

# Engineering

 BEng (Hons)

## COURSE DETAILS

- A level requirements: [AAB](#)
- UCAS code: H100
- Study mode: Full-time
- Length: 3 years

## KEY DATES

- Apply by: [29 January 2025](#)
- Starts: 22 September 2025

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## Course overview

Study Engineering and you will have the opportunity to delve into a huge range of disciplines. Become a problem solver, not just learning how to fix things but to develop and invent from the very start.

## INTRODUCTION

Following a broad first year of study covering all disciplines within the School, students on this programme will be required to transfer their registration onto one of the following engineering programmes, depending on whether they are on the three or four-year programme.

- Aerospace Engineering BEng (H425)
- Mechanical Engineering BEng (H300)
- Product Design Engineering BEng (HW24)

## WHAT YOU'LL LEARN

- Design, build and test products and systems
  - Computer programming
  - Engineering design
  - Collaborative design
  - How to conduct independent research
  - How to deal with complex problems that may require compromise to meet competing requirements
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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

### COMPULSORY MODULES

#### **MECHANICAL PRODUCT DISSECTION (MECH109)**

**Credits: 7.5 / Semester: semester 2**

This is predominantly a practical module in which students work in small groups to examine in detail the workings and manufacture of a single-cylinder, 4-stroke petrol engine by dismantling it into component parts and documenting the disassembly process in a Wiki.

#### **SOLIDS AND STRUCTURES 1 (ENGG110)**

**Credits: 15 / Semester: whole session**

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.

#### **ENERGY SCIENCE (ENGG116)**

**Credits: 15 / Semester: whole session**

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.

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

**Credits: 30 / Semester: whole session**

This module aims to provide students with an early understanding of the preliminary design processes including engineering drawing/visualisation, data analysis, computer aided engineering. It includes a team project and develops report writing and oral presentation skills. It also introduces vital topics of engineering sustainability and engineering ethics. It develops student ability to reflect upon and record their learning and development.

## **ENGINEERING MATHEMATICS (ENGG198)**

**Credits: 22.5 / Semester: whole session**

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.

## **INTRODUCTION TO ENGINEERING MATERIALS (MATS105)**

**Credits: 15 / Semester: whole session**

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.

## **DIGITAL ENGINEERING (ENGG125)**

**Credits: 15 / Semester: whole session**

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.

*Any optional modules listed above are illustrative only and may vary from year to year. Modules may be subject to minimum student numbers being achieved and staff availability. This means that the availability of specific optional modules cannot be guaranteed.*

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## **YEAR TWO**

Year two follows your chosen path from:

- [Aerospace Engineering BEng](#) (H425)
- [Mechanical Engineering BEng](#) (H300)

*Any optional modules listed above are illustrative only and may vary from year to year. Modules may be subject to minimum student numbers being achieved and staff availability. This means that the availability of specific optional modules cannot be guaranteed.*

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## **YEAR THREE**

Year three follows your chosen path from:

- [Aerospace Engineering BEng](#) (H425)
- [Mechanical Engineering BEng](#) (H300)

*Any optional modules listed above are illustrative only and may vary from year to year. Modules may be subject to minimum student numbers being achieved and staff availability. This means that the availability of specific optional modules cannot be guaranteed.*

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## 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.

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# Careers and employability

Graduates of this degree programme go on to a wide range of careers: you may be responsible for planning the electricity distribution network, or you may be designing the electronics of the next 'must have' item.

Some of our graduates go on to work in the industrial sector, in government and in education, whilst others enter non-technical professions such as banking, accountancy, management and law.

Specific career paths are many and varied, and have previously included:

- Design Engineer
- Systems Engineer
- Medical Physicist
- Postdoctoral Research Scientist
- Radio Frequency Scientist.

Many graduates have moved on to have careers with employers in the following industries:

- Technology: ARM Holdings Ltd, Ericsson Ltd, Logica CMG, Marconi, Siemens UK
- Energy: British Nuclear Group, Energetix Group PLC, Scottish Power, United Utilities PL
- Healthcare: Royal Liverpool University Hospital
- (Clinical Engineering)Government/Research: Daresbury Laboratory, Ministry of Defence, Science and Technology Facilities Council, The Highways Agency
- Engineering/Manufacturing: Deva Electronic Controls, Heap and Partners Ltd.

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

*Graduate Outcomes, 2018-19.*

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# Fees and funding

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

## TUITION FEES

<b>UK fees (applies to Channel Islands, Isle of Man and Republic of Ireland)</b>	
Full-time place, per year	£9,535
Year abroad fee	£1,385

<b>International fees</b>	
Full-time place, per year	£29,100
Year abroad fee	£14,550

*The UK full-time tuition fee, international course fee and fee for the year abroad for international students shown are correct for 2025/26 entry. We are currently awaiting confirmation of whether the year abroad fee for UK students will change, so the fee shown is for 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 fees and funding](#).

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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](#)

- **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. Most of our undergraduate degrees are eligible, with the exception of clinical programmes in Medicine and Dental Surgery.](#)

- **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.](#)

- **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.

- **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.

- **KAPLAN DIGITAL PATHWAYS EXCELLENCE SCHOLARSHIP**

- International students

Completed a Kaplan Digital Pathways Foundation Certificate? We're offering a £5,000 fee discount off the first year of undergraduate study for a maximum of two high achieving students joining one of our non-clinical degrees from an online Kaplan Foundation Certificate.

- **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.

- **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.

- **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.](#)

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## **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.](#)

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## **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.](#)

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## **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.](#)

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## **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 <a href="#">About our typical entry requirements</a>
A levels	<p>AAB including Mathematics and a second science.</p> <p>Applicants with the Extended Project Qualification (EPQ) are eligible for a reduction in grade requirements. For this course, the offer is <b>ABB</b> with <b>A</b> in the EPQ.</p> <p>You may automatically qualify for reduced entry requirements through our <a href="#">contextual offers scheme</a>.</p> <p>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.</p> <p>Available foundation years:</p> <ul style="list-style-type: none"><li>• <a href="#">Engineering Foundation (4 year route including a Foundation Year at Carmel College)</a> BEng (Hons)</li></ul>
GCSE	4/C in English and 4/C in Mathematics
Subject requirements	<p>Mathematics and a second science.</p> <p>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).</p> <p>Accepted Science subjects are Biology, Chemistry, Computing, Economics, Electronics, Environmental Science, Further Mathematics, Geography, Geology, Human Biology, Physics and Statistics.</p> <p>For applicants from England: For science A levels that include the separately graded practical endorsement, a "Pass" is required.</p>
BTEC Level 3 National Extended Certificate	Acceptable at grade Distinction* alongside BB in A Level

<b>Your qualification</b>	<b>Requirements</b> <a href="#">About our typical entry requirements</a>
	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	35 overall including 5 in Higher Level Mathematics and 5 in Higher Level 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 a second science
Welsh Baccalaureate Advanced	Acceptable at grade B alongside AA in A Level 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	Considered if taking a relevant subject. Check with Department or Admissions team.
International qualifications	Many countries have a different education system to that of the UK, meaning your qualifications may not meet our entry

<b>Your qualification</b>	<b>Requirements</b> <a href="#">About our typical entry requirements</a>
	requirements. Completing your Foundation Certificate, such as that offered by the <a href="#">University of Liverpool International College</a> , means you're guaranteed a place on your chosen course.

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## 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**