

Welcome to the University of Birmingham

Professor Hassan Hemida (School of Engineering)
Simi Chacko – International Officer



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Why study in the UK?

- World class international reputation – 900 yrs+ and counting
- Teaching by experts in their field
- Public universities that enjoy academic autonomy
- High standards - quality assurance by national bodies
- Small group teaching & personal attention
- High completion rates
- Exceptional student experience
- Investment in campus facilities & accommodation



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Other reasons...

- Early degree specialisms (unlike the US)
- Length of study (3-4 yrs UG, 1 yr Masters, 3-4 yrs PhD)
- Multicultural and welcoming society
- Large diaspora of communities from across the world
- Good infrastructure and travel links – easy access to the rest of Europe
- Size of UK – easy to get around



Birmingham city - your second home

- Second largest city in the UK – 1.1 million people
- In the centre of the country – 1.5hrs train to London
- Youngest city in Europe – 40% under 25
- Largest financial and creative districts outside of London
- 40% of our students stay in the city after graduation
- 7 mins on the train from campus to the city centre
- www.visitbirmingham.com



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Explore the city

- First class arts venues
- One of Europe's largest shopping developments
- More than 500 restaurants
- Exciting night life, clubs and bars
- Range of live music and theatre venues
- Host to international sporting venues
- Museums, gardens, galleries & historical houses
- Many Temples, Mosques, Synagogues & Churches



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A vibrant city on your doorstep



Why choose University of Birmingham?

- Founded in 1900 as England's first civic or 'red brick' university, where students from all backgrounds were accepted on an equal basis
- 276-acre campus university
- Best of both worlds – a safe, contained campus on the doorstep of the UK's second largest city
- Consistently ranked in global top 100
- International outlook (1/4 students and 1/3 staff from overseas)
- Student experience – opportunities outside of your studies, including sports and music
- Produced 11 Nobel Prize winners



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Sector leading excellence

'The Russell Group represents 24 leading UK universities which are committed to maintaining the very best research, an outstanding teaching and learning experience and unrivalled links with business and the public sector' – russellgroup.ac.uk

- Founding member of the Russell Group
- 24 universities including Cambridge, Oxford, Imperial, UCL and LSE
- Parallels to the US Ivy League
- Group accounts for approximately 65% of research income, 56% of PhDs and 30% of international students in the UK



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Edgbaston Campus Facilities



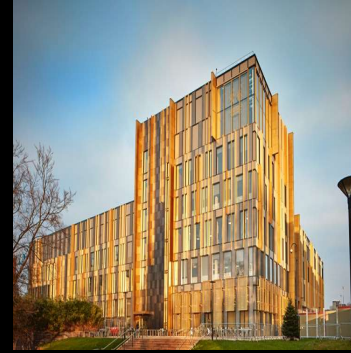
Modern Sports
Centre,
Pool and Gym



New £46.5m
School of
Engineering
Building



The Green Heart



Modern Library



Teaching and
Learning Building







Science is...

- Understanding how things work
- Probing the rules of nature
- Determining how the world works



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Engineering Subject Talk for Direct Entry 2024

Professor Hassan Hemida
School of Engineering



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Engineering is...

Using knowledge to design, invent, develop and make **anything**:

- Machines
- Systems
- Processes
- Devices
- Buildings
- and more!



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The School of Engineering

- All disciplines in one building
- Building designed to support student interaction with academics
- Maker space
- Design lab and BIM caves
- Computer suites
- A sense of community



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What is Engineering?

- Engineers Discover, Design and Deliver what society needs to function and grow.
- Engineering addresses global challenges around **health, security, environment , transport, energy, medicine and leisure.**
- Engineers think about systems and how best to design things that work. Often design driven – requiring innovative problem-solving skills, decision making and the ability and confidence to work in both teams and alone.
- Engineering is fundamental to our everyday lives and Engineers are in unprecedented demand.



Pillars of UoB Engineering

Multidisciplinary year 1

- Understand your colleagues
- Broaden your own experience
- Experience all disciplines

Integrated design projects (years 1, 2, 3)

- Familiarity working in a multidisciplinary team
- Experience challenges of teamwork in a “safe” environment

Accreditation and professional skills

- Accredited programmes
- Visiting RA Eng. professors, industrial relevance, EDI



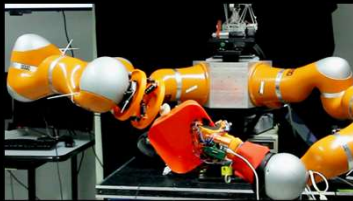
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Underpinned by Research



Transport systems, condition monitoring, future fuels



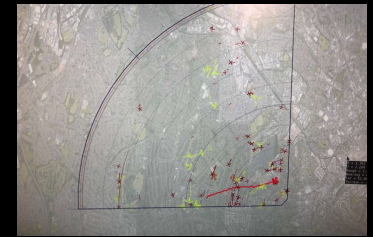
Soft and collaborative robotics, sensing and control



Renewable energy, smartgrids



Space environment



Radar, comms systems, antenna design



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Studying Engineering at Birmingham



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- Shared first year
- Common entry requirements
- Interdisciplinary experience
- Flexibility
- Opportunities for year in industry, placements or year abroad
- BEng or MEng route
- Accredited degrees



Engineering Mindset

“The Birmingham Engineer”

- Relied on to deliver
- Acting ethically
- Building in sustainability
- Skilled at communication
- Thinking independently
- Working collaboratively



What is Civil Engineering?

Design, construction and maintenance of the infrastructure that allows modern life to happen.



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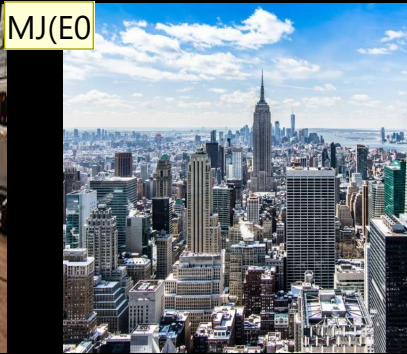
Civil Engineering at Birmingham



Road and
Rail



Geotechnical
and
underground
spaces



Buildings
and
Structures



Alternative
Energy



Climate
Change
Effects

Slide 24

MJ(E0

Image distorted

Mike Jesson (Civil Engineering), 2023-09-20T13:33:58.595



Civil Engineers

- Design our buildings, from their foundations to structural design of the tallest skyscrapers
- Protect us from climate change and its impacts – improving wind turbine design, resilient transport networks and flood defences
- Soils and structures, tunnelling and tornadoes: civil engineering covers it all!



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Civil Engineering Programmes

BEng (3 years), MEng (4 years)

- Programmes available*:
 - BEng Civil Engineering
 - MEng Civil Engineering
 - BEng Civil and Railway Engineering
 - MEng Civil and Railway Engineering

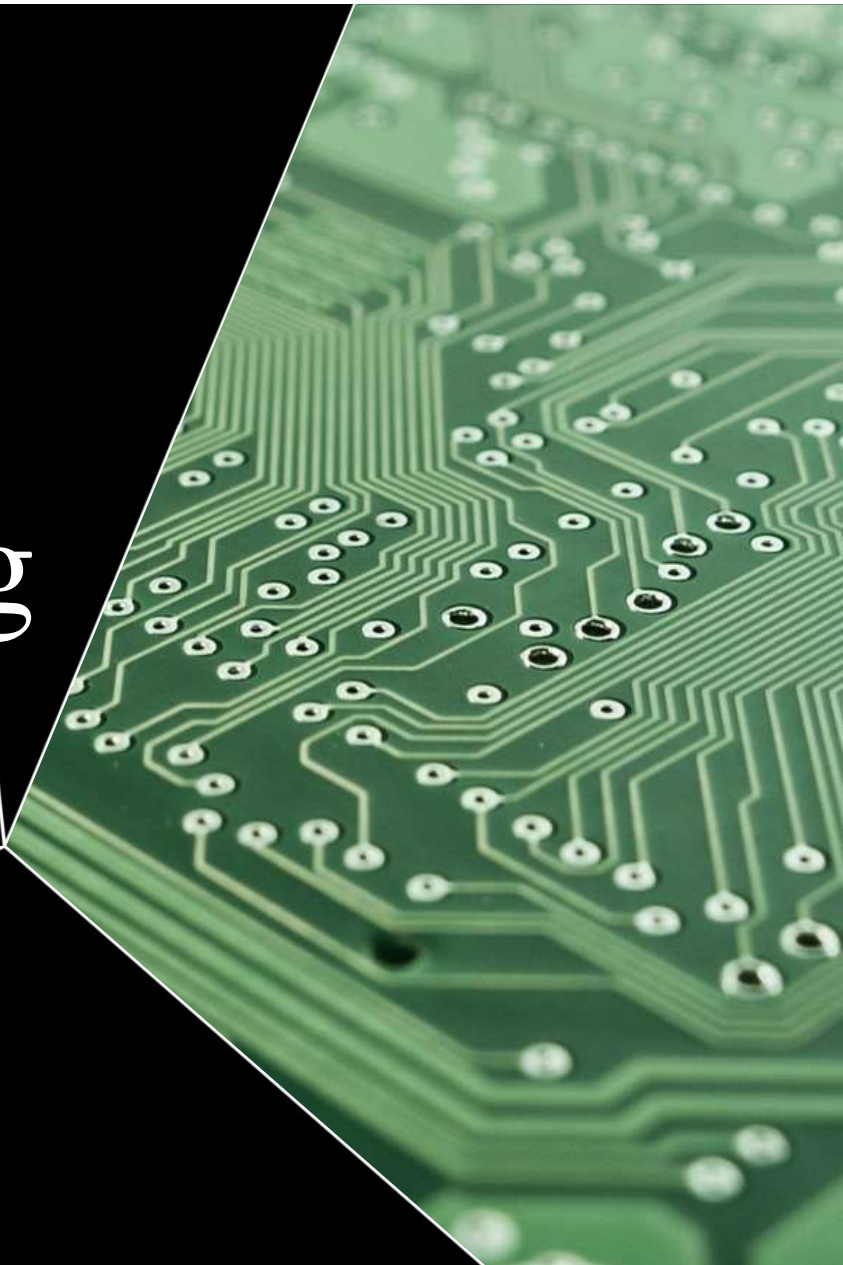


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Electronic, Electrical and Systems Engineering



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Electronic, Electrical and Systems Engineers

Design and develop:

- Digital networks
- Satellite technology
- Computers
- Robotic systems
- Mobile phones
- Virtual & mixed reality environments
- Ensure power and information are delivered to our homes and businesses



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Electronic and Electrical Modules Outline

Year 2	Year 3	Year 4 (MEng)
Microprocessors and Control	Power Systems	Machine Learning
Digital Electronics	Telepresence and Telerobotics	Autonomous Systems
Communication Systems	Internet of Things	Satellite Communications
Engineering Maths	Mechatronic Design	Computer Networks
		Renewable Energy



EESE Industrial Placements

Aysh

- BEng Electronic and Electrical Engineering with Industrial Year
- Graduated 2021
- Placement at Airbus (Bristol, Toulouse)
- Final year project with Airbus
- Now working at Airbus on graduate scheme



Electronic and Electrical Engineering

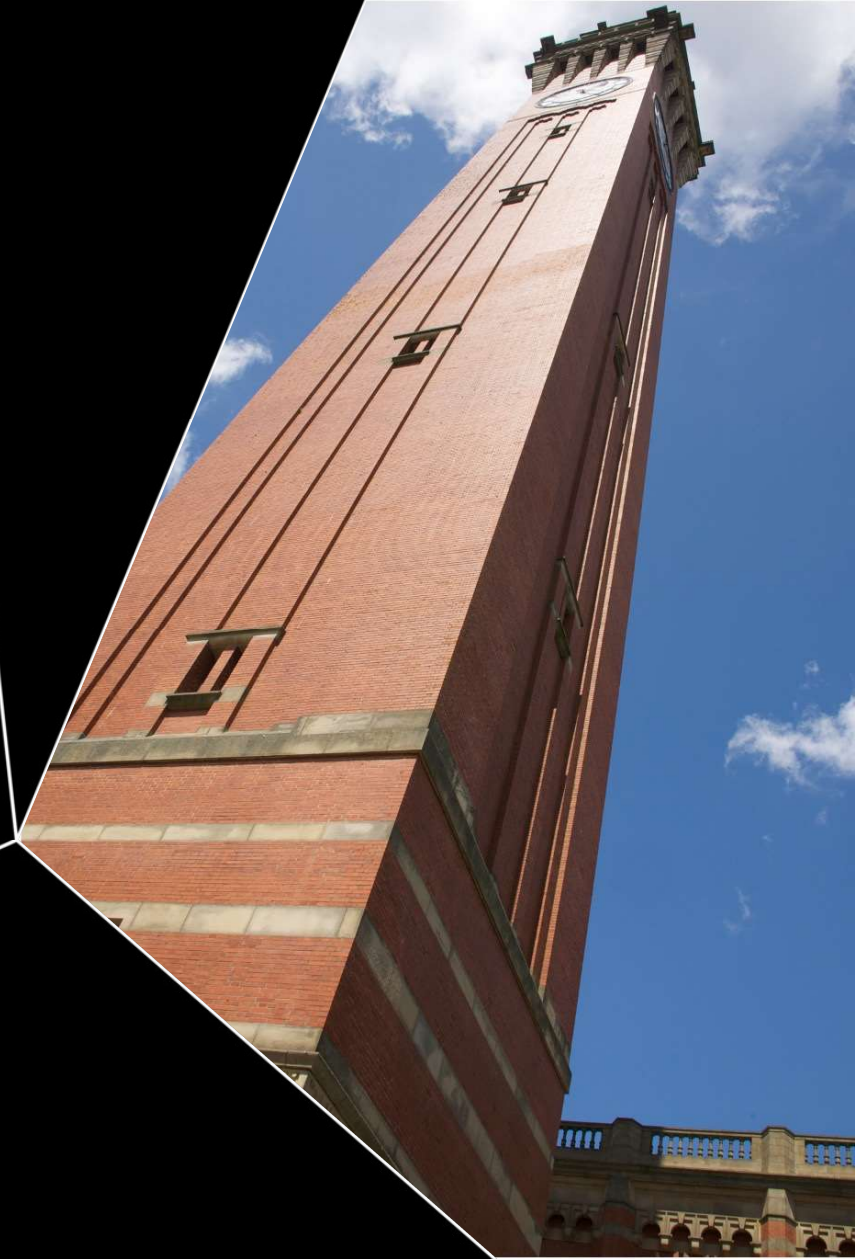
Mechatronic and Robotic Engineering

Programmes available*:

- BEng Electronic and Electrical Engineering
- MEng Electronic and Electrical Engineering
- BEng Electrical and Railway Engineering
- MEng Electrical and Railway Engineering
- BEng Mechatronic and Robotic Engineering
- MEng Mechatronic and Robotic Engineering

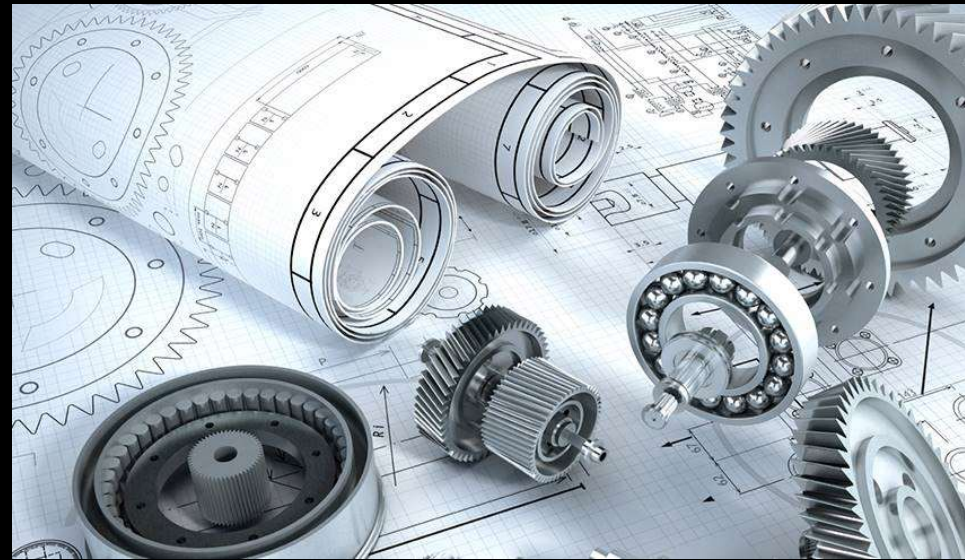


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What is Mechanical Engineering?

Engineering discipline that applies the principles of physics, chemistry and mathematics for analysis, design, manufacture and maintenance of mechanical systems



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Mechanical Engineers

Mechanical engineers plan, design, analyse and develop anything that moves:

- Machines
- Satellites
- Power plants
- Pacemakers
- Robots

Mechanical engineers apply mathematics and science to model and design efficient solutions to real problems



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What are Mechanical Systems?

Mechanical systems manage power to accomplish a task that involves forces and movement



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Mechanical Engineering Programmes

BEng (3 years), MEng (4 years)

- Programmes available*:
 - BEng Mechanical Engineering
 - MEng Mechanical Engineering
 - BEng Mechanical Engineering (Automotive)
 - MEng Mechanical Engineering (Automotive)


All degree programmes accredited by Institution of Mechanical Engineers

Institution of
**MECHANICAL
ENGINEERS**



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Modules Outline (Years 2 to 4)

Year 1		Year 2	Year 3	Year 4 (MEng)	
Mechanics 1		Mechanics 2	Computational Fluid Dynamics and Finite Element Analysis	(MEng) Individual Engineering Project	
Computing for Engineering	Engineering Materials	Mechanical Design A	Mechanical Design B	Synoptic Mechanical Engineering	
Electrical Engineering		Mechatronics and Control Engineering	Powertrain and Vehicle Engineering	Modules to select from: <ul style="list-style-type: none"> Advanced Vehicle Engineering (Auto) Advanced Fuels and Powertrain Systems (Auto) Advanced Manufacturing Bio-medical and micro engineering Industrial Automation and Robotics Research and Application of Machining Processes Advanced Mechanics and Thermal Systems Intelligent Automation 	
Engineering Mathematics 1		Engineering Mathematics 2	Integrated Design Project 3		
Integrated Design Project 1		Integrated Design Project 2	Sustainable Energy and the Environment		
Fluid Mechanics and Energy Transfer		Thermodynamics and Fluids	* (BEng) Individual Engineering Project		
<div style="border: 2px solid red; padding: 5px; display: inline-block;"> Combined 1st Year </div>			<div style="border: 2px solid red; padding: 5px; display: inline-block;"> Core 1st two years </div>		* (MEng) Turbomachinery & Compressible Flows
			* (MEng) Engineering Maths 3		
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Mechanical Engineering with Industrial Year Programmes

- 10-13 months industrial placement
- After 2nd or 3rd year depending on BEng/MEng (+ other criteria)
- Placements are paid jobs
- Fees will be reduced



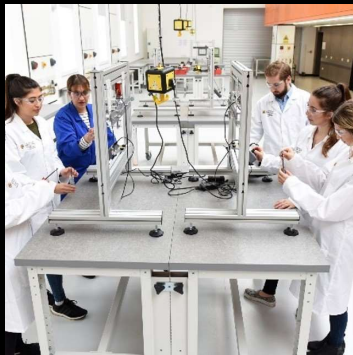
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Teaching and Learning



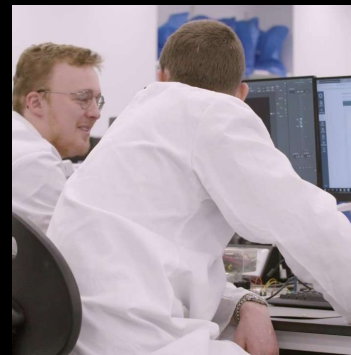
Lectures and
Tutorials



Laboratories



Group and
Individual
Projects



Computer
Laboratories



Private Study





The Makerspace

- Opened in 2022
- Equipped with the state-of-the-art facilities for engineering teaching and research



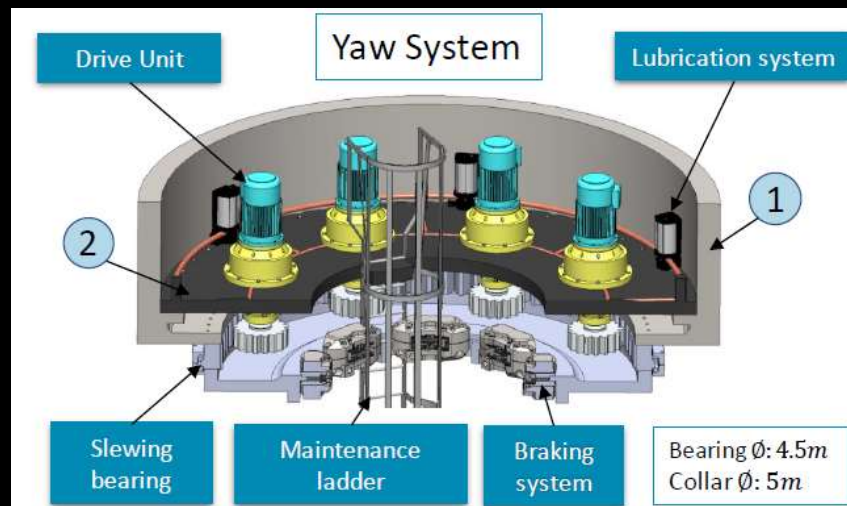
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Lab Facilities

- Well-equipped laboratories for world-class research-informed teaching
- Strong links with industry



Integrated Design Projects



Interdisciplinary Team Projects

- Mechanical, Civil and EESE groups

Global Challenges, for example:

- Renewable energy
- Net-Zero
- Health care systems for conflict zones
- Waste management
- Increasing the efficiency of public transport

Prototype and business plan



Individual Engineering Project

Individual project – Done in final year

- Aligned to research of lecturers
- Industrially sponsored
- Student developed

- MEng 40 Credits
- BEng 30 Credits

- Technical paper
- Presentation

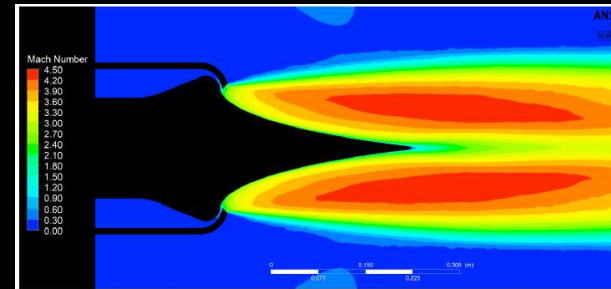


Figure G7: Mach Contour Plot for $P_0 = 10$ kPa. Shows under-expanded flow regime.

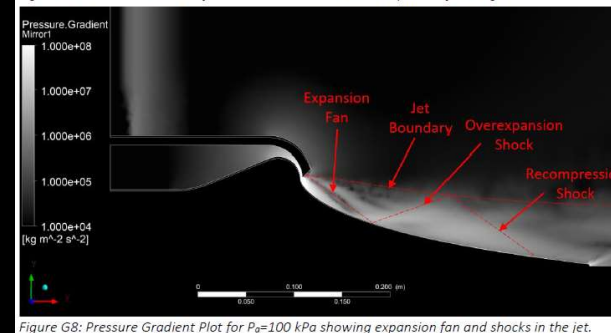


Figure G8: Pressure Gradient Plot for $P_0 = 100$ kPa showing expansion fan and shocks in the jet.



Industrial experience - why?

- Stronger CV - stand out from the crowd
- Apply learning in a real-life context
- Apply real life experience to your learning
- Try out different areas
- Earn some money!



Industrial experience options

- Year in Industry – all departments
- ‘With Industrial Experience’ – Civil Engineering
- SEEN – School of Engineering Employability Network
- UKESF (EASE students)



Where do students go?



Entry Requirements

Please speak to us, or your International Office to confirm entry requirements for your university.

Typical requirements include a GPA 3.0 and an English language certificate

We only consider major specific courses, and do not consider courses in sports, politics, humanities, etc.



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English Language Requirements

One of the following requirements must be met:

Undergraduate 2+2 programmes:

- IELTS - 6.0 Overall (at least 5.5 in each band)
- TOEFL - 80 with no less than 19 in reading, 19 in listening, 21 in speaking and 19 in writing
- Pearson Test of English (PTE) – 64 overall with 59 in all four skills

Postgraduate entry programmes:

- IELTS: 6.5 minimum overall, with at least 6.0 in each component
- TOEFL: TOEFL: 88 overall with no less than 21 in Reading, 20 in Listening, 22 in Speaking and 21 in Writing;
- PTE Academic: Pearson Test of English (PTE) including online: PTE Academic 67 with no less than 64 in all four skills.



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Pre-Sessional English Courses

- Available for students who do not meet the English requirements.
- 6, 10 and 15 week Pre-Sessional English language courses offered. Available online and on-campus
- 4 week optional Pre-Sessional course for students who meet the IELTS/TOEFL requirements, but still would like to try and improve their English before the main programme.
- Fees apply for each programme
- <https://www.birmingham.ac.uk/international/bia/presessional/index.aspx>



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2024-2025 Fees and Funding

- All students receive a tuition fee discount scholarship in each year of study.
- Please contact your us, or your international office to confirm your fee discount percentage.
- Tuition fees are annual. Fees include all academic expenses.
- Tuition fee does not include accommodation fees

Fees can be paid:

- In full
- By semester
- An instalment plan

Programme	Fee before discount	Annual tuition fee discount	Tuition fee after discount
Engineering programmes	£28,560	£5712 (20%)	£22,848

Fees and Funding- 2024 entry

EPS School	Fees per year
Chemical Engineering	£28,560
Chemistry	£27,180
Computer Science	£28,560
Engineering	£28,560
Maths	£28,560
Metallurgy and Materials	£28,560
Physics & Astronomy	£27,180

Accommodation

- **Range of accommodation – dorms, private flats**
- **Self catering or catered**
- **Single bedroom**
- **Shared social space/kitchen**
- **Most accommodation is a 15-minute walk from the University**
- **All students applying through this agreement are guaranteed accommodation (apply by 31st July)**



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Accommodation



Bedroom



Shared kitchen



Outdoor areas



Shared living area



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Cost of living

- 2023 Rent Index shows Birmingham 55% lower than in London, 12% lower than Edinburgh, also lower than Manchester (www.numbeo.com)

Essential living costs	Catered halls (meal plan)	Self-catered halls	Private housing
Rent	£175	£150	£100
Gas & Electric	Included	Included	£11
Water	Included	Included	£3
Food	Included	£50	£50
Toiletries	£5	£5	£5
Laundry	£5	£5	£5
Weekly total	£185	£210	£174
Annual total	£7,770	£8,820	£7,308



Guild of Students / Societies

- Students' union for more than 36,000 students
- Sports clubs and competitions
- Country societies – Chinese, Malaysian, Indonesian, more!
- You can even start your own society!
- Biggest employer of students on campus
- Student discounts



Working in the UK

- Student Route visa during studies
 - Up to 20 hours per week during term
 - time, full time during holiday periods
 - Minimum wage (23yr+): £10.42
 - Minimum wage (21-22yr): £10.18
 - Minimum wage (18-20yr): £7.49
 - Can work on or off campus
- 'WorkLink' advertises temporary and part-time positions
- Careers Network supports with job hunting, career selection, CV's, interview practice, work experience, assessment centre preparation and internships



Careers Network

- International-focussed events e.g. alumni panel events
- International internships
- Collaboration with other Universities to provide access to resources, fairs etc.
- Access to relevant online resources
- International Career Newsletter



Wellbeing and Support

- Personal Tutors
- Education Support Office (ESO)
- Reasonable Adjustment Programme (RAP)
- Disability Services
- School Wellbeing Officers
- Mental Health and Wellbeing team
- Wellbeing events throughout the year
- 24/7 support telephone line
- Physiological practitioners



UK Student Visa

- Once you have been made an unconditional offer, Admissions Office will issue the “Confirmation of Acceptance for Studies” (CAS).
- Once you have your CAS you can apply for visa from your country.
- Your visa fee will include a healthcare surcharge – this entitles you to healthcare while in the UK via the National Health Service (NHS)
- The University of Birmingham has an International Student Team who can give you visa and immigration advice
- <https://intranet.birmingham.ac.uk/student/international/visa-information/visa-information.aspx>



Graduate Route/ Post-Study visa

- Stay back for 2 years post-graduation
- Most suitable option for Student visa holders to gain work experience in the UK
- Work without restrictions
- Cost £1963 (visa + NHS surcharges)
- Opportunity to switch to Skilled work visa
- Birmingham – 2nd highest targeted city by UK employers



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Application Process - 2024

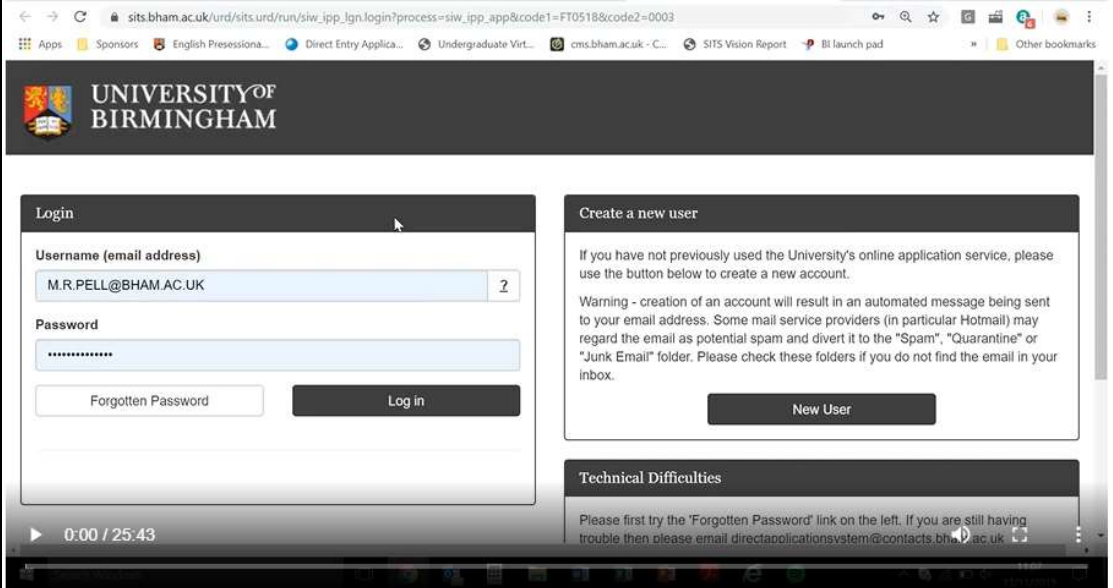
- Online applications for 2024 will open by November 2023. Your home university staff will provide you with the link to apply.
- When you apply, you will need to upload a number of documents:
 - Latest transcripts from home university (and translations if required)
 - A list of modules being studied in current semester
 - Copy of passport information pages
 - Evidence of English language capability (eg IELTS or TOEFL)
- After submitting all required documents you will receive your unconditional offer and CAS (Confirmation of Acceptance for Studies) letter. When your CAS is issued, you can apply for your UK Student Visa
- When you have your offer, you can apply for accommodation



Application Support

- We have PDF guidance available to you. Please contact us to receive this.
- We also have a walkthrough video to help you apply. Please visit this link to watch the video:

<https://www.birmingham.ac.uk/university/colleges/eps/study/undergraduate/international/direct-entry/de-application-video.aspx>



The screenshot shows a web browser displaying the University of Birmingham application portal. The page features a dark header with the university's logo and name. Below the header, there are two main sections: a login form and a 'Create a new user' section. The login form includes fields for 'Username (email address)' (containing 'M.R.PELL@BHAM.AC.UK') and 'Password' (masked with dots). There are also links for 'Forgotten Password' and a 'Log in' button. The 'Create a new user' section contains a warning message and a 'New User' button. At the bottom, there is a 'Technical Difficulties' section with a link to contact support. A video player interface is visible at the bottom of the page, showing a progress bar at 0:00 / 25:43.

Key Tips and Next Steps!

- Start your application now, you can save it and complete it later
- Start preparing for and book your language test now
- If you need a new passport, apply for it now
- Find out about our pre-sessional English programmes

<https://www.birmingham.ac.uk/international/bia/index.aspx>

- Do some research about the University of Birmingham, ask a member of staff (me!) or one of your classmates who has been to UoB

<https://www.birmingham.ac.uk/international/students/country/china/index.aspx>



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Contact us for
more information:

E: eps-international@contacts.bham.ac.uk



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