

A photograph of three students in a laboratory setting. On the left, a young man in a purple polo shirt is focused on a task, holding a small electronic component. In the center, a young man with blonde hair in a teal zip-up shirt looks on. On the right, a young woman with dark hair in a grey sweater is also working. They are gathered around a blue robotic arm with orange joints, which is connected to a complex network of red and yellow wires. The background is a blurred laboratory environment. A large, bold, white word 'ENGINEERING' is superimposed across the middle of the image. In the bottom left corner, the words 'UNDERGRADUATE STUDY' are written in white. In the bottom right corner, the University of Warwick logo, a stylized 'W', is shown above the word 'WARWICK' and the phrase 'THE UNIVERSITY OF WARWICK'. There are also some teal geometric shapes in the top right and bottom left corners.

# ENGINEERING

**UNDERGRADUATE  
STUDY**

**WARWICK**  
THE UNIVERSITY OF WARWICK



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93%

OF OUR COMPLETE  
REF2021 SUBMISSION  
WAS RATED AS  
'WORLD-LEADING' OR  
'INTERNATIONALLY  
EXCELLENT'

(Research Excellence  
Framework, 2021)

6<sup>TH</sup> IN THE UK FOR  
ENGINEERING

(The Guardian University  
League Table 2022)\*

6<sup>TH</sup> MOST TARGETED UNIVERSITY  
BY UK'S TOP 100 GRADUATE  
EMPLOYERS

(The Graduate Market in 2022, High Fliers Research Ltd)

TOP  
25 ONE OF THE WORLD'S TOP  
25 MOST INTERNATIONAL  
UNIVERSITIES

(The Times Higher Education 2022)

\*Because all our courses share the first year and first term of the second year, all our courses are ranked together in league tables under General Engineering rather than under individual specialisms.



# WHY ENGINEERING AT WARWICK?

## INTEGRATED APPROACH

Our expertise covers a range of specialist areas but we know it's when we work together that the most exciting developments are made. This approach is at the heart of everything we do, and our course structure is designed to give you shared foundational understanding and ample opportunities to work and build connections across disciplines.

## GET HANDS-ON

Our courses balance academic challenge with hands-on teaching and learning. Practical work such as designing a mobile-phone based electronic nose or a dominoes-playing robot give you the opportunity to expand and apply your learning. MEng students participate in a large group project which simulates the multidisciplinary practices you will experience in your career, working together in collaboration with students from other specialist courses.

## WORLD-CLASS FACILITIES

You'll have access to an impressive range of research facilities, workshops and laboratories with cutting-edge equipment.

This includes our Engineering Build Space, a design studio with manufacturing facilities, where you can see your ideas and innovations come to life, whether they are academic or personal projects. Spread across three unique spaces, the facility houses everything from discussion space, basic prototyping capability

and hand tools through to cutting-edge computer controlled manufacturing equipment and robotics. It offers a community space where students and staff can work alongside each other, explore ideas and come up with solutions to important design problems. Run by a team of Makers-in-Residence who work at the cutting-edge of design and manufacture research, you can experiment with the basics of designing and manufacturing while working side-by-side with an experienced team of creative engineers.

## COMMUNITY

The academics who teach you work at the forefront of their subjects and are making internationally significant advances. You'll also be supported by your fellow students, building meaningful friendships that you'll find become valuable professional networks.

## HEART OF INDUSTRY

We work closely with industry experts to develop your work-place skills from day one and ensure you're prepared for life after university. Our courses are delivered in partnership with Warwick Manufacturing Group (WMG), renowned worldwide for its innovative links between academia and industry. Our physical location in Coventry places you close to many of the UK's biggest names in engineering and students benefit from our strong connections with industrial partners such as Jaguar Land Rover, Arup, Tata Steel and Rolls-Royce.



THE ENGINEERING BUILD SPACE IS A VIBRANT AND CREATIVE SPACE WHERE YOU CAN HARNESS YOUR CREATIVITY, EXPLORE YOUR IDEAS, AND BRING YOUR DESIGNS TO LIFE. IT OFFERS A COMMUNITY SPACE WHERE STUDENTS AND STAFF CAN WORK ALONGSIDE EACH OTHER, EXPLORE IDEAS AND COME UP WITH SOLUTIONS TO IMPORTANT DESIGN PROBLEMS.

## ACCREDITATION

If you aspire to achieve Chartered-Engineer (CEng) status, a degree from Warwick is a great starting point. The majority of our degrees are accredited by licensed professional engineering institutions, such as the IET, IMechE and JBM and provide the academic component (in part or fully) needed for Chartered Engineer status. Please note that the IMechE are scheduled to review our Engineering programmes during 2022 as part of the standard accreditation process. Full information about the accreditation of our courses is available on our website: [warwick.ac.uk/eng-accreditation](http://warwick.ac.uk/eng-accreditation)

## BEYOND UNIVERSITY

We ask you to start thinking about your future from day one, and encourage you to take advantage of opportunities to gain work experience, study abroad, or work in research as part of your degree. We have a dedicated Placement and Internship Officer who will work with you to identify opportunities and support you as you consider your career after university. As a result you, and each of your classmates, will graduate with a unique combination of skills, experiences and relationships that will set you apart as you embark on your chosen career path.



# ENGINEERING COURSES

IF YOU'RE DRAWN TO THE APPLICATION OF MATHS AND SCIENCE TO CREATE, INNOVATE AND SOLVE REAL-LIFE PROBLEMS YOU MAY BE CONSIDERING STUDYING ENGINEERING.

But if you've had no exposure to engineering disciplines at school or college, deciding on a specialism may not be straightforward.

At Warwick, our flexible, innovative and interdisciplinary courses enable you to experience a range of different engineering disciplines before specialising in automotive, biomedical systems, civil, electrical, electronic, manufacturing and mechanical, mechanical or systems engineering\*. Alternatively you can choose to study a more diverse engineering curriculum or adopt a business focus.

Our courses are structured to give you choice and flexibility whilst meeting the needs of employers who want engineers with strong technical knowledge, and the ability to understand and communicate within technical and business roles.

"I chose Warwick because of its reputation and their initially general engineering course. Before coming here I only had experience in electronic engineering, but now I've been able to try the other disciplines and find the best one for me. I've actually switched to systems engineering which I wouldn't have been able to do if I'd specialised from first year."

**Jonathan, 4<sup>th</sup> year Systems Engineering student**



## ENTRY REQUIREMENTS\*

Our standard entry requirements for courses starting in 2023 are:

### BEng

A level: AAA to include Mathematics and Physics.

IB: 38 to include 6, 6 in Mathematics and Physics. At least one of these subjects should be at Higher Level.

### MEng

A level: A\*AA to include Mathematics and Physics.

IB: 38 with 6, 6, 6 at Higher Level. Mathematics and Physics are required. At least one of these subjects should be at Higher Level.

English language requirements also apply.

Applicants with a strong profile but without either A level Physics or A level Mathematics may be considered. Please contact [ugadmissions@warwick.ac.uk](mailto:ugadmissions@warwick.ac.uk) prior to applying.

## OTHER QUALIFICATIONS

We encourage applications from students with a wide range of other qualifications.

Please see the University website for more details: [warwick.ac.uk/study](https://warwick.ac.uk/study)

\*We also offer a joint degree in Computer Systems Engineering which does not follow the same pathway and has different entry requirements (see pages 30-31 for more details).

# COURSE STRUCTURE\*

WE OFFER FLEXIBLE COURSES THAT ENABLE YOU TO EXPERIENCE A RANGE OF DIFFERENT ENGINEERING DISCIPLINES BEFORE YOU SPECIALISE.

All first year students study a general engineering programme. In the second year, you continue to study the same core modules as all other students until the end of term one, after which you can specialise or continue on the general Engineering pathway.

This course structure not only ensures you make an informed decision about which specialism is right for you, but is also much favoured by industry which requires graduates that are conversant in the underlying principles of all engineering disciplines.

Students can also switch from the three-year BEng to the four-year MEng degree if academic requirements and regulations are met, and from the MEng to the BEng if they prefer to graduate earlier.

## YEAR 1

In your first year you'll be taught the fundamentals of engineering, which you will build on in later years according to your interests.

### Core modules

- Dynamics and Thermodynamics
- Electrical and Electronic Circuits
- Engineering Design

- Engineering Mathematics
- Introduction to Engineering Business Management
- Introduction to Engineering: Professionalism and Practice
- Materials for Engineering
- Statics and Structures
- Systems Modelling, Simulation and Computation

### Projects

You will undertake a range of small projects from 'reverse engineering' to design-and-make challenges on topics including: home automation, light rail transit, car aerodynamics, and intelligent robot vehicles. These projects introduce you to industry standard software, such as SolidWorks and Matlab.

## YEAR 2

All second year students follow the same core modules in term 1.

### Term 1 core modules

- Dynamics and Fluid Mechanics
- Electromechanical System Design
- Engineering Mathematics and Data Analytics
- Technical Operations Management

### Terms 2 & 3

You will study second year core and optional modules for your chosen course (see pages 10 to 29).

### Projects

For most disciplines there will be a core module that involves a 'design, make and test' project.

## YEAR 3

In the third year our courses concentrate entirely on providing specialist engineering knowledge in your chosen discipline. Those who would rather be more business focused can choose our Engineering Business Management degree which is delivered in partnership with the prestigious Warwick Business School.

### Projects

Students develop research skills through an individual project related to their degree, specialising in one particular area. This may be linked to our research activities, in conjunction with an external company, or support a fourth year project.

## YEAR 4 (MEng ONLY)

In the fourth year of an MEng course students study specialist material relevant to their degree course.

### Projects

MEng students participate in a large group project worth 25% of the year, which simulates the multidisciplinary working practices you will experience in your career. Students from all specialist courses work together on these projects allowing you to develop more advanced skills for the workplace and form new friendships and professional networks.

Popular projects include the IMechE Formula Student racing car competition, Warwick University satellite project (WUSAT), Severn Trent reservoir design, ICE shaping the world infrastructure design for poor communities, building search-and-rescue devices with Warwick Mobile Robotics, or creating a human-powered submarine.

The MEng final-year multidisciplinary group project is unique to the four-year degree and is not something that you would normally find as part of a one year standalone Master's.

## INTERCALATED DEGREES

Students may choose to spend a year in industry, research or study abroad between years two and three, or between years three and four for MEng, of their degree.

Placements are subject to availability.

\*Please note that the joint course Computer Systems Engineering does not follow the course structure outlined on this page. Please see pages 30-31 for more information.



# AUTOMOTIVE ENGINEERING

**BEng Automotive Engineering**  
3 years | UCAS code: H330

**MEng Automotive Engineering**  
4 years | UCAS code: H335

Accrediting institutions:



## THE AUTOMOTIVE INDUSTRY IS SYNONYMOUS WITH CREATIVITY AND INNOVATION.

In the UK, companies like BMW, Ford, Jaguar Land Rover, Nissan and Toyota are supported by a huge network of manufacturers, employing highly skilled engineers at the forefront of their field and internationally recognised for the solutions they create. The UK is also home to seven of the world's 10 Formula One teams.

Our Automotive Engineering degrees provide the skills and knowledge you need to stand out from the crowd. You'll develop an in-depth understanding of the classical principles of Engineering by following a general engineering programme for the first four terms. You can then specialise in Automotive Engineering, combining a firm grounding in the principles of automotive engineering with experience of cutting-edge technology.

"Warwick is in the centre of the automotive and motorsport hub in the UK with most manufacturers and suppliers of the industry being in the close vicinity. The Engineering degree at Warwick also includes an important business and operations management aspect. This is something I believe can provide a very important competitive advantage once I enter the professional world."

**Angel, 4<sup>th</sup> year Automotive Engineering student**

\*The IMechE are scheduled to review our Engineering programmes during 2022 as part of the standard accreditation process.

Coventry is at the heart of the UK's automotive sector and the National Automotive Innovation Centre is based on campus. There are plenty of opportunities for individual and group project work on topics such as gearbox analysis, autonomous vehicles, examining flywheel energy storage, developing an electric powered racing motor cycle and our IMechE Formula Student racing cars.

By gaining skills ranging from mechanical design, electronic systems, manufacturing techniques, management, ergonomics and human perception of things such as noise, vibration and performance, you will graduate as a well-rounded automotive engineer equipped for a broad range of career options.

THE NATIONAL AUTOMOTIVE INNOVATION CENTRE, SITUATED ON THE UNIVERSITY OF WARWICK CAMPUS, IS CURRENTLY THE LARGEST AUTOMOTIVE RESEARCH AND DEVELOPMENT CENTRE IN EUROPE. THE BUILDING IS A PARTNERSHIP BETWEEN THE UNIVERSITY, WMG, JAGUAR LAND ROVER AND TATA MOTORS EUROPEAN TECHNICAL CENTRE.

## CORE MODULES

### Year 1

- General Engineering core programme (see pages 8-9)

### Year 2, Term 1

- General Engineering core programme (see pages 8-9)

### Year 2, Terms 2 & 3

- Manufacturing Engineering Design
- Motor Vehicle Technology
- Systems and Software Engineering Principles

### Year 3

- Automation and Robotics
- CAD/CAM and Simulation
- Design for Manufacture
- Design for Vehicle Safety
- Quality Techniques
- Systems Modelling and Control
- Individual Project

### Year 4 (MEng)

- Design for Vehicle Comfort
- Automobile Systems, Dynamics and Control
- Vehicle Propulsion
- Automotive Materials and Processes
- Group Project

## EXAMPLES OF OPTIONAL MODULES

Industrial Engineering; Starting a Business; Quality Systems; Simulation of Operations; Advanced Robotics; Design for Sustainability; Modern Foreign Language module.

## FURTHER INFORMATION

[warwick.ac.uk/engineering](http://warwick.ac.uk/engineering)

We are constantly evolving our courses to keep up with developments in engineering and requirements from industry, so it is important you check our website for the most up-to-date information on module availability.





# BIOMEDICAL SYSTEMS ENGINEERING

**BEng Biomedical Systems Engineering**  
3 years | UCAS code: H161

**MEng Biomedical Systems Engineering**  
4 years | UCAS code: H161

## LEARN HOW TO SOLVE BIOMEDICAL PROBLEMS USING ENGINEERING METHODS AND TOOLS.

Biomedical Systems Engineering students develop an in-depth understanding of the classical principles of Engineering by following a general engineering programme for the first year and into second year. From the second term of second year onwards, you'll learn to apply systems methodology and concepts from other Engineering disciplines to the modelling, analysis of, and interventions for, biomedical problems.

For example, you may choose to apply the principles of electromagnetic engineering to analyse the body's own electrical and magnetic activity, making these measurements accessible to medical doctors and biologists. You may choose to apply the principles of mechanical engineering to the analysis of motion and creation of devices that monitor and support walking.

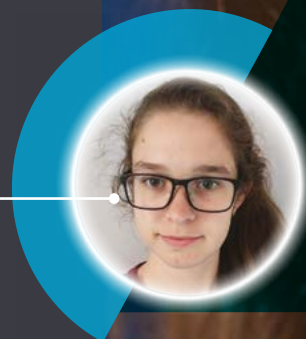
Students may choose to apply systems thinking perspectives to the impact of healthcare on people, processes, information and organisations, equipping them to work on high-level global priorities in healthcare.

Recent projects include improving magnetic resonance imaging techniques for the diagnosis of disease; improving fluidic systems used in life sciences to study and better control infections such as MRSA; and the optimal design of foot orthoses in the treatment of conditions of the lower limb.

After graduation, Warwick students are especially well equipped to work in areas such as healthcare, pharmacology, medical device development and evaluation, and large-scale healthcare projects.

"The stream offers a wide range of topics ranging from the clinical engineering aspects within a hospital to biomechanics of the human body. The facilities at Warwick, such as the Gait lab, allow you to enhance understanding in later years as they can be used for projects. Studying at Warwick has also given me the opportunity to do a summer research internship within the department."

**Emma, 2<sup>nd</sup> year Biomedical Systems Engineering student**



**BIOMEDICAL ENGINEERING IS A KEY RESEARCH THEME AT THE SCHOOL OF ENGINEERING. THE WARWICK BIOMEDICAL SYSTEMS DEGREE REFLECTS OUR STRENGTHS AND INDUSTRY COLLABORATIONS IN BIOMEDICAL SYSTEMS MODELLING, PHARMACOLOGY, AND HEALTHCARE TECHNOLOGY, EXPLORED FROM A SYSTEMS PERSPECTIVE.**

## CORE MODULES

### Year 1

- General Engineering core programme (see pages 8-9)

### Year 2, Term 1

- General Engineering core programme (see pages 8-9)

### Year 2, Terms 2 & 3

- Analogue Electronic Design
- Introduction to Biomedical and Clinical Engineering
- Systems and Software Engineering Principles

### Year 3

- Medical Device: Design, Maintenance and Assessment
- Finite Element Methods
- Biomedical Imaging and Medical Devices
- Biomechanics
- Signal Processing
- Systems Modelling and Control
- Individual Project

### Year 4 (MEng)

- Biomedical Signal Processing
- Biomedical Systems Modelling
- Group Project

## EXAMPLES OF OPTIONAL MODULES

Computational Intelligence in Biomedical Engineering; Advanced Robotics; Biomedical Materials, Tissue Engineering & Regenerative Medicine; Computational Synthetic & Systems Biology; Mechanical Engineering Design; Mathematical and Computer Modelling.

## FURTHER INFORMATION

[warwick.ac.uk/engineering](http://warwick.ac.uk/engineering)

We are constantly evolving our courses to keep up with developments in engineering and requirements from industry, so it is important you check our website for the most up-to-date information on module availability.



# CIVIL ENGINEERING

**BEng Civil Engineering**  
3 years | UCAS code: H200

**MEng Civil Engineering**  
4 years | UCAS code: H202

Accrediting institutions:



## CIVIL ENGINEERING IS EVERYTHING YOU SEE THAT'S BEEN BUILT AROUND US.

The kind of things we take for granted every day but would find life hard to live without: roads and railways, schools and hospitals or water and power supplies. Civil engineers design, create, connect and change the world, making our places work for the people that live there, and working on projects that can make a real difference to people's lives.

If you wish to advocate for the climate emergency and sustainability agenda, civil engineering is the field of studies to follow.

After developing an in-depth understanding of the classical principles of Engineering by following a general engineering programme for the first year and the first term of second year, our Civil Engineering degrees allow you to develop expertise in the fundamental principles of analysis, design, sustainability and safety, to enhance the quality of life for present and future generations.

Teaching and learning at Warwick takes place in an open and engaging environment with top-class facilities. You will have the opportunity to conduct research projects

in different labs and take modules related to current research in a range of civil engineering fields. Visits to construction sites, and lectures and seminars from experts in industry provide insights into the latest civil engineering practices.

Regular individual and group projects tackle industrial challenges such as the design, building and testing of structures, the development of a robotic construction scheme, designing civil engineering works on a high speed railway or providing engineered solutions for the urban development of poor communities. You will also take part in fieldwork, which has previously included geotechnical engineering in Wales and the Isle of Wight.

Career destinations for civil engineers often include working for consultants and contractors across the specialisms of structures, geotechnics, tunnelling and underground space, water engineering, transportation and energy. Our graduates work as professional and highly proficient engineers in a range of exciting and rewarding careers.

THE SCHOOL OF ENGINEERING IS A KEY PLAYER IN THE UNIVERSITY OF WARWICK'S SUSTAINABLE CITIES GLOBAL RESEARCH PRIORITY.



"Throughout my degree I've had many site visits, events and lectures from professionals within the civil and engineering industries which have made the degree content feel exciting and relevant to the outside world. I have also been able to gain work experience in two world-class civil engineering companies and had the opportunity to work on projects at the forefront of civil engineering including HS2 and the Thames Tideway project"

**Alice**, 3<sup>rd</sup> year Civil Engineering student

### CORE MODULES

#### Year 1

- General Engineering core programme (see pages 8-9)

#### Year 2, Term 1

- General Engineering core programme (see pages 8-9)

#### Year 2, Terms 2 & 3

- Civil Engineering Design 1
- Civil Engineering Materials and Structural Analysis
- Forensic Engineering

#### Year 3

- Civil Engineering Design 2
- Concrete Structures
- Geotechnical Engineering
- Steel Structures
- Water Engineering for Civil Engineers
- Design Project with Construction Management (BEng only)
- Individual Project (MEng only)

#### Year 4 (MEng)

- Advanced Geotechnical Engineering
- Advanced Structural Engineering
- Construction Management
- Global Water and Sanitation Technologies
- Group Project

### EXAMPLES OF OPTIONAL MODULES

Technology in International Development; Systems and Software Engineering Principles; Modern Foreign Language module; Starting a Business; Structural Dynamics and Health Monitoring; Design for Sustainability; Renewable Energy.

### FURTHER INFORMATION

[warwick.ac.uk/engineering](https://warwick.ac.uk/engineering)

We are constantly evolving our courses to keep up with developments in engineering and requirements from industry, so it is important you check our website for the most up-to-date information on module availability.



# ELECTRICAL & ELECTRONIC ENGINEERING

**BEng Electrical & Electronic Engineering**  
3 years | UCAS code: H605

**MEng Electrical & Electronic Engineering**  
4 years | UCAS code: H606

Accrediting institutions:



## DEVELOP SPECIALIST KNOWLEDGE OF ELECTRICAL AND ELECTRONIC ENGINEERING DEVICES, PROCESSES AND SYSTEMS.

For the first year and into the second year of the degree students follow a multidisciplinary route into engineering, with modules covering the core areas of the subject, including electrical and electronic engineering topics. Specialisation starts in term two of the second year, with Electrical & Electronic Engineering students following the same second year degree programme as those on the Electronic Engineering course (see pages 18-19).

In third and fourth year, Electrical & Electronic Engineering students focus on power electronics, electrical machines, systems modelling and the operation and control of power systems. Modules in these years reflect our key research areas including power electronics and systems, communications, embedded systems and silicon-based smart sensors. Practical work in

electrical and electronic engineering begins in the first year, with the third-year individual project forming a major part of the course. For example one past individual project, supported by industry, was titled 'Delivering Satellites to Space with Power Electronics'. Our laboratories are equipped with software and instrumentation to support the varied teaching activities in electrical and electronic engineering.

Electrical & Electronic Engineering graduates contribute to a variety of sectors and industries such as power electronics, electrical power generation, aerospace, automotive, marine engineering and a sustainable environment.

"Warwick's initially general degree structure helped me gain an understanding of how the various engineering streams link together. It refined my passion for Electrical and Electronic Engineering and equipped me with knowledge from a range of areas right from power and analogue electronics, to digital systems and microcontroller coding."

**Prabhdeep, 2<sup>nd</sup> year Electrical and Electronic Engineering student**



### PROFESSOR PHIL MAWBY:

"The Electrical and Electronic course at Warwick aims to equip you with in-depth state-of-the-art knowledge, delivered by some of the UK's leading experts in the field. The range of industrial sectors spans automotive, electrical drive-trains, rail, marine, aerospace, renewable power, consumer electronics, and space, all of which are rapidly developing areas with huge potential to make a real impact on the quality of life of future generations. Skills in this field are in high demand within the UK and internationally."



## CORE MODULES

### Year 1

- General Engineering core programme (see pages 8-9)

### Year 2, Term 1

- General Engineering core programme (see pages 8-9)

### Year 2, Terms 2 & 3

- Analogue Electronic Design
- Computer Architecture and Systems
- Semiconductor Materials and Devices

### Year 3

- Communication Systems
- Digital Systems Design
- Power Electronics
- Power Systems and Electrical Machines
- Signal Processing
- Systems Modelling and Control
- Individual Project

### Year 4 (MEng)

- Advanced Power Electronic Converters and Devices
- ASICs, MEMS and Smart Devices
- Control of Electrical Drives
- Operation and Control of Power Systems
- Group Project

## EXAMPLES OF OPTIONAL MODULES

Advanced Robotics; Advanced Wireless Systems and Networks; High Performance Embedded Systems Design; Optical Communication Systems; Information Theory and Coding; Systems and Software Engineering Principles; Modern Foreign Language module.

## FURTHER INFORMATION

[warwick.ac.uk/engineering](http://warwick.ac.uk/engineering)


We are constantly evolving our courses to keep up with developments in engineering and requirements from industry, so it is important you check our website for the most up-to-date information on module availability.



# ELECTRONIC ENGINEERING

**BEng Electronic Engineering**  
3 years | UCAS code: H610

**MEng Electronic Engineering**  
4 years | UCAS code: H612

Accrediting institutions:  IET  
The Institution of  
Engineering and Technology

RECENT SCIENTIFIC AND TECHNICAL INNOVATIONS MEAN THAT ELECTRONIC ENGINEERS ARE CENTRAL TO THE DESIGN AND MANUFACTURE OF A VAST RANGE OF PRODUCTS AND SYSTEMS.

Our Electronic Engineering degrees draw on both industrial and academic experience from across disciplines to provide skills that are aligned with best commercial practices and much sought after by employers.

In the first year, and into the second, students will follow a multidisciplinary route into engineering, with modules covering the core areas of the subject including electronic engineering topics. Specialisation starts in term two of the second year, and Electronic Engineering students follow the same degree programme as those on the Electrical & Electronic Engineering courses (see pages 16 – 17) until the end of the second year. Third and fourth year modules reflect our key research areas including communications, embedded systems, power electronics, ASICs and silicon-based smart sensors.

Practical work in electronic engineering begins in the first year, with the third-year individual project forming a major part of the course. For example one past individual project, supported by industry, was titled 'A Mobile Phone Based Electronic Nose,' with the project analysing the breath of patients in local hospitals. Our laboratories are equipped with software and instrumentation to support the varied teaching activities in electronic engineering.

Our graduates are well placed to contribute within a variety of sectors in addition to electronic engineering, such as design and production, energy, transport, the built environment, information and communications.

"Electronic Engineering at Warwick has given me the opportunity to understand a wide range of electronics on a theoretical and practical level. I've worked with cutting edge researchers, allowing me to extend my third year project on solar cells into a summer research project which has since been published. Studying this degree has opened the door to a huge range of careers and has given me the opportunity to go into nuclear fusion research after graduation."

**Jenny, 4<sup>th</sup> year Electronic Engineering student**



## CORE MODULES

### Year 1

- General Engineering core programme (see pages 8-9)

### Year 2, Term 1

- General Engineering core programme (see pages 8-9)

### Year 2, Terms 2 & 3

- Analogue Electronic Design
- Computer Architecture and Systems
- Semiconductor Materials and Devices

### Year 3

- Communication Systems
- Digital Systems Design
- Fundamentals of Modern VLSI Design
- Microwave Engineering and RF Circuits
- Power Electronics
- Signal Processing
- Individual Project

### Year 4 (MEng)

- ASICs, MEMS and Smart Devices
- Advanced Power Electronic Converters and Devices
- High Performance Embedded Systems Design
- Radiowave Propagation & Wireless Communications Theory
- Group Project

## EXAMPLES OF OPTIONAL MODULES

Systems and Software Engineering Principles; Advanced Robotics; Advanced Wireless Systems and Networks; Optical Communications Systems; Information Theory and Coding; Motor Vehicle Technology

## FURTHER INFORMATION

[warwick.ac.uk/engineering](http://warwick.ac.uk/engineering)

We are constantly evolving our courses to keep up with developments in engineering and requirements from industry, so it is important you check our website for the most up-to-date information on module availability.



# ENGINEERING (GENERAL)

**BEng Engineering**  
3 years | UCAS code: H100

**MEng Engineering**  
4 years | UCAS code: H102

Accrediting institutions:



## GAIN AN IN-DEPTH UNDERSTANDING OF ENGINEERING PRINCIPLES ACROSS A WIDE RANGE OF DISCIPLINES.

This is an ideal route into Engineering if you wish to sample all our disciplines and want a sustained broad learning experience. As with all our degrees, you will decide whether to stay on this general pathway or switch to another engineering course during your second year of study. Those choosing to stay on the more general pathway will be able to choose options for the different engineering disciplines and will develop an in-depth understanding of the classical principles of Engineering by learning from a wide range of areas.

Many engineered solutions involve multidisciplinary teams. General Engineers can see synergy across these disciplines which enables them to solve high-level problems. The Warwick course will allow you to develop sought-after skills including a multidisciplinary approach to problem solving, the ability to manage projects

and communicate ideas, and the capacity to lead, research, design, innovate and develop products and systems.

Interdisciplinary projects enable you to tackle challenges that could range from creating search and rescue robots, designing carbon-free homes, optimising mechanical biological waste treatment or building a nano-satellite.

After graduation Warwick students are especially equipped to work in multi-disciplinary organisations in functional teams which create solutions incorporating (for example) mechanical and electrical component, or on largescale civil projects where interdisciplinary thinking is required to understand (for example) the impact of the London Olympics on public transport.

\* The IMechE are scheduled to review our Engineering programmes during 2022 as part of the standard accreditation process.



"Warwick is one of the few universities where students can choose a general engineering degree, and I think that this has been a huge benefit for me. It has allowed me to try a whole range of interesting modules, from biomedical engineering to computer architecture, and this in turn means that I am not restricted to just one career path in my future."

**Molly, 2<sup>nd</sup> year Engineering (General) student**

## CORE MODULES

### Year 1

- General Engineering core programme (see pages 8-9)

### Year 2, Term 1

- General Engineering core programme (see pages 8-9)

### Year 2, Terms 2 & 3

- Core and optional modules from one of the engineering disciplines

### Year 3 (BEng)

- Individual Project
- Options available depend on module prerequisites and accreditation requirements

### Year 3 (MEng)

- Core modules from one of the engineering disciplines
- Individual Project

### Year 4 (MEng)

- Group Project
- Options available depend on module prerequisites and accreditation requirements

## EXAMPLES OF OPTIONAL MODULES

Optional modules are available from the following degrees: Automotive; Biomedical Systems; Civil; Electrical & Electronic; Electronic; Manufacturing & Mechanical; Mechanical; Systems (see rest of this brochure for examples). The precise modules available to you each year will depend on timetable constraints, accreditation requirements and module prerequisites (i.e. for some module choices it is necessary for you to have taken a particular module in a previous year).

## FURTHER INFORMATION

[warwick.ac.uk/engineering](http://warwick.ac.uk/engineering)

We are constantly evolving our courses to keep up with developments in engineering and requirements from industry, so it is important you check our website for the most up-to-date information on module availability.



# ENGINEERING BUSINESS MANAGEMENT

**BEng Engineering Business Management**

**3 years** | UCAS code: HN12

**THIS COURSE WILL APPEAL TO YOU IF YOU WANT TO STUDY ENGINEERING, BUT SEEK AN ALTERNATIVE TO BECOMING A CHARTERED ENGINEER.**

Engineering companies need to provide not only superior products, but also superior services in order to be sustainable in the long-term. There is a real demand for graduates with technical knowledge and strategic business management and entrepreneurial skills. By mastering this you'll provide the key interface between roles as diverse as design, manufacturing, marketing, contract management and supply chain management.

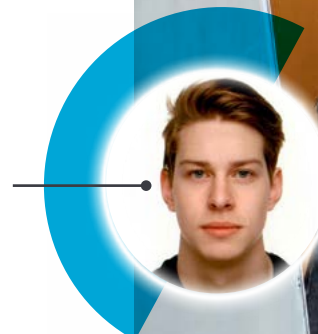
In the same way as our other engineering undergraduates, those studying Engineering Business Management spend their first year and first term of second year studying general engineering concepts. The course then specialises in engineering business related subjects, equipping students with the business and management skills they need to operate in a global economy. Teaching draws on the expertise of the School of Engineering, which delivers the highest standards of technical

expertise; WMG (Warwick Manufacturing Group), which offers innovative links between academia and industry; and Warwick Business School (WBS), which is internationally recognised for excellence in business management.

Reflecting the realities of the multidisciplinary business environment, our curriculum integrates both the technical and business context you will need to be successful in a wide range of careers. You might aspire to join a company that provides engineering, maintenance or logistic services, for example, or have your sights set on consultancy roles. EBM students develop their engineering expertise alongside knowledge of the full range of business functions and are equipped to find their place in an increasingly competitive global marketplace.

"With our world becoming progressively more connected, engineering is taking on a more prominent and connected role. EBM teaches you how to effectively bridge those gaps and provides you with the engineering skills and business know-how to excel in the changing work environment. With both the prestige of Warwick Business School and the cutting-edge industry-leading facilities of the Engineering department you have unprecedented support, and study under the best and brightest from both departments."

**Eric, 1<sup>st</sup> year Engineering Business Management student**



## CORE MODULES

### Year 1

- General Engineering core programme (see pages 8-9)

### Year 2, Term 1

- General Engineering core programme (see pages 8-9)

### Year 2, Terms 2 & 3

- Industrial Engineering
- Starting a Business

### Year 3

- Supply Chain Management
- Quality Techniques
- Individual Project

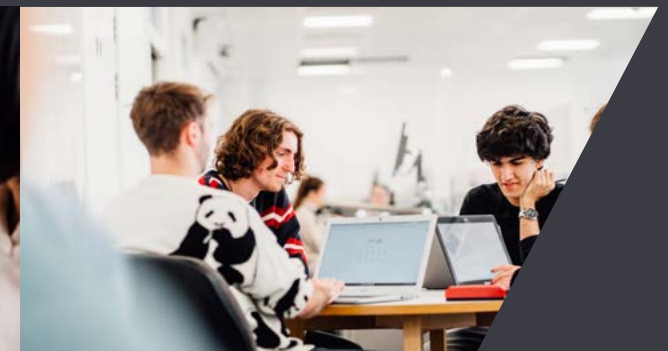
## EXAMPLES OF OPTIONAL MODULES

International Business Strategy; Design and Management of Lean Operations; Global Sourcing and Innovation; Changing Organisations; Foundations of Marketing

## FURTHER INFORMATION

[warwick.ac.uk/engineering](http://warwick.ac.uk/engineering)

We are constantly evolving our courses to keep up with developments in engineering and requirements from industry, so it is important you check our website for the most up-to-date information on module availability.





# MANUFACTURING & MECHANICAL ENGINEERING

**BEng Manufacturing & Mechanical Engineering**  
3 years | UCAS code: HH73

**MEng Manufacturing & Mechanical Engineering**  
4 years | UCAS code: HH37

Accrediting institutions:



DEVELOP A DEEP UNDERSTANDING OF MANUFACTURING PROCESSES AND MECHANICAL DESIGN PRINCIPLES.

The Fourth Industrial Revolution, a cyber physical age, will be realised over the next 20 years. This course will equip you with the skills and knowledge to be at the forefront of these exciting developments and is delivered in partnership with WMG (Warwick Manufacturing Group), renowned worldwide for its innovative links between academia and industry.

A sound underpinning of the basics in science and management is developing in the first year and first term of the second year. After this you can specialise in Manufacturing and Mechanical Engineering, where you will learn and develop state-of-the-art techniques and methodologies that graduates find directly applicable in industry.

You will master modern technologies and skills such as robotics, lifecycle analysis, computer-aided design and simulation. We will offer you a rich curriculum and resources to achieve this and will give you a significant

understanding of management techniques and skills alongside those technical subjects to give you the confidence to innovate and lead in a globally sustainable economy.

In your third year you will be able to apply your skills to an individual project such as rapid prototyping, robot design or processing of novel materials. Those who choose the MEng degree will complete a group project in the fourth year, for example designing and building a human-powered submarine or a robot to rescue victims from a collapsed building.

After graduation you will typically find employment within advanced industries as diverse as aerospace, automotive, consumer goods, electronics and pharmaceuticals, as well as the more traditional light- and heavy-engineering sectors.

\* The IMechE are scheduled to review our Engineering programmes during 2022 as part of the standard accreditation process.

WMG'S CENTRE FOR IMAGING, METROLOGY AND ADDITIVE TECHNOLOGIES PROVIDES A HUB FOR INNOVATION AND RESEARCH THAT BRINGS TOGETHER WORLD LEADING TECHNOLOGIES FOR THE ENHANCEMENT AND UNDERSTANDING OF PRODUCT AND PROCESS PERFORMANCE.

## CORE MODULES

### Year 1

- General Engineering core programme (see pages 8-9)

### Year 2, Term 1

- General Engineering core programme (see pages 8-9)

### Year 2, Terms 2 & 3

- Industrial Engineering
- Manufacturing Engineering Design

### Year 3

- Automation and Robotics
- CAD/CAM and Simulation
- Design and Management of Lean Operations
- Design for Manufacture
- Lifecycle Engineering for Manufacturing Systems
- Quality Techniques
- Individual Project

### Year 4 (MEng)

- Innovative Process Development
- Group Project

## EXAMPLES OF OPTIONAL MODULES

Motor Vehicle Technology; Failure Investigation; Starting a Business; Advanced Robotics; Automotive Materials and Processes; Quality Systems; Simulation of Operations.

## FURTHER INFORMATION

[warwick.ac.uk/engineering](http://warwick.ac.uk/engineering)

We are constantly evolving our courses to keep up with developments in engineering and requirements from industry, so it is important you check our website for the most up-to-date information on module availability.



"I chose Manufacturing and Mechanical Engineering because it covers a large range of technical knowledge and considers how engineers ensure quality, reliable and efficient manufacturing processes are implemented and maintained. I've enjoyed applying my knowledge directly to practical projects - building a flat pack go-kart was particularly fun! The flexibility this course offers has led me to find a placement at a pharmaceutical company and I look forward to even more opportunities when I graduate."

**Floriane, 3<sup>rd</sup> year Manufacturing and Mechanical Engineering student**



# MECHANICAL ENGINEERING

**BEng Mechanical Engineering**  
3 years | UCAS code: H300

**MEng Mechanical Engineering**  
4 years | UCAS code: H302

Accrediting institutions:



## DEVELOP THE EXPERTISE TO DESIGN AND CREATE SUSTAINABLE, CUTTING-EDGE TECHNOLOGIES.

Mechanical systems, mechanisms and machines lie at the heart of our traditional engineering industries, and the skills and techniques associated with them continue to be essential. In recent years these skills have extended into areas such as precision engineering, nanotechnology and mechatronics, as mechanical engineers have broadened their abilities and embraced technologies from other disciplines to solve difficult problems.

After developing an in-depth understanding of the classical principles of engineering, those who choose to specialise in Mechanical Engineering augment their knowledge with deeper understanding of mechanically based systems. We provide opportunities to learn from world-leading researchers at the School of Engineering and WMG (Warwick Manufacturing Group) in areas such as precision mechanics, fluid dynamics, and sustainable thermal energy technology, as well as complementary areas in other fields of engineering.

You'll have the chance to apply your new skills through projects at various points in the degree. Current projects include reverse engineering a single-cylinder internal combustion engine and building a fighting robot. Third year students undertake a major individual project to work on a specific problem in depth. For those who choose the MEng degree, the fourth-year project is much more collaborative and is a realistic simulation of working in a multidisciplinary team in industry. In project work you will develop highly sought-after skills in project management and communication, alongside the ability to research, design and develop mechanical engineering products and systems.

After graduation Warwick's Mechanical Engineering students are well equipped to work in modern, multidisciplinary organisations, and are enabled to solve modern technological problems.

\* The IMechE are scheduled to review our Engineering programmes during 2022 as part of the standard accreditation process.



"This course provides a wide range of opportunities to experience both practical and theoretical knowledge across the mechanical field, from beam balancing laboratories to finite element analysis. I found that commencing the degree with general engineering (first year) has provided a strong foundation which is helpful when dealing with group projects. Additionally, the option to complete an intercalated year allowed me to experience the industry and the expectations of an incoming engineer."

**Karishma**, 4<sup>th</sup> year Mechanical Engineering with Intercalated Year student

## CORE MODULES

### Year 1

- General Engineering core programme (see pages 8-9)

### Year 2, Term 1

- General Engineering core programme (see pages 8-9)

### Year 2, Terms 2 & 3

- Mechanical Engineering Design
- Planar Structures and Mechanisms
- Systems and Software Engineering Principles

### Year 3

- Dynamics of Vibrating Systems
- Engines and Heat Pumps
- Finite Element Methods
- Fluid Mechanics for Mechanical Engineers
- Advanced Mechanical Engineering Design
- Precision, Measurement and Control
- Individual Project

### Year 4 (MEng)

- Group Project

## EXAMPLES OF OPTIONAL MODULES

Motor Vehicle Technology; Introduction to Biomedical and Clinical Engineering; Forensic Engineering; Dynamic Analysis of Mechanical Systems; Automobile Systems Dynamics and Control; Computational Fluid Dynamics; Advanced Robotics.

## FURTHER INFORMATION

[warwick.ac.uk/engineering](http://warwick.ac.uk/engineering)

We are constantly evolving our courses to keep up with developments in engineering and requirements from industry, so it is important you check our website for the most up-to-date information on module availability.



# SYSTEMS ENGINEERING

**BEng Systems Engineering**  
3 years | UCAS code: HH35

**MEng Systems Engineering**  
4 years | UCAS code: HH31

Accrediting institutions:



## STUDY PRINCIPLES ACROSS ENGINEERING DISCIPLINES AND INTERACTIONS BETWEEN SYSTEMS.

Systems Engineering is an interdisciplinary approach that enables the realisation of complex systems. Many complex engineering products (such as aerospace and automotive) involve a high level of integration and interaction across the mechanical, electronic and software domains. Systems Engineers analyse and design the behaviour of these systems including active and intelligent software, which allows systems to detect and respond to changes.

A Systems Engineer needs to understand the broader context of a system including people, processes, and information flow. The Systems thinking approach that will be gained from this course equips engineers to work on holistic problems where there are conflicting needs and complex interactions.

After studying general engineering for the first year and first term of the second year, those specialising in Systems Engineering

will develop the tools required to model problems across different areas, synthesising their knowledge and highlighting analogies. Recent projects carried out by students in recent years include the creation of a gesture detection systems which recognises British sign language, and developing a systems model of iron storage in brain disease.

As well as giving you the skills to communicate effectively and pursue a flexible career, a degree in Systems Engineering will allow you to work in an environment where you can apply data science and software engineering techniques. Warwick students are especially equipped to work in multidisciplinary organisations in functional teams which create systems incorporating mechanical and electrical components or on large-scale projects where systems thinking is required to understand (for example) the impact of the London Olympics on public transport.

"The Systems Engineering course at Warwick has a very good range of exciting, but directly applicable modules that are useful for any future Engineering career. A module I find particularly interesting is Systems and Software Engineering Principles which stresses the importance of systems thinking and applying it when designing, managing or analysing any system using practical and mathematical tools."

**Bianca, 2<sup>nd</sup> year Systems Engineering student**

**DR ALEX MOUZAKITIS,**  
Head of Vehicle Engineering Research,  
Jaguar Land Rover Ltd:

"This is a well structured course that covers systems and software engineering content by taking an integrated approach ranging from maths, engineering design, dynamics, intelligent systems, biomedical, control, systems, simulation and software engineering. This course will close a gap providing the right knowledge and skills to future engineers. The course will create competent engineers able to address future challenges within engineering environments that demand multidisciplinary skills to deliver innovations and products that consumers want."

## CORE MODULES

### Year 1

- General Engineering core programme (see pages 8-9)

### Year 2, Term 1

- General Engineering core programme (see pages 8-9)

### Year 2, Terms 2 & 3

- Analogue Electronic Design
- Systems and Software Engineering Principles

### Year 3

- Automation and Robotics
- Dynamics of Vibrating Systems
- Intelligent System Design
- Advanced Systems and Software Engineering
- Signal Processing
- Systems Modelling and Control
- Individual Project

### Year 4 (MEng)

- Group Project
- Mathematical and Computer Modelling

## EXAMPLES OF OPTIONAL MODULES

Technology in International Development; Motor Vehicle Technology; Advanced Robotics; Automobile Systems, Dynamics and Control; Computer Architecture and Systems; Biomedical Systems Modelling; Affective Computing.

## FURTHER INFORMATION

[warwick.ac.uk/engineering](http://warwick.ac.uk/engineering)

We are constantly evolving our courses to keep up with developments in engineering and requirements from industry, so it is important you check our website for the most up-to-date information on module availability.

\* The IMechE are scheduled to review our Engineering programmes during 2022 as part of the standard accreditation process.



# COMPUTER SYSTEMS ENGINEERING (JOINT DEGREE)

**BEng Computer Systems Engineering**  
3 years | UCAS code: G406

## Entry Requirements

**A Level:** AAA to include A in Mathematics

## Other Qualifications

We encourage applications from students with a wide range of other qualifications. Please see the University website for more details: [warwick.ac.uk/study](http://warwick.ac.uk/study)

Computer Systems Engineering (CSE) is a fully-integrated degree taught jointly with the Department of Computer Science. It provides a comprehensive grounding in the principles and practice of computer science, alongside the fundamental technology of digital electronic systems. You will learn about both computer hardware, such as digital hardware design and real-time systems, and computer software such as algorithms, programming and operating systems.

You will specialise from the first year as this course does not share the common first year with our other degrees. In the first two years, you will study core material in computer programming, data structures and algorithms as well as system modelling, electronic devices and circuits, and then go on to deepen your knowledge of computer architecture, digital electronics design, software engineering and operating systems and networks.

**MEng Computer Systems Engineering**  
4 years | UCAS code: G408

## Entry Requirements

**A Level:** A\*AA to include A in Mathematics

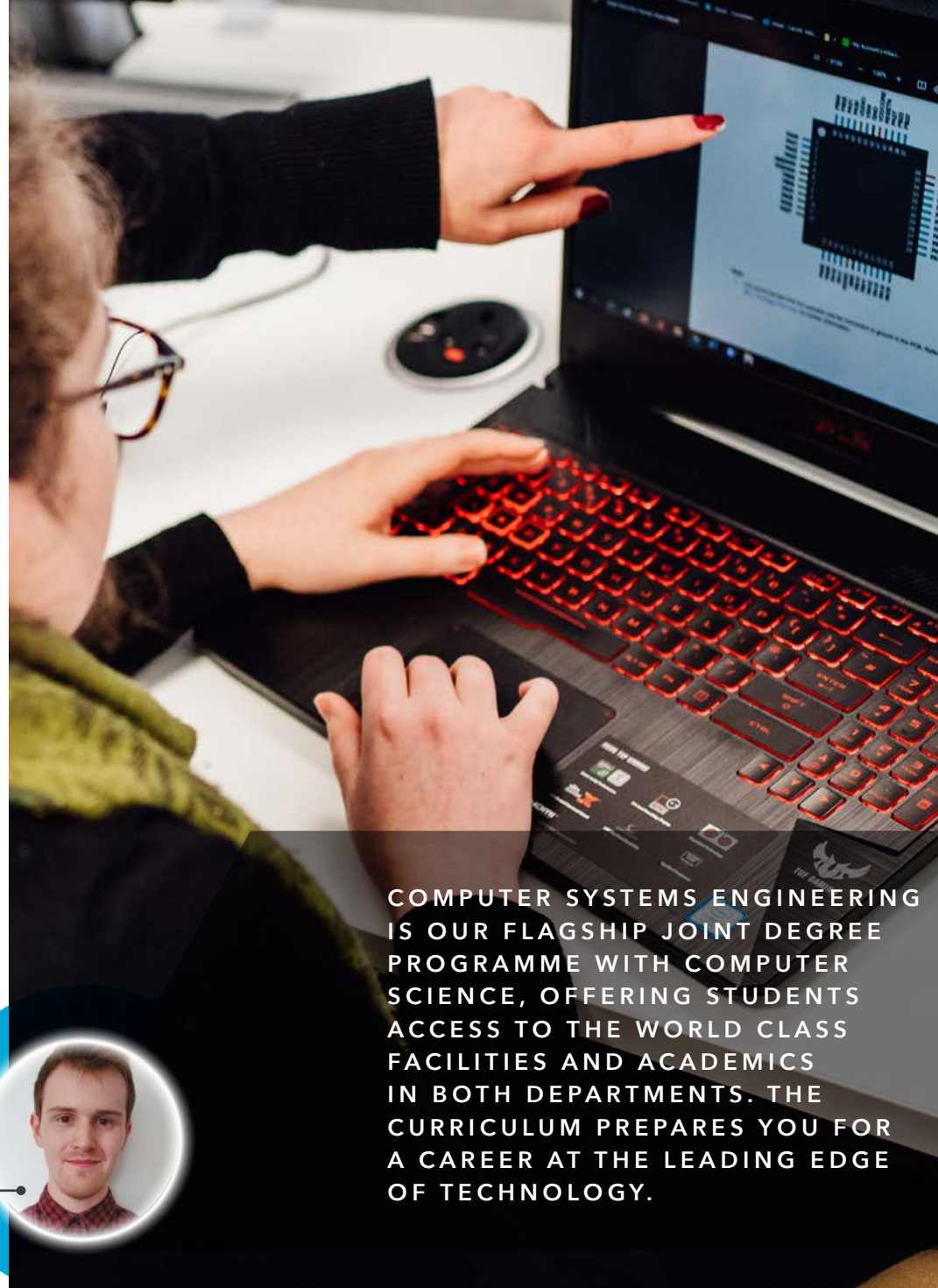
In the third year you will take a bespoke module in high-performance embedded systems design, and undertake an individual project which can be on a topic selected by you under the supervision of academics from either department.

If you choose to study the MEng you will study advanced material for a further fourth year where you will also undertake an interdisciplinary Engineering group project to help advance your research and development skills in a team environment.

CSE graduates have a skill set which is applicable across a range of careers. Recent graduates have landed prestigious jobs at the very best computer design companies and current students have undertaken internships at companies such as ARM, Intel and Airbus.

"The multidisciplinary nature of CSE makes it an incredibly special course in an expanding digital world of smart and IoT devices. There is an increasing demand for computer engineers with a skillset that the programme provides."

**Steven, 3<sup>rd</sup> year Computer Systems Engineering student**



## CORE MODULES

### Year 1

- Computer Organisation and Architecture
- Design of Information Structures
- Electrical and Electronic Circuits
- Engineering Mathematics
- Professional Skills
- Programming for Computer Scientists
- Systems Modelling, Simulation and Computation

### Year 2

- Advanced Computer Architecture
- Analogue Electronic Design
- Digital Systems Design
- Engineering Mathematics and Data Analytics
- Operating Systems and Computer Networks
- Software Engineering

### Year 3

- High Performance Embedded Systems Design
- Project Management for Computer Scientists (MEng only)
- Individual Project

### Year 4 (MEng Only)

- Group Project

## EXAMPLES OF OPTIONAL MODULES

Mathematics for Computer Scientists I; Functional Programming; Visualisation; Computer Security; Digital Communications and Signal Processing; Artificial Intelligence

## FURTHER INFORMATION

[warwick.ac.uk/engineering](http://warwick.ac.uk/engineering)

We are constantly evolving our courses to keep up with developments in engineering and requirements from industry, so it is important you check our website for the most up-to-date information on module availability.



# HOW WILL I LEARN?

BY JOINING OUR SCHOOL OF ENGINEERING YOU'LL BECOME PART OF OUR APPROACHABLE AND INCLUSIVE COMMUNITY AND BE SUPPORTED BY STAFF AND STUDENTS ALIKE.

The academics who teach you work at the forefront of their subjects and are making internationally significant advances, so you'll encounter the latest thinking and most up-to-date knowledge while you study at Warwick.

## CONTACT HOURS

We use a variety of teaching methods, ranging from lectures and group tutorials to small-group teaching in laboratories. We try to balance academic teaching with opportunities to get hands-on, applying this learning and testing your ideas through practical work.

## PROFESSIONAL SKILLS

As well as deep subject knowledge, our courses help you develop key skills in independent and critical thinking, presentation, communication, research, leadership, team-working and organisation. Our courses are designed to progressively build your knowledge, skills and confidence ensuring you're ready for life after university.

93%

OF OUR COMPLETE REF2021 SUBMISSION WAS RATED AS 'WORLD-LEADING' OR 'INTERNATIONALLY EXCELLENT'

(Research Excellence Framework, 2021)

## PROJECTS

In Year 3 students develop their research skills through an individual project related to their degree, specialising in one particular area. This may be linked to our research activities, be in conjunction with an external company, or support a fourth year project. For those who study for a MEng degree, the fourth year large group project is worth 25% of the year and simulates the multidisciplinary working practices you will experience in your career.

## TUTORS

Lecturers provide support and feedback hours for additional help with materials they've covered. Students are allocated a personal tutor to whom they can turn for advice regarding academic or personal matters, and can signpost students to other appropriate sources of personal support and guidance within the University.

The School also has a Senior Tutor who promotes the academic welfare of students and to whom students can turn for support regarding difficulties in their studies.

## ASSESSMENT

You will experience a variety of assessment methods, and can expect to mostly take (online or face-to-face) examinations and complete coursework assignments. Projects are assessed by a variety of methods, including oral presentations, written reports and posters.

## INDEPENDENT STUDY

Our building is equipped with all the facilities, tools and work and social spaces you need to be successful in your studies. Computer laboratories loaded with specialist software are open 24/7 and you can also download much of this software on your own devices, helping you undertake work at any time or in any place that suits you.

## SOCIAL LIFE

You'll have opportunities throughout your degree to work on tasks or projects with other students, helping you to forge meaningful friendships which can prove a great source of academic and personal support throughout your time at university, and often go on to become valuable professional networks after you graduate.





# STUDENT COMMUNITY

**Our Campus** is home to students and staff from many different backgrounds and countries. This inclusive and cosmopolitan atmosphere gives Warwick its vibrancy and characteristic 'buzz.' We value your individuality and provide an environment where you can be yourself and form life-long friendships.

**Students' Union (SU)** supports over 300 student societies and sports clubs so you'll have many opportunities to meet people, learn valuable skills and try new things. The SU runs a packed programme of events including gigs, karaoke, open-mic nights and pub quizzes. [warwicksu.com](http://warwicksu.com)

**Warwick Arts Centre** is one of the largest multi-artform venues in the UK and hosts many arts and cultural activities. [warwickartscentre.co.uk](http://warwickartscentre.co.uk)

## ENGINEERING SOCIETY

Warwick Engineering Society is an award winning student-run hub for Warwick engineers to network, socialise, learn and make the most of their university life. With an all-inclusive community of over 600 members, there's sure to be something for you:

- Two annual conferences
- Site visits and student projects
- Careers talks and networking opportunities
- Regular and diverse socials for all
- Academic sessions and workshops
- Welfare initiatives, such as 'Let's STEM the Stress!'



ENGINEERING  
SOCIETY • WARWICK

- **WINNER**  
Best University Society, National Undergraduate Employability Awards 2019
- **WINNER**  
Impact on Campus Award, Bright Network Society of the Year Awards 2019
- **SHORTLISTED**  
Innovation Award, Bright Network Society of the Year Awards 2020

[warwickengineers.co.uk](http://warwickengineers.co.uk)

[f](https://www.facebook.com/WarwickEngineeringSociety) [WarwickEngineeringSociety](https://www.facebook.com/WarwickEngineeringSociety) [in](https://www.linkedin.com/company/warwick-engineering-society) [warwick-engineering-society](https://www.linkedin.com/company/warwick-engineering-society)

## ENGINEERS WITHOUT BORDERS

Engineers Without Borders Warwick is affiliated to the national charity Engineers Without Borders UK, a movement that inspires, enables and influences global responsibility through engineering. The society provides opportunities for students to:

- Develop practical skills through creative and sustainable-minded technical projects
- Volunteer in local schools and events, inspiring the next generation of engineers
- Learn about international development through talks and networking events
- Enjoy regular socials with a friendly group of engineers and non-engineers

[f](https://www.facebook.com/ewbwarwick) [ewbwarwick](https://www.facebook.com/ewbwarwick)



## WARWICK WOMEN IN ENGINEERING AND SCIENCE

Warwick Women in Engineering and Science (WWES) is focused on promoting and creating a diverse and inclusive STEM industry. WWES is affiliated with the UK charity WES and offers support, advice, inspiration and professional development for minorities in Engineering and STEM. Students can get involved through volunteering, outreach, conference, collaborations with other societies and great socials. There is bound to be something for you!

- **WINNER**  
Bright Network's Diversity and Inclusion Award 2020
- **SHORTLISTED**  
Top 3 in Engineering Talents Award 2020

[f](https://www.facebook.com/warwickwes) [warwickwes](https://www.facebook.com/warwickwes)



## WARWICK RACING

Warwick Racing are a student run racing team who design and build single seat race cars for participation at international competitions. The project is open to all years to get involved with the opportunity to get hands-on engineering experience. The team is made of several different sub teams: Chassis, Dynamics, Powertrain, Electronics, Manufacture and Testing as well as a business side which deals with Marketing, Finance, Sponsorship, PR and Outreach & Events. The team are currently manufacturing both an Internal Combustion and an Electric car.

[warwick-racing.co.uk](http://warwick-racing.co.uk)



## WARWICK MOTO

Warwick Moto is a student run racing team who aim to design and build an electric motorcycle to compete against other students and professional teams from across the world in multiple national and international race events every year. The project provides opportunities to develop skills on both the engineering and business sides, and the team is open to all years and made of several sub-teams which tackle different domains of the motorcycle such as aerodynamics and powertrain. The team has an ultimate goal to race at the Isle of Man TT on the return of the TT Zero class.

[f](https://www.facebook.com/warwickmotoracing) [warwickmotoracing](https://www.facebook.com/warwickmotoracing)



# INTERCALATED DEGREES

STUDENTS CAN CHOOSE TO SPEND A YEAR IN INDUSTRY, RESEARCH OR STUDY ABROAD AS PART OF THEIR DEGREE.

Intercalated years are typically taken between years two and three, or between years three and four for MEng, and add a year to your degree duration.

A year in industry enables students to apply, build and reflect on their key technical and professional skills in a paid work environment for up to 12 months (see pages 37-38). A year in research is an alternative option for those who may want to develop a career in academic or a particular field of research.

Those choosing to study abroad will have an opportunity live and study in a different cultural setting, therefore enhancing the learning experience.

Please note: study abroad options are offered subject to availability.



# PLACEMENTS AND INTERNSHIPS

THE SCHOOL OF ENGINEERING HAS A DEDICATED PLACEMENT AND INTERNSHIP OFFICER WHO ACTIVELY ENCOURAGES STUDENTS TO GAIN RELEVANT WORK EXPERIENCE THROUGH A SUMMER OR YEAR-LONG PLACEMENT.

They also provide guidance to help prepare you for the rigorous recruitment and selection procedures used by employers in the UK and overseas. Students with relevant work experience tend to fare much better in the graduate recruitment process as they can demonstrate greater skills, competencies, strengths and experiences.

## Ciara, 3<sup>rd</sup> year MEng Civil Engineering student with placement at Graham Construction

"As a Placement Engineer I spent the majority of my placement working on Carpenters Land Bridge, a 66m long steel footbridge Graham constructed in the Olympic Park in Stratford, London. My role was to assist with the everyday running of site including ordering materials, co-ordinating deliveries and inducting new operatives. Using survey equipment, I set out the project's concrete structures and guided the placement of the bridge sections so they can be welded together in the correct alignment. The highlight was watching the installation of Carpenters Land Bridge over Network Rail tracks, DLR lines and Carpenters Road on Christmas Day.

My university modules provided me with the theory I would see utilised on site

throughout my placement. In particular, I was able to relate the slump and geological tests that were performed on site to my materials and geotechnical modules.

I wouldn't have gained invaluable site experience if I hadn't of taken my placement. The placement allowed me to develop multiple transferable skills that I will be able to utilise no matter what industry I enter after university. It also enabled me to further enhance my industry awareness of the construction sector. In fact, my placement confirmed to me that I want to enter contracting civil engineering after I graduate. I have learnt more about the skills required by the industry, what tasks I will be expected to complete and how a working day is structured."





**Josh, 4<sup>th</sup> year MEng Systems Engineering student with placement at BAE Systems**

"I spent the first six months in a team as a systems engineer working on all aspects of the design of new systems. My activities included Technical Capability studies to assess the suitability of different modelling approaches, evaluating potential suppliers based on their capability, writing system requirements and carrying out model-based systems engineering using Enterprise Architect to increase the maturity of the design.

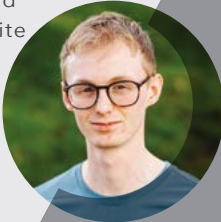
The second six months were spent working in business development and strategy on a wide range of different projects. My favourite was developing a simulation model of submarine availability, which required me to work with stakeholders from across the business, supply chain and our customers.

I had an amazing time on my placement! My team were all very supportive and incredibly knowledgeable, I learned so much about a

really wide range of topics working with them and I felt a valued part of the team.

Warwick supported me with interview practise prior to the placement and kept in regular contact to ensure I was settling in and making the most of the opportunity. Studying Systems Engineering at Warwick prior to my placement also taught me how to be a problem solver, flexible and work in teams which meant I could quickly get stuck into my new surroundings and start actively contributing to the project, despite having no prior knowledge of the topic area.

The placement definitely made me more confident, well-rounded and more of a team player which helped in final year where I had a lot of group work. The experience has also helped securing a job, I had an offer to return to BAE but have also been offered a job at Deloitte which is more focused on my area of interest, mathematical modelling."



**Oluseyi, 4<sup>th</sup> year MEng Manufacturing and Mechanical Engineering student with placement at Xylem**

"I spent my placement year working as a Manufacturing Engineer Intern at Xylem. My primary objective was to help with the introduction and implementation of Lean manufacturing tools and techniques. However in practice I got involved in so much more. I worked with Xylem Watermark (the social corporate responsibility arm of Xylem) to educate children on the worldwide water crisis, I worked with the HSE team to develop a new system for managing the outstanding actions and I also got my hands dirty on the shop floor conducting on site 5S events. My highlight was definitely getting sent to the south of France (all expenses paid!) to go and work with a customer in resolving an issue that was brought to our attention.

The most significant thing about the Engineering course was the general structure which meant that, although my role was specific to the Lean methodology, my understanding of engineering design, fluid dynamics, and even presentation skills all helped me on my placement.

I have currently secured a graduate job at Cisco as a consulting Engineer. Without a shadow of a doubt there is no way I would have secured this role without my year in industry. Not only in terms of having the experience of working full time in such an environment, but even during every interview stage, the experience I gained gave me an upper hand which was critical to my success in securing the role."



# CAREERS AND EMPLOYABILITY

CHOOSING WARWICK WILL GIVE YOU THE OPPORTUNITY TO MAXIMISE YOUR CAREER PROSPECTS.

Our degrees are attractive to employers both in the UK and internationally because of the breadth of knowledge and skills our 'well-rounded' graduates gain. We have a strong University Student Careers and Skills Service, who offer valuable graduate careers support.



95%

**6<sup>TH</sup> MOST TARGETED BY UK'S TOP 100 GRADUATE EMPLOYERS**  
(The Graduate Market in 2022, High Fliers Research Ltd)

**95% WARWICK'S GRADUATE PROSPECTS SCORE FOR GENERAL ENGINEERING**  
(In the Complete University Guide 2022)\*

\*This is 3rd in the Russell Group, and 3rd in the sector.



## HOW TO APPLY

Applications are made through UCAS  
[ucas.com](https://ucas.com)

If you are made and accept an offer, and meet all conditions we will confirm your place and look forward to warmly welcoming you at the start of your life here at Warwick.

For more information about how we process applications please visit  
[warwick.ac.uk/study/undergraduate/apply](https://warwick.ac.uk/study/undergraduate/apply)

## OVERSEAS APPLICANTS

At Warwick, we welcome applications from across the globe, and have dedicated teams available to advise and support, as well as a global network of Agents and Representatives. For more information on applying from your country see:  
[warwick.ac.uk/study/international](https://warwick.ac.uk/study/international)

## SCHOLARSHIPS

Warwick is privileged to attract high-fliers and seeks to recognise and promote achievement, talent, ideas, hard work and diversity, including through offering scholarships where possible. For more details see our website: [warwick.ac.uk/engineering/undergraduate/scholarships](https://warwick.ac.uk/engineering/undergraduate/scholarships)

## DISCOVER MORE

To find out more about the University, including opportunities to visit and engage with your department of choice, visit:

[warwick.ac.uk/undergraduate/visits](https://warwick.ac.uk/undergraduate/visits)

## ACCOMMODATION

Warwick Accommodation manages over 7400 self-catering residences on campus. Living on campus in your first year gives you the opportunity to meet people and form new friendships whilst never being more than a short distance from your lectures or the amazing facilities campus has to offer. At Warwick, you'll enjoy the freedom of independent living alongside your fellow students but with the security of knowing you're surrounded by people who can support you. For more information visit:

[warwick.ac.uk/accommodation](https://warwick.ac.uk/accommodation)

## STUDENT FEES AND FUNDING

We want to ensure that, wherever possible, financial circumstances do not become a barrier to studying at Warwick. We provide extra financial support for qualifying students from lower income families.

[warwick.ac.uk/studentfunding](https://warwick.ac.uk/studentfunding)



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