

Why choose a career in engineering?

Become highly employable with a degree in engineering. Not only will your engineering skills be in huge demand globally, engineers also enjoy higher than average graduate starting salaries.

Engineers are needed across all sectors, making a degree in engineering a smart career choice. From developing surgical robots to making greener, safer transport or designing the cities of the future, you'll be using your creativity and problem-solving skills to help shape the world we live in.



Find out more at www.intostudy.com/newcastle

What are some of my career options after a degree in engineering?



Civil Engineer

- Typical role: use the latest technologies to design, build and shape the world around us – from natural environments to buildings and infrastructures
- Types of civil engineering: buildings, coastal and marine, environment, highways and transportation, power, rail, tunnelling, waste management
- Typical UK salary: £24,000-£81,000*
- Typical hours: 42 per week



Electrical Engineer

- Typical role: work in project teams with colleagues in other branches of engineering to design, build and test electrical systems and components
- Typical sectors: power, transport, manufacturing, computing, renewable energy, telecommunications, armed forces, aerospace, government
- Typical UK salary: £20,000-£60,000*
- Typical hours: 40 per week



Mechanical Engineer

- Typical role: focusing on anything that moves – from prosthetic limbs and machinery to racing cars – you'll design, develop and improve mechanical systems across a range of industries
- Typical sectors: aerospace, automotive, manufacturing, utilities, transport, oil and gas, pharmaceuticals
- Typical UK salary: £25,000-£60,000*
- Typical hours: 40 per week

Top 150 universities worldwide

(QS World University Rankings 2022)

Top 20 most targeted university in the UK by The Times Top 100 Graduate Employers 2020-21

Top 150 in the world for Civil and Structural Engineering

(QS World University Rankings by Subject 2021)

* Salary information from EngineeringUK

What degrees in engineering can I take at Newcastle University?

Course progression options

When you start the International Year One in Engineering in September 2022, you can progress to the below degrees at Newcastle University in September 2023. The table below also provides information about module requirements and the grades you'll need to achieve in order to progress.

Degree	Description	English level	Final academic grade
Engineering MEng (Hons) with specialism in Civil Engineering ^W	Study geotechnics, structural analysis and reliability, and constructional management to prepare for a rewarding career as a Civil Engineer with a strong understanding of our core infrastructure.	65	40% (with a minimum of 40% in all subjects)
Engineering MEng (Hons) with specialism in Electrical and Electronic Engineering ^W	Explore electrical machines and drives, digital systems, industrial automation and robotics, and power electronics to gain the practical skills you need to analyse, design and build electrical and electronic circuits.	65	40% (with a minimum of 40% in all subjects)
Engineering MEng (Hons) with specialism in Mechanical Engineering ^W	After learning a broad spectrum of engineering fundamentals, you'll specialise in core mechanical engineering themes such as thermodynamics, computational modelling, and energy sources and storage.	65	40% (with a minimum of 40% in all subjects)

^W Degree option with a placement year is available. This can have different requirements.



Specialist facilities at Newcastle University

Civil Engineering

- BE:WISE: Europe's largest wastewater treatment research facility
- Urban Observatory, collecting real-time urban data
- Geotechnical Soils Lab
- Heavy Structures Lab

Electrical and Electronic Engineering

- Electrical Power Teaching Lab
- Merz Court Pilot Plant Laboratory
- Millennium Laboratory
- Lucas-Nuelle test rigs
- Clean-Room Microfabrication Lab

Mechanical Engineering

- Dedicated biomaterial and biotribology labs
- Micro-electromechanical systems
- 3D motion capture
- Artificial joint testing
- Gear manufacture and testing

3 reasons to study engineering at Newcastle University:

Graduates have gone on to work in a wide range of roles and industries, recently securing positions in organisations including ABB, Aecom, Arup, BP, Centrica, Dyson, Jaguar Land Rover, Nissan, Royal Navy, Satorius and Siemens

Leading, or part of, some of the UK's most important engineering research centres and projects, such as: National Centre for Energy Systems Integration, UK Collaboratorium for Research on Infrastructure and Cities, and Faraday Institution

A track record of innovating, researching and teaching alongside industrial partners. One of only four UK universities to enjoy principal partner status with global engineering and technology giant, Siemens

Secure your place on a degree with the International Year One in Engineering

This International Year One programme will prepare you for entry to Year 2 of the four-year MEng Engineering degree at Newcastle University, with the choice of specialising in Civil, Electrical and Electronic, or Mechanical Engineering.

What is an International Year One?

Equivalent to the first year of an undergraduate degree, this programme:

- is for international students who show the potential to succeed at the University but would benefit from extra academic and English language support during the first year of their degree
- gives you the opportunity to make friends with other international students just like you
- helps you settle into life in a new country and adjust to the new education system

Why should I take the International Year One in Engineering?

With guaranteed conditional progression to Year 2 of a degree at Newcastle University's School of Engineering, you'll build your subject knowledge and English skills through modules taught by INTO Newcastle University, with access to specialised equipment within the labs at INTO Newcastle University and the University's School of Engineering.

What is INTO Newcastle University?

INTO Newcastle University is an international study centre at the heart of the Newcastle University campus. You'll become part of the Newcastle University student community from day one – with access to the same libraries, Students' Union and cafés as everyone else on campus.

As well as contemporary classrooms and IT facilities, the Centre provides modern science labs, a Language Resource Centre and an extensive library. You'll be supported by our dedicated teachers and staff who'll ensure you get the most from your time at Newcastle University.

Key facts

Course dates

Mon 26 September 2022-Fri 16 June 2023

Course length

3 terms

Class hours

Average of 22 hours per week

Class size

18 students maximum for English language teaching

Academic entry requirements

Satisfactory completion of A levels, or a recognised Foundation programme, or first year of an overseas university degree programme with good grades, or equivalent

English language entry requirements

IELTS 5.5 (with a minimum of 5.5 in writing) or equivalent

If you do not meet the minimum English language requirements, you should apply for our Academic English course

Award

Successful completion of this programme leads to the initial award of Certificate of Higher Education (FHEQ Level 4) from Newcastle University

Age requirement

17 years and above. All students must be 17 years old by 31 December of that calendar year

Tuition fees*

£21,395

Tuition fees do not include:

- enrolment fee: £150 (charged upon confirmation)
- textbooks and other learning materials: £240
- lab fee: £400

"The teachers prepared me well for university. It was a good introduction to writing lab reports and what to expect in exams. I really enjoyed my course, student life, and the experience of living outside my home country."

Oirat, Kazakhstan
Project Engineer in Kazakhstan
Graduate of BEng (Hons) Electrical and Electronic Engineering, Newcastle University



Graduate
with a UK
degree in just
four years

What modules will I take during the International Year One in Engineering?

You will need to earn 140 credits to successfully complete your International Year One in Engineering and be eligible to progress to a degree in engineering at Newcastle University.

Compulsory modules

EAP for International Year One Engineering (20 credits)

This module will develop your confidence and skill in using academic English for university study, focusing on the key areas of writing and speaking as well as listening and reading.

Engineering Mathematics (20 credits)

From differential and integral calculus to matrices and vectors, this module teaches the mathematical methods needed to analyse and solve engineering problems.

Design and Professionalism (30 credits)

An introduction to the concept and process of and approaches to design. You'll learn to use software applications such as AUTOCAD while investigating engineering-related ethical issues.

Electrical and Magnetic Systems (15 credits)

Gain an understanding of electromagnetic fields and forces, and simple electrical machines and transformers, along with the fundamental rules of AC and DC circuits.

Electronics and Sensors (10 credits)

This module covers the basic concepts associated with analogue electronics such as semiconductors, followed by an introduction to digital electronics. You'll learn to design simple analogue and digital circuits.

Thermofluid Mechanics (15 credits)

Introducing the basic concepts and definitions of energy, heat and work, this module will provide you with the core knowledge and skills to understand and analyse engineering thermofluid systems.

Engineering Materials (15 credits)

This module provides the essential facts, theories and principles of engineering material science, helping you to test and identify the strength and suitability of differing engineering materials.

Mechanics (15 credits)

Study the four core areas of statics, dynamics, mechanics of machines and strength of materials to help you solve linear mechanics problems, understand core mechanics concepts and predict the motions of bodies.

92%

of Electrical and Electronic Engineering students at Newcastle University agreed that they were satisfied with the quality of their course

(National Student Survey 2020)

"INTO exposes students to university life at a very enjoyable pace. We were taught the skills required to succeed at university, and lecturers and teachers were always available for us to consult. INTO did an awesome job in preparing me for university life."

Anrui, China
Structural Engineer at RFR, Shanghai
Graduate of MEng (Hons) Civil Engineering, Newcastle University



Scan the QR code to find out more about studying engineering at Newcastle University.