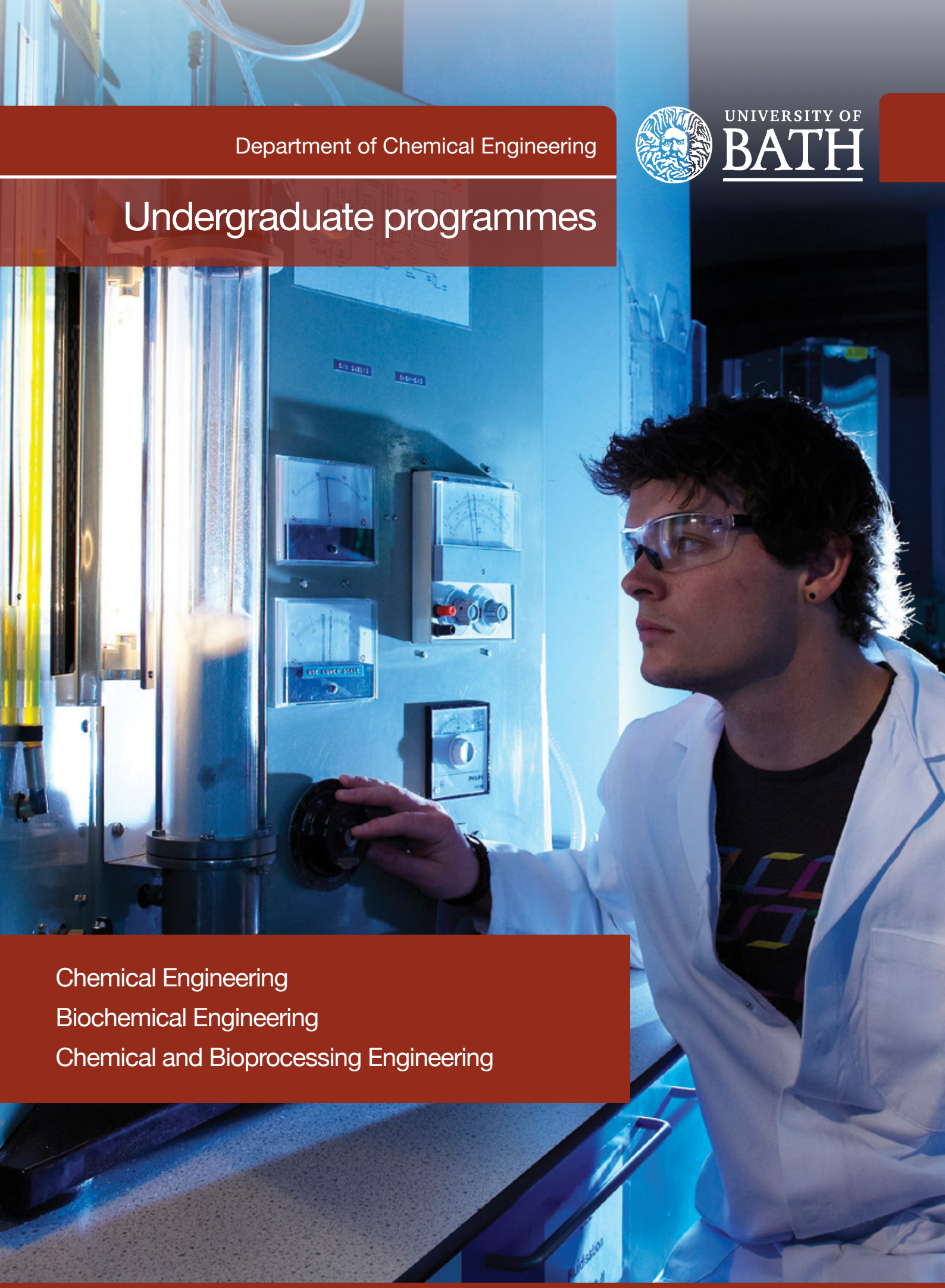


Department of Chemical Engineering

UNIVERSITY OF BATH

Undergraduate programmes

Chemical Engineering

Biochemical Engineering

Chemical and Bioprocessing Engineering

Key facts

- **70 places available**
- **600 applicants**
- **All courses fully accredited by IChemE**
- **Modern, purpose built facilities**
- **Over 85% of our students entered full-time graduate employment last year**

Why study Chemical Engineering at Bath?

We are recognised for the industrial relevance of our academic programmes, an excellent placement scheme and career prospects as well as a close and friendly community in our purpose built, high tech building. The Department of Chemical Engineering at Bath consistently ranks highly across UK league tables and university guides, recently 3rd in the UK for subject area and 2nd for graduate employment in the Sunday Times University Guide 2012. We also received a 96% student satisfaction rate in the National Students' Survey 2011.

What will I study?

Chemical Engineering is all about changing raw materials into useful products you use every day in a safe and cost effective way. For example, petrol and nylon from oil; drinking water from sea water; and antibiotics from bacteria.

You will begin by learning how to combine science and maths to take science from bench-scale to process scale. You will work towards designing entire processes (such as a waste disposal system for a submarine) and products (such as a bio artificial liver). There will be a lot of project work and practical work, just as you will find in a graduate job.

Programme options

We offer three year BEng and four year MEng study programmes with an optional industrial placement year. You can complete a degree programme in Chemical, Biochemical or Chemical and Bioprocess Engineering.

Over 70% of our students choose to spend a placement year in industry with a typical salary of £14-23,000. Our dedicated Faculty placement team offer a comprehensive service to both students and employers to ensure a worthwhile placement for any student who chooses this option.

Programme structure

	MEng 5 Year Sandwich Chemical Engineering/ Biochemical Engineering	MEng 4 Years Chemical Engineering/ Biochemical Engineering	BEng 4 Year Sandwich Chemical Engineering/ Chemical and Bioprocess Engineering	BEng 3 Years Chemical Engineering/ Chemical and Bioprocess Engineering
Year 1	Mathematical Techniques, Physical Chemistry, Biology & Bioprocesses, Chemical Engineering Principles, Chemical Engineering Skills, Instrumentation & Control, Transport Phenomena, Engineering Chemistry, Separation Processes, Engineering Applications Laboratories, Design Project.			
Year 2	Engineering Thermodynamics, Transport Phenomena, Chemical & Biological Reaction Engineering, Further Mathematical Techniques, Process Design & Safety, Management, Separation Processes, Process Dynamics, Particle Technology, Engineering Applications Laboratories.			
Year 3	Environmental Management, Management & Economics, Transport Phenomena, Technical Review, Mathematical Modelling, Research Project (carried out in Bath, UK industry or abroad).		Industrial Placement	Advanced Chemical Engineering, Advanced Biochemical Engineering, Transport Phenomena, Technical Review, Environmental Management, Research & Design Project. Graduation Year 3
	Industrial Placement	Advanced Biochemical Engineering, Advanced Chemical Engineering, Product Design, Final Design Project and options from the list. Graduation Year 4	Advanced Chemical Engineering, Advanced Biochemical Engineering, Transport Phenomena, Technical Review, Environmental Management, Research & Design Project. Graduation Year 4	
Year 5	Advanced Biochemical Engineering, Advanced Chemical Engineering, Product Design, Final Design Project and options from the list. Graduation Year 5	**Options for Year 4 and Year 5 include:** Legislation & Waste Management, Biomedical Engineering, Advanced Materials and Porous Solids, Micro-Process Engineering and Molecular Biochemical Engineering.		

Career options for Chemical Engineers

There are a huge range of career options and job prospects are excellent. Chemical engineers are rated as the third highest graduate earners in the UK with an average graduate salary of £28,000. You could aspire to help solve the planet's problems by developing a replacement for fossil fuels, developing a new cancer drug, or providing clean water for all. Or consider different business areas such as marketing or finance.

Chemical Engineering graduates are known for the wide range of skills they offer an employer. Skills you will develop at Bath include specialist scientific knowledge, project management, resource management, health and safety, problem solving, decision making, creativity, communication skills, leadership, IT, business and legal knowledge.

Typical careers include:

Plant management – overall responsibility for a plant

Project engineering – organise and run projects for other companies

Operations engineering – ensure the process runs smoothly

Plant commissioning – design and set up new processes

Consultancy – develop specialised areas of processes

Economic analysis – working in the financial sector

Marketing & management – taking a new product to market

Research – study for a PhD and specialise in developing new technologies

Our graduates are highly valued by employers world-wide in areas such as developing new products, process design and optimisation. Recent employers of our graduates have included BP, Exxon Mobil, Mars, National Grid and Procter & Gamble.

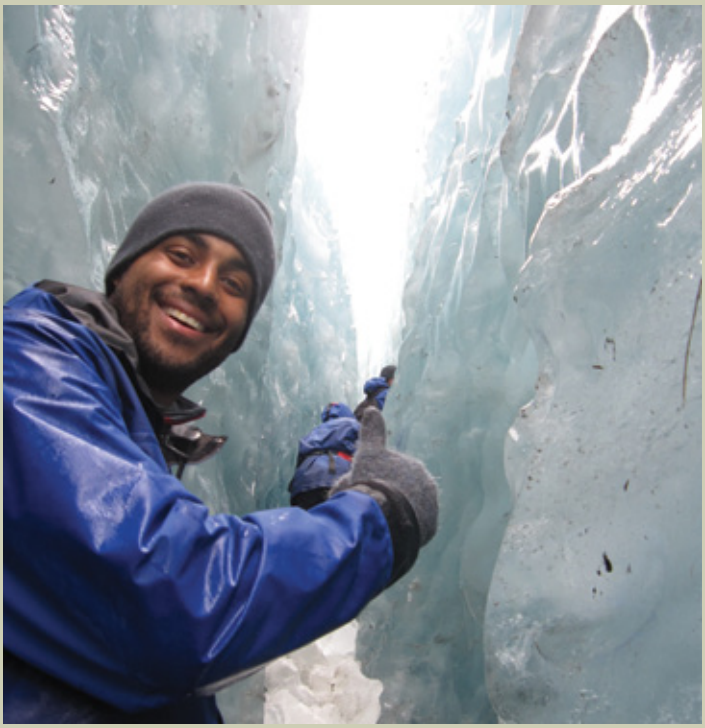
What do I need to study Chemical Engineering?

Mathematics and Chemistry are essential and another science is desirable.

Typical qualification offers include:

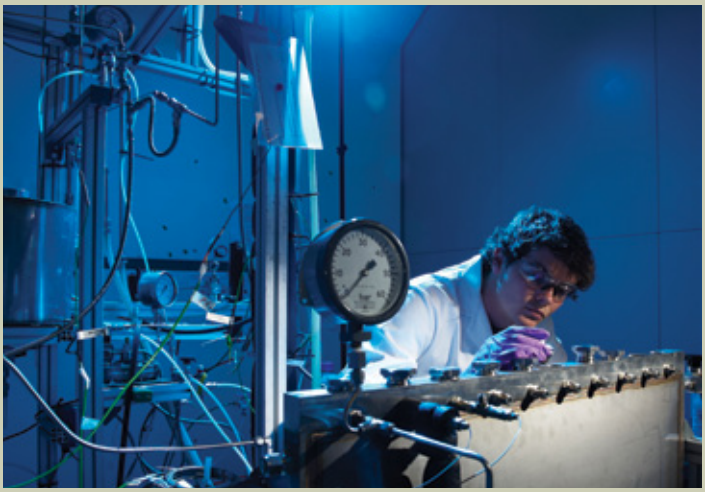
A Levels: MEng and BEng -AAA including Mathematics and Chemistry
International Baccalaureate: MEng and BEng - 36 points (including bonus points) overall, including scores of 6 in both Mathematics and Chemistry at the Higher Level.
All Level 3 qualifications are considered.

For detailed and up-to-date information please check **www.bath.ac.uk/study/ug**
Other useful information can be found at **www.whynotchemeng.com** and **www.headstartcourses.org.uk**



"I have thoroughly enjoyed my time at the University of Bath. It has given me a wide range of life experience, including studying abroad in New Zealand as well as a placement year working at the Chevron Pembroke Refinery. I have played various sports, participated in societies, attended some fantastic events and had great nights out with friends. The course has prepared me for life after university, with a diverse range of skills taught, both technical and non-technical. It has certainly helped my employment prospects and enabled me to gain employment outside a non-traditional chemical engineering job working in business in London. The University is well setup for students, and provides a wholesome university experience. I am glad I came to the University of Bath and would thoroughly recommend it to anybody considering a chemical engineering programme."

Stephen Martin, MEng Chemical Engineering 2012



"My time at the University of Bath has been brilliant. Doing a research project in Spain and spending my industrial placement year working for Chevron in Pembrokeshire were amazing experiences, and all the fun I've had with societies and friends here has been unforgettable! The course has been diverse and interesting and has opened doors to lots of different careers that I wasn't even aware of when I started university. There's lots of support and guidance available throughout the course, and I'm really glad I chose to study Chemical Engineering at Bath."

Jack Jones, MEng Biochemical Engineering 2011

For more information
Tel: +44 (0)1225 386338
Email: chem-eng@bath.ac.uk
Web: www.bath.ac.uk/chem-eng

Department of
Chemical Engineering

UNIVERSITY OF BATH