UNIVERSITY OF LIVERPOOL

Courses may close earlier than the advertised application deadline if the course is full.
Browse more courses for 2026 entry

BEng (Hons)

Aerospace Engineering with Pilot Studies

UCAS code H401

Entry requirements	Study mode	Duration	
A level: AAB	Full-time	3 years	Apply by: **30 June 2026** Starts on: **28 September 2026**

About this course

If you are interested in becoming either private or professional pilot, this is the programme for you.

Introduction

In addition to studying the core aerospace engineering topics outlined below, you will also take the pilot studies modules and develop knowledge, skills and experience of flying. As well as the flight training, pilot studies students also have access to and use of the students pilots lab and can join the Flight Simulation Group (FSG). Study Aerospace Engineering and by the end of your time at Liverpool, you will be able to show that you can now design, build, test and fly an aircraft.

As an aerospace engineering student, you will experience a wide variety of topics and modes of study, whether it be conducting research, analysing reports or designing and building an

aircraft. You will have have the opportunity to study a wide range of topics during your time at Liverpool such as; aerodynamics, aerostructures, flight dynamics and control, propulsion systems, avionics, aerospace materials and aircraft design.

Aerospace engineers design, analyse, build, test and maintain vehicles, their sub-assemblies and components as well as their associated systems that fly. Flight is not limited to simply within the Earth's atmosphere, and can also be outside of it.

Conducting independent research as part of an individual project will provide you with the knowledge to develop innovative concepts in your preferred technical area of interest. All of our Aerospace Engineering degree programmes are accredited, or pending accreditation, by our professional bodies, the Royal Aeronautical Society and the Institute of Mechanical Engineers and are a recognised qualification on the route to Chartered Engineer status.

What you'll learn

- Aircraft design and manufacturing
- Flight testing
- Systems engineering
- How to conduct independent research
- Aerodynamics
- Flight dynamics and control
- How to deal with complex problems that may require compromise to meet competing requirements
- Access to and use of pilots lab

Accreditation

All of our BEng/MEng degree programmes are accredited, or preparing for accreditation, by at least one professional engineering institution, providing you with a solid foundation for your career. An MEng degree in aerospace, civil and mechanical engineering from Liverpool, satisfies all of the academic requirements for registration as a Chartered Engineer (CEng). We have excellent links with the professional engineering institutions and benefit from their support.

Accreditation in detail

Institution of Mechanical Engineers

All mechanical engineering programmes are accredited, or pending accreditation, by the Institution of Mechanical Engineers. This is the professional body for Mechanical Engineers. Our programmes are a recognised qualification on the route to Chartered Engineer status.

Royal Aeronautical Society

The Royal Aeronautical Society is licensed by the Engineering Council to accredit academic programmes that provide the exemplifying level of understanding, knowledge and skills to underpin professional competence to help graduates on their way to registration as Chartered Engineers (CEng) or as Incorporated Engineers (IEng).

Back to top

Course content

Discover what you'll learn, what you'll study, and how you'll be taught and assessed.

Year one

You will study the core engineering topics that provide a firm background and understanding of aerospace engineering, in addition you will also study pilot studies modules and develop your knowledge, skills and experience of flying.

The pilot studies module is based on the Private Pilot's License (PPL) ground school syllabus. It is studied alongside either the mandatory 20-hour flight training programme for fixed-wing flying (aeroplanes) or the 20-hour flight and ground training programme for rotary-wing flying (helicopters). For the latter, the 20-hour training programme is divided between 10.5 hours flight training and 9.5 hours of helicopter-relevant ground school.

Modules

Compulsory modules	Credits
SOLIDS AND STRUCTURES 1 (ENGG110)	15
PROFESSIONAL ENGINEERING: A SKILLS TOOLKIT (ENGG111)	30
ENERGY SCIENCE (ENGG116)	15
DIGITAL ENGINEERING (ENGG125)	15
ENGINEERING MATHEMATICS (ENGG198)	22.5
INTRODUCTION TO ENGINEERING MATERIALS (MATS105)	15
PRIVATE PILOT'S LICENSE STUDIES (AERO132)	7.5

Programme details and modules listed are illustrative only and subject to change. As part of our commitment to continuous improvement, we are currently reviewing all of our programmes. This may include refining study pathways, strengthening links with employers, integrating generative AI, developing students' research skills, and enhancing alignment with our research strengths. The course content currently shown on this page reflects the programme as it is running in September 2026. This page will be updated for students beginning in September 2027 by 1 September 2026 at the latest.

Year two

Year two includes a two-day flight test course in the national flying laboratory aircraft. In year two, the pilot studies modules are based on the Air Transport Pilot's Licence (ATPL) ground school syllabus.

Students will continue to study the core engineering topics as well as taking part in a two-day flight test course in the national flying laboratory aircraft.

Modules

Compulsory modules	Credits
AEROENGINES (AERO213)	15
AEROSPACE ENGINEERING DESIGN 2 (AERO220)	15
DYNAMIC SYSTEMS (MECH215)	15
PROJECT MANAGEMENT (MNGT202)	7.5
SOLIDS & STRUCTURES 2 (ENGG209)	15
ENGINEERING MATHEMATICS AND COMPUTING (ENGG295)	15
FLIGHT MECHANICS (AERO202)	15
EXPERIMENTAL METHODS (ENGG201)	7.5

Compulsory modules	Credits
AIRLINE TRANSPORT PILOT'S LICENSE STUDIES (AERO234)	15

Programme details and modules listed are illustrative only and subject to change. As part of our commitment to continuous improvement, we are currently reviewing all of our programmes. This may include refining study pathways, strengthening links with employers, integrating generative AI, developing students' research skills, and enhancing alignment with our research strengths. The course content currently shown on this page reflects the programme as it is running in September 2026. This page will be updated for students beginning in September 2027 by 1 September 2026 at the latest.

Year three

During your third year you will undertake an individual project. This provides you with the opportunity to conduct independent research and/or develop innovative concepts in your preferred technical area of interest.

Modules

Compulsory modules	Credits
ADVANCED MODERN MANAGEMENT (MNGT352)	7.5
FLIGHT DYNAMICS AND CONTROL (AERO317)	15
AEROSTRUCTURES (AERO318)	15
AEROSPACE ENGINEERING DESIGN 3 (AERO321)	15
INDIVIDUAL PROJECT (ENGG341)	30
AERODYNAMICS (AERO316)	15

Compulsory modules	Credits
COMPUTATIONAL METHODS IN ENGINEERING (ENGG386)	15
SPACEFLIGHT (AERO319)	7.5

Programme details and modules listed are illustrative only and subject to change. As part of our commitment to continuous improvement, we are currently reviewing all of our programmes. This may include refining study pathways, strengthening links with employers, integrating generative AI, developing students' research skills, and enhancing alignment with our research strengths. The course content currently shown on this page reflects the programme as it is running in September 2026. This page will be updated for students beginning in September 2027 by 1 September 2026 at the latest.

Teaching and assessment

How you'll learn

We are leading the UK's involvement in the international Conceive-Design-Implement-Operate (CDIO) initiative – an innovative educational framework for producing the next generation of engineers.

Our degree programmes encompass the development of a holistic, systems approach to engineering. Technical knowledge and skills are complemented by a sound appreciation of the life-cycle processes involved in engineering and an awareness of the ethical, safety, environmental, economic, and social considerations involved in practicing as a professional engineer.

You will be taught through a combination of face-to-face teaching in group lectures, laboratory sessions, tutorials, and seminars. Our programmes include a substantial practical component, with an increasing emphasis on project work as you progress through to the final year. You will be supported throughout by an individual academic adviser.

How you're assessed

Assessment takes many forms, each appropriate to the learning outcomes of the particular module studied. The main modes of assessment are coursework and examination. Depending on the modules taken, you may encounter project work,

presentations (individual and/or group), and specific tests or tasks focused on solidifying learning outcomes.

Liverpool Learning Framework

At Liverpool, we take a distinctive approach to education through the Liverpool Learning Framework. This means teaching that is engaging, inclusive and designed to help you succeed during your studies and beyond.

You'll develop specialist subject knowledge alongside the skills employers value most, including:

- Digital fluency
- Confidence
- Global citizenship

Our curriculum is characterised by the three Liverpool Hallmarks:

- Research-connected teaching - learning informed by the latest ideas and discoveries
- Active learning - taking part, applying knowledge and learning by doing
- Authentic assessment - assessments designed around real-world tasks and challenges

We also embed key priorities across our curriculum, including AI literacy, employability, and sustainability, helping you prepare for the future and make a positive impact in the world.

We're committed to creating a supportive and inclusive learning environment where every student can thrive.

Back to top

Careers and employability

As a graduate of aerospace engineering, you will be equipped with the skills to work in the development and maintenance of aircraft, satellites, and space vehicles.

Typical types of work our graduates have gone on include:

- Airline operators
- Armed forces,
- Government research agencies like the Ministry of Defence (MoD)

Recent employers of our graduates are from the following industries and companies:

- Engineering and Infrastructure: ABB Ltd, Bentley, Metronet Rail, Rolls Royce;
- Utilities: United Utilities;
- Defence and Military: BAE Systems, British Army, RAF (Royal Air Force), Royal Navy;
- Aviation: British Airways;
- Government organisations: National Nuclear Laboratory (Government-owned).

Back to top

Fees and funding

Your tuition fees, funding your studies, and other costs to consider.

Tuition fees

UK fees (applies to Channel Islands, Isle of Man and Republic of Ireland)

Full-time place, per year - £9,790
Year in industry fee - £1,955
Year abroad fee - £1,465 (applies to year in China)

International fees

Full-time place, per year - £32,000
Year in industry fee - £1,955
Year abroad fee - £16,000 (applies to year in China)

The fees shown are for the academic year 2026/27. Please be advised that tuition fees may increase each year for both UK and international students. For UK students, this will be subject to the government's regulated fee limits.

Tuition fees cover the cost of your teaching and assessment, operating facilities such as libraries, IT equipment, and access to academic and personal support. Learn more about paying for your studies.

Additional costs

We understand that budgeting for your time at university is important, and we want to make sure you understand any course-related costs that are not covered by your tuition fee. This includes the cost of flight training, an aircraft checklist, and a study pack. All safety equipment, other than boots, is provided free of charge by the department.

Pilot studies students should expect to cover the following additional costs:

Stationery and equipment:

All essential safety equipment, other than boots, is provided free of charge by the department.

Flight training:

There is a one-off up-front fee of approximately £4,700 inclusive of VAT for training using the Tomahawk aircraft and £5,300 inclusive of VAT for the Warrior aircraft. A total of 20 hours of ground and airborne rotary-wing flight training is conducted by HELISPEED at Blackpool International Airport. There is a one-off up-front fee of £9112.20 inclusive of VAT for this training.

Please note, these prices are correct at the time of publication but may change at any time. Please check with the School for the correct pricing.

Study pack:

Costs are only for those doing their flight training at Liverpool Flying School. Students have to pay for their own travel to and from the airport.

Students are also required to purchase a study pack costing approximately £100 (for the smaller pack) or £210 (for the larger pack) and an aircraft checklist for £10 (2022 entry costs).

Find out more about additional study costs.

Back to top

Entry requirements

The qualifications and exam results you'll need to apply for this course.

A levels

AAB
including Mathematics and a second science.

Applicants with the Extended Project Qualification (EPQ) are eligible for a reduction in grade requirements. For this course, the offer is **ABB** from A levels, with **A** in the EPQ.

You may automatically qualify for reduced entry requirements through our contextual offers scheme. Based on your personal circumstances, you may automatically qualify for up to a two-grade reduction in the entry requirements needed for this course. When you apply, we consider a range of factors – such as where you live – to assess if you're eligible for a grade reduction. You don't have to make an application for a grade reduction – we'll do all the work.

Find out more about how we make reduced grade offers.

If you don't meet the entry requirements, you may be able to complete a foundation year which would allow you to progress to this course.

Available foundation years:

- Engineering Foundation (4 year route including a Foundation Year at Carmel College) BEng (Hons)

T levels

T levels are not currently accepted.

GCSE

4/C in English and 4/C in Mathematics

Subject requirements

Applicants following the modular Mathematics A Level must be studying A Level Physics or Further Mathematics as the second science (or must be studying at least one Mechanics module in their Mathematics A Level).

Accepted science subjects:
Applied ICT
Biology (and Human Biology)
Chemistry
Computer Science
Economics
Electronics
Environmental Science
Further Mathematics
Geography
Geology
ICT
Life and Health Sciences
Mathematics
Psychology
Physics
Statistics.

For applicants from England: For science A levels that include the separately graded practical endorsement, a "Pass" is required.

BTEC Level 3 National Extended Certificate

Acceptable at grade Distinction* alongside BB in A Level Mathematics and a second science.

BTEC Level 3 Diploma

Distinction* Distinction* in relevant BTEC considered alongside A Level Mathematics grade B. Accepted BTECs include Aeronautical, Aerospace, Construction, Mechanical, Mechatronics and Engineering.

BTEC Level 3 National Extended Diploma

D*DD in acceptable BTEC, plus B in A level Maths (not accepted without B in A level Maths)

International Baccalaureate

34 points overall and no score less than 4 and including 5 in HL Mathematics and 5 in HL Physics, or pass the IB Diploma with 6,6,5 in 3 Higher Level subjects, including 5 in HL

Mathematics and 5 in HL Physics.

Irish Leaving Certificate

H1,H1,H2,H2,H2,H3, including H2 in Higher Maths and Higher Second Science. We also require a minimum of H6 in Higher English or O3 in Ordinary English

Scottish Higher/Advanced Higher

Pass Scottish Advanced Highers with grades AAB including Mathematics and second science

Welsh Baccalaureate Advanced

B in the Welsh Baccalaureate, plus grades AA at A level to include Mathematics and a second science.

Cambridge Pre-U Diploma

D3 in Cambridge Pre U Principal Subject is accepted as equivalent to A-Level grade A M2 in Cambridge Pre U Principal Subject is accepted as equivalent to A-Level grade B Global Perspectives and Short Courses are not accepted.

Access

Pass Access to HE Diploma in a relevant subject with 45 Level 3 credits, with 36 at Distinction (including 15 Level 3 in Mathematics credits) and 9 at Merit.

International qualifications

Select your country or region to view specific entry requirements.

If you hold a bachelor's degree or equivalent, but don't meet our entry requirements, you could be eligible for a Pre-Master's course. This is offered on campus at the University of Liverpool International College, in partnership with Kaplan International Pathways. It's a specialist preparation course for postgraduate study, and when you pass the Pre-Master's at the required level with good attendance, you're guaranteed entry to a University of Liverpool master's degree.

Alternative entry requirements

- If your qualification isn't listed here, or you're taking a combination of qualifications, contact us for advice
- Applications from mature students are welcome.

English language requirements

You'll need to demonstrate competence in the use of English language, unless you're from a majority English speaking country.

We accept a variety of international language tests and country-specific qualifications.

International applicants who do not meet the minimum required standard of English language can complete one of our Pre-Sessional English courses to achieve the required level.

IELTS

6.0 overall, with no component below 5.5

TOEFL iBT

If you took a TOEFL test on or before 20 January 2026, you'll need 78 overall, with minimum scores of listening 17, writing 17, reading 17 and speaking 19. If you took a TOEFL test from 21 January 2026 onwards, when a new scoring system was introduced, you'll need 4 overall, with 4 or above in all components. TOEFL Home Edition not accepted.

Duolingo English Test

115 overall, with speaking, reading and writing not less than 105, and listening not below 100

Pearson PTE Academic

59 overall, with no component below 59

LanguageCert Academic

65 overall, with no skill below 60

Cambridge IGCSE First Language English 0500

Grade C overall, with a minimum of grade 2 in speaking and listening. Speaking and listening must be separately endorsed on the certificate.

Cambridge IGCSE First Language English 0990

Grade 4 overall, with Merit in speaking and listening

Cambridge IGCSE Second Language English 0510/0511

0510: Grade C overall, with a minimum of grade 2 in speaking. Speaking must be separately endorsed on the certificate. 0511: Grade C overall.

Cambridge IGCSE Second Language English 0993/0991

0993: Grade 5 overall, with a minimum of grade 2 in speaking. Speaking must be separately endorsed on the certificate. 0991: Grade 5 overall.

Cambridge ESOL Level 2/3 Advanced

169 overall, with no paper below 162

International Baccalaureate English A: Literature or Language & Literature

Grade 4 at Standard Level or grade 4 at Higher Level

International Baccalaureate English B

Grade 6 at Standard Level or grade 5 at Higher Level

Pre-sessional English

Do you need to complete a Pre-sessional English course to meet the English language requirements for this course?

The length of Pre-sessional English course you'll need to take depends on your current level of English language ability.

Pre-sessional English in detail

If you don’t meet our English language requirements, we can use your most recent IELTS score, or the equivalent score in selected other English language tests, to determine the length of Pre-sessional English course you require.

Use the table below to check the course length you're likely to require for your current English language ability and see whether the course is available on campus or online.

Your most recent IELTS score	Pre-sessional English course length	On campus or online
5.5 overall, with no component below 5.5	6 weeks	On campus or online
5.5 overall, with no component below 5.0	10 weeks	On campus or online
5.0 overall, with no component below 5.0	12 weeks	Online
5.0 overall, with no component below 4.5	20 weeks	On campus
4.5 overall, with no component below 4.5	30 weeks	On campus
4.0 overall, with no component below 4.0	40 weeks	On campus

If you’ve completed an alternative English language test to IELTS, we may be able to use this to assess your English language ability and determine the Pre-sessional English course length you require.

Please see our guide to Pre-sessional English entry requirements for IELTS 6.0 overall, with no component below 5.5, for further details.

Back to top