MECHANICAL ENGINEERING
Welcome

I am pleased you are considering studying Mechanical Engineering at the University of Birmingham. Mechanical Engineering is a wonderfully diverse subject and I think it can be best summed up with a slogan from our professional body, the Institution of Mechanical Engineers – ‘Nothing moves without Mechanical Engineers’. Whether it is an aircraft, car, train, satellite or an artificial knee replacement, mechanical engineers play an important role.

As you read through this brochure, you will learn about our degree programmes, be informed about our industrial partnerships and how they can be of benefit to you, and learn how to achieve chartered status.

Please do not hesitate to contact us if you have any questions. Contact details appear at the back of the brochure and our friendly Admissions Office is always happy to help and inform.

I am proud to be a mechanical engineer and I hope you decide that it is the profession for you. I wish you every success in your future examinations and look forward to welcoming you to the Department of Mechanical Engineering at the University of Birmingham.

Best wishes,
Professor Duncan Shepherd
Head of Department
Mechanical Engineering

STUDENT EXPERIENCE

You will have plenty of opportunities to get involved in extra-curricular activities alongside your study, and the Department of Mechanical Engineering has a number of very active student societies you can take part in.

MechSoc brings together students in the Department for social activities, student-arranged industrial and employer talks, sports matches and much more. UBRacing is the University’s Formula Student team, which provides a fantastic opportunity to gain hands-on experience of a real-life engineering task to students from all years and disciplines in the School. UBRobotics was established to build different types of robots to compete in national and international competitions and gives you the opportunity to develop skills such as coding, mechanical design and electronics.

Visit www.birmingham.ac.uk/eps-societies for the latest news and details from all societies in the College of Engineering and Physical Sciences.

EXCELLENT TEACHING AND FACILITIES

As a Mechanical Engineering student, your learning experience will be enhanced by teaching from lecturers who are internationally renowned and respected experts in their fields, and our leading-edge teaching facilities and laboratories.

The Collaborative Teaching Laboratory (CTL) is to become a hub for science and engineering teaching, with multifunctional labs suitable for subject-specific and cross-disciplinary teaching and teamworking. It represents an investment of over £40 million across two distinct phases in Science, Technology, Engineering and Mathematics (STEM) subjects with a vision to transform practical teaching in this area. The first phase of the project has provided flexible learning spaces for our students for laboratory and classroom work, and the second phase will see a new building created to facilitate collaborative working, reflecting industry practices (due to be completed in the academic year 2018–19).

STRONG LINKS INDUSTRY

Mechanical Engineering at the University of Birmingham has extremely strong links with key employers, such as Aston Martin, BP, Jaguar Land Rover and Rolls-Royce, who provide projects and work placements for our students and regularly recruit our graduates. You will be actively encouraged to gain industrial experience by undertaking summer placements or studying the programme MEng Mechanical Engineering with Industrial Year. These will help build your confidence and prepare you for graduate employment. We have an Industrial Liaison Officer who works with our industrial partners and we also have extensive industrial contact through our research.

The Department also benefits from an Industrial Advisory Committee, which ensures that our programmes are industrially relevant and producing graduates with the skills and knowledge industry needs. The committee includes senior engineers from Rolls-Royce, Caterpillar, IMechE, Renishaw, Mazak Intertek and MatoOrtho.
Introduction to Mechanical Engineering

Mechanical engineers make things move. Mechanical engineers design and develop all machines with moving parts – anything from vehicles like satellites, cars, trains and aircraft, to plants for generating clean power, medical equipment like pacemakers and micro-scale pumps, and machines, such as robots, that make other products.

Engineering is key to many of the issues affecting our quality of life today. Mechanical engineers are engaged in a large range of engineering topics, whether it be designing mechanisms to improve vehicle performance, reducing car emissions and improving vehicle consumption; working on solutions to reduce journey distances and traffic speed with GPS technology, or speeding up railways and improving their reliability and comfort.

Mechanical engineers supply solutions in terms of life-saving equipment in the medical sector, and are involved with manufacturing products of all scales from nanotechnology to large industrial manufacturing machines.

Our courses are designed to give you the expertise needed to tackle real-world problems. As an engineering professional, you might be responsible for product design, testing, planning for profitable and high-quality production, management of business, or all of the above – and a degree from Birmingham provides you with the skills to deliver results in an ever-changing industry.

Our students benefit from a research-led culture, which informs our teaching. Our expertise is in applying engineering science to solve problems of industrial and societal significance. We have specific research strengths in several areas, and there are opportunities for students to undertake projects in these key themes:

- The Vehicle Technology Research Centre has a world-leading research profile in combustion engines and low-carbon vehicle technology. Our work includes the use of hydrogen as a clean fuel, the investigation of heat build-up in aircraft tyres, and the use of new materials to reduce weight.
- The Advanced Manufacturing Technology Centre carries out internationally leading research focusing on High Value Manufacturing and the associated knowledge-based technologies.
- Biomedical engineering research at Birmingham concentrates on surgical techniques, implants and instruments, as well as the physical properties of natural and synthetic materials to design and develop devices.
- Exciting developments in the field of nanotechnology at Birmingham allow students to undertake projects in areas such as micron-scale sensors and engines using silicon chip technology.
'I always had a strong passion for maths at school and being able to see its real-life applications through studying mechanical engineering was one of the main reasons I chose to study it. Mechanical Engineering at Birmingham provides all the support needed to succeed.'

LAURA GREEN,  
MEng Mechanical Engineering
Industrial experience
We believe that industrial training and experience are vital components of every student’s professional development. As part of our continuing commitment to providing a balanced education, we will help you to gain experience or sponsorship with an industrial company as either an industrial year or summer placement student during the course, if this is what you are looking for.

We offer the services of an Industrial Liaison Tutor, whose role is to help you and your fellow students to forge links with industry by providing opportunities for vacation work, year-out placements, sponsorships, etc, and to act as a ‘match-maker’ to bring together final-year students and recruitment staff from suitable companies.

These companies include Jaguar, Cadburys, the BBC, Unilever, Rolls-Royce, JCB, Kodak, Siemens, Mercedes AMG High Performance Engines, Delcam and Airbus.

We also invite companies to enrich our teaching by contributing to seminars, live projects and case studies.

Opportunities for both year-out and vacation placements are advertised openly on the Mechanical Engineering industrial liaison notice board, and are available to all qualifying students.

Year-out placements
A number of our students opt to take a year out with an engineering company. You may take a year out either between Years 2 and 3 or Years 3 and 4 of your degree programme. As well as benefiting from a period of approved and paid employment with all the usual entitlements of the job such as paid leave, networking, etc, (the exception being a pension plan) your degree programme will change to have the additional words ‘with industrial year’ added to the title, in recognition of your efforts. This type of placement qualifies you towards one year of your graduate training period towards Chartership.

Taking a placement can speed up the process of achieving chartered status. During the industrial year, you will retain your undergraduate status with us, even though you are in employment, and will continue to benefit from being a member of this University at a reduced student fee level.

The aim of this activity is not simply to provide paid work but to ensure that its nature and quality are commensurate with your professional development. A key element is to ensure that students and companies are well matched, maximising both parties’ experience.

‘When looking at graduates it is highly important that they are engaged and connected with the working environment and are, for example, aware of the tools that are applied as part of their chosen profession.

‘The University of Birmingham prepares its students with practical hands-on sessions bridging the gulf between academia and industry very well, which in turn is very helpful to the individual candidate.’

JOHNNY OJEIL, Director, Arup
Building your skills

As one of our Mechanical Engineering students, a huge and exciting array of career opportunities will be open to you when you graduate – both at home and abroad. Not only do our degrees provide you with the relevant technical knowledge, but we also place great emphasis on developing your professional and business skills, required by the industry once you graduate. Competencies such as time and project management, oral and written presentation, effective teamworking and proficiency in IT are fostered through individual and group work throughout your programme.

The University provides an award-winning employability programme, the Personal Skills Award (PSA), exclusively for undergraduate students. Endorsed by a range of employers, the award gives students the opportunity to develop and articulate extra-curricular skills to enhance their employability opportunities.

MATTHEW FOX,
Graduate Engineer at Rolls-Royce,
MEng Mechanical Engineering graduate

‘Before I go any further I would like to point out that this is the Rolls-Royce that makes aerospace engines (amongst other products) and not the one that makes cars; so no I don’t get a company car! I am certain that the fact I had an engineering degree from the University of Birmingham on my CV was a big factor in me getting the job.

‘As part of the graduate scheme you complete four attachments, each of which are around four months long. I am now roughly half-way through my second of these attachments. In the first, I was working within the turbines team looking at stress; I found it very interesting to get to look at serviced parts and see how they deteriorate during use. As part of my current placement, I am working on the brand new technology of composite fan blades. The manufacturing method of these blades is quite fascinating, but I’m sorry I can’t tell you more than that! I really feel that being on a structured graduate programme like this will help me to develop into a better engineer in the future.’

*Destinations of Leavers from Higher Education 2015/16*
Where will your degree take you?
Continued

Tailored careers support from Careers Network
We provide a wealth of opportunities to develop your career. From your first day at Birmingham to after you graduate, Careers Network is here to help you identify and achieve your individual career aspirations through its wide range of services.

Our dedicated careers team brings you information, advice and guidance tailored to your specific needs. Careers advisers offer one-to-one advice appointments where you can discuss your career plans and explore your options.

Our multi-award-winning work experience team has dedicated internship officers to help find the right work experience for you. Make the most of these opportunities and apply for our Work Experience Bursary Scheme, the Birmingham Undergraduate Internship Programme or one of our successful mentoring schemes.

‘I am currently on a two-year graduate scheme with McLaren Racing Team. The role involves me spending time in the various engineering departments that make up their Racing division, including design, performance and systems engineering. Studying Mechanical Engineering with a Year in Industry at Birmingham has had a significant impact on my career. I spent my Year in Industry working in the design department at Xtrac Ltd, a transmission technology specialist. Over the duration of my placement I consolidated some of the skills I had gained during my degree and it allowed me to experience what it is like to work in the motorsport industry.’

MICHAEL RACKSHAW, Graduate Engineer at McLaren, MEng Mechanical Engineering with a Year in Industry, graduate
‘Students from the University of Birmingham have an excellent grounding in the fundamentals of engineering and also display good personal skills allied with original and innovative thinking and ideas.’

ROBERT MOYLE, Executive Chairman, North Midland Construction PLC

‘Interested in doctoral research after your degree? You can find details of our PhD programmes at www.birmingham.ac.uk/mechanical-phd’

‘Alex Conway
Mechanical Engineering with Industrial Year, graduate

‘I undertook a placement with Mercedes AMG High Performance Powertrains after the third year of my degree. Prior to my degree I’d not considered a career in motorsport, but the opportunity of early involvement with the Formula Student team soon made it an ambition. The degree programme and Formula Student team encouraged me to develop and nurture an interest and understanding of internal combustion engines so I soon had my sights set on Formula 1 engine design and testing. The internship gave me the opportunity to apply and further knowledge I’d gained in the first three years of my degree. Highlights of my placement have included being a member of the factory-based track support team and Monday morning victory champagne!’

‘Jenny Freij
Product Development Engineer at Corin Group Plc, MEng Mechanical Engineering with a Year Abroad, graduate

‘A year ago I attended a lecture at the University about project management. Although it was perhaps not my favourite topic, I was intrigued by the company where the guest lecturer worked. Despite being aware of its small size and that the company did not have a graduate scheme (nor any advertised jobs at the time), I asked him who to contact regarding applying for a job. The same week, I sent an email to HR with a short description of myself and my past experiences as well as a CV. Four months and 33 emails later, I had a 15-minute telephone interview and yet another month later, an interview on site. At the beginning of June 2015, I had secured a job in a small town in Gloucestershire.’

JAANANNI SRISSANTHIRARASA, Graduate Supply Chain Engineer at Rolls-Royce, MEng Mechanical Engineering with a Year in Industry, graduate

‘Jaananni Srisanthirarasa
Graduate Supply Chain Engineer at Rolls-Royce, MEng Mechanical Engineering with a Year in Industry, graduate

‘Rolls-Royce was always the company I wanted to work for once I graduated, and I joined them in September 2014 on their graduate scheme. The best thing about what I am doing now is understanding how the different components are made for a jet engine and the different manufacturing processes and techniques that are used. Being an engineer is my dream job and I am happy I found the right career for myself.’

JAANANNI SRISSANTHIRARASA, Graduate Supply Chain Engineer at Rolls-Royce, MEng Mechanical Engineering with a Year in Industry, graduate

‘A year ago I attended a lecture at the University about project management. Although it was perhaps not my favourite topic, I was intrigued by the company where the guest lecturer worked. Despite being aware of its small size and that the company did not have a graduate scheme (nor any advertised jobs at the time), I asked him who to contact regarding applying for a job. The same week, I sent an email to HR with a short description of myself and my past experiences as well as a CV. Four months and 33 emails later, I had a 15-minute telephone interview and yet another month later, an interview on site. At the beginning of June 2015, I had secured a job in a small town in Gloucestershire.’

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Our programmes: degrees in Mechanical Engineering

You can choose from a range of programmes to find the option best suited to your interests and needs. All of our programmes reflect the strength and longevity of our industrial partnerships.

- MEng Mechanical Engineering (H301)
- BEng Mechanical Engineering (H300)
- MEng Mechanical Engineering (Automotive) (H330)
- BEng Mechanical Engineering (Automotive) (H302)
- MEng Mechanical Engineering with a Year in Industry (H303)
- BEng Engineering Foundation Year (Mechanical Engineering Pathway) (HFJ0)

Aims and objectives
The Mechanical Engineering course is designed to suit the needs of a high-quality student intake and to produce graduates with the requisite skills and knowledge to create products that can compete successfully in global markets.

The Mechanical Engineering (Automotive) course provides a thorough background in Mechanical Engineering together with a specialisation in automotive engineering. It also is designed to suit the needs of a high-quality student intake and to produce graduates with the requisite skills and knowledge to develop and implement new automotive technologies.

In addition, both courses aim to produce graduates who can communicate effectively, who possess the skills and competencies needed for industrial management, and who have the ability to further their professional development by personal research or study.

Learning styles
You will experience a range of teaching and learning styles during your course that reflects the diversity of the subject and the practicality of the workplace. The majority of our lecture courses are linked with design projects or laboratory experience, giving you the experience of applying theory to real-world situations. You will experience interdisciplinary working alongside other engineering branches, replicating industry expectations, and as well as extending your technical knowledge, our courses aim to build your confidence and skills in communication and industrial management.

ENGINEERING FOUNDATION YEAR
If you want to study Mechanical Engineering at Birmingham but don’t possess the recommended qualifications for entry to one of our degree programmes, we offer an engineering foundation year programme. For further information visit: www.birmingham.ac.uk/engineering-fy
Programme organisation

Our programmes have been developed to provide you with a strong knowledge of engineering fundamentals, alongside a broader understanding of topics such as behaviour, policy, entrepreneurship and global perspectives. In later years, your programme offers you the opportunity to specialise in areas that interest you. By the end of your course, you will be equipped to play a leading role in a professional capacity in both industry and academia.

Changing specialism

In the School of Engineering, we offer the flexibility for you to tailor your study to your own interests, and give you the opportunity to change your engineering specialism should you wish to do so.

You may need to meet certain progression requirements to progress between areas, to add in an industrial year or move/transfer from the BEng to the MEng programmes during your study.

When you start studying in the School of Engineering, your first year will be shared across all disciplines, meaning you will be working with colleagues in the departments of Civil and Electronic, Electrical and Systems Engineering, as well as those in Mechanical Engineering. This interdisciplinary working reflects industry practices and right from the very start will begin building your teamworking and professional skills alongside your technical knowledge.

You will study a number of core engineering topics, including Materials, Structural, Electrical and Fluids Engineering, as well as Design and Management.

One of the defining features of your first year of study is the Integrated Design Project, where you will work with colleagues from across the School on a project combining several areas of engineering. Right from the start, we encourage collaborative and innovative working, to prepare you for joining industry after you graduate.

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<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
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<tr>
<td>Mechanics 1</td>
<td>Mechanics 2</td>
<td>Computational Fluid Dynamics and Finite Element Analysis</td>
<td>Individual Engineering Project (MEng) (04 21833)</td>
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<tr>
<td>Computing for Engineers</td>
<td>Engineering Materials</td>
<td>Mechanical Design A</td>
<td>Mechanical Design B</td>
</tr>
<tr>
<td><strong>Electrical Engineering 1</strong></td>
<td><strong>Mechatronics and Control Engineering</strong></td>
<td><strong>Sustainable Energy and the Environment</strong> <strong>Turbomachinery &amp; Compressible Flows (MEng)</strong></td>
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</tr>
<tr>
<td>Engineering Mathematics 1</td>
<td>Engineering Mathematics 2</td>
<td>Powertrain and Vehicle Engineering</td>
<td><strong>Optional Modules: Semester 1</strong></td>
</tr>
<tr>
<td>Integrated Design Project 1</td>
<td>Integrated Design Project 2</td>
<td>Integrated Design Project 3</td>
<td><strong>Advanced Vehicle Engineering</strong></td>
</tr>
<tr>
<td>Fluid Mechanics and Energy Transfer</td>
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<td>Individual Engineering Project (BEng) <strong>Engineering Maths A+B (MEng only)</strong></td>
<td><strong>Optional Modules: Semester 2</strong></td>
</tr>
</tbody>
</table>

*BEng – two modules dropped to enable students to take Individual Engineering Project.
**MEng – Choose 60 credits in total from the following, ensuring 30 credits in each semester. Modules in italics are compulsory for the Automotive pathway.
These are current modules and may be subject to change. For the most up-to-date list, please visit [www.birmingham.ac.uk/mechanical](http://www.birmingham.ac.uk/mechanical)
Programme organisation
Continued

In Year 2, you will build on the knowledge gained in Year 1 and begin to specialise your study. The programme is organised into integrated modules covering core Mechanical Engineering subjects designed to develop your learning progressively. You work on improving your mathematical, statistical and computing techniques; studying heat, power and fluid flows, learning about mechanisms and control, studying manufacturing technology and how production is managed, as well as taking on a group project with other students. You will consider the movement of mechanisms, the strength of individual parts, the efficiency and environmental impact of your designs, and the methods that can be employed to make products profitable.

All students carry out a major group design project to develop a new product, looking at all parts of the product development including the legal and business aspects.

In Years 3 and 4, you will develop your specialisation further, with an increased problem-solving-based focus. You continue with Mechanical Design where you undertake project work and have the opportunity to attend lectures from companies such as Rolls-Royce, Aston Martin and Jaguar Land Rover to gain an insight into industrial design projects.

If you study the BEng programme you will undertake an individual design project in your third and final year.

If you opt for the MEng programme, in your final year you will be given options to study topics reflecting the academics’ research interests and emerging engineering topics. These options are designed to allow you to focus on your chosen area of specialism. Your final-year project forms a significant part of your final year – the projects range in type from purely experimental laboratory-based projects to ones that solely make use of our extensive simulation and modelling software. They vary in topic from designing new artificial joints to the thermodynamic modelling of engines. Many projects are defined by industry and Formula Student team members can also undertake projects based on the racing car. The project gives you the chance to use your own initiative and apply the skills and knowledge learnt during your degree programme. To summarise, we have adopted an approach that is designed to provide continuity and coherency that will help you to acquire a deep understanding of each new topic by placing it in its wider context. We believe this strategy will challenge and motivate you, improve your overall learning experience and enhance your skills as a mechanical engineer.
Professional skills
We place great emphasis on developing your professional and business skills, required by the industry once you graduate. Competencies such as time and project management, oral and written presentation, effective teamworking and proficiency in IT are fostered through individual and group work throughout your programme.

Assessment
Each module is assessed independently and methods may include end-of-year exams, written assignments, oral and poster presentations, computer-based tests, class tests, and laboratory and project reports. The early years of your course are assessed mostly by examination, whereas in later years this emphasis will shift to continuous assessment in project work. This model reflects your ability to specialise in Years 3 and 4, after undertaking thorough grounding of engineering principles at the start of your studies.

Studying at university
Studying at degree level is very likely to be different from your previous experience of learning and teaching. At the University of Birmingham, we provide support and resources to help you develop your independent study skills, which are particularly important when you come to undertake projects within your degree programme.

Within the School, you will be assigned a personal tutor, who will support you in your study and provide a point of contact to discuss subject-specific issues, whilst the Academic Skills Centre at the University offers you support through workshops, events, one-to-one appointments and extensive online resources. For full information on the student support we offer, please visit www.birmingham.ac.uk/undergraduate/support/index.aspx

Research
Our teaching benefits from strong links with our research programmes through the range of modules available. You will benefit from developments at the leading edge of your chosen field, and links formed across modules reflects the holistic nature of engineering from the very start of your programme.

ACCREDITATION
The Mechanical Engineering programme is accredited by the Institution of Mechanical Engineers up to the 2018 student intake. Our next accreditation visit takes place in November 2018. An accredited degree means that graduates are deemed to have met, part or all, of the academic requirements for registration as a Chartered Engineer, and are in a strong position to move on to achieve professional engineering status after a period of initial professional development in industry. The MEng fully meets the exemplifying academic benchmark requirements for registration as a Chartered Engineer. The BEng will meet, in part, the exemplifying academic benchmark requirements for registration as a Chartered Engineer and graduates will need to complete an approved format of further learning. Following the last accreditation visit, the Institution of Mechanical Engineers review panel highlighted as commendable: the strong links with industry; Formula Student, which has high levels of participation; the physical resources available in support of the programmes, and its commitment to enhancing those resources; the meaningful and innovative ways in which research is used to inform its curriculum; the enthusiasm of the students, and their positive views on their studies.
'I was contracted to Lionbridge during my Year in Industry but I worked for Rolls-Royce in their Central Manufacturing Engineering team.

'The Year in Industry experience was really useful to my degree because it taught me to justify decisions that I was making and to stick to the project specification. It also helped me to improve my softer skills so I now have the confidence to talk to people face-to-face when I require support, whereas before I may have resorted to email. My organisational skills have also improved. I now have lots of experience to talk about in interviews and am looking forward to my new career as a Railway Systems and Safety Engineer in September.'

NATHANIAL HUTCHINSON, MEng Mechanical Engineering with Industrial Year
UBRacing

UBRacing is the official Formula Student team at the University of Birmingham. This student-run project takes place each year to design, fund and build a single-seater racing car from scratch, in order to compete in a series of tests against other universities.

The competition combines the need for innovative engineering, careful project management and organised teamwork in order to see the production of a working prototype. This project is purely an extra-curricular activity, and solely managed by the students themselves. Since UBRacing started competing in 1998, our student teams have travelled all over the world competing in various series of Formula Student.

DR KARL DEARN
READER IN MECHANICAL ENGINEERING AND FORMULA STUDENT FACILITY ADVISOR

‘As a member of UBRacing, you can expect to be pushed further than you have ever been, but the rewards are great. UBRacing alumni can be found in all aspects of engineering including, for example, in automotive (eg, Jaguar Land Rover), Formula 1 (eg, Red Bull), defence (eg, MBDA) and aerospace (eg, Airbus) industries.’

‘Formula Student and UBRacing have given me the opportunity to apply my studies to a real-life engineering situation. It has given me experience of writing professional emails, negotiating sponsorships and lead times with manufacturers, and long-term teamwork. These are all skills that make students involved with the project stand out when applying for year in industry placements or graduate placements.’

CHARLIE HODGSON, MEng Mechanical Engineering

Formula Student UK Results 2017: UBR20, the team’s 20th car, finished second overall and won the endurance race and overall dynamics, which is the team’s best ever performance.
Life at Birmingham

Birmingham is a modern and exciting city, famous for its historic, industrial past; it is also a centre of arts and culture, commerce and entertainment, with a vibrant and diverse community. At Birmingham, you will benefit from the best of both worlds; a beautiful green campus, just a few minutes away from the heart of an exciting, busy city. With our very own railway station on campus, trains take just minutes to travel into the city centre.

RETAIL THERAPY
The city centre offers a first-class retail experience; from famous brands to independent stores, Birmingham has every shop you could ever need.

AFTER DARK
As a thriving city for students and young professionals, when the sun sets, Birmingham has a vibrant nightlife and a huge selection of pubs, bars and clubs. As a student-friendly city, there are set student nights for every day of the week in Birmingham; with something for everyone.

FOOD
Digbeth Dining Club is the perfect place for foodies to try all the mouth-watering offerings of Birmingham. Check out Independent Birmingham (www.independent-birmingham.co.uk) for some Birmingham favourites and hidden gems. Birmingham is home to the famous Balti Triangle, a must-visit place for curry lovers.

ART AND CULTURE
For the culture vultures out there, Birmingham has something to suit all tastes; whether it be Old Masters, contemporary artists or performing arts. The city regularly hosts a variety of music and cultural festivals including the annual German Market.
MUSIC
Birmingham is full of different beats to suit all tastes, from large arenas and big names in music to smaller more intimate venues, where you can hear everything from new artists to old favourites.

LOCAL FAVOURITES
There is more to Birmingham than its city centre. You'll find plenty going on just a short walk from our Edgbaston campus. A student favourite, Harborne is home to a number of bars, restaurants and cafes. Nearby Moseley and Kings Heath are buzzing with bars and live music to discover.

ACTIVE BIRMINGHAM
Stay active during your time at Birmingham by getting involved in the huge variety of opportunities on offer. There are numerous park runs, local teams including hockey, tennis and rugby. Immerse yourself in sport in one of the iconic venues including Edgbaston Cricket Ground, Villa Park and Alexander stadium.

LIFE ON CAMPUS
When you step onto campus, you are immersed in our historic red-brick buildings and glorious green spaces. You’ll find our Edgbaston campus both a peaceful and vibrant place to spend your time, whether it’s studying on one of the lawns, or enjoying a drink in one of the many cafes.

SPORT AND FITNESS
Our new sport and fitness centre opened its doors last year and features an exceptional range of quality facilities for everyone from beginner to elite athlete. It will be another iconic sporting venue for the city as the 50-metre pool and arena sports hall will host national and international events.

NEW FACILITIES
In 2017 we opened the doors to our state-of-the-art library, phase I of the Collaborative Teaching Laboratory (CTL) and a new halls of residence – Chamberlain in the Vale Village. The second phase of the CTL will open its doors to students from September 2018, the Green Heart will be fully completed in 2019 but parts of it are already open and looking spectacular, and plans are also underway for a new Teaching and Learning building on campus.

THE GUILD
The Guild of Students represents all of the students at the University. The Guild offers support and advice to all students, delivers fantastic student nights and entertainment, and has over 150 student groups and clubs for you to choose from.

www.birmingham.ac.uk/building
How to apply

You have the flexibility to tailor the course you study to your needs and interests, and are not committed to the degree pathway at the point of entry. If you are offered the BEng programme at the point of entry there is an opportunity to transfer to the MEng programme if you meet the relevant progression requirements at the end of your second year.

How do I apply?
You will need to submit an application through UCAS to be considered for study and use the appropriate code below. Demand for places is high and we advise applicants to apply early.

www.ucas.com

Essential information
- A level Mathematics is required.
- Physics and Further Maths are not required but are advantageous.
- General Studies and Critical Thinking are not considered.
- International Baccalaureate (IB) Diploma: Our standard offer is no less than 32 points overall including Mathematics at Higher Level (HL). HL scores needed are in the table provided.
- Students who just miss the grade requirements for MEng study will be automatically considered for a place on the BEng programme.

We assess all UCAS applications individually to determine your eligibility and so qualifications under other examination systems may also be acceptable.

Deferred entry and sponsorship
We value the experience gained by students who wish to take an industrial or gap year before entering University. Students who obtain industrial sponsorship may need to defer their entry for the year. If you wish to do this, simply continue with the standard UCAS admissions procedure but write to the Undergraduate Admissions Tutor once you are sure that deferral is required. We will contact UCAS and the University administration on your behalf and make all the necessary arrangements. A place on the following year’s course will be reserved for you, so you need take no further action.

If you’re a local student you may be eligible for the A2B Scheme. Visit www.birmingham.ac.uk/a2b for further details.

FACT

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<th>Duration (Years)</th>
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<tr>
<td>Mechanical Engineering MEng</td>
<td>H301</td>
<td>4</td>
<td>A level: AAA /IB: 6, 6, 5</td>
<td>A level Maths at grade A/HL Maths at grade 6</td>
</tr>
<tr>
<td>Mechanical Engineering BEng</td>
<td>H300</td>
<td>3</td>
<td>A level: AAB /IB: 6, 6, 5</td>
<td>A level Maths at grade B/HL Maths at grade 5</td>
</tr>
<tr>
<td>Mechanical Engineering with Industrial Year MEng</td>
<td>H303</td>
<td>5</td>
<td>A level: AAA /IB: 6, 6, 6</td>
<td>A level Maths at grade A/HL Maths at grade 6</td>
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<tr>
<td>Mechanical Engineering (Automotive) MEng</td>
<td>H330</td>
<td>4</td>
<td>A level: AAA /IB: 6, 6, 6</td>
<td>A level Maths at grade A/HL Maths at grade 6</td>
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<td>Mechanical Engineering (Automotive) BEng</td>
<td>H302</td>
<td>3</td>
<td>A level: AAB /IB: 6, 6, 5</td>
<td>A level Maths at grade B/HL Maths at grade 5</td>
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<td>Engineering Foundation Year</td>
<td>HFJ0</td>
<td>For further details, visit <a href="http://www.birmingham.ac.uk/engineering-fy">www.birmingham.ac.uk/engineering-fy</a></td>
<td></td>
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</table>
Fees and funding
For comprehensive information on fees and funding, please visit www.birmingham.ac.uk/undergraduate/fees/index.aspx

Scholarships
The Department offers scholarships to outstanding students to reward excellence in academic performance.

Eligible UK and EU students will be automatically considered for the scholarships offered by the Department during the application process. International students should visit our webpages for more information. Full details of the scholarships for 2019 entry, along with the terms and conditions can be found by visiting the Department webpages at www.birmingham.ac.uk/mechanical-scholarships

Visiting us
If you are made an offer you will be given the opportunity to join us on campus at an Offer-Holder Day. You will be able to visit the School and its facilities, meet current staff and students, tour our campus and learn more about studying with us. The Offer-Holder Day is an ideal opportunity to ask questions about the programme and student life, and will give you a clear idea of what Birmingham has to offer.

LEARN MORE
Please contact us for further details or with any questions you may have.

Admissions Tutor
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Email: ug-admissions-eng@contacts.bham.ac.uk
www.birmingham.ac.uk/mechanical
This leaflet was written several months in advance of the start of the academic year. It is intended to provide prospective students with a general picture of the programmes and courses offered by the School. Please note that not all programmes or courses are offered every year. Also, because our research is constantly exploring new areas and directions of study, some courses may be discontinued and new ones offered in their place.