Chemical Engineering with Industry
MEng Honours
UCAS code H815
4 Years

This professionally accredited MEng Honours degree includes a 12-month paid work placement to enhance your practical skills and employability.

You’ll study a broad curriculum covering the theory and practical application of chemical engineering, including how to use industrial apparatus in our very own pilot plant.

In your third year, you undertake a fully accredited, paid work placement with a chemical/process engineering company.

On return to University in your fourth year, you study a selection of topics that are tailored to further develop the technical expertise you gain on your placement.

Highlights of this degree

Quality and ranking
At Newcastle you’ll join a School of Engineering with a long-standing reputation for teaching quality and student support.

We rank in the top 150 for Chemical Engineering in the QS World University Rankings by Subject 2019.

Professional accreditation

Accreditations
All of our degrees are accredited by:

- Institution of Chemical Engineers (IChemE)
- Institute of Measurement and Control

IChemE accreditation means employers will recognise the quality of your degree because it meets high professional standards.

BEng or MEng?

Both our BEng degree and specialist MEng degrees provide a pathway to becoming a Chartered Chemical Engineer. This is one of the most recognisable international engineering qualifications.

Our MEng degrees are a direct route to becoming a Chartered Engineer (CEng). You don’t need to study any more qualifications after your degree to work towards chartered status.

Our three-year BEng degree can also lead to Chartered Engineer status. However, you’ll need to complete further study, such as an approved Master’s degree.

Find out more

Find out more about the benefits of becoming a Chartered Engineer on the Engineering Council’s website.

Find out how to obtain Chartership through IChemE on IChemE’s Get Chartered website.

*All professional accreditations are reviewed regularly by their professional body.

Core topics

What you will study
We introduce you to core engineering, maths and science principles underpinning the design of a chemical engineering process plant. You’ll learn everything from controlling chemical reaction rates to using specialist computer software to solve chemical and process engineering problems.

Study topics include:

- how to perform, measure, analyse and manipulate chemical reactions
- basic types of mass, heat and momentum transfer
- the design criteria for heat exchangers and other plant equipment used in process plants

Flexible degree structure

Transfer to or from our Industry degree from one of our other chemical engineering degrees is possible up to the end of Stage 2, before the accredited industrial placement begins in Stage 3.

Work placement and study abroad

Work placement
In your third year you spend a paid year in industry, gaining invaluable work experience and building industry contacts. You will work in a team of professional engineers and scientists to apply your knowledge to an industrial problem defined by your host company. Your technical skills will be assessed through an industrial design project and you complete selected chemical engineering topics by distance learning.

The School and the University Careers Service will help you to find potential employers and guide you through the application process. We have strong links with over 100 companies, including:

- P&G
- MSD
- ExxonMobil

Study abroad
In your final year you complete an individual design project and substantial research project.

With the agreement of the Degree Programme Director, you can carry out a research project at one of our partner institutions.
universities in Europe or worldwide. Locations include Australia and Singapore.

**Defence Technical Undergraduate Scheme (DTUS)**

Do you want to become a technical officer in the Royal Navy, British Army, RAF or Defence Engineering and Science Group when you graduate?

This degree is approved by the Defence Technical Undergraduate Scheme (DTUS).

DTUS is a sponsorship programme for students interested in a scientific, engineering or technical career in the armed forces or the Ministry of Defence.

Find out more on our Armed Forces page.

**Facilities and support**

As a chemical engineering student at Newcastle, you will join our School of Engineering.

**Facilities**

Facilities include:

- a state-of-the-art BioLab, providing access to a range of small scale unit operations and the latest equipment
- a recently upgraded pilot plant laboratory
- modern bench-top experimental equipment
- an interactive video teaching system
- high-specification fume cupboards for handling volatile chemicals
- two dedicated computing suites, running specialised industry-standard computer software

**Support**

To support you in your studies, all new students entering year 1 or year 2 will receive:

- a tablet so you can download the online learning resources you’ll need for your course (helping us to make our campus more sustainable);
- a start-up pack containing essential personal protective equipment and text books.

You’ll be supported by a personal tutor throughout your degree – an academic member of staff who can help with academic and personal issues.

You’ll also have access to a peer mentor in your first year – a fellow student who can help you settle in and answer any questions you have.

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**Course Details**

**Modules for 2018 entry**

Please note

The module and/or programme information below is for 2018 entry. Our teaching is informed by research and modules change periodically to reflect developments in the discipline, the requirements of external bodies and partners, student feedback, or insufficient numbers of students interested (in an optional module). To find out more read our terms and conditions. Module/programme information for 2019 entry will be published here as soon as it is available (end of May 2019).

Our degrees are divided into Stages. Each Stage lasts for an academic year and you need to complete modules totalling 120 credits by the end of each Stage. Further information, including the credit value of the module, is available in each of the module descriptions below.

**Stage 1**

**Compulsory modules**

- CME1020 Chemistry
- CME1021 Thermodynamics
- CME1023 Transfer Processes
- CME1025 Principles of Chemical Engineering
- CME1026 Computing and Numerical Methods
- CME1027 Data Analysis in Process Industries
- ENG1001 Engineering Mathematics 1

**Stage 2**

**Compulsory modules**

- CME2022 Separation Processes 1
- CME2023 Transfer Processes 2
- CME2024 Reactor Engineering
- CME2027 Chemistry 2
- CME2028 Thermodynamics 2
- CME2029 Process Measurement, Dynamics and Control
- CME2030 Chemical Engineering Laboratory I
- CME2031 Safety, Risk and Engineering Practice
- ENG2011 Engineering Mathematics II
Stage 3

Compulsory modules
- CME3028 Industrial Design Project
- CME3037 Separation Processes 2 (Industry)
- CME3041 Placement Log Book
- CME8110 Chemical Engineering Knowledge (Industry)

Work Placement
You will spend a year in industry on an approved placement. This is subject to successful completion of Stage 2 with an overall pass threshold of 65%.

Stage 4

Compulsory modules
- CME3008 Process Control 2
- CME3034 Advanced Design for Safety
- CME3035 Reactor Systems Engineering
- CME8107 Process Intensification
- CME8117 MEng Research Project
- CME8120 Advanced Design Project

Teaching and assessment

Industry-informed teaching
Newcastle students graduate fully equipped with the skills they will need thanks to our strong links with industry experts and focus on industry skills, including:
- **problem-based learning** for the first three years based around industrial case studies – excellent preparation for life as a professional engineer
- lectures delivered by **practising industry experts** covering issues surrounding safety management and environmental protection
- industry representation on our Board of Studies with direct input into our degrees
- **industry links** with over 100 chemical engineering companies, resulting in sponsorship and placement opportunities and plant visits

Teaching methods
We use case-study-led teaching, so your learning has real-world relevance.

Teaching is through a combination of:
- lectures
- tutorials
- seminars
- computer practice sessions
- extensive practical laboratory work
- group work on case studies and design projects

Assessment methods
You’ll be assessed by a range of methods depending on the modules you study, including:
- class tests
- laboratory reports
- multi-choice questions
- project reports
- oral presentations
- closed book examinations
- interviews

Find out more
Visit our Teaching & Learning pages to read about the outstanding learning experience available to all students at Newcastle University

Careers

Chemical Engineering careers
Chemical engineers play a crucial role in many aspects of our everyday life. They are employed across a wide range of sectors helping with the management of resources, the protection of the environment and the control of health and safety procedures, while developing and managing the processes that make the products we desire or depend on.

Our graduates are targeted by prestigious and high-profile organisations from sectors including pharmaceuticals, chemicals, energy, oil and gas, water, environment, biotechnology and food and drink.

International opportunities are available for experienced graduates with an interest in working outside the UK. Past graduates have built and run plants in the Far East, operated water treatment processes in the Gulf and developed catalysts in Chicago.

Chemical Engineering is a degree that is well respected in industry and commerce. The wide scope of the training and skills you receive in your degree studies is highly valued by many different organisations and opens up opportunities in careers ranging from ground-breaking research and consultancy to business and management.

Our extensive network of industry contacts and strong partnership with the University’s Careers Service enables us to equip our students with the necessary skills and experience to secure challenging and rewarding graduate employment.

Find out more about the career options for Chemical Engineering from Prospects: The UK’s Official Careers Website.

For more information on careers in chemical engineering or industrial sponsorship, contact:
The Institution of Chemical Engineers
Telephone: 01788 578 214
Website: www.icheme.org
What our graduates go on to do: employment and further study choices

See what our recent graduates went on to do and view graduate destinations statistics. These statistics are based on what graduates were doing on a specific date, approximately six months after graduation. Take a look at the most recent data available for our graduates.

The destination data is available in varying levels, beginning with the University and moving through Faculty and School down to individual course reports. This final level may give you some useful ideas about possible options after your course or a course you are considering.

Careers and employability at Newcastle

Newcastle University consistently has one of the best records for graduate employment in the UK.

96% of our 2017 UK-domiciled UG/PG graduates progressed to employment or further study within six months of graduating.

85.5% of our graduates are in graduate level employment or further study within six months of graduating.

We provide an extensive range of opportunities to all students through an initiative called ncl+. This enables you to develop personal, employability and enterprise skills and to give you the edge in the employment market after you graduate.

Our award-winning Careers Service is one of the largest and best in the country, and we have strong links with employers.

Fees & Funding

Tuition Fees (UK students)

Please note:
The maximum fee that we are permitted to charge for UK students is set by the UK government.
As a general principle, you should expect the tuition fee to increase in each subsequent academic year of your course, subject to government regulations on fee increases and in line with inflation.
See more information on all aspects of student finance relating to Newcastle University.

Tuition Fees (EU students)

2020 entry:
Tuition fees for 2020 entry are not yet available.

2019 entry:
£9,250 You will pay the same tuition fees as UK students for the duration of your course.
For programmes where you can spend a year on a work placement or studying abroad, you will receive a significant fee reduction for that year.
Some of our degrees involve additional costs which are not covered by your tuition fees.
Please note:
As a general principle, you should expect the tuition fee to increase in each subsequent academic year of your course, subject to government regulations on fee increases and in line with inflation.
See more information on all aspects of student finance relating to Newcastle University.

Tuition Fees (International students)

2020 entry:
Tuition fees for 2020 entry are not yet available.

2019 entry*:
£22,110
*Please note:
You will be charged tuition fees for each year of your degree programme (unless you are on a shorter exchange programme).
The tuition fee amount you will pay may increase slightly year on year as a result of inflation.
If you spend a year on placement or studying abroad as part of your degree you may pay a reduced fee for that year.
See more information on all aspects of student finance relating to Newcastle University.

Scholarships and Financial Support (UK students)

You may be eligible for one of a range of Newcastle University Scholarships in addition to government financial support.

Newcastle University Scholarships
Scholarships and Financial Support (UK students)

Government financial support

Scholarships and Financial Support (EU students)

You may be eligible for one of a range of Newcastle University Scholarships in addition to government financial support.

Newcastle University Scholarships

Government financial support

Scholarships and Financial Support (International students)

We offer a range of scholarships to eligible international students:

- Vice-Chancellor’s International Scholarships
- Vice-Chancellor’s Excellence Scholarships
- Vice-Chancellor’s Global Scholarships

We also offer International Family Discounts which are available for all international students with a close family member who has graduated from or is now studying at Newcastle University.

Some of our subject scholarships and sports scholarships are also available for international students.

Apply

Applying to Newcastle University through UCAS

To apply for undergraduate study at Newcastle you must use the online application system managed by the Universities and Colleges Admissions Service (UCAS).

UCAS codes for Newcastle University

- institution name - NEWC
- institution code - N21

UCAS buzzword

Ask your teacher or adviser from your school or college for the UCAS buzzword. You need the buzzword when you register on the Apply system. This makes it clear which school or college you are applying from.

All UK schools and colleges and a small number of EU and international establishments are registered with UCAS.

If you are applying independently, or are applying from a school or college which is not registered to manage applications, you will still use the Apply system. You will not need a buzzword.

Making your application

On the UCAS website you can also find out more about:

- application deadlines and other important dates
- offers and tracking your application

Application decisions and enquiries

Find out more about our admissions process and who to contact if you need help with your application.

The Students’ Union has many social spaces.