-BBB. Must include maths at A-level.

WBA

The Welsh Baccalaureate Advanced Skills Challenge Certificate will be accepted in lieu of one A-level (at the grades listed above), excluding any specified subjects.

IB

IB for BEng, this is 30 overall or 665 at higher level (to include 6 in HL maths). At MEng, it's 32-36 overall or 665-666 HL (to include 6 in HL maths).

BTEC

DD-DM in BTEC Diploma in any subject and A-Level maths at grade A or B depending on course.

Other

Applications from those offering alternative equivalent qualifications are welcome, as are those who may have other relevant work/life experience.

Specific subjects

A-level maths (or equivalent). Also grade C/ grade 4 or higher in GCSE maths and English (or equivalent).

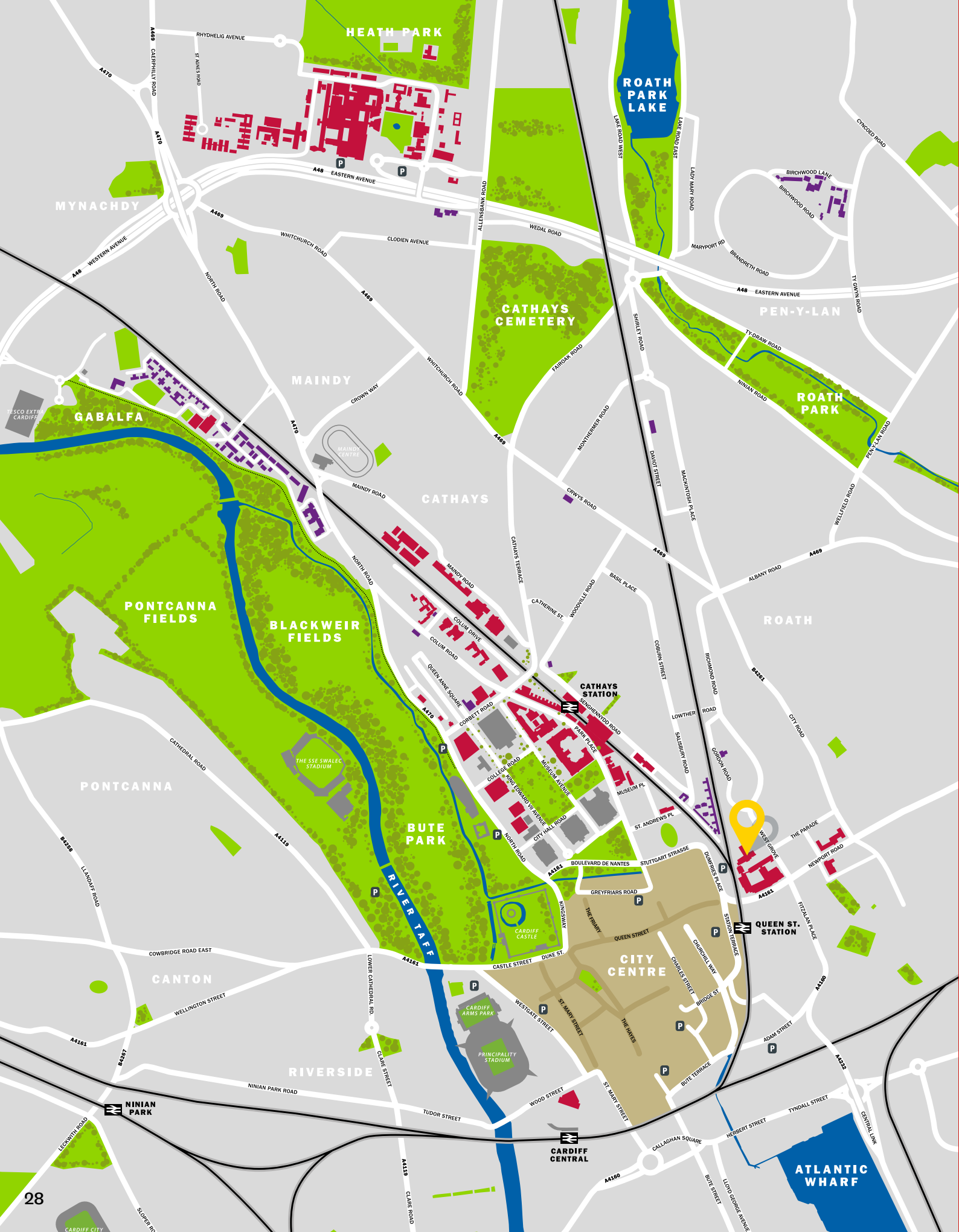
Foundation year

If you have a GCSE pass in mathematics and good A-level passes in nonmathematical subjects, the foundation year would be an ideal route for you to enter engineering. If you wish to apply for the foundation year, enter H101 in the choices section of your UCAS application, plus the code for the degree programme you wish to follow after the foundation year. This is an integrated degree programme (foundation year, plus chosen degree programme).

You have the option to switch to a different degree programme at the end of your foundation year, if you wish to do so.

International Students

We welcome applications from international students and accept a wide range of qualifications. Check our course pages for information about your country.



How to find the School

The School of Engineering is located in Queen's Buildings, just a short walk from Cathays Campus.

Key

-  School of Engineering
-  University and NHS buildings
-  Student residences

Important Legal Information

The contents of this brochure relate to the Entry 2026 admissions cycle and are correct at the time of going to press in April 2025. However, there is a lengthy period of time between printing this brochure and applications being made to, and processed by us, so please check our website at: **www.cardiff.ac.uk** before making an application in case there are any changes to the course you are interested in or to other facilities and services described here. Where there is a difference between the contents of this brochure and our website, the contents of the website take precedence and represent the basis on which we intend to deliver our services to you.

Your degree:

Students admitted to Cardiff University study for a Cardiff University degree.

This brochure is printed on paper obtained from well managed sources using vegetable-based inks. Both the paper used in the production of this prospectus and the manufacturing process are FSC® certified. The printers are also accredited to ISO14001, the internationally recognised environmental standard.

When you have finished with this brochure it can be recycled, but please consider passing on to a friend or leaving it in your careers library for others to use.

Thank you.

Mae'r ddogfen hon hefyd ar gael yn Gymraeg.

This document is also available in Welsh.

Cardiff University is a registered charity, no. 1136855

This prospectus can be made available in alternative formats, including large print (text), Braille and on audio tape/ CD.

To request an alternative format please contact Laura Roberts:

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Email: **RobertsL9@cardiff.ac.uk**



**To find out more about the
School of Engineering**

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