

Civil Engineering with Foundation Year

Undergraduate degree course/programme Civil Engineering with Foundation Year H294:

Engineering is about design, making things happen and solving problems. It calls for creativity, management and communication skills, as well as technical expertise and knowledge. If you want to study Engineering at Birmingham in all its diversity but lack the traditional qualifications for direct entry to a degree programme, you can start here.

Civil Engineers (<http://www.birmingham.ac.uk/schools/civil-engineering/index.aspx>) play a pivotal role in shaping our future and are fundamental to all aspects of the built environment from the design and construction of iconic structures to the provision of underground services.

At Birmingham, our staff and students are working on a diverse range of projects. In fluid mechanics, we investigate topics ranging from the aerodynamics of cyclists/trains, to the flooding of rivers; current geotechnical engineering projects range from developing 'intelligent' tunnels to cleaning up contaminated land; and in structural engineering our students are designing a variety of structures to withstand extreme winds as well as investigating and implementing the sustainable construction technologies of tomorrow.

We have a strong design theme running through all of our degree courses which not only enables your creative abilities to grow but is highly prized by employers. Our unique facilities and excellent staff combine to ensure that you will be excellently placed to fulfil your ambitions.

Study here and find out why the University of Birmingham was awarded The Times and The Sunday Times University of the Year 2013-14 (<http://www.birmingham.ac.uk/news/latest/2013/09/20-sep-Birmingham-announced-as-University-of-the-Year.aspx>)

Course fact file

UCAS code: H294

Duration: 1 year

Typical Offer: BBB depending on your previous study and the discipline you are applying for, please contact the relevant admissions tutor for further advice ([More detailed entry requirements and the international qualifications accepted can be found in the course details \(?OpenSection=EntryRequirements\)](#))

Start date: September

Related courses

[Civil Engineering undergraduate degree courses \(/schools/civil-engineering/undergraduate/index.aspx\)](/schools/civil-engineering/undergraduate/index.aspx)

Contact

Undergraduate Admissions

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[School of Civil Engineering \(/schools/civil-engineering/index.aspx\)](/schools/civil-engineering/index.aspx)

Details

This is a multidisciplinary year, giving you experience of teamwork and developing computer literacy and presentation skills. You study a mix of compulsory and optional modules that could include: Mathematics, Mechanics, Electrical and Chemical Engineering, Computing, Design, Engineering Materials, Manufacturing and Business Studies, and Engineering and Design Studies.

You learn about the particular engineering discipline you may wish to follow. If you have ambitions to pursue a particular branch of engineering (chemical; civil; electronic, electrical and computer; metallurgy and materials; or mechanical), you should select the appropriate programme title. This determines which modules are required and which are optional. It is often possible to change branch at the end of the year.

International students

International students should see the Birmingham Foundation Academy, specific course details are located on the Engineering and Physical Sciences Pathway.

Foundation Year Handbook

The EPS Foundation Year programmes, including Civil Engineering with Foundation Year, are currently under review for 2012 entry. All the progression routes onto first year courses will be maintained and the core content of modules offered will be similar, but the module structure may be different. For information about the current programme [please see the course Handbook \(PDF 290 kb\) \(/Documents/college-eps/foundation/foundation-handbook.pdf\)](#).

Related links

- [Civil Engineering undergraduate degree courses \(/schools/civil-engineering/undergraduate/index.aspx\)](/schools/civil-engineering/undergraduate/index.aspx)
- [Frequently asked questions \(/schools/civil-engineering/undergraduate/faq.aspx\)](/schools/civil-engineering/undergraduate/faq.aspx)

Why study this course

The degree Civil Engineering with Foundation Year (H294) is for students who want to study civil engineering but do not have the appropriate subjects to enter directly into First Year. In most cases, this means that you have not studied enough maths, as we require you to have A-Level maths (or equivalent).

The Foundation Year is designed to build your confidence in technology and numeracy, team working, computer literacy and communication skills. You are a fully registered University student and will be taught by the same lecturers and professors who teach the accredited engineering programmes.

You will have a guaranteed place on the Civil Engineering degree programme of your choice at the end of the Foundation Year, as long as you pass all the subjects (achieve 40%+) and achieve 55%+ in the Maths and Mechanics & Waves subjects.

Modules

Course outline

Title	Credits	Semester
Introduction to Maths	10	1
Introduction to Computer Science	20	1 & 2
Foundation Electrical and Electronic Engineering	20	1 & 2
Science and Engineering Skills	10	1
Properties of Matter	10	1
Mechanics and Waves	20	1 & 2
Further Maths	20	2
Science and Engineering Labs	10	2

Please note: Programmes and options are revised each year to keep them up to date, so details may change.

International students should see the Birmingham Foundation Academy, specific course details are located on the Engineering and Physical Sciences Pathway.

Fees and funding

Standard fees (<http://www.birmingham.ac.uk/students/ug/courses/fees/standard>) apply

For further information please see **fees and funding** (<http://www.birmingham.ac.uk/students/ug/courses/fees>).

Scholarships

Learn more about our **scholarships and awards** (<http://www.birmingham.ac.uk/students/ug/funding>).

Entry requirements

Typical offer: BBB depending on your previous study and the discipline you are applying for, please contact the relevant admissions tutor for further advice

Required subjects and grades: GCSE Maths grade B; GCSE Physics (or Science Double Award) at grade C. plus three A levels

General Studies: accepted

Additional information:

Other qualifications are considered – learn more about **entry requirements** (<http://www.birmingham.ac.uk/students/ug/requirements>).

Offers may vary according to discipline.

International students:

International students should see the Birmingham Foundation Academy, specific course details are located on the Engineering and Physical Sciences Pathway.

Depending on your chosen course of study, you may also be interested in the Birmingham Foundation Academy, a specially structured programme for international students whose qualifications are not accepted for direct entry to UK universities. Further details can be found on the **foundation academy web pages** (<http://www.birmingham.ac.uk/students/foundation-academy/Pathways/index.aspx>).

How to apply

Apply through UCAS at **www.ucas.com** (<http://www.ucas.com/>)

Learn more about **applying** (<http://www.birmingham.ac.uk/students/ug/courses/apply>)

Key Information Set (KIS)

Key Information Sets (KIS) are comparable sets of information about full- or part-time undergraduate courses and are designed to meet the information needs of prospective students.

All KIS information has been published on the Unistats website and can also be accessed via the small advert, or 'widget', below. On the **Unistats website** (<http://unistats.direct.gov.uk>) you are able to compare all the KIS data for each course with data for other courses.

The development of Key Information Sets (KIS) formed part of HEFCE's work to enhance the information that is available about higher education. They give you access to reliable and comparable information in order to help you make informed decisions about what and where to study.

The KIS contains information which prospective students have identified as useful, such as student satisfaction, graduate outcomes, learning and teaching activities,

Related links

[Civil Engineering undergraduate degree courses \(/schools/civil-engineering/undergraduate/index.aspx\)](/schools/civil-engineering/undergraduate/index.aspx)

[EPS Foundation Year Handbook \(pdf 303 KB\) \(/Documents/college-eps/foundation/foundation-handbook.pdf\)](/Documents/college-eps/foundation/foundation-handbook.pdf)

Related news and events

[Seeing and touching structures makes structural analysis learning more fun \(/schools/civil-engineering/news/archive/structural-analysis-learning.aspx\)](/schools/civil-engineering/news/archive/structural-analysis-learning.aspx)

Learning and teaching

The information below relates to our BEng/MEng courses:

As a Birmingham student you are part of an academic elite and will learn from world-leading experts. At Birmingham we advocate an enquiry based learning approach, from the outset you will be encouraged to become an independent and self-motivated learner, qualities that are highly sought after by employers. We want you to be challenged and will encourage you to think for yourself.

Your learning will take place in a range of different settings, from scheduled teaching in lectures and small group tutorials, to self-study and peer group learning (for example preparing and delivering presentations with your classmates).

To begin with you may find this way of working challenging, but rest assured that we'll enable you to make this transition. You will have access to a comprehensive support system that will assist and encourage you, including personal tutors and welfare tutors who can help with both academic and welfare issues, and a formal [transition review \(https://intranet.birmingham.ac.uk/student/transitionreview/index.aspx\)](https://intranet.birmingham.ac.uk/student/transitionreview/index.aspx) during your first year to check on your progress and offer you help for any particular areas where you need support.

How will I be taught?

As a Birmingham student, you are joining the academic elite and have the privilege of learning from world-leading experts in the field of civil engineering. Throughout your studies, you will be encouraged to become an independent and self-motivated learner, thriving on challenge and opportunities to think for yourself.

Personal tutor

At the start of your degree, you'll be assigned a Personal Tutor who will remain with you throughout your studies to help you in three important areas: supporting your academic progress, developing transferable skills and dealing with any welfare issues.

Contact hours

In your first and second years, the course is delivered as lectures, small group workshops, laboratories, computer-based activities, enquiry-based learning and tutorials. A strong emphasis is placed on design project work in your third year.

Laboratory-based work is an integral part of our civil engineering degree programme, vital to develop your experimental practical skills, and to reinforce concepts introduced in lectures or to explore a particular phenomenon. Lab work takes place mainly in the first two years of the programme when you'll learn all the fundamental concepts, but you can also opt for a laboratory final-year project. You never know, you could be 'playing' in the Schools newly constructed wind tunnel.

Build something big. You could spend a week during your degree on site with your fellow students building a scale version of an iconic structure. It is muddy and exhilarating and our undergraduates rate it as one of the best experiences possible during a civil engineering degree:

Adobe Flash Player or QuickTime is required for video playback. [Get the latest Flash Player](#) [Get the latest version of QuickTime](#)

Lectures take place in our theatres which, as well as the traditional whiteboard and pen, are equipped with the latest technology, including facilities to show movies, animations and molecular graphics, to record lectures and to interact with 'ask the audience' style electronic voting systems.

Small-group tutorials/personal tutorials run alongside the lecture course, addressing any individual problems you may have and allowing you to consolidate lecture material, as well as test your understanding through problem-solving exercises.

Enquiry Based Learning (EBL) is a group activity which requires you to work in a team, with a variety of assessment methods; in either a group or individually, by written reports and sometimes as a presentation. Based on techniques used in research-led organisations like the University of Birmingham, EBL gives you a research-orientated approach to a problem and helps you to gain essential skills that are highly valued by employers.

Assessment methods

The information below relates to our BEng/MEng courses:

Each module is assessed independently with all containing some components of continuous assessment, which usually accounts for a quarter to one third of your marks. Some modules are completely assessed by coursework. Assessment methods include end-of-year examinations in May and June, written assignments, oral and poster presentations, computer-based tests, marked exercises, and laboratory and project reports.

In your first year, assessment is weighted more towards exams at 56%, with coursework accounting for 44% of your mark. By the second year they're weighted equally. In the third year your design projects take precedence and this is reflected in the marks; 55% coursework and 45% examination. These figures are the average for MEng Civil Engineering so they'll vary depending on what options you choose.

During your first year you will also undergo a formal 'transition' review, mentioned above, to see how you are getting on and whether there are particular areas where you need support. This is in addition to the personal tutor who is based in your School or Department and can help with any academic issues you encounter. Our Academic Skills Centre also offers you support with your learning. The centre is a place where you can develop your mathematical, academic writing and general academic skills. It is the centre's aim to help you to become a more effective and independent learner through the use of a range of high-quality and appropriate learning support services. These range from drop-in sessions with support with mathematics and statistics based problems provided by experienced mathematicians, to workshops on a range of topics including note taking, reading, writing and presentation skills.

Feedback is an essential part of learning and we use a wide range of methods, such as written feedback on your assessments, class feedback sessions and discussions with your tutor. You'll receive feedback on each assessment within four weeks, highlighting the positives of your work as well as any areas that need more attention. You will also be given feedback on any exams that you take; if you fail an exam we will ensure that you receive particularly detailed feedback to enable you to learn for the future.

Employability

The information below relates to our BEng/MEng courses:

Feedback shows that 80-85% of our students were employed or in further study six months after graduation. Of those in employment, 95% were in graduate-level jobs and earning salaries in the region of £23-£29,000 per annum.

As one of our Civil Engineering students, the range of career opportunities open to you when you graduate is enormous. The civil engineering and construction industries offer a wealth of jobs (from engineering consultants to contractors), with work in such fields as structures, geotechnics, water, environmental, highways, and railways. Engineering management jobs could also come from the environmental protection and local government sectors, or your problem-solving skills could, equally, be directed towards a career in finance, law, teaching and/or research.

Superb opportunities exist for you to gain industrial experience before you graduate:

You could add a year to your programme and spend this time in paid employment; usually between your second and third study years. You will gain relevant work experience, and earn money putting into practice the skills and knowledge gained from your degree. Students on placement get involved in practical projects which ask challenging questions that require good engineering answers - and which often lead to sponsorship and/or the offer of a graduate job.

Spending at least two summers in industries will enable you to obtain a 'with industrial experience' degree.

Many top construction companies offer sponsorship to students through the **RESPECT scheme** (<http://www.birmingham.ac.uk/schools/civil-engineering/undergraduate/industry-sponsorship.aspx>).

A rich vein of experience will be available for you to tap into, not only through the University's dedicated Careers Network, but from the School's own industrial liaison officer. From these careers professionals you will gain the skills to help you secure a range of placements from vacation jobs to, eventually, your graduate job.

At School-level, you can opt to add a year to your programme, whatever the course you are studying, and spend this time on placement in industry. You will gain relevant work experience, and earn money putting into practice the skills and knowledge gained from your degree. Students on placement get involved in serious projects which ask searching questions that require good engineering answers - and which often lead to sponsorship and/or the offer of a graduate job. On successful completion of a placement in industry organised by the School, and success in your studies, you will be awarded the Certificate in Industrial Studies to add to your degree and improve your employability prospects.

At University-level, our unique careers guidance service is tailored to academic subject areas, offering a specialised team (in each of the five academic colleges) who can give you expert advice. Our team sources exclusive work experience opportunities to help you stand out amongst the competition, with mentoring, global internships and placements available to you. Once you have a career in your sights, one-to-one support with CVs and job applications will help give you the edge. In addition, our employer-endorsed award-winning **Personal Skills Award (PSA)** (<https://intranet.birmingham.ac.uk/as/employability/psa/index.aspx>) recognises your extra-curricular activities, and provides an accredited employability programme designed to improve your career prospects.

We also offer voluntary work which complements your studies by helping you gain practical experiences in occupational settings while contributing back to society. This can bring new skills that will be useful throughout your future and can make a positive impact on your learning whilst at university. Volunteering enables you to develop skills such as communication, interpersonal skills, teamwork, self-confidence and self-discipline all of which can be transferred into your studies.

Whichever of the above forms of careers guidance, or combination of such, you select you will find your prospects for employment after graduation considerably enhanced. If you make the most of the wide range of careers advice we can offer, you will be able to develop your career from the moment you arrive.

Career destinations of previous graduates include:

- Amey
- ARUP
- Atkins
- Balfour Beatty Ltd
- Bam Nuttall Ltd
- Birmingham City Council
- Bombardier Transportation
- Costain Group PLC

- Edmund Nuttall Ltd
- FaberMaunsell/AECOM
- Galliford Try
- Grontmij
- Interserve
- Jacobs
- Keller
- Laing O'Rourke,
- Met Office
- Metronet Rail BCV
- Mott MacDonald Group Limited
- Nottinghamshire County Council
- Npower
- Nuttall
- Royal Haskoning
- Walsall Metropolitan Borough Council
- Wardeil - Armstrong

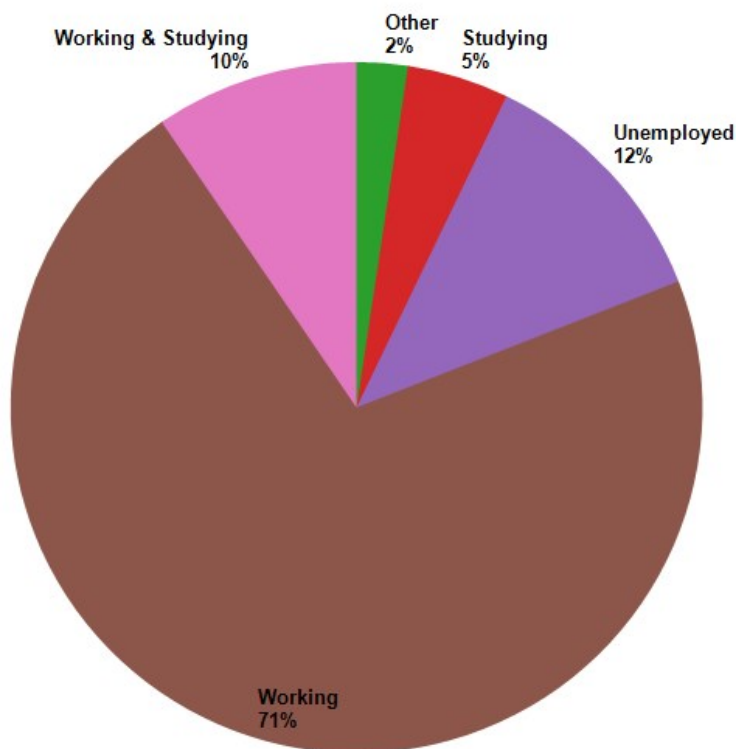
University Careers Network

Preparation for your career should be one of the first things you think about as you start university. Whether you have a clear idea of where your future aspirations lie or want to consider the broad range of opportunities available once you have a Birmingham degree, our Careers Network can help you achieve your goal.

If you make the most of the **wide range of services** (<https://intranet.birmingham.ac.uk/as/employability/careers/college/eps/index.aspx>) you will be able to develop your career from the moment you arrive.

Destinations of Leavers from Higher Education (DLHE) 2011/12

The DLHE survey is conducted 6 months after graduation.



Examples of occupations

- Assistant Civil Engineer
- Consultant Engineer
- Graduate Bridge Engineer
- Graduate Leader
- Graduate Site Engineer
- Graduate Tunnelling Engineer
- Officer Cadet
- Site Engineer
- Structural Engineer
- Water Engineer

Further study - examples of courses

- MRes Materials and Sustainable Technology
- MRes Science and Engineering of Materials
- MSc Computer Science
- MSc Construction Management
- MSc Environmental Technology
- MSc Railway Systems Engineering and Integration
- MSc Road Engineering and Management
- PhD Civil Engineering

Visit the [Careers section of the University website](#)

<https://intranet.birmingham.ac.uk/as/employability/careers/college/eps/index.aspx> for further information.

83% Students agreed staff are good at explaining things



To see more details and compare with other courses

Visit

