






## Contact us

-  @BristolUni
-  bristoluniversity
-  UniversityofBristol
-  UniversityofBristol

### Enquiries Team

**Tel** +44 (0)117 394 1649

**Email** [choosebristol-ug@bristol.ac.uk](mailto:choosebristol-ug@bristol.ac.uk)

If you have any questions about courses, applications or student life at Bristol, please contact the Enquiries Team.

### Photography

Dan Rowley

© University of Bristol

If you need all or part of this publication in an alternative format please contact us:

**Tel** +44 (0)117 394 1649

**Email** [choosebristol-ug@bristol.ac.uk](mailto:choosebristol-ug@bristol.ac.uk)



# Aerospace Engineering



Undergraduate study



# Courses

## Single Honours

**BEng Aerospace Engineering**  
three years H405

**MEng Aerospace Engineering**  
four years H410

**MEng Aerospace Engineering  
with Study in Continental Europe**  
four years H401

**MEng Aerospace Engineering  
with Study Abroad\***  
four years

**MEng Aerospace Engineering  
with a Year in Industry†**  
five years

\* Entry by transfer from H410 or H401 at the end of the first year subject to eligibility criteria.

† Entry by transfer subject to eligibility criteria.

This leaflet contains information for students planning to start university in autumn 2020. We have made every effort to ensure all details are correct at the time of going to press (May 2019). However, since this information is subject to change, you are advised to check the University's website, [bristol.ac.uk/ug-study](http://bristol.ac.uk/ug-study), for the latest updates.

# Why study aerospace engineering at Bristol?

If you enjoy problem solving, excel in maths and physics and have a strong interest in areas such as aircraft, spacecraft, Formula 1 or wind power, then aerospace engineering may be for you. Our degrees focus on the technical material that interests you from the start, ensuring theoretical ideas are set clearly in a practical aerospace context.

The vibrant nature of the department is reflected in our connections with industrial partners such as Airbus UK, BAE Systems, Rolls-Royce, Leonardo, GE Aviation and GKN Aerospace, which are all located on our doorstep. Further manufacturers and engineering consultancies such as DNV GL (Garrad Hassan), GE and Atkins also have centres near the University. We have a leading role within the UK National Composites Centre, and we are partners in the Centre for Fluid Mechanics Simulation (CFMS).

The department's research is at the forefront of the aerospace sector, reflected in the high proportion of highly rated research in the 2014 Research Excellence Framework (REF); ninety-three per cent of engineering research (including aerospace) was found to be 'internationally excellent' or 'world-leading'.

Our department is ranked fourth in the UK (Complete University Guide 2020). Coupled with the huge investment we are making in our facilities, this means we offer an exceptional student experience.

The Engineering Growth Project has recently invested £14 million to equip the Faculty of Engineering for the next generation of research, practice and innovation. This major expansion of our facilities includes state-of-the-art equipment and large, flexible teaching, design, study and workshop spaces, which enable interactive teaching and learning. Our new atrium acts as a social learning and meeting place, with a café and bookable project and study rooms.

**Aerospace Engineering at  
Bristol is ranked 4th in the UK.**

Complete University Guide 2020

## What will you study?

Teaching in a research environment is the philosophy at the heart of our undergraduate courses, spanning all our teaching units and ensuring you benefit from knowledge of the latest developments and discoveries. Every part of our courses is tailored to provide you with the skills needed to design an aircraft or spacecraft. Lectures cover fundamental material and are supported by practical experience through coursework and laboratory exercises.

The early part of the degree lays a broad foundation in basic engineering, taught in the context of aerospace. As you progress, you will develop your skills through more advanced study, leading to an understanding of the complexity of modern engineering. As well as teaching core theoretical knowledge, we run design, build and test tasks in the first and second years. In these you will construct balsa, foam and finally aluminium wings in a series of projects involving structural and wind tunnel testing.

Teaching is organised into three streams:

- aerodynamics
- dynamics and control
- structures and materials.

Our state-of-the-art wind tunnel laboratories have been used to test the aerodynamics of aircraft, cars, buildings, and even Wimbledon No. 1 Court.

You will study the basic engineering that underpins all these streams, such as computing, systems engineering and design. The second and third years also teach professional studies, covering topics such as business, management and ethics.

Greater flexibility in the fourth year allows you to pursue your areas of interest. Some options relate to specific applications, such as helicopter aerodynamics, space systems, or wind and marine power. Others allow you to study particular technologies, such as advanced composites analysis, experimental or computational aerodynamics, or multidisciplinary design. You may also be able to take university-wide options such as sustainable development.

On the study in continental Europe and study abroad courses, you will spend your third year at a partner university overseas. These partners have been carefully selected to ensure courses provided are aligned with those in Bristol.

We actively support year-long industrial placements, usually between the third and fourth years of study. Department staff and the faculty's

Industrial Liaison Office will support you through the process of applying for placements and working in industry.

For MEng students, the fourth-year group design project is currently run in close collaboration with Airbus and Leonardo. Senior design staff will help to lead teaching related to the design of fixed-wing aircraft, space systems or helicopters. Groups of students work competitively to the same design specification, considering the full spectrum of factors contributing to the design. These projects provide a major opportunity for the application of systems engineering principles.

The final piece of coursework in the fourth year is an individual research project. This follows on from work in the third year and is an opportunity for you to become involved in our department's research activities by undertaking your own original piece of research. This work often sits alongside current staff links to industrial partners, helping to build beneficial contacts for our students and creating an active, vibrant research community.

### Facilities

The department houses a variety of research and teaching facilities, ranging from flight simulators, miniature gas turbines and structural testing equipment through to our subsonic and supersonic wind tunnels and tethered miniature helicopters. You will have the opportunity to operate state-of-the-art optical laser-based measurement equipment for wind tunnels or build wind tunnel test models in the designated student workshop. In your final year, use of facilities will depend on your choice of research project, but may include the composites lab, wind tunnels, dynamics lab or robotics lab. Whatever your interest, we offer world-class facilities to enhance your learning experience.



'At Bristol you receive an incredible degree taught by world-leading researchers. The real-world application of the teaching has impressed me most.'

Carlos (MEng Aerospace Engineering)

## Careers and graduate destinations

Our graduate employment record is excellent, and our aerospace engineering degrees open up numerous career opportunities, both within aerospace engineering and further afield. Our courses help develop excellent problem-solving, numeracy and creative skills, providing you with a broad technical basis and the ability to work creatively in a team. This means that, while aerospace engineering is a popular destination, many of our graduates are also employed in the renewables, oil and gas, automotive, managerial and finance sectors.

Our graduates are highly sought after, with a high percentage of those employed after graduation in professional or managerial jobs, and an average starting salary of £28,000.\* The department's strong relationships with the major aerospace companies further enhance career prospects.

\*Destinations of Leavers from Higher Education survey, graduates from 2016/17, MEng Aerospace Engineering.

### Industrial networking

The Industrial Liaison Office (ILO) manages our links with a diverse set of world-class engineering and technology companies and works to ensure that you engage with industry throughout your studies.

You will benefit from an outstanding range of activities designed to enhance your employability. These include the Inside Track lecture series, where business insiders offer first-hand insight into the engineering industry. Industrial mentoring and internship schemes provide opportunities to gain valuable experience and make important connections, and regular newsletters highlight further opportunities and industry events.

[bristol.ac.uk/engineering/ilo](http://bristol.ac.uk/engineering/ilo)

**'Bristol has an outstanding reputation and excellent links to the aerospace industry, which makes it the perfect choice.'**

Balazs (MEng Aerospace Engineering)

Source: Destinations of Leavers from Higher Education survey 2016/17. Find out more at [bristol.ac.uk/careers/be-inspired](http://bristol.ac.uk/careers/be-inspired).



### Graduate employers

Rolls Royce  
Airbus  
Red Bull Racing  
Royal Air Force  
GKN Aerospace



### Career destinations

Aerodynamics Engineer  
Fixed Equipment Engineer  
Financial Consultant  
Graduate Engineering Trainee  
Graduate Research Engineer

## Making your application

Visit [bristol.ac.uk/ug20-aero](http://bristol.ac.uk/ug20-aero) for more information about our courses.

### Typical offer for BEng/MEng Aerospace Engineering

**A-levels** A\*AA (contextual AAB) including A\*A (contextual AA) in Mathematics and either Physics, Chemistry, Computer Science or Further Mathematics (in any order).

**IB Diploma** 38 points overall with 18 at Higher Level, including 7, 6 (in any order) at Higher Level in Mathematics and a science-related subject (contextual 34 points overall with 17 at Higher Level, including 6, 6 at Higher Level in Mathematics and a science-related subject).

Our contextual offer is a grade reduction of up to two grades below the standard entry requirements, made to applicants from under-represented groups. Find out more at [bristol.ac.uk/contextual-offers](http://bristol.ac.uk/contextual-offers).

**GCSEs** No specific subjects required.

**Selection process** UCAS.

For other accepted qualifications, and for our English language requirements, visit [bristol.ac.uk/ug20-aero](http://bristol.ac.uk/ug20-aero).

### Application advice for aerospace engineering courses

We assess all applications for academic potential and motivation. We will use your predicted grades, references and past results to assess your academic ability, checking particularly for your mathematical strength.

We will assess your motivation through your personal statement, looking especially for your commitment to studying aerospace engineering. It is a broad subject and there are lots of reasons to study it; just tell us yours, frankly and clearly. We want to know what excites you about this subject and why. Back it up with evidence: what have you done to learn more about aerospace engineering?

### Further information

Find out more about the Department of Aerospace Engineering: [bristol.ac.uk/aerospace](http://bristol.ac.uk/aerospace).

This information is correct at the time of printing (May 2019), but we recommend you check the University website for the latest information: [bristol.ac.uk/ug20-aero](http://bristol.ac.uk/ug20-aero).



Read more about how we support you when you are here:

[bristol.ac.uk/students](http://bristol.ac.uk/students)