



University of
Nottingham

UK | CHINA | MALAYSIA

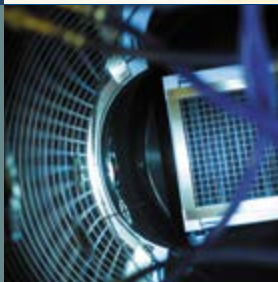
Aerospace Engineering



Test it



Refine it



nottingham.ac.uk/aerospace

Undergraduate guide 2019

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Expert academics

who are pushing forward the boundaries of the subject

Our course are shaped by our industrial links with companies such as **Rolls-Royce, Airbus and Bombardier**

Get hands-on experience

with a year out in industry



Build key, transferable skills

sought after by top employers

Study abroad opportunities

for a full year



Get involved

by choosing from over 300 clubs and societies



Top 5 in UK

for mechanical engineering

The Guardian University Guide 2018



Guidance and advice

from your personal tutor, peer mentor and dissertation supervisor

Our MEng degrees cover all core aerospace requirements needed to become **a Chartered Engineer**



Aerospace engineering at Nottingham

Our teaching is underpinned by world-leading research, with £75m of funding awarded to our Institute for Aerospace Technology from industry giants such as Airbus, Rolls-Royce and BAE Systems.

Careers

There are wide-ranging employment opportunities for aerospace engineers across a range of job functions, from technical to managerial.

The University's engineering graduates are highly employable and we look forward to seeing our aerospace engineering students graduate into positions of innovation, responsibility and leadership as our course matures.

We are confident that our commitment to research and teaching excellence combined with strong links to industry will put Nottingham and our graduates at the forefront when it comes to finding a job.

Equally, you may decide to progress onto postgraduate study and either pursue an MSc or focus on research and study for a PhD.

Developing your potential

At Nottingham, we like to see individuals succeed to the best of their capability. We provide a stimulating learning environment that both challenges and supports you throughout your course, and our personal tutor system ensures you always have close contact with an academic staff member.

At a glance

- Use state-of-the art aerospace equipment including wind tunnels and a flight simulator, as well as access to flying lessons at a local airport
- Be taught by academics who conduct high-quality aerospace research

High-quality research

The Research Excellence Framework (REF) is the system for assessing the quality of research in UK higher education institutions.

According to REF 2014, in the Faculty of Engineering over 98% of research is of international quality, while 85% is 'world-leading' or 'internationally excellent'.

Our courses

Degree title	UCAS code	Duration	A levels	IB
Single honours				
BEng Aerospace Engineering	H402	3 years	AAA-AAB	36-34
BEng Aerospace Engineering including an Industrial Year	H40A	4 years	AAA-AAB	36-34
MEng Aerospace Engineering	H400	4 years	A*AA-AAA	38-36
MEng Aerospace Engineering including an Industrial Year	H40B	5 years	A*AA-AAA	38-36

Required subjects

All courses: A level general studies and critical thinking not accepted as part of the grade offer. Maths is essential – A level grade A or IB Higher Level 6 or Standard Level 7. Physics is a highly preferred subject, however offers are sometimes made to applicants without this.

Foundation courses

Applicants who are not eligible for direct entry to undergraduate study may be able to apply for the Engineering Foundation Year Programme. Find out more at nottingham.ac.uk/foundationcourses

English language requirements

IELTS 6.0 (no less than 5.5 in any element). For details of other English language tests and qualifications we accept, please see nottingham.ac.uk/go/alternativerequirements

Academic English preparation

If you require additional support to take your language skills to the required level, you may be able to attend a pre-sessional course at the Centre for English Language Education, which is accredited by the British Council for the teaching of English in the UK.

Students who successfully complete the pre-sessional course to the required level can progress onto their chosen degree course without retaking IELTS or equivalent. Find out more at nottingham.ac.uk/cele

BEng | MEng Aerospace Engineering

Our courses are offered at both BEng and MEng levels with the BEng consisting of three taught years and MEng consisting of four.

Year one and two

You will follow a common programme of study for the first two years, studying material that provides comprehensive core expertise in aerospace engineering and aircraft technology. A key feature of the first year is the integrating design, make and test project where you use some of the key skills and knowledge from your first year studies to design and build a model-scale glider.

Year two builds on year one with more advanced content in all the key subject areas. The design, make and test project this year focuses on aircraft design and control.

Years three and four

Years three and four provide the opportunity to specialise in certain subject areas and study advanced topics. An individual research project is a key element in final year for all our courses.

Accreditation

As these degree courses are new they cannot yet be accredited. However we are following the defined and recognised processes for becoming accredited by the Royal Aeronautical Society, the Institute of Engineering and Technology (IET), and the Institution of Mechanical Engineers (IMechE) under licence from the UK regulator, the Engineering Council.

Accreditation is a mark of assurance that the degree meets the standards set by the Engineering Council in the UK Standard for Professional Engineering Competence (UKSPEC).



“The most exciting thing about our course so far is the integrated project. We’ve been working in small groups to build a glider that should go the distance we’ve calculated. Tasks like this have allowed me to develop the skills industry are looking for, like the ability to work as a team as well as showing leadership. We’ve got really good contacts with personal tutors and our course director too – they’re always there to help us if we need to know anything.”

Emily Terry, first year,
BEng Aerospace Engineering

Typical modules

Year one BEng MEng	Year two BEng MEng	Year three BEng MEng	Year four MEng
Core Aerospace Aerodynamics Aerospace Design and Materials 1 Aerospace Electrical and Electronic Engineering 1 Aerospace Statics and Dynamics Aircraft Design and Performance Professional Engineering and Project	Core Aerospace Design 2 Aerospace Propulsion Control of Aerospace Systems Airframe and Materials Dynamics and Flight Mechanics Professional Engineering and Project 2	Core BEng: BEng Individual Project MEng: Aerospace Group Design Project Management, Professional Practice, Certification, Safety and Reliability-Computer Modelling Techniques Optional: Advanced Aerodynamics Advanced Propulsion Advanced Materials More Electric Aircraft Avionic Systems Introduction to Space	Core MEng Individual Project Aerospace Industry, Management and Technology Optional: Additive Manufacture Advanced Computational Fluid Dynamics Advanced Finite Element Analysis Aerospace Control System Design Aerospace Ergonomics Navigation Rotorcraft Satellite Based Positioning Spacecraft Systems and Design Structural Vibration and Aeroelasticity Turbulence and Aeroacoustics

Modules may change, for example due to curriculum developments. The above list is a sample of typical modules that we offer, not a definitive list. The most up to date information can be found on our website at nottingham.ac.uk/ugstudy/aerospace

Degrees with a year in industry

A year in industry is a fantastic opportunity for you to practise and develop your engineering skills, providing valuable professional experience which is key to achieving Chartered Engineer status.

Benefits

A year in industry will give a significant boost to both employment and academic prospects. According to research previously conducted by High Fliers Research, more than a third of graduate jobs are being filled by candidates who already have work experience with that employer. Getting a year in industry placement is therefore a great way into the job market after graduation. The skills and maturity that students develop while out on placement have a positive impact on their final degree results, which of course further enhances employability.

Features

Placements are usually undertaken in the UK, but can be anywhere in the world in companies from major global organisations to smaller consultancies and technology specialists.

“I would definitely recommend a year in industry because it lets you have a taste of what working life is really like.”
Laura Cruz Garcia, MEng Mechanical Engineering, carried out her placement at Rolls-Royce Plc

During a placement, you are classed as an employee of the host company, and will receive a salary. There is a nominal fee for the placement year and you will remain fully registered with the University during this time.

Support

Our dedicated Industrial Placement Team works closely with the Careers and Employability Service to support you in finding the right placement. Companies also visit the University to recruit students for industrial placements.

The benefits of a year in industry are well recognised, and as such our degrees with an industrial year are very popular. Likewise, securing a year in industry placement is a highly competitive process, and you are responsible for submitting your own applications, which may include attendance at interviews and assessment centres. We therefore expect you to commit additional time over and above your academic studies to this process.

Engaging study, incredible results

Engineers are among the busiest students on campus. On average, you will have around 20-22 contact hours a week in years one and two. Combined with coursework and self-study, you may spend over 40 hours a week on your studies.

An important part of learning comes through constructive feedback and you will receive appropriate and comprehensive feedback on all your coursework.

Key Information Sets

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 data is published on the Unistats website unistats.co.uk

Course structure

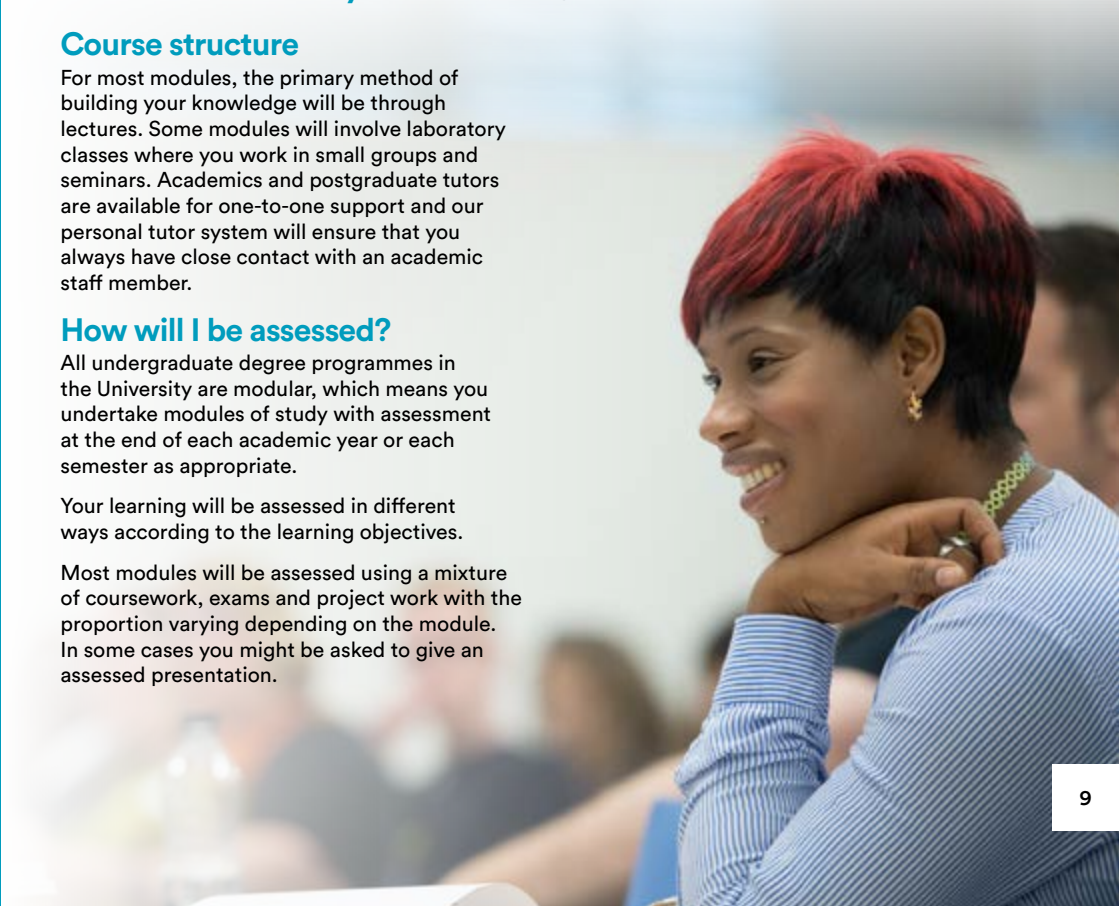
For most modules, the primary method of building your knowledge will be through lectures. Some modules will involve laboratory classes where you work in small groups and seminars. Academics and postgraduate tutors are available for one-to-one support and our personal tutor system will ensure that you always have close contact with an academic staff member.

How will I be assessed?

All undergraduate degree programmes in the University are modular, which means you undertake modules of study with assessment at the end of each academic year or each semester as appropriate.

Your learning will be assessed in different ways according to the learning objectives.

Most modules will be assessed using a mixture of coursework, exams and project work with the proportion varying depending on the module. In some cases you might be asked to give an assessed presentation.



The Institute for Aerospace Technology (IAT)

The University of Nottingham has an illustrious legacy of high impact aerospace research held within our prestigious Institute for Aerospace Technology (IAT), based at our Jubilee Campus.

Working closely with a wide range of aerospace companies including Rolls Royce, Boeing and Airbus, the Institute has a portfolio of projects worth £60m. The UK has the second largest aerospace sector in the world and more people use our work on aerospace than any other university in the UK.

We have over 70 externally funded projects with a team of 50 academics and 400 researchers

The IAT works across these five key themes:

- **Aero Engines and Propulsion** – key technologies related to engines and propulsion systems
- **Aerospace Manufacturing** – innovative methods to manufacture aircraft structures using the latest tools and techniques
- **Aerospace Materials and Structures** – developing new materials and structures to enable more efficient flight
- **Aerospace Operations** – enabling fuel efficient and passenger friendly experiences
- **More Electric Aircraft** – delivering advanced electrical technologies to enable lighter and more controllable aircraft

“Rolls-Royce has enjoyed a long and successful partnership with the University including two University Technology Centres researching aero-engine transmissions and manufacturing technologies.
John Rishton, Former CEO of Rolls-Royce Plc”

Outstanding careers support

Our courses have a strong focus on preparing you for professional practice. Modules are designed to meet the standards set by industry.

112,000 people

The UK aerospace industry is the second largest in the world, directly employing 112,000 people.

£26,000



was the average starting salary with the highest being £33,000*



“My time at Airbus has been highly exciting and it's particularly gratifying to actively contribute to real aircraft that will soon be flying around the world. Since starting at Airbus, I've realised the main thing I took away from my time at Nottingham was the way I viewed engineering problems and how to solve them. Beyond this, working in industry has opened my eyes to the importance of team work, something ingrained in me from the first year at Nottingham.”

Sam Crawshay-Jones, Airbus, MEng Mechanical Engineering



Take your degree further

Our courses have a strong focus on preparing you for professional practice: modules are designed to fulfil the requirements of engineering institutions and projects often have direct industrial relevance.

Our degrees are balanced and well-rounded and the majority of our graduates who do not continue in further education progress to professional careers in a wide range of engineering industries or in non-engineering sectors.

Amplify your potential

Whether you already have a plan or need some inspiration, your Careers and Employability Service is here to help.

Academic excellence and employability go hand in hand at Nottingham. Your course, and the diverse student experiences we offer, will enable you to develop the skills and professional competencies required to thrive in the job market of the future.

We will help you explore your options, so you feel confident making choices about what you want to achieve. Our team will support you as you build your CV, search for jobs, prepare applications, practise your interview technique, and much more.

Get the Advantage

The career-enhancing Nottingham Advantage Award recognises and rewards your extracurricular activities. With a choice of over 200 modules, you can hone the key skills employers are looking for. From developing your leadership skills and learning a language to public speaking and volunteering, you will leave university with demonstrable experience that sets you apart from other graduates. For further information, visit nottingham.ac.uk/careers/advantage

* Known destinations of full-time home undergraduates who were available for work 2015/16. Salaries are calculated based on the median of those in full-time paid employment within the UK.

How do I apply?

How to apply

All applications for undergraduate study at Nottingham, including applications by international students, must be made through UCAS.

You can apply online at ucas.com and will be notified of decisions through UCAS Track.

Your personal statement

This is the section of your UCAS form that tells us most about you, and you should make the best use of it. Be as specific and detailed as you can – we would like to see that you are a student who can work hard, be self-motivated and make the best possible use of the opportunities that our courses offer you. We would also like to hear about any skills you have gained through extracurricular activities.

Minimum entry requirements

Unless otherwise stated in individual course profiles, all UK applicants should have GCSE English grade 4 (C) as a minimum.

Alternative qualifications

In this brochure you will find our A level and International Baccalaureate entry requirements but we accept a much broader range of qualifications. For more details, visit nottingham.ac.uk/ugstudy/applying

GCSE reform

Following the reform of GCSE grading in England from A*–G to 9–1, we have adopted Ofqual's recommended equivalence. This means that GCSE grade A*=9, A=7, B=5/6 and C=4. GCSE qualifications taken outside of the UK will still be graded A* to G.

Around one-third of our UK students receive our means-tested core bursary, worth up to £2,000 a year (2018 entry figure; subject to change). For details, see nottingham.ac.uk/financialsupport

Flexible admissions policy

In recognition of our applicants' varied experience and educational pathways, we employ a flexible admissions policy. If we judge that your situation has adversely affected your achievement, then we will consider this when assessing your academic potential. Some courses may make a slightly lower offer. For more information about this policy, see nottingham.ac.uk/ugstudy/applying

Mature applicants

We encourage applications from mature applicants who have a significant gap in education. You should apply through UCAS. Find out more at nottingham.ac.uk/mature

International applicants

The University provides a range of information and advice for international applicants. If you are unable to attend an open day, we can meet you in your country at one of our overseas events or arrange an individual visit to the University. For further information please visit nottingham.ac.uk/go/international-applicants

Deferred entry

Applicants who wish to defer their entry by a year will not be at a disadvantage. Please tell us something about your plans for your gap year in your UCAS personal statement.

Equal opportunities policy

The University aims to create the conditions whereby students and staff are treated solely on the basis of their merits, abilities and potential, regardless of gender, race, colour, nationality, ethnic or national origin, age, socio-economic background, disability, religious or political beliefs, trade union membership, family circumstances, sexual orientation or other irrelevant distinction.

Experience it



Accommodation to suit every budget and personal choice

nottingham.ac.uk/accommodation



10 minutes from the city for music, food and shopping

nottingham.ac.uk/nottinghamlife



Live and study abroad as part of many courses

nottingham.ac.uk/studywithus/studyabroad

200+

student-led groups, clubs and societies at your Students' Union

su.nottingham.ac.uk



Student Service Centres on all UK campuses for support and advice

nottingham.ac.uk/student-services



One of the UK's leading universities for sport* with over 70 student sports clubs

nottingham.ac.uk/sport

* British Universities and Colleges Sports Standings, 2016-17.

Join in with the vibrant musical life on campus and in the city

nottingham.ac.uk/music/performance

Choose from 9 modern languages to study alongside your course

nottingham.ac.uk/language-centre



nottingham.ac.uk/ugstudy/applying



University of
Nottingham

UK | CHINA | MALAYSIA

For undergraduate enquiries contact:
Student Recruitment Enquiries Centre



+44 (0)115 951 5559



nottingham.ac.uk/contact



NottinghamEngineering



@UoNEngineering

nottingham.ac.uk/aerospace

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available in
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MIX
Paper from
responsible sources
FSC®

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This brochure has been drafted in advance of the academic year to which it applies. Every effort has been made to ensure that the information contained in this brochure is accurate at the time of publishing, but changes (for example to course content) are likely to occur given the interval between publication and commencement of the course. It is therefore very important to check our website for any updates before you apply for the course by following nottingham.ac.uk/ugstudy. Where there is a difference between the contents of this brochure and our website, the contents of the website take precedence.