UNIVERSITY OF LIVERPOOL

# Aerospace Engineering MEng

### COURSE DETAILS

- A level requirements: AAA
- UCAS code: H421
- Study mode: Full-time
- Length: 4 years

### KEY DATES

- Apply by: 29 January 2025
- Starts: 22 September 2025

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# Course overview

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.

### INTRODUCTION

The Aerospace Engineering MEng is a four-year integrated Master's degree developed to fast-track our graduates to become Chartered Engineers either with the Institution of Mechanical Engineers or the Royal Aeronautical Society.

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.

By studying the MEng, you will develop a greater depth and breadth and specialist knowledge in core aerospace subjects than on the three-year BEng degree programme. At the end of the degree you will be able to demonstrate further key skills required by employers in advanced modules such as advanced aerodynamics; advanced aerostructures; flight handling qualities; advanced guidance systems and enterprise studies.

As part of year four, you will be able to demonstrate your knowledge and understanding in the year four Capstone Design Project, a year long assignment where you will be asked to find solutions to industry challenges or create your own invention.

This programme also has a year abroad option, an incredible opportunity to spend an academic year at one of our partner universities. On the four-year integrated master's programme, you can go abroad either between years two and three (apply in year two), or between years three and four (apply in year three).

### 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

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## ACCREDITATION

The MEng degree is recognised throughout the UK and fully satisfies the Engineering Council's academic requirements for registration as a Chartered Engineer. 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.

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# Course content

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

## YEAR ONE

You will be introduced to a range of fundamental topics that an aerospace engineer must at least be aware of to be able to function in such a multi-disciplinary industry.

## COMPULSORY MODULES

### INTRODUCTION TO AEROSPACE ENGINEERING (AERO110)

**Credits: 7.5 / Semester: semester 1**

A short module to introduce students to the language and main concepts of the aerospace engineer to provide a solid basis for the remainder of their degree programme

### SOLIDS AND STRUCTURES 1 (ENGG110)

**Credits: 15 / Semester: semester 2**

This module aims to introduce students to the fundamental concepts and theory of how engineering structures work to sustain loads. It will also show how stress analysis leads to the design of safer structures. It will also provide students with the means to analyse and design basic structural elements as used in modern engineering structures.

**PROFESSIONAL ENGINEERING: A SKILLS TOOLKIT (ENGG111)**

**Credits: 30 / Semester: semester 3**

This module aims to provide students with an interesting and engaging project that will help them to immediately relate the material being taught,both within and without this module, to a practical problem that is identifiable to their engineering discipline, thus reinforcing its relevance to the topixc.

The module:
1) Seeks to provide students with an early understanding of the preliminary design processes
2) Will introduce students to formal engineering drawing and visualisation
3) Will expose the students to group work and the dynamics of working in a team
4) Will expose students to the complexity of an engineering design task
5) Will enable students to develop data analysis and plotting skills
6) Will embody an approach to learning that will engage the students for the remainder of their lives
7) Seeks to provide students with an early understanding of the detail design and manufacturing process
8. Will introduce students to industry standard computer aided engineering drawing tools and practice
9. Will enable students to develop report writing and oral presentation skills
10. Will provide students with a basic understanding of engineering components and mechanisms
11. Will embody an approach to learning that will engage the students for the remainder of their lives

**ENERGY SCIENCE (ENGG116)**

**Credits: 15 / Semester: semester 2**

To develop an understanding of the basic principles of fluid mechanics, the laws of thermodynamics, and an appreciation of how to solve simple engineering problems. To develop skills in performing and reporting simple experiments.

**ENGINEERING MATHEMATICS (ENGG198)**

**Credits: 22.5 / Semester: semester 2**

ENGG198 is a Year 1 mathematics module for students of programmes taught in the School of Engineering, e.g. Aerospace, Civil, Architectural, Mechanical, Product Design and Industrial Design Engineering. It is designed to reinforce and build upon A-level (or equivalent) mathematics, providing you with the strong background required in your engineering studies and preparing you for Year 2 mathematics modules.

#### DIGITAL ENGINEERING (ENGG125)

**Credits: 15 / Semester: semester 2**

Students completing the module should be able to understand simple computer programs and write their own simple MATLAB programs to solve problems and process data as required by other modules and in engineering practice.
Students completing the module will be able to understand simple electrical circuits with passive and active components, mechanical (mass-spring-damper) systems and electromechanical systems (DC machines). They will learn basic mathematical, practical and computational methods for analysing and modelling these.

#### INTRODUCTION TO ENGINEERING MATERIALS (MATS105)

**Credits: 15 / Semester: semester 2**

To provide students with a basic introduction to various classes of engineering materials, their mechanical properties, deformation and failure and how the properties structure and processing can be controlled to design materials with desired properties for various engineering applications.

*Programme details and modules listed are illustrative only and subject to change.*

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## YEAR TWO

You 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.

Students undertaking Aerospace Engineering programmes will be required to wear safety shoes or boots (both toe cap and midsole protection must conform to European safety legislation) for some activities, and these must be provided by the students themselves.

## COMPULSORY MODULES

#### AEROENGINES (AERO213)

**Credits: 15 / Semester: semester 3**

This module covers the main technical aspects of gas turbine engines used on aircraft and other mechanical applications (e.g. power generation, marine). It covers many topics from the basic principles of aeroengines (e.g. production of thrust) through to the design of axial flow turbomachinery (compressors and turbines). An understanding of the principles of compressible flow is also developed. Students do a laboratory using the Virtual Engine Test Bench to explore aeroengine components, thermodynamics and performance. In addition, they use a commercial CFD package to perform a compressible flow simulation.

**AEROSPACE ENGINEERING DESIGN 2 (AERO220)**

**Credits: 15 / Semester: semester 2**

Aircraft design is a complex process and requires knowledge and skills in a number of topics, e.g. aerodynamics, structures, materials, flight mechanics and control. The module will look at these topics relating to the components of full aircraft, e.g. mass distribution, aerodynamic surface sizing, fuselage, landing gear, etc. This module explains the different stages of this multi-disciplinary process: Configuration Selection; Conceptual Design; Preliminary Design. The module describes each of these processes and provides analytical engineering tools to allow the students to complete a project to the Preliminary Design.

**DYNAMIC SYSTEMS (MECH215)**

**Credits: 15 / Semester: semester 2**

Dynamic systems are encountered in most engineering disciplines such as mechanical engineering, aerospace engineering, electrical engineering. These systems require specific techniques to be analysed for design or monitoring purpose.

In this module, students will learn the main methods for analysing dynamic systems in time and frequency domains. They will learn how to solve dynamical problems, how to evaluate and control the stability, the accuracy and the rapidity of a dynamical system.

This module will be mainly delivered through class lectures and assessed through a final exam. Additionally, students will be taught some experimental techniques related to second-order dynamical systems through an assessed  laboratory work.

**EXPERIMENTAL METHODS (ENGG201)**

**Credits: 7.5 / Semester: semester 1**

The module focusses on the essentials of data analysis and interpretation, engineering experimentation, measurement techniques and principles of instrumentation.

**PROJECT MANAGEMENT (MNGT202)**

**Credits: 7.5 / Semester: semester 1**

Project Management is a core skill for professional engineers of all types and a sound education in this subject area is required by the professional accrediting bodies. The knowledge and skills developed in this module will equip students for their future UG project work and for their careers ahead.
This module teaches students the theory of fundamental techniques in project management, risk management, and cost management.

In this modules student undertake a group "virtual project" in which they undertake all stages of project management involved n a major construction projects. The five virtual project tasks require students to apply their theoretical learning; and they provide an opportunity to develop key professional skills.

**SOLIDS & STRUCTURES 2 (ENGG209)**

**Credits: 15 / Semester: semester 2**

This module aims to introduce students to techniques for load and displacement analysis of simple structures.

**ENGINEERING MATHEMATICS AND COMPUTING (ENGG295)**

**Credits: 15 / Semester: semester 3**

Engineering Mathematics and Computing will provide a fundamental understanding of mathematical techniques used to solve Engineering problems. Successful completion of this module will provide students with basic skills and solution methodologies (mathematical, and using MATLAB) for various engineering applications. The module will expose the essentials of numerical methods to solve systems of linear, non-linear, ordinary and partial differential equations. A series of classic engineering problems, such as trusses, mass-spring dampeners, 2D trajectory calculation, and 2D heat flow will place the acquired knowledge in an engineering context.

**FLIGHT MECHANICS (AERO202)**

**Credits: 15 / Semester: semester 2**

This module acquaints students with performance analysis of fixed-wing aircraft, including analysis of aircraft range and endurance, climb performance, and take-off and landing distance. Students will also learn about methods to analyse the static stability of fixed-wing aircraft in different conditions. To complement the study of fixed-wing aircraft, students will also learn about the anatomy and fundamental physics of conventional helicopters.

**ENGINEERING MATERIALS PROCESSING & SELECTION (MATS201)**

**Credits: 15 / Semester: semester 2**

This module introduces the main processing and manufacturing techniques used to make metallic, ceramic, polymer and composite materials. The students will learn and appreciate how the microstructure and properties of materials are impacted by the processing methods. The students will also learn how to derive materials performance indices and select appropriate materials for a given situation.

*Programme details and modules listed are illustrative only and subject to change.*

## 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.

## COMPULSORY MODULES

### ADVANCED MODERN MANAGEMENT (MNGT352)

**Credits: 7.5 / Semester: semester 1**

The Aims of this module are as follows:

To introduce the student to various aspects of advanced modern management.

To develop a knowledge and understanding of modern management tools.

To stimulate an appreciation of management and its importance in organisational success.

### AEROSPACE ENGINEERING DESIGN 3 (AERO321)

**Credits: 15 / Semester: semester 2**

Aircraft design is a complex process and requires knowledge and skills in a number of topics, e.g. aerodynamics, structures, materials, flight mechanics and control. Starting with a pre-completed customer brief, students on this course will build upon the methods of Year 2 Design course and proceed with an advanced Conceptual Design of the vehicle. This will include the use of analysis tools and the creation of a simple simulation model of the aircraft. The module will be taught largely in lecture format but is supported by pc-based laboratory support sessions.

### AEROSTRUCTURES (AERO318)

**Credits: 15 / Semester: semester 2**

Aerostructures for aerospace engineering

### FLIGHT DYNAMICS AND CONTROL (AERO317)

**Credits: 15 / Semester: semester 2**

The module introduces key techniques and concepts used in the analysis of the trim, stability, and dynamic response characteristics of conventional fixed-wing aircraft.
Also introduced are a several important feedback control design methods, useful for modifying and improving aircraft stability and control characteristics, including Root Locus, Bode and Nyquist based design methods for PID control.
As part of the module, students will undertake a flight test course in the National Flying Laboratory Centre to assess the performance and stability qualities of a real aircraft in flight.

### INDIVIDUAL PROJECT (ENGG341)

**Credits: 30 / Semester: semester 2**

The Year 3 individual research project; 300 hours student work over 2 semesters; 3 assessment stages (proposal 5%, interim 20%, final 75%).

#### AERODYNAMICS (AERO316)

**Credits: 15 / Semester: semester 1**

To provide students with an understanding of aerodynamic theories including hierarchy of aerodynamic models, basics of boundary layer theory, shock/expansion theory, potential flow theory, thin airfoil theory and the generation of lift, and finite-wing lifting line theory.

#### COMPUTATIONAL METHODS IN ENGINEERING (ENGG386)

**Credits: 15 / Semester: semester 2**

Finite element analysis and computational fluid dynamics tools have become ubiquitous in engineering practice to design trains, planes and automobiles, to analyse the structural mechanics of gears, shafts, bridges and skyscrapers and the fluid flow in power generation systems and in heating, ventilation and air conditioning, and many more applications. The module will provide students with the skills to use finite element analysis and computational fluid dynamics tools with confidence with an understanding of the underlying theory and technology, and limitations thereof.

## OPTIONAL MODULES

#### ROTORCRAFT FLIGHT (AERO314)

**Credits: 7.5 / Semester: semester 1**

The module will introduce the common types of rotorcraft configuration, and will cover the basic theory of helicopter performance and flight dynamics. It will explain how rotorcraft behave in flight, and the roles of some of the main constituent components. The lectures will explain how basic physical and mathematical principles (e.g. fluid mechanics, dynamics, differential equations) can be applied to the analysis of helicopter flight. There is also some discussion of other rotary wing types such as the tilt-rotor and the autogyro.

#### SPACEFLIGHT (AERO319)

**Credits: 7.5 / Semester: semester 1**

An introduction to the main concepts of space flight is provided, including princples of space propulsion, space launch vehicles and orbital mechanics of spacecraft.

*Programme details and modules listed are illustrative only and subject to change.*

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## YEAR FOUR

During this year you will work towards demonstrating you knowledge and understanding as part of the year four Capstone Design Project.

## COMPULSORY MODULES

### FURTHER AEROSTRUCTURAL ANALYSIS (AERO417)

**Credits: 7.5 / Semester: semester 1**

Structural analysis forms the basis behind structural design in the aerospace industry. The module builds on basic knowledge of linear elasticity to introduce physical phenomena relevant to real-life structural design, as well as demonstrating applications to practical problems. The module proceeds to put this knowledge in the context of advanced computational analysis methods relevant to aerospace, automotive and the wider engineering sectors. The module will also provide skills in operating industry-standard simulation software, as well as first-hand experience in coding simple solutions to structural problems.

### AEROELASTICITY (AERO415)

**Credits: 7.5 / Semester: semester 1**

This module is about the theories of structural vibration, steady and unsteady aerodynamics, and static and dynamic aeroelasticity.

### AEROSPACE CAPSTONE GROUP DESIGN PROJECT (AERO420)

**Credits: 30 / Semester: semester 3**

This module is the culmination of your Aerospace Engineering degree. It allows you to demonstrate all that you have learned as applied to an aircraft design project. You will work in a small team to satisfy an aircraft design proposal. You will start with a conceptual design exercise and then move into a more detailed design phase of activity. The ultimate demonstration of your aircraft's capabilities comes with a flight test exercise either in the School of Engineering's flight simulation facility or in hardware for small unmanned air system projects. The design exercise is marked using group-based coursework assessments which are moderated by a webPA exercise.

### ENTERPRISE STUDIES (MNGT414)

**Credits: 7.5 / Semester: semester 1**

The module teaches the concepts of Entrepreneurship, Intrapreneurship, Company Infrastructure and Investment Proposals. It is taught using lectures, class questions, case studie sand a comprehensive coursework assignment. Successful students will have acquired knowledge and understanding at mastery level of the process and how itis executed in a modern industrial environment.

**ADVANCED FLUID MECHANICS AND AERODYNAMICS (AERO406)**

**Credits: 15 / Semester: semester 1**

To reinforce and deepen the students' understanding of:

— the mathematical description of fluid kinematics.

— the physical laws expressed by the equations of fluid motion.

— the assumptions associated with particular limits of the equations of fluid motion.

— simple exact solutions of the equations of motion.

— the differences between laminar and turbulent flow.

— the origins of laminar-turbulent flow transition

— the physics of turbulence

— the need for turbulence modelling and fundamental concepts of turbulence modeling.

To introduce students to advanced concepts in potential flow theory building upon existing knowledge of:
— the analytical generation of inviscid flow over two-dimensional objects using elementary potential flows.
— the mathematical description of potential flow from the incompressible to the supersonic regime.
— the analytical calculation of resulting forces and moments on lifting surfaces.
— the numerical computation of aerodynamic properties using panel methods
— the numerical computation of flow properties using the Method of Characteristics in compressible potential flow

To introduce students to:

— the mathematical nature of different classes of partial differential equations and the implications for their numerical solution.

— the concept of scientific computing and its basic elements: solution of linear and nonlinear systems, eigenvalue problems, differentiation and integration.

To enable student to:

— solve simple fluid mechanics problems in Matlab and analyze the results.

— recognise the capabilities and weaknesses of CFD.

— choose appropriate levels of CFD analysis for a specific problem.

— use a suitable CFD package, including meshing and setting up a simulation.

— solve laminar and turbulent flow examples using a CFD package and analyze the results.

### FLIGHT HANDLING QUALITIES (15CR) (AERO401)

**Credits: 15 / Semester: semester 1**

This module covers the fundamentals of Flight Handling Qualities for both fixed and rotary wing aircraft. Students will work in groups to assess handling qualities of different aircraft. The module adopts a Problem Based Learning approach and contains a number of lectures, desktop modelling and flight simulator sessions. The module is assessed through a group presentation and final report, both of which will contain an element peer assessment for the final mark.

## OPTIONAL MODULES

### ADVANCED 4TH YEAR RESEARCH PROJECT (ENGG443)

**Credits: 15 / Semester: semester 2**

This module focuses on a specific project related to a students third year project, with a journal style paper written.

### ADVANCED GUIDANCE SYSTEMS (AERO430)

**Credits: 7.5 / Semester: semester 1**

In this module students develop an understanding of the use of advanced guidance laws in autonomous air systems, including the interactions of airframe dynamics, sensors and control surfaces.

### ENERGY AND THE ENVIRONMENT (MECH433)

**Credits: 15 / Semester: semester 1**

This modules discusses energy generation and usage, and how they complement each other. The topics are introduced in lectures that then lead onto a case study on a specific topic.

### MUSCULOSKELETAL BIOMECHANICS (ENGG410)

**Credits: 15 / Semester: semester 1**

This module will give students an understanding of the biomechanics of the musculoskeletal system and will cover techniques used to measure and analyse body movements as mechanical systems.

**NUCLEAR TECHNOLOGIES (MECH434)**

**Credits: 7.5 / Semester: semester 1**

The module provides an understanding of nuclear engineering, with coverage going from the atomic scale through to the bulk scale. The topics will cover reactor dynamics, design and operation, lifetime behaviour, evolution of technologies and nuclear waste. For example, understanding the implications of the fission/fusion processes themselves on the behaviour of the core.

**STRUCTURAL OPTIMISATION (ENGG414)**

**Credits: 7.5 / Semester: semester 1**

This module is about classical optimisation and modern optimisation and their numerical methods. Structural optimisation and their numerical methods. Students will get an idea of how to optimise simple structure and get optimal solutions by analytical and numerical methods.

**SPACE MISSION DESIGN (AERO419)**

**Credits: 15 / Semester: semester 1**

Astrodynamics is an exciting field for students from multiple disciplines, for those interested in space mission design, in planetary science, in applied mathematics, in computer science and mission control. On completion of this module, students will understand the advanced numerical concepts and techniques for space mission design, navigation and operations. Fundamental skills for those who are interested in job roles as Flight Dynamics Engineers, Space System Engineers, Mission Analysts and Researchers

**ADDITIVE MANUFACTURING (MNFG603)**

**Credits: 15 / Semester: semester 1**

This module aligns our graduates with the market needs. The UK additive manufacturing market was valued at 0.54 billion pounds sterling in 2022 and is predicted to reach 2.01 billion pounds sterling by 2030, with a compound annual growth rate of 18.0% from 2023 to 2030.

**ADVANCED ENGINEERING MATERIALS (MATS631)**

**Credits: 15 / Semester: semester 2**

This module aims to understand advanced engineering materials, focusing on non-ferrous alloys and composite materials. It covers the processing, heat treatment, microstructure and properties of Al, Ti and Ni alloys. It introduces constituent materials, manufacturing methods, test methods and mechanical response of composite materials.

*Programme details and modules listed are illustrative only and subject to change.*

## 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 HALLMARKS

We have a distinctive approach to education, the Liverpool Curriculum Framework, which focuses on research-connected teaching, active learning, and authentic assessment to ensure our students graduate as digitally fluent and confident global citizens.

# 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).

**4 IN 5** **OF OUR ENGINEERING STUDENTS FIND THEIR MAIN ACTIVITY AFTER GRADUATION MEANINGFUL.**

*Graduate Outcomes, 2018-19.*

# 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 | £9,250 |
| Year in industry fee | £1,850 |
| Year abroad fee | £1,385 |

| **International fees** | |
|---|---|
| Full-time place, per year | £27,200 |
| Year in industry fee | £1,850 |
| Year abroad fee | £13,600 |

*Fees shown are for the academic year 2024/25. Please note that the Year Abroad fee also applies to the Year in China.*

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.

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## 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 may include a laptop, books or stationery. All safety equipment, other than boots, is provided free of charge by the department.

Find out more about the additional study costs that may apply to this course.

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## SCHOLARSHIPS AND BURSARIES

We offer a range of scholarships and bursaries that could help pay your tuition and living expenses.

We've set the country or region your qualifications are from as United Kingdom. Change it here

- ### RIGBY ENTERPRISE AWARD

  - Home students

  Are you a UK student with a household income of £25,000 or less? If you've participated in an eligible outreach programme, you could be eligible to apply for a Rigby Enterprise Award worth £5,000 per year for three years of your undergraduate degree.

- ### THE LIVERPOOL BURSARY

  - Home students

  If you're a UK student joining an undergraduate degree and have a household income below £35,000, you could be eligible for a Liverpool Bursary worth up to £2,000 for each year of undergraduate study.

- ### ASYLUM SEEKERS SCHOLARSHIP

  - Home students

  Apply for an Asylum Seekers Scholarship and you could have your tuition fees paid in full and receive help with study costs. You'll need to have applied for asylum in the UK, or be the dependant of an asylum seeker, and be joining an eligible undergraduate degree.

- ### CARE LEAVERS' OPPORTUNITY BURSARY

  - Home students

  If you've spent 13 or more weeks in Local Authority care since age 14, you could be eligible for a bursary of £3,000 per year of study. You'll need to be a UK student joining an eligible undergraduate degree and be aged 28 or above on 1 September in the year you start.

- ### COWRIE FOUNDATION SCHOLARSHIP

  - Home students

  Are you a UK student with a Black African or Caribbean heritage and a household income of £25,000 or less? You could be eligible to apply for a Cowrie Foundation Scholarship worth up to £8,000 for each year of undergraduate study.

- ### ESTRANGED STUDENTS BURSARY

- Home students

If you're a UK student identified as estranged by Student Finance England (or the equivalent UK funding body), you could be eligible for a bursary of £1,000 for each year of undergraduate study.

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## GENESYS LIFE SCIENCES SCHOLARSHIP

- Home students

Joining a School of Biosciences degree and have a household income of less than £25,000? If you're a UK student, you could apply to receive £4,500 per year for three years of your undergraduate course.

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## GRADUATE ASSOCIATION HONG KONG & TUNG UNDERGRADUATE SCHOLARSHIPS

- International students
- Hong Kong

If you're an undergraduate student from Hong Kong who can demonstrate academic excellence, you may be eligible to apply for a scholarship worth £10,000 in partnership with the Tung Foundation.

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## NOLAN SCHOLARSHIPS

- Home students

Do you live in the Liverpool City Region with a household income of £25,000 or less? Did neither of your parents attend University? You could be eligible to apply for a Nolan Scholarship worth £5,000 per year for three years of undergraduate study.

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## ROLABOTIC SCHOLARSHIP

- Home students

Are you a UK student with a household income of £25,000 or less? Did neither of your parents attend University? You could be eligible to apply for a ROLABOTIC Scholarship worth £4,500 for each year of your undergraduate degree.

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## SPORT LIVERPOOL PERFORMANCE PROGRAMME

- Home and international students

Apply to receive tailored training support to enhance your sporting performance. Our athlete support package includes a range of benefits, from bespoke strength and conditioning training to physiotherapy sessions and one-to-one nutritional advice.

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## TECHNETIX BROADHURST ENGINEERING SCHOLARSHIP

- Home students

Joining a degree in the School of Electrical Engineering, Electronics and Computer Science? If you're a UK student with household income below £25,000, you could be eligible to apply for

£5,000 a year for three years of study. Two awards will be available per academic year.

- ## UNDERGRADUATE GLOBAL ADVANCEMENT SCHOLARSHIP

  - International students

If you're a high-achieving international student starting an undergraduate degree with us from September 2024, you could be eligible to receive a fee discount of up to £5,000. You'll need to achieve grades equivalent to AAA in A levels and be joining a non-clinical degree.

- ## UNIVERSITY OF LIVERPOOL INTERNATIONAL COLLEGE EXCELLENCE SCHOLARSHIP

  - International students

Completed a Foundation Certificate at University of Liverpool International College (UoLIC)? We're offering a £5,000 fee discount off the first year of undergraduate study to some of the highest achieving students joining one of our non-clinical degrees from UoLIC.

- ## UNIVERSITY OF LIVERPOOL INTERNATIONAL COLLEGE FIRST CLASS SCHOLARSHIP

  - International students

We're offering a £1,000 fee discount for years 2 and 3 of undergraduate study to eligible students progressing from University of Liverpool International College. You'll need to be studying a non-clinical subject and get an average of 70% or above in year 1 of your degree.

- ## UNIVERSITY OF LIVERPOOL INTERNATIONAL COLLEGE IMPACT PROGRESSION SCHOLARSHIPS

  - International students

If you're a University of Liverpool International College student awarded a Kaplan Impact Scholarship, we'll also consider you for an Impact Progression Scholarship. If selected, you'll receive a £3,000 fee discount off the first year of your undergraduate degree.

- ## YOUNG ADULT CARER'S (YAC) BURSARY

  - Home students

If you're a young adult and a registered carer in the UK, you might be eligible for a £1,000 bursary for each year of study. You'll need to be aged 18-25 on 1 September in the year you start your undergraduate degree.

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# Entry requirements

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

| **Your qualification** | **Requirements**<br>About our typical entry requirements |
|---|---|
| A levels | AAA including Mathematics and a second science.<br>Applicants with the Extended Project Qualification (EPQ) are eligible for a reduction in grade requirements. For this course, the offer is **AAB** with **A** in the EPQ.<br>You may automatically qualify for reduced entry requirements through our contextual offers scheme. |
| GCSE | 4/C in English and 4/C in Mathematics |
| Subject requirements | Mathematics and a second science.<br>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).<br>Accepted Science subjects are Biology, Chemistry, Computing, Economics, Electronics, Environmental Science, Further Mathematics, Geography, Geology, Human Biology, Physics and Statistics.<br>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 AA in A Level Mathematics and a second science. |
| BTEC Level 3 Diploma | D*D in relevant BTEC considered alongside A Level Mathematics grade A. Accepted BTECs include Aeronautical, Aerospace, Mechanical, Mechatronics and Engineering. |

| **Your qualification** | **Requirements**<br>About our typical entry requirements |
|---|---|
| BTEC Level 3 National Extended Diploma | Not accepted without grade A in A Level Mathematics |
| International Baccalaureate | 35 overall, including 5 at Higher Level Mathematics and Physics |
| Irish Leaving Certificate | H1, H1, H2, H2, H2, H2 including H1 in Higher Mathematics and Higher Second Science. |
| Scottish Higher/Advanced Higher | Pass Scottish Advanced Highers with grades AAA including Mathematics and a second science. |
| Welsh Baccalaureate Advanced | Not accepted |
| Cambridge Pre-U Diploma | D3 in Cambridge Pre U Principal Subject is accepted as equivalent to A-Level grade A Global Perspectives and Short Courses are not accepted. |
| Access | Not accepted |
| International qualifications | Many countries have a different education system to that of the UK, meaning your qualifications may not meet our entry requirements. Completing your Foundation Certificate, such as that offered by the University of Liverpool International College, means you're guaranteed a place on your chosen course. |

## 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.

THE ORIGINAL REDBRICK