We are a world-leading university, consistently ranked in the top ten in UK league tables and the top university to be targeted by leading graduate employers. Research-led teaching ensures all engineering graduates gain technical knowledge and skills in problem-solving, management and communications, meaning you will leave with the ability to transfer and apply your knowledge in creative solutions. Our attractive and friendly campus with sports facilities, entertainment venues and the Students’ Union, caters for the 13,000 students who make up the undergraduate population, 2,500 of whom are from overseas. Warwick undergraduate student numbers are typically evenly split between male and female. In 2013 we topped the list of universities targeted by graduate employers, making Warwick the first choice for aspiring students.

Welcome to Warwick
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Welcome to Warwick

Contents

Engineering at Warwick 04
Campus life 05
An international prospective 06
Learning resources 06
Learning another language 06
Warwick advantage 06
Warwick volunteers 06
Internships and placements 07
Career pathways 08
Career destinations 09
International students 10
Student engineering societies 11
Course structure and content 12
Timetable 13
Automotive 14
Civil 16
Electronic 18
General 20
Manufacturing and Mechanical 22
Mechanical 24
Joint 26
MEng 28
Student projects 30
Research overview 32
Research projects 33
Applying 34
FAQs 35
Engineering at Warwick

We are a world-leading university, consistently in the top ten to study engineering in the UK (as determined by the national league tables and the last Research Assessment Exercise).

A unified approach
At Warwick we have a unified approach to the teaching of our engineering courses, which mirrors the inter-disciplinary working practices within industry. Through a partnership between the School of Engineering and WMG (Warwick Manufacturing Group), our research-led teaching develops continuously to reflect cutting-edge technology and emerging needs of industry. We have a friendly and supportive learning and teaching environment. Many of our academics are leading researchers in their field.

Flexibility
To prepare our graduates for employment, we have designed our courses around a common first and second year that develops the multi-disciplinary approach. This also enables you to delay your final choice of engineering degree course and allows you to make a more informed choice about your graduate career path. Throughout your course you will develop an impressive range of transferable skills to equip you for the future.

Facilities
We are continuously investing to maintain state-of-the-art facilities, including two large engineering halls, giving you access to staff and resources to enable you to carry out your studies.

International links
We have worked with a wide range of companies, both nationally and internationally, for over 30 years. As the largest research group of its kind in Europe, and with teaching centres in Europe, the Far East and South Africa, you will benefit from WMG’s world renowned reputation.

Our course structure means that you will only find us ranked in the league tables against general engineering.

Help in your first year
All first year engineering students will receive their essential textbooks and equipment completely free of charge, saving you nearly £300. The department offers £1,000 merit scholarships for gifted and talented students in their first year of study. To be eligible, you must have made us your first (firm) choice. Please refer to our website for further details.

warwick.ac.uk/engineering/ug
Campus life

Location
Our campus offers a great mix of urban and rural life. You are well provided for on campus with the Students’ Union and a wide range of facilities including a supermarket, bars, cafés, restaurants, cinema, post office, hairdresser, launderettes, banks, travel agency and health centre. If you fancy venturing off campus, the centre of Coventry is only three miles away, offering all the facilities you would imagine in a city, such as multi-screen cinema, bars, restaurants, museums, art galleries and an ice rink – home to league-topping ice hockey team Coventry Blaze.

The Georgian town of Royal Leamington Spa is within easy reach via the ‘Uni Bus’ which runs regularly between the town and campus. It’s also home to lots of Warwick students. The UK’s second city, Birmingham, is only 25 minutes from Coventry railway station and London is just over an hour’s train journey away.

We’re also close to historic centres like Kenilworth, Warwick and Stratford-upon-Avon, Shakespeare’s birthplace and home to the Royal Shakespeare Company (RSC). If you prefer more tranquil surroundings, the University is close to the traditional rural landscape of the Cotswolds.

Warwick Sport
During 2013 £1.5 million was invested in developing our sports facilities. There’s something to offer everyone from a state-of-the-art gym, 25 metre swimming pool, two sports halls, a tennis centre, athletics track, 60 acres of outdoor playing fields and three all-weather floodlit pitches. There are 73 sports clubs and 100 teams competing in British Universities and Colleges Sport (BUCS). Warwick also funds a Scholarship and Bursary Scheme for students competing at a top level in their sport.

Warwick Arts Centre
Situated in the middle of campus and housing two theatres, a concert hall, a cinema and an art gallery, Warwick Arts Centre showcases some of the best in UK and international drama, comedy, dance, art, film and live music. There are often great ticket deals for University of Warwick students. Many clubs and societies use these facilities to put on their own shows.

Students’ Union
Warwick’s Students’ Union is one of the largest in the UK; a hub to enhance your experience while studying. There’s something to suit everyone with a lively programme of events, with some of the largest student run festivals in the world, such as One World Week.

Societies
Societies bring like-minded people together. At Warwick we have over 240 – that’s more than any other university in the country and we also have some of the best! Along with the usual sports and social clubs, choose anything from Argentine Tango to the Curry Society, Comic Book Society and Warwick TV. Try something new, or set up your own. A great place to meet new friends, develop essential skills and improve your employability.

Accommodation
We have a range of high-quality self-catering accommodation on campus to suit both your budget (rental periods of 30 or 39 weeks) and lifestyle. All halls are within a 15 minute walk of central campus. Some of the 6,200 rooms on campus are en-suite and all have broadband and residential tutors to ensure your wellbeing.

Those who have accepted an offer from us as their firm choice (and have applied for accommodation online by 31 July 2014), will be guaranteed a place in University accommodation for their first year.

For further information please visit our website.

warwick.ac.uk
An international perspective

A total of 145 nationalities are represented at Warwick. Our links with more than 200 institutions around the world, including the prestigious Monash University in Australia, mean you could graduate with a global education.

Warwick.ac.uk/monash

Learning resources

Recently transformed by a £3.5 million refurbishment, Warwick’s library is situated in the middle of campus, only a short walk from Engineering. Its catalogue contains over 1.2 million volumes and there are extensive online resources available, including 30,000 electronic journals. You can use the library electronically, on or off campus.

Warwick.ac.uk/go/library

Our four Learning Grids are a unique integrated learning landscape for individual working. There are three on campus and in 2013 we opened a grid in Leamington Spa to support students off campus. The Learning Grid at University House is open 24/7 and features digital multimedia, reference material, careers information, wireless networking, video editing, cleverboards, networked PCs, plasma screens, internet points and presentation rooms, so you can work whenever you like.

Warwick.ac.uk/go/grid

Learning another language

We recognise that an additional language is increasingly seen as an essential skill for professionals. We offer courses in Arabic, French, German, Italian, Japanese, Mandarin Chinese, Russian and Spanish.

Warwick.ac.uk/languagecentre

The Warwick Advantage

A good degree from a top university is a starting point for recruiters, but it is the extra-curricular dimension that enables you to stand out and make your application unique. The Warwick Advantage online resources and training sessions enable you to reflect on your learning and skills development. The Warwick Advantage Award, run in collaboration with the Students’ Union and sponsored by IBM, demonstrates that you have the right transferable skills. The Warwick Global Advantage, sponsored by Deloitte, encourages students to add an international dimension to their CV.

Warwick.ac.uk/advantage

Warwick Volunteers

Warwick Volunteers is a great way to get involved with the local community and participation can be used as part of the submission for one of our Advantage Awards.

Warwick.ac.uk/volunteers
Internships, placements and study abroad

Industrial placements are an excellent way to enhance your CV.

A year out in industry can be taken before you start a degree or by temporarily withdrawing for a year at any point in your degree. MEng students can also choose to take a formal year out between study year three and four and have this experience formally reflected in their degree title: MEng with an intercalated year (for industry) or with a year in research. Studying abroad can also add to your personal development, future study and career opportunities. We have links to universities in Europe and around the world, where you can study for between three months and a year.

Erasmus
Tom Houiller

After my second year I went on a year abroad to Darmstadt in Germany, which was a very valuable experience for me. As an Erasmus student, I could combine modules from lots of different areas, faculties and departments, that meant I undertook engineering, language and IT modules and developed a real interest in the energy sector and power generation.

I travelled extensively around Germany, which was obviously a lot of fun, but it has given me numerous transferable skills as well. It was sometimes tough, but it has taught me about adaptability, I have developed my confidence, become more open-minded and have broadened my horizons.

Now in my final year at Warwick, I know I want to study the sustainability elective because it will continue my studies from the modules and activities I was doing in Germany. It has prepared me for the end of my degree and my future career plans. I would recommend it to anyone.
Career pathways

Chartered Engineer status

As an ambitious student, you will probably aspire to achieving Chartered Engineer (CEng) status. The preferred route to reaching this goal is to complete a four-year accredited Masters of Engineering (MEng), degree, or you can undertake an accredited Bachelor of Engineering (BEng) degree and complete additional training after graduation. All our specialist degrees are accredited by the relevant professional institutions for progression to CEng status.

Vacancy service

Our vacancy service covers opportunities for work experience, graduate jobs, internships and sponsorship for further study. Our close contacts with over 1,500 local, national and international employers ensure our services reflect their priorities when recruiting high potential graduates. We also organise careers events such as ‘Options in Engineering’ to bring students and employers together.

Student Careers and Skills Centre

Our careers representative hosts regular careers clinics in Engineering, so you can drop in and seek advice on a variety of topics such as career opportunities, job applications and CVs. The Centre also offers a comprehensive and popular range of career planning workshops, assessment centre experience, mock interview practice and e-learning skills courses. These all help you make the most of your time at Warwick and prepare for the future. Former University of Warwick students can use the Centre for Student Careers and Skills services for up to three years after graduation.

Who employs our graduates?

Around 70% of our graduates find employment within engineering and IT sectors. A further 10% are employed by accountancy firms, consultancies and investment banks because of their strong numeracy, inter-personal and team-working skills. The remaining 20% of graduates find employment in a variety of sectors such as retail, the armed forces and teaching. Here are just a few of the companies employing Warwick engineers:

- Amey
- BAE Systems
- Jaguar Land Rover
- JCB
- Rolls-Royce (Aerospace)
- Ericsson
Career destinations

Graduate profile
Louise Hardy

London 2012 would not have happened without the infrastructure - the venues and spaces that athletes and visitors used to such great enjoyment and success last summer. As Director of Infrastructure for CLM Delivery Partner at the Olympics, Louise controlled a substantial budget and formed part of the team that helped make London 2012 such a great success.

What are you working on?
From 2006 to 2012 I was the Infrastructure Director for the Olympic Park, controlling about £2billion of public spend and ensuring that all the roads, bridges, utilities and landscaping were ready for the Games. I left to give birth to my gorgeous twin daughters and have been at home looking after them for a year. I am about to return to work with a remit to enhance project performance of a large portfolio of diverse projects across Europe, hopefully utilising the skills and knowledge that I developed by working on the Olympic challenges.

Aside from the money, what do you get out of your job?
There are few jobs where you can see your product grow in front of you each day. From my office on the Olympic Park, I could see the amazing venues rising majestically from the once barren, contaminated industrial landscape. It is an inspiring process and can create very cohesive teams. It is very rewarding.

How did you get where you are today?
By taking my career in five year chunks. Start somewhere - a job, a place, a project. Find the element that you love. Keep learning and progressing by seeking the next challenging and rewarding opportunity. Every five years I moved to a level that I had not contemplated before. It has been a voyage of self-discovery.

What’s the best advice you could give to someone wishing to follow in your footsteps?
Be tenacious! The ‘built environment’ offers a plethora of wonderful and exciting career opportunities in many disciplines. But, it can be a tough place. Do not be daunted by obstacles. My experience is that there is a way around almost every problem.

Additional interviews with Warwick alumni can be found online in the Knowledge Centre.

warwick.ac.uk/alumni  warwick.ac.uk/knowledge
International students

Each year in Engineering we welcome around 100 students from outside the UK into the first year.

We are supported by the International Office who provide a personal contact while you are at the University. The office will help you through the application process, arrival in the UK and throughout your time at Warwick. Help and advice is also available from the regional team.

Coming to visit
You are welcome to visit the campus whilst you are deciding where to study or before you begin your studies. The best way to visit the campus is through the weekly campus tours on Wednesday afternoons. Current students show you around the highlights of the university and answer any questions that you may have about studying at the University or life on campus.

warwick.ac.uk/study

Immigration advice
The Immigration Service within the International Office provides free, confidential advice and assistance to international students before and during their studies. Information and advice on the latest Immigration guidance can be found on their website.

warwick.ac.uk/immigration

Live Chats
Each week, representatives from the International Office will be available to answer questions about studying at the University of Warwick. There will also be dedicated Engineering chats and information chats, such as immigration or orientation.

warwick.ac.uk/livechat

Orientation
An exciting and interactive residential programme is held each year in the week leading up to the start of term. The four-day programme is packed full of activities, trips, social events and information sessions to welcome students and help them adjust to living and studying in the UK.

warwick.ac.uk/orientation

In-country events
During the year, representatives from the University of Warwick will attend fairs, visit schools and universities, and hold receptions for offer holders. Details of the events held in your country are available online.

warwick.ac.uk/international
Student engineering societies

Engineering Society

The Engineering Society is run by students for students. Through a wide-ranging event programme such as industrial visits, career speakers and mentoring sessions, the Engineering Society will help you get the most out of your degree. The society promotes inter-year collaboration through trips, discussion groups and career support. The engineering degree paths available at Warwick are unique and the Society believes that it’s vital to keep lower years informed and supported by students who have made their choices and experienced the course first-hand. They also run great social nights out!

External trips
- Prodrive Motorsport (factory visit)
- Cosworth Motorsport (factory visit)
- Coventry Speedway race events
- National Engineering Recruitment Exhibition at the NEC

Support
- Workshops with professional careers adviser on writing CVs, advice for industrial interviews and more
- Student-run support sessions for first year CAD coursework
- Student-run support sessions on how to write lab reports
- Student-lead advice groups on module and pathway selections

Socials
- Welcome to the ‘Freshers’
- Pub golf (pub crawl game in Leamington Spa)
- Trampolinists vs. Engineers battle

Engineering Without Borders

Engineering Without Borders (EWB) is a charitable organisation with branches at many universities across the UK and around the world. EWB sets out to remove barriers to development through engineering, developing skills and knowledge in the areas of appropriate technology and international development.

EWB-UK organises nationwide training events and conferences which usually include a strong social aspect to encourage networking. EWB-UK also organises and funds international placements, where members will be tackling water and sanitation projects. In 2013 the summer vacation project took place in Tanzania.

At Warwick, EWB holds regular meetings with an aim to provide a wide-range of engineering skills and knowledge from all their activities. A recent project has been to build a 3.6 metre diameter Hugh Piggott wind turbine on campus from scratch. The society manually carved the blades, laid foundations, tensioned steel cables, wound generator coils and casted and welded metal components. The turbine now supplies electrical energy to the campus grid, with on-going maintenance conducted by EWB members.

warwicksu.com/societies/ewb

warwicksu.com/societies/engineers
Course structure and content

We recognise that while you are confident in your decision to study engineering, you may be far less certain about which specialist course to choose. Our course structure has therefore been designed to give you choice and flexibility and to meet the needs of employers, who want engineers with strong technical knowledge and the ability to understand and communicate in technical and business functions. For the first two years all students (no matter which course they apply for) follow the same common content, meaning you will have until the end of second year to make your final choice about which type of engineering to specialise in, giving you time to gain an understanding of each area.

Year one

In your first year you will learn about the different specialisms in engineering through our core modules, for example our Mechanics and thermodynamics module provides an introduction to mechanical engineering. The Design for function module offers a range of tasks to choose from designed around three themes - electronic, civil or automotive/mechanical engineering. As a Chartered Engineer you will take a lead role in the engineering industry and our Introduction to engineering business management module helps prepares you to become a business leader of the future. The optional modules broaden your knowledge and transferrable skills, for example, our language centre offers a wide range of languages at different levels from beginner to post A level. Alternatively you can take a module related to our research expertise in areas such as biomedicine.

<table>
<thead>
<tr>
<th>Core modules</th>
<th>Optional module (one of the following)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circuits, devices and power systems, Design for function, Engineering mathematics and systems modelling, Engineering skills, Introduction to engineering business management, Mechanics and thermodynamics</td>
<td>Aesthetics of design, Biomedical engineering, Foreign language, Multimedia technology, Technology in international development, Foundation mathematics module (for those with higher level Physics, but no higher level Mathematics)</td>
</tr>
</tbody>
</table>

Year two

Engineering products such as cars, aeroplanes and bridges, are complex systems with electronics playing an increasingly important role. During your second year, you will build on your understanding of the multi-disciplinary nature of these products and gain the language and terminology to communicate with the wide range of specialists who you will work with in the future. A choice of design projects and an optional module will help you make your final decision on which area of engineering to specialise in. It is at the end of this year that you also make your final decision about whether to continue for a BSc, BEng or MEng degree. Note: If you are an MEng student, you will need to achieve an upper second class classification (60% or higher average) in your second year to remain on the MEng.

<table>
<thead>
<tr>
<th>Core modules</th>
<th>Optional module (one of the following)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy conversion and power systems, Design and manufacture, Engineering mathematics and technical computing, Mechanics and thermofluids, Technical operations management</td>
<td>Computer systems, Foreign language, Forensic engineering, Introduction to secondary teaching, Vehicle technology</td>
</tr>
</tbody>
</table>

Year three

In your third year the course concentrates on providing the specialist engineering knowledge essential to each course and on developing your research skills through an individual project. If you still want to take a broad approach that will lead to Chartered Engineer status, you can do this via the General Engineering BEng or MEng degree. There is also an opportunity for some MEng students to spend their third year studying abroad. If you decide you do not wish to become a Chartered Engineer you can study more business modules on our Engineering Business Management or Engineering and Business Studies degrees.

Year four (MEng only)

If you follow a MEng course you will stay on for a fourth year of academic study and add some more specialist material relevant to your chosen degree course. All MEng students join an interdisciplinary group project, which will integrate taught material as well as helping you practise your research skills in a team environment. You can focus on a particular area of interest via your elective choice or simply choose three optional modules. It is also possible to take a year-long placement in an industrial or research environment, before returning for your fourth year of academic study and have this reflected in your MEng degree title.
# Course Structure and Content

We recognise that while you are confident in your decision to study engineering, you may be far less certain about which type of engineering to specialise in. In your first year, you will learn about the different specialisms in engineering through our core modules, which will help you understand and communicate in technical and business functions. For the first two years, all students follow the same common content, meaning you will have until the end of your second year to make your final choice about which type of engineering to specialise in, giving you time to gain an understanding of each area.

## Core Modules

- **Design for function** module offers a range of tasks to choose from designed around three themes - electronic, civil and mechanical engineering. For example, our Mechanics and thermodynamics module provides an introduction to mechanical engineering. The Electrical circuits module covers a broad range of topics, including energy conversion and power systems, while the Mathematics module (for those with higher level mathematics) covers topics such as linear algebra and probability. The Business module gives you an understanding of the nature of business and the role of business in society.

## Optional Modules

- For the first two years, all students follow the same common content, meaning you will have until the end of your second year to make your final choice about which type of engineering to specialise in. It is at the end of this year that you also make your final decision about whether to continue for a BSc, BEng or MEng degree. Note: If you are an MEng student, you will need to achieve an upper second classification (60% or higher average) in your second year to remain on the MEng.

- The optional modules broaden your knowledge and transferrable skills, for example, our Aesthetics of design module helps you understand and communicate with the wide range of specialists you will work with in the future. A choice of design projects and an optional module will help you make your final decision on which area of engineering to specialise in. It is also an opportunity for some MEng students to spend their third year studying abroad.

- If you decide you do not wish to become a Chartered Engineer, you can study more business modules on our Business Management or Engineering Business Management courses.

- As a Chartered Engineer, you will take a lead role in the engineering community, providing the specialist engineering knowledge and skills needed to meet the needs of employers, who want engineers with strong technical knowledge and the ability to communicate and work in interdisciplinary teams.

- Our language centre offers a wide range of languages at different levels from beginner to post A level. Alternatively, you can take a module related to our research expertise in areas such as biomedicine.

- As an MEng student, you will take a broad approach that will lead to you integrating taught material as well as helping you practise and develop your research skills through an individual project. If you follow a MEng course, you will stay on for a fourth year of academic study and add some more specialist modules. It is also possible for students to take a year-long placement in an industrial or research environment, before returning for your fourth year of academic study.

- If you follow a MEng course, you will stay on for a fourth year of academic study and add some more specialist modules. It is also possible for students to take a year-long placement in an industrial or research environment, before returning for your fourth year of academic study.

## Sample Timetable

<table>
<thead>
<tr>
<th>Time</th>
<th>Mon (Lecture)</th>
<th>Tue (Lecture)</th>
<th>Wed (Lecture)</th>
<th>Thu (Lecture)</th>
<th>Fri (Lecture)</th>
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<tbody>
<tr>
<td>8:00</td>
<td>Mathematics</td>
<td>Electrical circuits</td>
<td>Meeting with personal tutor</td>
<td>Seminar</td>
<td>Lecture</td>
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<tr>
<td>9:00</td>
<td>Lecture</td>
<td>Personal study</td>
<td>Business</td>
<td>Design for function</td>
<td>Design for function</td>
</tr>
<tr>
<td>10:00</td>
<td>Lecture</td>
<td>Lecture</td>
<td></td>
<td>Lecture</td>
<td>Lecture</td>
</tr>
<tr>
<td>11:00</td>
<td>Business</td>
<td>Business</td>
<td></td>
<td>Revision class</td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>Study skills</td>
<td></td>
<td></td>
<td>A swim at the Sports Centre</td>
<td>Personal study</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Personal study</td>
<td></td>
</tr>
<tr>
<td>13:00</td>
<td></td>
<td></td>
<td></td>
<td>The Aesthetics of design</td>
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<tr>
<td>14:00</td>
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<td></td>
<td></td>
<td></td>
<td>Laboratory</td>
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<tr>
<td>15:00</td>
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<td></td>
<td>Design for function</td>
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<td>16:00</td>
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<td>17:00</td>
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<tr>
<td>18:00</td>
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</tbody>
</table>

**Key:**
- Core
- Option
- Tutorial
- Other

**Type of module:**
- Lecture
- Seminar
- Workshop
- Laboratory
- Lecture

**Teaching method:**
- Lecture
- Seminar
- Workshop
- Laboratory

**Module title:**
- Design for function
- Electrical circuits
- Mathematics
- Business
- Study skills
- Revision class
- A swim at the Sports Centre
- Personal study
- The Aesthetics of design
- Design for function
- Laboratory

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For more information, visit [warwick.ac.uk/engineering](http://warwick.ac.uk/engineering).
Automotive Engineering

H330 BEng Automotive Engineering
H335 MEng Automotive Engineering

Automotive industries are central to the manufacturing sectors of many countries. This includes the UK, where companies like BMW, Jaguar Land Rover, Nissan and Toyota continue to fly the flag of automotive innovation and quality production. These global brands are supported by the supply chain - a huge network of companies who manufacture a wide range of parts for the industry both in the UK and internationally.

Automotive Engineering is increasingly global in its outlook and multidisciplinary in its operation, for example over 30% of the value of a modern car lies in its electronic systems. With skills ranging from mechanical design, electronic systems, manufacturing techniques, management, ergonomics and human perception of things such as noise, vibration and performance, the well-rounded automotive engineer will be equipped for a broad range of career options.

The degree is underpinned by WMG’s wide-ranging automotive research, including a state-of-the-art hybrid powertrain facility and a low carbon vehicle and technology project.

Career destinations for Automotive Engineers range from research and development positions within industrial or academic establishments, to design and manufacturing posts in car companies or the supply industries.

**BEng Automotive Engineering | Year three**

**Core modules**

- Project, Automation and robotics, CAD/CAM and simulation, Design for manufacture, Design for safety and comfort part 1, Quality techniques, Systems modelling and control

**Optional modules - one of the following:**

- Dynamics of vibrating systems, Electrical machines and power systems

**MEng Automotive Engineering | Year three**

**Core modules**

- Individual project, Automation and robotics, CAD/CAM and simulation, Design for manufacture, Design for safety and comfort part 1, Quality techniques, Systems modelling and control

**MEng Automotive Engineering | Year four**

**Core modules**

- Group project, Automobile systems, Dynamics and control, Design for safety and comfort part 2

**Optional modules - four of the following:**

- Advanced robotics, Design for sustainability, Dynamic analysis of mechanical systems, Energy conservation, IC engines, Quality systems, Renewable energy systems, Simulation of operations, Supply chain management

**Electives - available by taking three specific optional modules:**

- MEng Automotive Engineering with Business Management
- MEng Automotive Engineering with Robotics
- MEng Automotive Engineering with Sustainability
The main reason I chose Warwick was the approachability of the staff and the overall environment and feel. It’s so diverse with people from a wide variety of cultures, enabling you to explore the world and make lifelong friends.

I love my degree, studying general engineering in the first year enables you to gain an insight into the various streams before deciding which one you want to focus on. As part of my fourth year project I do Formula Student which is potentially the coolest project there is – we get to build a single seat racing car and race it around Silverstone!

My industrial placement involved working for Rolls-Royce Defence in Bristol between my second and third year, as well as doing various summer internships; from this I now have a job offer.

Whilst at Warwick I have got involved with a range of clubs; Surf, Judo, Tae Kwon-Do, Rowing, Sailing and Women’s Football. Everyone is so enthusiastic and you can take part in charity events and volunteering. Sports clubs have definitely made my overall university experience something I am proud to be a part of and there is so much going on that you never run out of things to do or try.
I chose Civil Engineering because I really enjoyed maths and science at school and wanted to do something practical in this field. Whilst I have been firmly set on doing a civil engineering degree, the course at Warwick allows you to decide at the end of year two. I think this is a real benefit to the course and has been really useful, particularly when I’ve been on placement as I’ve had knowledge of mechanical, electrical and business elements to help me.

My main reason for choosing Warwick was that I loved the campus feel when I came on an open day, I think it’s the only way to properly see where you will spend the next three to four years of your life!

I have become more confident and also more focused; studying a subject I truly enjoy.
Civil Engineering

H200 BEng Civil Engineering
H202 MEng Civil Engineering

We rely on civil engineering every day. As a civil engineer you will plan, design, construct and maintain the infrastructure around us, such as roads, railways, tunnels and bridges, protect our coastlines from rising sea levels and support a growing population through more energy efficient buildings.

Like all our students, during your course you will master the key principles of design, analysis, management and communication. On graduation, you will use these transferable skills to achieve a ‘built’ environment without damaging the world’s fragile natural ecology.

Design will form a unifying theme throughout your course. We begin by establishing a sound approach to the principles of design, which you will relate to the core disciplines of structures, fluids and geotechnical engineering during subsequent years.

Throughout the course you will develop analytical techniques and management skills, essential to the realisation of civil engineering design.

Modules are supported by practical work in modern, well equipped laboratories and by residential field-courses in geotechnical engineering in Wales and on the Isle of Wight. A further field-course in Uganda is offered in a year four module.

Career destinations for Civil Engineers are in a diverse range of industries such as structures, foundations, water, transport and energy. Students also go on to work for civil engineering consultants and contractors.

BEng Civil Engineering | Year three

**Core modules**

- Project, Civil engineering materials and structural analysis, Construction management in practice, Geotechnical engineering, Steel structures, Water engineering for civil engineers

MEng Civil Engineering | Year three

**Core modules**

- Individual project, Civil engineering materials and structural analysis, Concrete structures, Geotechnical engineering, Steel structures, Water engineering for civil engineers

MEng Civil Engineering | Year four

**Core modules**

- Group project, Construction management in practice

**Optional module** - four of the following:

- Advanced geotechnical engineering, Advanced structural engineering, African field course, Design for sustainability, Engineering conservation, Finite element methods, Global water and sanitation technologies, Health and wellbeing and the built environment, Quality systems, Renewable energy systems, River mixing, Simulation of operations, Supply chain management

**Electives**

- available by taking three specific optional modules:

  - MEng Civil Engineering with Business Management
  - MEng Civil Engineering with Sustainability
Intelligent embedded electronic systems are becoming so pervasive, influential and complicated that the breadth and depth of knowledge needed to create them is often not appreciated. It is no longer sufficient for electronic engineers to build hardware alone, as systems are increasingly dependent on autonomous real-time software with safety-related requirements.

As the underlying electronic technologies continue to advance rapidly, our taught courses are carefully designed, and regularly reviewed, to ensure the optimum balance is achieved in all disciplines between unchanging principles, current commercial practices and emerging opportunities.

The spectrum of knowledge, devices and techniques covered is extensive from micro-power sensors to analogue and digital signal processing - with integrated microcontrollers and field programmable gate arrays - to VLSI design, power devices and actuators. All are studied with respect to overall system-level performance, using analytical mathematical modelling, as well as detailed behaviours including reliability. Lectures are supplemented by extensive individual and team-based projects in all years to ensure knowledge gained can be applied to real design challenges.

Careers destination for Electronic Engineers are in areas as diverse as smart building control, petrochemical engineering, medical imaging, secure communications, consumer/media electronics, and automotive/aircraft systems.

**BEng Electronic Engineering** | Year three
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**Core modules**
- Project, Analogue systems design, Communication systems, Digital systems design, Fundamentals of modern VLSI design, Signal processing

**Optional module** - one of the following:
- Automation and robotics, Electrical machines and power systems, Systems modelling and control, Software engineering

**MEng Electronic Engineering** | Year four
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**Core modules**
- Group project, ASICs, MEMS and smart devices, Power electronic converters and devices

**Optional module** - four of the following:
- Advanced robotics, Automobile systems, dynamics and control, Biomedical systems modelling, Instrumentation and measurement, Optical communication systems, Quality systems, Remote sensing and global modelling, Signal and image processing, Simulation of operations, Supply chain management, Wireless communications

**Electives** - available by taking three specific optional modules:
- MEng Electronic Engineering with Business Management
- MEng Electronic Engineering with Communications
Engineering at Warwick gave me the flexibility I needed in deciding which discipline to follow. I had no actual experience in engineering, just topics I knew I enjoyed, so not having to finally decide until the end of second year suited me well. I chose electronic engineering, which has allowed me to learn about cutting edge technology and in particular I have enjoyed the digital aspect the most. We have done everything from turning circuit designs into physical printed circuit boards, to programming microprocessors and other devices.

Currently I am in my fourth year and have been involved in the beginning of a brand new project, which aims to design and build a University of Warwick satellite and my group are producing a working prototype. Eventually this will be launched and it will be fascinating for me to see my work in space in a few years’ time.
I am extremely pleased with my course. Studying General Engineering for two years has enabled me to achieve a basic understanding and technical knowledge of all the different streams before choosing one to focus on, which is perfectly adapted to the increasing interconnectedness of modern engineering!

I particularly enjoy the regular high profile guest talks at Warwick which truly inspire me as well as offering amazing career prospects, for example in the fields of supersonic cars, underground civil engineering or the 2016 Olympic Games!
General Engineering

H100 BEng Engineering
H102 MEng Engineering

An autonomous mobile robot, the hybrid electric propulsion system in an automobile, the flight control system in a fly-by-wire aircraft and human metabolic processes are all examples of a complex engineering systems. General engineers are employed in the analysis, design, development and operation of systems. In contrast to experts in the traditional engineering disciplines, they take a holistic view of complex problems and proposed technological solutions, including relevant factors in the surrounding environment and/or the whole product life cycle. Many will be engaged in applying modelling and analytical techniques, supported by computational tools, to decision making and problem solving, and to refining and testing new design concepts. Others will act as technical consultants to senior management in support of strategic planning. At Warwick our size and scope allows us to offer a General Engineering degree that includes electronics, mechanical and manufacturing systems; and which includes an appreciation of business systems within engineering. The Engineering degree also offers an ideal entry route if you intend to specialise, but want to delay your decision as to which specialist course to follow until later in your studies.

Career destinations for Engineers with a broad engineering education can be as diverse as project or contract management within engineering companies and local/central government. Having kept your options open, it could also enable you to utilise your engineering knowledge in careers such as teaching or journalism or alternatively, you could use your analytical and problem solving skills in the financial sector.

BEng/MEng General Engineering | Year three

**Core modules**
- Project, Electrical machines and power systems, Measurement and instrumentation, Quality techniques, Signal processing, Systems modelling and control

**Optional modules**
- two for BEng, one for MEng, of the following:
  - Automation and robotics, Dynamics of vibrating systems, Software engineering

MEng General Engineering | Year four

**Core modules**
- Group project

**Optional modules** - six of the following:
- A minimum of three modules from:
  - Automobile systems, dynamics and control, Biomedical systems, Dynamic analysis of mechanical systems, Mathematical and computer modelling, Power electronic converters and devices, Renewable energy systems

- No more than three from:
  - Advanced fluid dynamics, Design for sustainability, Energy conservation, Precision engineering and microsystems, Quality systems, Remote sensing and global modelling, Simulation of operations, Supply chain management

**Electives**
- available by taking three specific optional modules:
  - MEng Engineering with Business Management
  - MEng Engineering with Communications
Manufacturing and Mechanical Engineering

HH73 BEng Manufacturing and Mechanical Engineering
HH37 MEng Manufacturing and Mechanical Engineering

Manufacturing and Mechanical Engineers are creative problem solvers and require vision to work with a range of other engineers in the development of innovative and cost-effective products.

Students of Manufacturing and Mechanical Engineering will master modern technologies and skills such as robotics, computer aided design (CAD) and simulation. You will also gain a significant understanding of management techniques and skills alongside the technical subjects. These skills are essential in advanced manufacturing companies to ensure competitiveness in this global environment through improving productivity and quality, reducing costs and their environmental impact.

A sound underpinning of the basics in science and management is developed in years one and two, whilst years three and four develop state-of-the-art techniques and methodologies, that as a graduate, you will find directly applicable in industry. WMG’s large well equipped laboratories and engineering hall, enables you to experience industrial-scale equipment. Close interaction with industry ensures that our modules reflect and exploit the latest technologies. You will also benefit from having staff who teach a wide range of subjects and who have industrial experience.

Manufacturing and Mechanical Engineers find employment within advanced industries as diverse as aerospace, consumer goods, electronics and pharmaceuticals, as well as the more traditional light and heavy engineering sectors.

BEng or MEng Manufacturing and Mechanical Engineering | Year three

Core modules

- Individual project, Automation and robotics, CAD/CAM and simulation, Design and management of lean operations, Design for manufacture, Industrial engineering, Quality techniques

MEng Manufacturing and Mechanical Engineering | Year four

Core modules

- Group project, Innovative process development

Optional module - four of the following:

- Automobile systems, dynamics and control, Advanced robotics, Design for sustainability, Dynamic analysis of mechanical systems, Energy conservation, IC engines, Quality systems, Renewable energy systems, Simulation of operations, Supply chain management

Electives - available by taking three specific optional modules:

- MEng Manufacturing and Mechanical Engineering with Business Management
- MEng Manufacturing and Mechanical Engineering with Robotics
- MEng Manufacturing and Mechanical Engineering with Sustainability
Ben Tomita
Manufacturing and Mechanical Engineering

I always wanted to be an Engineer but I had no idea what stream I wanted to specialise in and after touching into a bit of everything in my first two years, it wasn’t till the end of my second year that I decided I wanted to specialise in Manufacturing and Mechanical Engineering.

As part of my fourth year, I did a group project where the aim is to design and build a human powered submarine to race in the annual international submarine races. It’s great to use the stuff you’ve learnt from lectures and apply it to real life situations, something other Universities don’t give.

Outside of Engineering, Warwick boasts the biggest number of societies and clubs in the country meaning there is something for everyone. I have played a wide variety of sports which include the likes of hockey, football, tennis, floorball and even underwater hockey! Warwick also has a Music Centre where students from all disciplines come and play music together. This has given me the opportunity to be involved in the prestigious chamber choir and also direct an opera and a musical theatre production.

This well-structured course, as well as the prestige of the University, helped me secure two summer internships and a graduate job in the manufacturing sector. I would highly recommend it to anyone who’s thinking of applying.
When I applied to university I knew a campus university was for me, having everything within a couple of minutes’ walk has been really useful. I chose the engineering course at Warwick as it allowed me to experience each type of engineering subject and then make a decision in my second year about which one I would choose.

The projects run in the third and fourth year have been the highlight as they have given me an experience of what it would be like to work in industry.

Whilst completing the projects any equipment I required has always been available, such as wind tunnels, workshop tools, along with advice from experienced technicians.
Mechanical Engineering

H300 BEng Mechanical Engineering
H302 MEng Mechanical Engineering

Accrediting institutions

From cars to robots, aircraft to DVD players and from power stations to medical implants, almost all man-made systems involve mechanical engineering in one form or another. As a Mechanical Engineer in a rapidly evolving field, you will apply your knowledge into reality and improve people’s lives.

Throughout the degree you will gain a mix of essential design and analysis techniques, technical, business and management skills, along with emerging technologies. With a combination of the engineering fundamentals and innovative developments, you will have the skills to apply to areas such as thermodynamics and sustainable energy technology. This flexible approach enables you to steer your course to suit your interests and career aspirations.

Situated close to the UK’s industrial heartland, The University of Warwick works with many of the country’s leading companies. This collaboration fuels our research and informs our teaching, helping us to keep our courses at, and beyond, the forefront of industrial best practice.

Career destinations for Mechanical Engineers are varied, from stress engineers in the aerospace industry to mechanical and solutions engineers for the utilities and analysts in banking, finance and management consultancy.

BEng Mechanical Engineering | Year three

Core modules

Project, Dynamics of vibrating systems, Electromechanical systems, Engines and heat pumps, Fluid mechanics, Mechanical design, Planar structures and mechanisms, Techniques for mechanical detail design

MEng Mechanical Engineering | Year three

Core modules

Individual project, Dynamics of vibrating systems, Electromechanical systems, Engines and heat pumps, Fluid mechanics, Mechanical design, Planar structures and mechanisms

MEng Mechanical Engineering | Year four

Core modules

Group project

Optional modules - six of the following:

A minimum of three modules from:
Advanced fluid dynamics, Computational fluid dynamics, Dynamic analysis of mechanical systems, Finite element methods, Mathematical and computer modelling, Precision engineering and microsystems

No more than three from:
Advanced robotics, African field course, Biomedical systems and modelling, Design for sustainability, Energy conservation, Heat transfer, IC engines, Optical engineering, Quality systems, Remote sensing and global modelling, Renewable energy systems, Simulation of operations, Supply chain management

Electives

- available by taking three specific optional modules:

MEng Mechanical Engineering with Business Management
MEng Mechanical Engineering with Fluid Dynamics
MEng Mechanical Engineering with Sustainability
Joint degrees

These degrees are not accredited by any engineering institution and are not an appropriate route for students wishing to become Chartered Engineers.

H1N1 BSc Engineering and Business Studies

Engineering has for many years been regarded as an ideal background for a career in management, business or commerce. The financial sector recruits engineering graduates because they have strong numerical and quantitative skills, combined with a sound understanding of industry.

In the first two years of this degree you will take modules with all the BEng and MEng engineering students, providing a broad study of engineering and technology. In year three you will transfer to the internationally renowned Warwick Business School and study alongside business students, selecting modules to gain a wide introduction to the world of commerce, business and management. The choice of business modules available in the third year is extensive, giving you the opportunity to study subjects such as managing customer service, entrepreneurship and marketing strategy. The skills acquired will open up a wide range of graduate career opportunities for management or administrative positions within industry or commerce.

This degree is ideally suited to candidates who have an interest in science and technology as well as business, but who do not wish to become a chartered engineer.

Graduates from the Engineering and Business Studies degree have achieved employment in positions varying from Investment Analyst within the financial sector, Marketing Director in manufacturing, IT Manager in utilities, as well as setting up their own companies in chemicals and journalism.

HN12 BEng Engineering Business Management

To be successful in the modern business environment, engineering companies need to provide superior services as well as superior products. Approximately 70% of companies worldwide are engineering based. They create a substantial demand for graduates who can demonstrate an understanding of technical engineering subjects as well as the wider aspects of entrepreneurial expertise and strategic business management to provide an interface between different roles and departments within a company.

Led by WMG, this degree is designed to provide for those individuals who wish to work within an engineering industry but who do not wish to become a chartered engineer. For the first two years you will follow the same course content as all other engineering students, but in your third year you choose half of your modules from engineering disciplines and half your modules from business disciplines.

Graduates of Engineering Business Management acquire the skills to open up a wide range of career opportunities, in functions such as accountancy, marketing, contract management, procurement, supply chain management or servicing.

BEng Engineering Business Management | Year three

Core modules

Individual project, Quality techniques, Supply chain management

Engineering optional modules
- two from the following:
Automation and robotics, Design for safety and comfort 1, Design for manufacture, Industrial engineering

Business optional modules
- two from the following:
e-Business and value chains, Corporate strategy, International business strategy, Marketing management
Ebrahim Mashal
Engineering and Business Studies 2011

I wanted to be in an institution that would provide me with a top-class education in both my fields of interest and the School of Engineering provided that balance.

On a joint degree, the most crucial learning outcome is the ability to understand the links between the disciplines. Warwick is great because it gives you the freedom to choose how deep to specialise.

I took part in many academic projects, from engineering labs to preparing and analysing business plans. Entering the employment world with the knowledge of two areas provided me with an extra edge over others. The way modules are taught dares you to think ‘outside the box’ and that is a requirement of succeeding in the outside world.

On graduation I took a Masters in Finance to truly develop an in-depth view of the world of financing and how that applies to engineering projects. Following this, I joined PricewaterhouseCoopers’ (PwC) graduate programme in London and remained there for 18 months. My time at Warwick was crucial in being one-step ahead of other applicants in both theory and application. I have now transferred to PwC’s Middle East office, which has been very exciting in a fast and growing region.

Without Warwick, I would not have been one step ahead.
MEng electives

We offer a choice of five electives (each made up from three modules), which are linked to areas of teaching and research expertise at Warwick.

The elective title can be added to your final degree title to differentiate yourself from other graduates, e.g. MEng Civil Engineering with Sustainability. Alternatively you can take individual modules from any of the electives.

If you have taken ‘an intercalated year’ in industry or ‘a year in research’ and extended your degree to five years, you could add this to your degree title instead.

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<th>Business Management</th>
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<th>Fluid Dynamics</th>
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Business Management

Career progression within the engineering profession will require you to become involved in planning and co-ordinating with other business functions such as purchasing, quality, marketing and finance. This planning and co-ordination is vital to ensure that the products meet the ever more stringent customer requirements. This elective is suited to students from any of the engineering disciplines. The business management modules will draw on the material developed for WMG’s MSc courses in areas such as Engineering Business Management and Supply Chain and Logistics Management.

The modules forming this elective are:
Quality systems, Simulation of operations and supply chain management.

Communications

In recent years, the most significant improvements in our everyday life have been within the electronics field. Communications is the fastest growing sector of the electronics industry and offers tremendous opportunities and employment prospects. The Information and Communications Technologies research group at Warwick has worked on improving protocols for ad hoc wireless systems, analysis of the security of these systems and on improving the design of optical antenna to capture infrared energy more efficiently than lenses.

The modules forming this elective are:
Optical communications systems and wireless communications, Signal and image processing.
**Fluid Dynamics**

Aerodynamics and computational fluid dynamics (CFD) have applications throughout engineering, for example the design of car bodies and aircraft wings; modelling air flow within and around buildings or investigating the flow of dog food through pipes during production. The list is endless!

This elective draws on the research and teaching of Warwick’s Fluid Dynamics Research Centre - one of the largest groups of its kind in the UK. The Centre promotes interdisciplinary research through the collaboration of engineers, mathematicians and physicists.

Not all modelling is computer based; the centre also builds equipment to conduct research. Knowing about the ideas behind the research will give you a head-start for a career in many important industry sectors.

**The modules available for this elective:**
Advanced fluid dynamics, Computational fluid dynamics and optical engineering.

**Robotics**

Robots are becoming increasingly sophisticated; before long they will no longer be confined to industry, but be mass-produced consumer goods. Robotics need many different types of engineers, working together to ensure a successful product. Electronic engineers are required for control, mechanical to move, software for ‘intelligence’ and manufacturing to work on the application of robots to make products or creating the actual robots. This elective equips you with the necessary skills and know-how to pursue a career working towards creating new and better robots.

**The modules in this elective are:**
Advanced robotics, Dynamic analysis of mechanical systems and simulation of operations.

**Sustainability**

Modern industrial activities consume an enormous amount of natural resources and create large volumes of waste material, a situation that is no longer sustainable. All engineering disciplines are now concerned with minimising this wastage and in assessing the true cost of a project for the planet as well as for current and future generations. Many large companies have departments solely for this purpose.

Sustainable development is a key national and international policy that requires companies to minimise the environmental impact of their projects and to inform the initial design process. Research activities in the School of Engineering focus on three interacting areas: pollutant control, whole life cycle design and resource and energy optimisation.

**The modules forming this elective are:**
African field course, Design for sustainability, Energy conservation, Renewable energy systems, River mixing.
Student projects

Throughout the degree at Warwick there are many chances to take part in projects. The transferable skills learnt in these multi-disciplinary group projects are important for a professional career where teamwork and collaboration are the norm. Some of these projects operate like a business, where you will approach companies to secure sponsorship (in kind/parts or monetary) to allow the project to progress.

First year
During your first year 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 or intelligent robot vehicles. These projects introduce you to industry standard software such as SolidWorks and Dymola.

Second year
As a second year student, you will extend your design knowledge by participating in a large group-based design and make task. You might design instrumentation that is placed in the nose cone of a proprietary rocket. The electronics will measure pressure, acceleration and orientation as the rocket is fired from its launch site. You will have the opportunity to launch your own rocket, before evaluating the data that is recorded by the on-board instruments.

Third year
During your third year you will undertake an individual project related to your degree, specialising in one particular area. This may be linked to our research or be in conjunction with an external company. Other individual projects support the fourth year group projects, for example designing a component for the Formula Student racing car.

Fourth year
If you decide to continue your studies to MEng level, you will participate in a large group project worth 25% of the year. We run over 20 projects each year, which simulate the multi-disciplinary working practices you will experience after graduation. Warwick benefits from being a unified department, meaning you work with students from all specialist courses to achieve a common goal.

Warwick University Satellite
This year the Warwick University Satellite (WUSat) project team have designed and built a prototype CubeSat. It was launched via a weather balloon into the stratosphere, during which the students measured and recorded meteorological data. They were also able to capture photographs and video with the on-board cameras. The satellite was recovered after a two hour and 100 mile descent.

Formula Student
Engineering students take part in the annual IMechE Formula Student competition. Collectively they design, develop, build and market a single seater racing car. The culmination of the project is competing against other national and international university teams at Silverstone in July.

Electric Vehicle Grand Prix
The Electric Vehicle Grand Prix (EVGP) team design and build an electric go-kart to compete at the annual EVGP in Indiana, USA.

Warwick Mobile Robotics
Each year the Warwick Mobile Robotics team develop a robot to compete in the European or World RoboCup Rescue competitions. The robot has to find victims trapped in a simulated earthquake zone.

Severn Trent Water reservoir design
This project is a typical example of a ‘live’ joint project with industry. Severn Trent Water gave the same brief to both a contractor and the students at the same time. Their brief was to find the effect of the disparities between the bell-mouth spillway, compared to the as built structure at Tittlesworth Reservoir in Staffordshire.

New for 2014

Warwick Submarine
The project team design and build a race-worthy human-powered submarine to compete in an international competition. The students will compete against universities from UK, Europe, Asia and North America on straight-line and slalom courses, to prove their speed, agility and innovation.
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New for 2014
Research overview

Our undergraduate engineering courses benefit from the research activities of two departments; the School of Engineering and WMG.

The School of Engineering is one of the few unified Schools in the UK to undertake internationally leading research in all the main fields of Engineering; civil, electrical and electronics, mechanical, and chemical engineering. Particular areas of research in which Warwick is leading are; fluid dynamics, sensors (chemical, gas and ultrasonic), power electronics, heat transfer (heat pumps and refrigeration), systems modelling (neural and pharmacokinetic), biomedical engineering, wireless communications, intelligent systems, image processing, precision engineering, structures, geotechnics and water engineering. Additionally, the School works in collaboration with a large number of companies from all the main sectors of engineering, examples include; Arup and Morgan Sindall in construction, AstraZeneca in pharmaceuticals, Converteam in energy efficiency, Thales and Airbus from aerospace to name a few. Three overarching research themes help to shape collaboration within the School and the wider University: Energy, Cities and in Biomedicine.

WMG is an international model for how universities and businesses can work together. They are at the forefront of innovative technology, leading major multi-partner projects to create and develop exciting new processes and products that can lead to significant breakthroughs and be of huge benefit to organisations providing them with the opportunity to gain a competitive edge. They are developing applied research in fields such as materials, manufacturing technologies, digital technologies, operations, business management and healthcare. These multi-partner projects have seen WMG working across a wide range of sectors including automotive, aerospace and defence, digital, energy and utilities, finance, food and drink, healthcare and pharmaceuticals. Within these sectors they have collaborated with government sponsored bodies and the NHS, innovative SMEs and global corporations such as Airbus, Arup, AstraZeneca, BAE Systems, GlaxoSmithKline, Jaguar Land Rover (JLR), Network Rail, Rolls-Royce, Siemens, TATA Motors, TATA Steel and TVS to name but a few. As advocates of manufacturing, innovation and technology, WMG has provided expert advice to many overseas governments, who have visited the Group to study how they operate, in order to develop similar initiatives in their own countries.

The two departments collaborate on a number of joint research programmes such as the £19 million Low Carbon Vehicle Technology programme funded by Advantage West Midlands. The School of Engineering and WMG recently collaborated on a conference with IMAPS-UK and NMI. The two-day event brought together more than 150 representatives from across the UK in the field of Power Electronics Technology, for networking between end-users, researchers, supply chains and technology providers. Integrating cutting edge research into the engineering undergraduate programmes is a priority for both departments. Research led teaching brings the subject alive and makes it up-to-date and relevant as well as preparing graduates for the demands of an engineering career.
Research projects

Engineering in Biomedicine
The Biomedicine group represents a long-term collaboration between the School of Engineering, Warwick Medical School and University Hospital Coventry and Warwickshire (UHCW), to bring together complementary expertise looking at new engineering solutions to clinical practice.

Drawing on our world-renowned expertise in smell (specifically utilising the electronic nose, which was invented at Warwick), the potential impact could radically change the way Doctors diagnose and treat patients. These instruments work on a similar principle to the human nose, identifying smells by their ‘aroma’ instead of the chemical components.

We are currently working on a test to detect colon cancer from a urine sample, which will replace a blood test and other invasive procedures. Our long-term vision is to develop a new generation of non-invasive, rapid, portable instruments that will detect a broad range of ailments.

Metrology and Visualisation
WMG’s Metrology and Visualisation groups have a central goal of providing real-world solutions for the product development process in a variety of business sectors, from automotive engineering to the medical industry. The team has developed capabilities in the areas of Advanced Metrology, Human Machine Interface (HMI) and Design Validation and is actively working with companies such as Autodesk, Arup, Envisage, Jaguar Land Rover, Magna, Nikon and SAIC to ensure the latest technologies are implemented in a practical and creative way to cut costs and add business value.

The team assists manufacturers with dimensional measurement and quality inspection of anything from single components to complete vehicles. The Design Validation facility includes a 3D visualisation suite which uses the latest 10 megapixel digital projectors to create the highest resolution 3D power wall in the UK.

The level of photorealism produced allows companies to make confident and effective design decisions early in the product development process. The facility also includes active head and hand tracking for real time interactive Virtual Reality.

WMG Centre HVM Catapult
Catapults are technical centres of excellence which bridge the gap between government industrial policy, academic research and business. WMG is focusing on the challenges of Low Carbon Mobility and is home to two UK centres of excellence in Lightweight Technologies and Energy Innovation. Research activity takes a whole systems approach with expertise in Lightweight Product/System Optimisation, Energy Storage and Management, Digital Validation and Verification to address the Government roadmaps for the automotive, commercial and off-road, rail and marine sectors.

WMG is working with Midland’s SMEs as well as international manufacturers, to develop multifunctional components including lightweight electronics and miniaturisation, enhanced functionality of materials through additive layer manufacturing, battery characterisation and energy storage, all-electric or hybrid drive trains, virtual product evaluation and performance simulation. A newly constructed Energy Innovation Centre contains a ‘one stop shop’ for vehicle energy testing and development of new battery chemistries and is the only one of its kind in the UK.

CATAPULT
High Value Manufacturing

warwick.ac.uk/wmg/research
Applying to us

All applications, whether from UK residents or from overseas, are made online through the Universities and Colleges Admissions Service (UCAS). If you have any enquiries, you can call UCAS on 0871 468 0 468. Our institution code is W20.

 Entry requirements
Our 2014 offer levels for those studying A levels are AAB for BEng/BSc and AAA for MEng. All applicants are given individual consideration. Refer to our website for offer levels on a range of qualifications.

 warwick.ac.uk/engineering/ug

 Academic qualifications
Candidates are expected to offer three A level (or equivalent) subjects (excluding General Studies and Critical Thinking), which should normally include both Mathematics and Physics.

We will consider strong, motivated candidates for entry into year one who have either Mathematics or Physics at A level and who have demonstrated their aptitude for both these subjects at a lower level, such as GCSE or AS level.

We will accept applications from those offering equivalent qualifications and are happy to give advice in advance of an application, to those who are uncertain as to whether they satisfy our entry criteria.

 warwick.ac.uk/engineering/ug

 International students
There are around 6,400 international students from more than 145 different countries studying at Warwick. Our overseas students are offered a superb level of support through the University’s International Office. From running a network of overseas representatives to attending recruitment events all over the world, the International Office is available to give you all the information you need before choosing Warwick. The International Office also runs its own scholarship programme to assist students applying from overseas.

 warwick.ac.uk/international

The highlight of Warwick’s international student calendar is One World Week, the world’s largest student-run international event. The week celebrates culture, diversity and internationalism through a series of debates and discussions, parades and performances, sports and events.

 oneworldweek.net

 Language requirements
If your academic qualifications meet our admissions requirements, but your English language qualifications are not accepted as equivalent to GCSE or International Baccalaureate English, you may be offered a place on condition that you achieve an acceptable qualification before you join us.

If English is not your first language:

- IELTS 6.0, including minimum 5.5 in each component
- TOEFL 87 internet-based with a minimum of 21 in listening and writing, 22 in reading and 23 in speaking
- PTE Academic 60 with no less than 59 in any component

 elts.org | ets.org | pearsonpte.com | cambridgeesol.org

 Visiting us
Applicants who live in the UK are strongly encouraged to visit us to meet students and staff and learn more about life at Warwick, our facilities and the course content.

Before you apply you can visit Warwick via our University-wide Open Days, held in June and September each year, which include engineering talks and an opportunity to see the engineering facilities. We also have a number of Engineering Visit Days from Easter to September.

 warwick.ac.uk/opendays
 warwick.ac.uk/engineering/ug/visit

After an application is made all Engineering offer holders resident in the UK will be invited to an admissions day. You will spend the day with a current engineering student and have a talk about the course, a tour of our facilities, a campus tour and a chance to experience life as a student via a small hands-on laboratory session.

 Further information
If you would like any further information, or have any questions, please contact our admissions secretary on 024 7652 8193 or engadmissions@warwick.ac.uk

 warwick.ac.uk/engineering/ug
Frequently Asked Questions

What are the advantages of having an MEng compared to a BEng?
The MEng degree is a year longer than the BEng and gives you the benefit of advanced skills and knowledge, which is always appealing to employers. The MEng and BEng courses are the same for the first two years, but different topics are covered in the MEng course from year three onwards. Whilst both courses include group work in years one and two, 25% of the final year of the MEng is made up of our multi-disciplinary group projects. This is unique to the four year MEng and not something that you would normally find as part of a one-year stand-alone Masters course. As well as improving your job prospects in an increasingly competitive market, the MEng is also the premier route to achieving Chartered Engineer status. MEng students therefore have a head-start in terms of their career development.

What does it mean to be a Chartered Engineer?
A Chartered Engineer is officially registered with the Engineering Council. To achieve this status an engineer has to demonstrate the required professional competences and commitment through education and working experience. You must also be a member of a licensed professional engineering institution such as ICE, IET, IMechE, IntMC, IStructE. Chartered status is an indicator of your level of competence and your on-going commitment to professionalism. Attaining Chartered status can have a major impact on your employment prospects and salary.

Is it possible to transfer from a BEng to an MEng?
Yes. To allow students to benefit from the advantages of the MEng, transfer is encouraged for those who have met the required academic standards at the end of the second year.

Where can I find you in the league tables?
Our engineering courses all have a common first and second year, no matter which you apply for. You will therefore only find us in the league tables under ‘General Engineering’. We are consistently in the top ten – testament to the fact that our flexible, multi-disciplinary approach will equip you with the transferable skills needed for your future career. Warwick is also the top university targeted by recruiters looking for exceptional graduates.

Is there any funding available?
In addition to the scholarships and bursaries available to all UG students at Warwick, we provide all first year engineering students with their essential textbooks and equipment completely free of charge, saving you nearly £300.

The department offers £1,000 merit scholarships for gifted and talented students in their first year of study. To be eligible, you must have made us your first (firm) choice. This scholarship is open to UK, EU and international applicants. Please refer to our website for further details.

warwick.ac.uk/engineering/ug

The latest advice on potential funding opportunities for UK, EU and international students can be found online.

warwick.ac.uk/ug/studentfunding
warwick.ac.uk/scholarships

Do you run taster sessions?
We run a number of taster courses aimed at different year groups. For example we offer a Headstart course for year 12 pupils in conjunction with the Engineering Development Trust.

Will I definitely get accommodation on campus?
If you hold us as your firm choice and have applied for accommodation online by 31 July 2014, you will be guaranteed a place in University accommodation for your first year.

Are there any temporary employment opportunities?
There are many opportunities on campus for part-time and vacation work, including the Students’ Union, Warwick Arts Centre and helping Engineering on open days. The University also has its own temporary employment agency for students and graduates.

unitemps.co.uk
Recognising commitment to advancing women’s careers in STEMM (Science, Technology, Engineering, Mathematics and Medicine) academia.