Faculty of Engineering

Aviation Technology
Undergraduate Degrees 2019
YOU WILL HAVE ACCESS TO TWO FLIGHT SIMULATORS INCLUDING AN AIRBUS A320 AND A COMPLEX TWIN-ENGINE AIRCRAFT

Information provided by the University, such as in presentations, University brochures and on the University website, is accurate at the time of first disclosure. However, courses, University services and content of publications remain subject to change. Changes may be necessary to comply with the requirements of accrediting bodies or to keep courses contemporary through updating practices or areas of study. Changes may arise outside the reasonable control of the University leading to required changes. Such circumstances include industrial action, unexpected student numbers, significant staff illness (where a course is reliant upon a person’s expertise), unexpected lack of funding, severe weather, fire, civil disorder, political unrest, government restrictions and serious concern with regard to the transmission of serious illness making a course unsafe to deliver. After a student has taken up a place with the University, the University will look to give early notification of any changes and try to minimise their impact, offering suitable alternative arrangements or forms of compensation where it believes there is a fair case to do so. Offers of a place to study at the University will provide up-to-date information on courses. The latest key information on courses, entry requirements and fees can be found at courses.leeds.ac.uk. Please check this website before making any decisions.

The University of Leeds achieved a Gold rating in the Teaching Excellence Framework (TEF) 2017
As the demand for flights continues to grow, there will always be a need for appropriately qualified and skilled aviation professionals, whether in the air or in operational and management roles. If you want to embark on an exciting career in the aviation industry, our aviation technology degree courses are for you.

At Leeds, our world-class research feeds directly into our teaching, which means that our aviation courses are directly aligned to the industry’s needs. You will have the opportunity to learn to fly and progress towards a Private Pilot’s Licence (PPL). You will gain a wide range of aviation-related skills, enabling you to accelerate your career progression.

We have close links with some of the top graduate recruiters in the industry and our aviation graduates are highly sought after by employers. Our strong industrial links mean that your course is industry oriented, so material is up to date and relevant to your future career as an aviation professional.

In recognition of our strong and continued commitment to gender equality, we have received a prestigious Athena SWAN Silver Award. This is awarded by the Equality Challenge Unit, the national body that promotes equality in the higher education sector.

"Being on such a niche and unique course allows you to be placed in a group of very like-minded people with similar aspirations and interests. Sharing a common passion such as this in a relatively small group really brings everyone on the course close together."

IOANNIS MATTHEOS
BSc Aviation Technology with Pilot Studies

OUR DEGREES:
AVIATION TECHNOLOGY AND MANAGEMENT
AVIATION TECHNOLOGY WITH PILOT STUDIES

To view all undergraduate degrees offered by the Faculty of Engineering visit:
engineering.leeds.ac.uk
Learning and teaching

You’ll be taught by academics who are leaders in their field – staff have conducted research for organisations such as NASA, the US Federal Aviation Administration, Boeing, Lockheed Martin and the US Air Force. Our research feeds directly into our teaching, meaning you’ll hear about the very latest developments as you study.

You’ll benefit from our integrated style of teaching and learning, using methods such as lab classes, project work, lectures, tutorials, example classes and group activities, allowing you to gain first-hand experience of applying your knowledge to real-life situations. Together they will equip you with in-depth knowledge and key practical skills that will put you in a good position to compete in science and technology-related careers.

INDUSTRY-RELEVANT COURSES
You will benefit from specialist input into the curriculum through the involvement of professional pilots and other professionals from the aviation industry. Our strong industrial links mean that your course is industry oriented, so material is up to date and relevant to your future career as an aviation professional.

Our student-led Aviation Society organises a range of industrial visits and invites external speakers to give presentations. Flight training schools and airline and airport professionals regularly give careers talks. This means you will have direct contact with industry and potential employers from an early stage in your course. Our alumni also organise events to assist students with their preparation for a career in aviation.

CAREER FLEXIBILITY
The design of our Aviation Technology degrees supports a wide range of career aspirations within the aviation industry. Whether you want to become a professional pilot, manage aviation enterprises, pursue a career in air traffic control or oversee major projects at an aircraft manufacturer, this degree equips you with the skills you need.

PRIVATE PILOT TRAINING
We incorporate ten hours of private pilot flight training into course fees. This takes place during the summer and includes:

- aircraft hire
- flight instructor fees
- ground transport between the Leeds campus and the training location
- flying club membership fee.

Private Pilot’s Licence (PPL) theory and ground examinations are included during year one. Students considered ready to fly solo will need to provide a valid UK Civil Aviation Authority (CAA) class 2 medical certificate to complete training, and we will be pleased to facilitate them taking the necessary medical examination if they have not already done so on entry to the programme. Flight training is provided by a flying school at an airfield near Leeds.

PROJECTS
Project work provides you with an excellent opportunity to explore a subject further and will enable you to develop essential skills in problem-solving, communication and teamwork, all vital to success in your chosen aviation career. Teamworking is an essential aspect of personal development for your future career in the aviation industry and its importance is reflected in the team project you will carry out in your final year.

* Upon the successful first-time pass of 100 credits at level one.
STUDENT SUPPORT
Our personal tutorial system provides academic and pastoral support. You will have a designated member of staff as your personal tutor throughout your studies at Leeds. You will have weekly academic tutorials with your tutor throughout your first year in your tutor group (of typically five students), as well as one-to-one meetings twice per semester. We have an excellent Student Support team, located close to where you will work and study. They will help you with anything, from academic advice and guidance, online module enrolment and registration, timetabling, results and progression requirements to coursework/project submission enquiries and what to do if you miss work through illness.

The web-based student portal will enable you to access the University's student services and information, while our virtual learning environment (VLE) will allow you access to your personal timetables, course materials, academic and social groups, and much more.

FACILITIES
You’ll have access to our engine laboratories and flight simulators, including an Airbus A320 airliner cockpit simulator. You’ll also benefit from the use of our complex twin-engine aircraft simulator. You will enjoy excellent teaching facilities and resources including modern, well-equipped lecture theatres and laboratories.
Your degree from the University of Leeds and the wider experience you’ll gain while you’re studying here will help you stand out from the crowd and secure that all-important graduate job. Both degrees will equip you with the skills you need to succeed in industry, including design, problem-solving, numeracy and analytical skills, together with transferable skills such as communication and working as a team.

**REWARDING CAREERS**

Many of our students see these courses as being the first step towards gaining a Commercial Pilot Licence (CPL). In addition to these options, airports, airlines, aircraft manufacturers and the broader aviation industry offer many other opportunities. You will be well-placed to launch your career in areas such as airport operations and management, air traffic control, government positions related to aviation, flying instruction, and roles in technical sales and marketing. Some students have been successful in obtaining RAF sponsorship.

Many of our graduates are working as first officers for a range of airlines and we would expect them to progress to captain in due course. Graduate salaries are dependent on the size of the airline. A newly qualified pilot employed with a small regional airline would earn around £24,000. A first officer working for one of the larger airlines can earn between £38,000 and £48,000, and a senior captain at a major airline will typically receive a very high salary. Graduates progress towards their CPLs in various ways, including studying at commercial flight training schools in the UK and abroad.

Other aviation careers attract competitive salaries. For example, a fully trained air traffic controller can expect to earn between £32,000 and £36,000, rising to very high salaries for a senior controller.

Throughout your time with us, our award-winning Employability Team is here to guide and advise you.

You’ll have access to one-to-one careers guidance meetings, workshops supporting CV development and application forms, and you can also practice with mock interviews.

Our Employability team also organises an annual Careers Fair, which will give you the opportunity to meet over 100 graduate recruiters to gain an insight into graduate jobs and to explore work experience and internship opportunities.

Just a few of the employers that have recently attended our fairs include:
- Airbus
- British Airways
- Manchester Airports Group
- Jet2.com
- Royal Air Force (RAF).

**INDUSTRIAL PLACEMENT YEAR**

An industrial placement year is a great way to help you decide what kind of career you might like when you graduate. As well as giving you the opportunity to develop your own skills, you’ll gain a real insight into working life in a particular company or sector.

You will be given the opportunity to undertake a placement year alongside your degree, between the second and third year of your studies.

If you decide to undertake a placement year, this will extend your degree by 12 months. On successfully completing the year, you will be awarded the “industrial” variant in your degree title to demonstrate your unique expertise to future employers.
If you would like to develop specialist aviation engineering, technical and management skills but do not wish to take the commercial pilot ground training component, our BSc Aviation Technology and Management is the perfect choice. This course is also suitable for those who already hold an ATPL and wish to acquire broader knowledge of the air transport industry.

This degree course will equip you with the skills required for a career in management and operations in the aviation industry, and will enhance your employability and credentials. You will also have the opportunity to undertake flight training at private pilot level. In your second year, you will take modules on aviation management and will study how to manage and finance activities in the aviation industry.

You will benefit from specialist input throughout the course through the involvement of professional pilots and senior managers from the aviation industry. Bringing working knowledge of advanced communications and navigation systems, management techniques and strategic thinking, these contributions complement the knowledge base provided by the course.

**HANDS-ON LEARNING**

Every year of the course gives you hands-on experience of project work. Recent examples of projects our students have been working on include:

- Airport design: thinking outside the box
- Environmental impact assessment for airlines
- Security aspects of baggage handling; reduction of security-related threats to aircraft
- Analysis of key performance indicators in airside operations.

**GRADUATE DESTINATIONS**

Recent graduates have secured positions including:

- Link Manager, Air Canada, Heathrow
- Flight Planner, Teesside Airport
- Aircraft Broker, Air Charter Service, Dubai
- Operations Controller, Eastern Airways
- Air Traffic Controller, Eurocontrol
- Aircraft Propulsion Engineer, Rolls-Royce North America
- Air Traffic Controller, RAF
- Project Manager, QinetiQ.

**FURTHER STUDY**

- Air traffic control course, Australia
- Commercial pilot training, CTC Training, New Zealand
- JAA ATPL integrated course, Oxford Aviation Training.
Drawing on our extensive expertise in aircraft design, materials, propulsion, environmental issues and industrial management, this course will equip you with a solid science and engineering base and the broader aviation knowledge vital for pilots in the 21st century.

You’ll benefit from the training facilities and expertise of a professional flying school as you undertake ten hours of flight training, achieve the Civil Aviation Authority (CAA) ground exam requirements for the Private Pilot’s Licence (PPL) and develop advanced knowledge. At the same time, you’ll gain a strong science and engineering base with modules on topics like aviation engineering materials. You’ll also put this knowledge into the context of the aviation industry today and in the future.

You will benefit from specialist input throughout the course through in-depth engagement with staff who bring a wide variety of real world experience and outside speakers.

HANDS-ON LEARNING
Every year of the course gives you hands-on experience through project work. Recent examples of projects our students have been working on include:
- Aircraft control in turbulence
- Aircraft cabin reconfiguration
- Air traffic control problems
- Design and construction of aircraft landing systems
- Design, construction and operation of a small unmanned aerial vehicle
- Development of a remote piloting system using the flight simulator
- The cockpit - a total rethink
- Novel on-board surveillance systems for in-flight security
- Design of a hypersonic business jet
- Design and scale-model testing of an air ambulance for the 21st century.

GRADUATE DESTINATIONS
Recent graduates have secured positions including:
- First Officer, British Airways, flying B757/767, based at Heathrow
- First Officer, Easyjet, flying A320, based at Luton
- Flight Dispatcher, Gatwick International Airport
- Aeronautical Analyst, Navtech
- First Officer, Qatar Airlines, flying A340, based in Doha
- Weapons Systems Officer, RAF
- First Officer, Ryanair, flying B737, based at Stansted
- Senior First Officer and Pilot Technical Instructor, Thomas Cook, flying A320, based at East Midlands.
Modules

Our courses are broadly common and focus on core aviation knowledge, transferable aviation skills and creative aviation industry problem-solving. Teamwork is an essential aspect of personal development for your future career in the aviation industry and its importance is reflected in the team project you will carry out in your final year. For full module descriptions, visit our website.

**Aviation Technology and Management (BSc)**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Compulsory modules:</th>
<th>Optional modules:</th>
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<tbody>
<tr>
<td></td>
<td>Technical Skills and Applications</td>
<td>Foundation Mathematics</td>
</tr>
<tr>
<td></td>
<td>Aviation Engineering Materials</td>
<td>Fundamentals of Process Chemistry</td>
</tr>
<tr>
<td></td>
<td>Theoretical Knowledge for the Private Pilot’s Licence</td>
<td>Foundation Engineering Physics</td>
</tr>
<tr>
<td></td>
<td>Aviation Engineering Science</td>
<td>Introduction to Management</td>
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<tr>
<td></td>
<td>Introduction to Aviation</td>
<td>Introduction to Surface and Air Transport</td>
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<tr>
<td></td>
<td>Mathematical Techniques 1</td>
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<thead>
<tr>
<th>Year 2</th>
<th>Compulsory modules:</th>
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<tbody>
<tr>
<td></td>
<td>Aircraft 1</td>
<td>Airline and Airport Operations</td>
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<tr>
<td></td>
<td>Aviation Project Management and Finance</td>
<td>Aviation Management Project</td>
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<tr>
<td></td>
<td>Aviation Health and Safety</td>
<td>Mathematical Techniques 2</td>
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<thead>
<tr>
<th>Year 3</th>
<th>Compulsory modules:</th>
<th>Optional modules:</th>
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<tbody>
<tr>
<td></td>
<td>Aircraft 2</td>
<td>Aviation Technology Team Project</td>
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<tr>
<td></td>
<td>Aviation Safety and Reliability</td>
<td>Aviation Futures</td>
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**Aviation Technology with Pilot Studies (BSc)**

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<th>Year 2</th>
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<tbody>
<tr>
<td></td>
<td>Aircraft 1</td>
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<tr>
<td></td>
<td>Aviation Health and Safety</td>
<td>Mathematical Techniques 2</td>
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<td></td>
<td>Advanced Pilot Theory</td>
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These are the typical modules studied and may change from time to time.
Entry requirements
and how to apply

<table>
<thead>
<tr>
<th>Degree title</th>
<th>UCAS code</th>
<th>Duration (years)</th>
<th>A-level</th>
<th>BTEC</th>
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<tbody>
<tr>
<td>BSc Aviation Technology and Management</td>
<td>HN42</td>
<td>3</td>
<td>AAA, including Mathematics or Physics, and excluding General Studies and Critical Thinking.</td>
<td>D*DD with distinctions in relevant mathematics and physics units. Some mathematics and physics units may be optional on your BTEC but are required by the Faculty. Please contact us for further information.</td>
</tr>
<tr>
<td>BSc Aviation Technology with Pilot Studies</td>
<td>H460</td>
<td>3</td>
<td></td>
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* Where an A-level science subject is taken, we require a pass in the practical science element, alongside the achievement of the A-level at the stated grade.

Extended Project Qualification (EPQ): while we recognise the value, effort and enthusiasm applicants make in the EPQ, we do not currently include this as part of our offer-making. We do however encourage you to provide further information on your project in your personal statement and, if invited, at interview.

**EQUIVALENT QUALIFICATIONS**
We welcome students with a wide range of qualifications and these are listed on our website.
[engineering.leeds.ac.uk/chemical/ug-equivalents](http://engineering.leeds.ac.uk/chemical/ug-equivalents)

**ENGLISH LANGUAGE REQUIREMENTS**
GCSE English Language grade C/A (or above) or an equivalent recognised English language qualification, eg IELTS 6.0 overall with no less than 5.5 in each section.

**ACCESS TO LEEDS**
The University of Leeds has a policy of welcoming applicants from non-traditional academic backgrounds. If you do not meet our entry criteria above, you may be eligible via the Access to Leeds scheme.
[www.leeds.ac.uk/a2l](http://www.leeds.ac.uk/a2l)

**IF YOU CHOOSE TO UNDERTAKE A PLACEMENT YEAR THIS WILL EXTEND YOUR STUDIES BY 12 MONTHS**
AVIATION TECHNOLOGY

UNDERGRADUATE DEGREES

SCHOLARSHIPS
We offer a number of scholarships within the School. Visit our website for further details.
engineering.leeds.ac.uk/scholarships

CONTACT US
If you require any further information prior to making a formal application, contact our Undergraduate Admissions team.

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University of Leeds
Leeds LS2 9JT, UK
tel: +44 (0)113 343 6542
e-mail: ugaviation@leeds.ac.uk

FIND US ONLINE
To find out more about the University and Aviation Technology visit:
engineering.leeds.ac.uk/aviation

FOUNDATION COURSES
If you do not have the formal qualifications for immediate entry to one of our degrees, you may be able to progress through a foundation year. The University offers a one-year BSc Studies in Science designed to prepare students without a science background at A-level for study on one of our degrees in engineering.

We also offer an interdisciplinary Science Foundation Year for applicants who meet specific widening participation criteria.
www.llc.leeds.ac.uk

INTERNATIONAL FOUNDATION YEAR IN ENGINEERING
Our International Foundation Year (IFY) is intended for international students who do not yet have the formal qualifications required for entry to level 1 of our degree courses.

To find out more, visit
internationalfoundationyear.leeds.ac.uk

LANGUAGE CENTRE
Our Language Centre provides the Academic English for Undergraduate Studies pre-sessional course, which is designed to help international students develop the necessary language and academic study skills for undergraduate study.
www.leeds.ac.uk/languages

HOW TO APPLY
All undergraduate applications should be made through the Universities and Colleges Admissions Service (UCAS). Full instructions on how to apply are available at ucas.com

OFFER PROCESS
Suitable applicants will be invited to an applicant day, for which we strongly encourage attendance, as this gives you the opportunity to meet our students, academic and admissions staff, and find out more about your course.

You’ll take part in a practical engineering activity, followed by a School and campus tour. The tour of the School’s facilities includes interactive demonstrations of student activities.

During the day you’ll have a discussion with an academic member of staff, to check that it’s the right course for you and your career plans, have your questions answered and find out more about studying at Leeds.