<table>
<thead>
<tr>
<th>OUR PROGRAMMES</th>
<th>UCAS CODE</th>
</tr>
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<tbody>
<tr>
<td>MEng Civil Engineering</td>
<td>H201</td>
</tr>
<tr>
<td>BEng Civil Engineering</td>
<td>H200</td>
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<tr>
<td>MEng Civil Engineering with Industrial Experience</td>
<td>H202</td>
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<tr>
<td>MEng Civil Engineering with International Study</td>
<td>H203</td>
</tr>
<tr>
<td>MEng Civil Engineering with Industrial Year</td>
<td>H204</td>
</tr>
<tr>
<td>MEng Civil and Railway Engineering</td>
<td>581H</td>
</tr>
<tr>
<td>BEng Civil and Railway Engineering</td>
<td>52H7</td>
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</tbody>
</table>
I am very pleased to introduce the Department of Civil Engineering, founded on our world-leading teaching, research and engagement with industry and government.

At Birmingham, we are focused on the interactions between the built environment and the world we live in, working towards solving the economic, environmental and social challenges that the world faces. As a Civil Engineering student at the University, you’ll develop the skills, knowledge and attitudes necessary to lead society’s response to these challenges. So, whether we’re teaching the principles of seismic engineering to build resilience into our infrastructure, understanding how new materials and condition monitoring technologies will change our urban communities or securing clean water and sanitation access for all, we’re always focused on making lives better across the globe. Civil Engineering at the University of Birmingham is a place where change happens, where you’ll learn to make a difference and where futures are made.

Professor Karl Dearn,
Head of Department of Civil Engineering

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**WHY STUDY CIVIL ENGINEERING AT BIRMINGHAM?**

- **Internationally recognised and multidisciplinary research** – our research feeds into our degree programmes. Our emphasis on innovative thinking challenges you to envisage the future of civil engineering.

- **Interdisciplinary design projects** – designed to give you as many opportunities as possible to tackle problems by applying taught materials in design exercises. These projects thread through our degree programmes, increasing in complexity as the course continues.

- **Industry links** – you will benefit from our excellent links with industry to gain real-world experience during your study, and to prepare you for entering the workplace as a graduate.

- **State-of-the-art facilities** – including our new School of Engineering building and Collaborative Teaching Laboratory (CTL).
ALL DEGREE PROGRAMMES – YEAR 1

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 Mechanical, Electronic, Electrical and Systems Engineering, as well as those in Civil 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 – the key to success as an engineer of the future.

You will study a number of core engineering topics on themes such as structural, materials, water and electrical engineering.

You will learn essential engineering fundamentals to develop knowledge that you will use as a foundation for later years.

ENTRY REQUIREMENTS

A level: MEng: AAA; BEng: AAB
IB: MEng: 6, 6, 6; BEng 6, 6, 5 at higher level
BTEC options considered

Required subjects and grades:
A level: Maths
IB: To include Mathematics with a minimum of 32 points overall

EPQ: We may reduce your offer by one grade if you achieve at least an A grade in this qualification

Visit www.birmingham.ac.uk/schools/engineering/courses/undergraduate.aspx

ACCREDITATION

All our BEng and MEng programmes offered for 2021 entry are accredited by the Institution of Civil Engineers, the Institution of Structural Engineers, the Chartered Institution of Highways and Transportation, and the Institute of Highway Engineers and are compatible with the latest guidelines for professional engineering registration:

- BEng degrees are accredited as fully satisfying the educational base for an Incorporated Engineering (IEng).
- MEng degrees are accredited as fully satisfying the educational base for a Chartered Engineering (CEng). They are also recognised by the European Federation of National Engineering Associations (FEANI).
YEAR 2 ONWARDS

Second year will build on the broad base of Year 1, commencing your specialisation in the core fundamentals of Civil Engineering. The programme’s strong design theme becomes apparent as you learn how to apply taught theory to design key components of Civil Engineering structures.

Years 3 and 4 allow your specialisation to develop even further. You have optional modules and you will also tailor your study towards your interests through projects. The core integrated design project theme is further broadened to provide experience of working on complex civil engineering projects. These aim to challenge your innovative, creative, technical, management and presentation skills, bringing together your learning over the degree. In final year you complete an independent research project in an area of civil engineering that interests you, supported by an individual supervisor and for some their research team too.

For those on the Railway pathway, you will take rail-specific modules from Year 2 onwards including Railway Infrastructure Engineering and a Railway Design Project.

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
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<tbody>
<tr>
<td>Mechanics 1 (20 credits)</td>
<td>Structural Engineering 1 (20 credits)</td>
<td>Structural Engineering 2 (20 credits)</td>
<td>Structural Engineering 3 (20 credits)</td>
</tr>
<tr>
<td>Integrated Design Project 1A and 1B (20 credits)</td>
<td>Integrated Design Project 2 (20 credits)</td>
<td>Integrated Design Project 3 (20 credits)</td>
<td>Integrated Design Project 3 (20 credits)</td>
</tr>
<tr>
<td>Electrical Engineering 1 (20 credits)</td>
<td>Geotechnical Engineering 1 (20 credits)</td>
<td>Geotechnical Engineering 2 (20 credits)</td>
<td>Geotechnical Engineering 3 (20 credits)</td>
</tr>
<tr>
<td>Computing for Engineers (10 credits)</td>
<td>Construction Management and Practice (10 credits)</td>
<td>Water Transmission and Treatment (10 credits)</td>
<td>Options from the below themes:</td>
</tr>
<tr>
<td>Engineering Mathematics 1 (20 credits)</td>
<td>Engineering Mathematics 2 (20 credits)</td>
<td>BEng: Research Project (20 credits)</td>
<td>Management theme</td>
</tr>
<tr>
<td>Fluid Mechanics and Energy Transfer (20 credits)</td>
<td>Open Channel Flow Hydraulics (10 credits)</td>
<td>Plus 1 10 credit option module</td>
<td>Roads/Transportation theme</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MEng: Applied Fluid Dynamics (10 credits)</td>
<td>Water theme</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20 credits from options</td>
<td>Structural theme</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Geotechnics theme</td>
</tr>
</tbody>
</table>
RESPECT is the Department’s Engineering Industrial Placement recruitment programme, which gives you the opportunity to undertake placements and possibly receive sponsorship to support your studies. Work placements are an incredibly valuable learning experience, allowing you to see engineering in the workplace and preparing you for employment after graduating.

The RESPECT Scheme is open to students from their first year onwards, giving them the chance to attend careers fairs and events and to interact with employers who are looking for students to undertake summer or year-long placements.

The scheme can provide:
- Placements during your summer holidays, giving you valuable industrial work experience
- Excellent networks to help secure employment after graduating
- An enhanced CV

We work with a range of organisations and some of the best names in civil engineering. Some companies look for one-off placements and others prefer to offer structured training and development via sponsorships. The flexible nature of the scheme means that a large number of companies take part and you have the chance to explore a wide range of options to fit with your interests.

Organisations that have previously participated in RESPECT include:
- AECOM
- Atkins
- Curtins
- Cundall
- Kier
- Osborne

CALLUM

Civil Engineering with Industrial Experience

‘The RESPECT scheme has provided me with a set of diverse industrial placements over three consecutive summers. I have enjoyed solving problems within real-life projects and the scheme has enabled me to find and develop my interests within the Civil Engineering industry. I have gained essential skills to transition into the workplace, which has added value when applying for graduate roles. The RESPECT scheme represents an outstanding opportunity for students at Birmingham, I would advise every student to grasp it.’
WHERE COULD YOUR DEGREE TAKE YOU?

We offer a range of opportunities for students to enhance their educational experience, including study abroad and industrial experience.

Study abroad
There is an option to add an international study year if completing the MEng. Students have previously studied in locations such as Melbourne and the USA.

Industrial options
We offer two types of accredited industrial experience, both of which count towards your degree. You will gain valuable experience working on real-world problems whilst developing your personal and professional skills in the workplace. Many students who engage with industrial experience during their study find their academic learning becomes more meaningful, and they tend to perform better as a result.

- Industrial Year – by adding an extra year to your degree, you can spend a year working with an organisation before returning to the University to resume your study. You can add an industrial year to any of our BEng and most of our MEng programmes.

- Industrial Experience – your degree remains the same length and you instead have your work experience formally recognised over two summer placements. Our dedicated Industrial Liaison Officer supports students in securing industrial experience, advising on CVs and how to prepare for interviews.

CAREERS

Graduates of our Civil Engineering programmes have gone on to work for a wide range of organisations including:

- Balfour Beatty
- Interserve Keller Ground Engineering
- The British Army
- Procter & Gamble
- Amey
- Arup
- Barclays
- IBM

*90% of our graduates (Destination of Leavers from Higher Education survey 2016/17) are in employment, or further study, six months after graduating.

NAOMI

Civil Engineering (International Study)

'I decided to study abroad for an adventure! It is a great opportunity to explore the world and become immersed in a new culture in a way you don’t get when you visit somewhere on holiday. A university setting makes it easy to settle into life abroad and you will walk away with friends from all over the world! I’ve also found that employers have been really interested in the ways which a year abroad has improved my adaptability, self-reliance and resilience, and the experience has definitely given me an advantage in gaining summer internships and graduate jobs.'
LEARNING SUPPORT

The teaching environment is designed to help develop your engineering mind. Engineering is a social activity. You'll be working with others alongside your own study.

A personal tutor will be assigned for you to discuss your progress, complete reviews and may be involved in project assessments. They will be your first contact for any aspect of your studies that you wish to discuss.

In your first year, you will have small group maths sessions in addition to lectures and example classes. We believe support in mathematics is essential because it underpins all aspects of engineering.

The wellbeing team is here to assist should something affect your studies and to provide practical and emotional support.

FACILITIES

As a Civil Engineering student, you will benefit from the extensive facilities that the campus has to offer.

The new School of Engineering building has been designed with spaces that enable the collaboration that’s central to everything we do. The state-of-the-art building will provide spacious seminar rooms, design centres, project labs and media stations, meeting the research and educational needs of today and the future.

The laboratory facilities are also being upgraded including the Collaborative Teaching Laboratory (CTL) providing a hub for practical work, alongside the National Buried Infrastructure Facility. The facility will be used for a number of activities including research, education and training in buried infrastructure-ground interaction, soil stabilisation and improvement.
CIVSOC

There are many student societies at the University and our civil engineers have set up their own! CivSoc is the society for Civil Engineering students run by Civil Engineering students.

As a society, they want to help bring together all Civil Engineering students from the different years of study by providing members with a good time throughout the year; organising nights out, industry talks and a massive end-of-year summer trip.

CONCRETE CANOE

CivSoc have recently started a sister society, Concrete Canoe. Inspired by the success of a Concrete Canoe Competition in the US, their aim is to design, build and race their own canoe made from concrete in the near future.
RESEARCH

Studying at a Russell Group university means our teaching and research are closely interlinked, so there will be plenty of opportunities for you to become involved in exploring new ideas in your subject and beyond. In your final year, you will carry out a research project in an area that particularly interests you. During your project, you will work closely with academics, using our main research labs and equipment to do real research ranging from wind tunnel work on buildings, to vehicle aerodynamics to self-healing concrete!

The new Engineering building incorporates the UK Rail Research and Innovation Network (UKRRIN) Centre of Excellence for Digital Systems. This exciting development continues to ensure that the University of Birmingham remains a world-leading organisation in railway research. The new National Buried Infrastructure Facility (NBIF) will also open this year, providing a unique research facility for geotechnics, buried infrastructure and non-intrusive sensing, such as our revolutionary quantum gravity technology.

The Department continues to lead the way with innovative research in various areas of civil engineering. Our TRAIN Rig facility is being applied to tunnel design for HS2; global collaborations on research into the structural impacts of extreme wind events are at the forefront of tornado and storm research; and our wind energy research is paving the way for more efficient wind turbines.

SCHOLARSHIPS

The School of Engineering offers widening participation scholarships and scholarships for excellent academic performance. Eligible UK, EU and international students will be automatically considered for the scholarships offered by the School during the application process.

Full details for scholarships for 2021 entry, along with their terms and conditions, can be found by visiting the School webpages: www.birmingham.ac.uk/schools/engineering/courses/undergraduate-scholarships.aspx

LUKE

Civil Engineering

‘Coming to the University of Birmingham, who are accredited by the Institution of Civil Engineers allowed me to apply and successfully secure an ICE QUEST Scholarship. The Engineering department supplied the tools and skills necessary for my summer placements on a technical and practical level. The established communication between academics and students allowed for the development of placement work to be incorporated into my final-year project. The opportunity of the scholarship and placement experience has secured me a graduate scheme on completion of my degree, all with great thanks to the School of Engineering.’
Civil Engineering

‘Civil Engineering has always been a degree I wanted to pursue, the very wide field of work and the range of opportunities a degree like this offers is incredible. I chose the University of Birmingham because of the supreme academia and the great industry relations. Not just does it offer you the perfect degree academically, Birmingham also offers a great campus, high-end facilities and an overall friendly feel. Through my degree I have felt very supported even at the most critical times and this is why I recommend Birmingham, it’s a one-of-a-kind experience!’

APPLICATION STEPS TO STUDY AT BIRMINGHAM

Step 1
Find out more about the University and Civil Engineering at our Open Days

Step 2
Apply to us through UCAS following UCAS deadlines

Step 3
After receiving an offer you can join an Offer-Holder Visit Day, usually between December and April

Step 4
Stay connected through social media and our student-led accounts

CONTACT US

General admissions enquiries:
Tel: +44 (0)121 414 4230
Email: ugengineering@contacts.bham.ac.uk

@schoolofenguob
@schoolofengineeringbirmingham
@schoolofeng_uob

FIND OUT MORE ABOUT THE DEPARTMENT OF CIVIL ENGINEERING AT BIRMINGHAM:
WWW.BIRMINGHAM.AC.UK/CIVIL-ENGINEERING
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 all 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.

Please note the information in this brochure is correct at time of publication but may be subject to change (July 2020).