University of Birmingham

Chemical Engineering Science MRes

Postgraduate combined research and teaching degree programme in Chemical Engineering Science MRes

Chemical Engineering is dynamic and evolving. It provides many solutions to problems facing industries in the pharmaceutical, biotechnological, oil, energy and food and drink sectors. It is vital to many issues affecting our quality of life; such as better and more economical processes to reduce the environmental burden, and more delicious and longer lasting food due to the right combination of chemistry, ingredients and processing.

Birmingham is a friendly, self-confident, School which has one of the largest concentrations of chemical engineering expertise in the UK. The School is consistently in the top five chemical engineering schools for research in the country.

It has a first-class reputation in learning, teaching and research, and is highly placed in both ***The Guardian*** and ***The Times*** league tables. The School was recently awarded the **Queen's Anniversary Prize for Higher Education.**

Study here and find out why the University of Birmingham was awarded The Times and The Sunday Times University of the Year 2013-14 (http://www.birmingham.ac.uk/news/latest/2013/09/20-sep-Birmingham-announced-as-University-of-the-Year.aspx)

Course fact file

Type of Course: Combined research and taught

Study Options: Full time, part time

Duration: 1 year full-time, 2 years part-time

Start date: September

Related courses

Postgraduate degree courses - School of Chemical Engineering (/schools/chemical-engineering/postgraduate/index.aspx)

Contact

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School of Chemical Engineering (/schools/chemical-engineering/index.aspx)

Follow us on Twitter (http://twitter.com/eps_unibham)

Details

Selected modules from our taught programmes can be combined with an extended research project to obtain an MRes degree. This is a strongly research-orientated qualification and provides excellent training for further research in industry or academia.

Programme content

Taught modules support the development of both research and transferable skills. All students take a set of compulsory modules and a selection of optional modules of their choice (subject to timetabling) in addition to their research project.

Related links

- **Postgraduate degree courses - School of Chemical Engineering (/schools/chemical-engineering/postgraduate/index.aspx)**
- **The Centre for Formulation Engineering (/research/activity/chemical-engineering/index.aspx)**

Modules

This is a one year, full-time programme comprising a major research project and six taught modules which are taken intermittently throughout the year.

Taught modules

These support the development of both research and transferable skills. All students take a set of compulsory modules and a selection of optional modules of their choice (subject to timetabling).

Compulsory taught modules	Credits
Process engineering fundamentals †	10
Measurement techniques	10
Effective Project Management	10
Presentation and communication skills/team skills development	10
Optional taught modules (20 or 30 credits)	
Bioscience for graduates from other scientific disciplines	10
Cell factories	10
Bioseparations	20
Bioreaction engineering	10
Molecular delivery	10
Characterisation of structured fluids	10
Interfacial physics and chemistry	10
Mathematical modelling of time-dependent processes	10
From bench to market: the development of pharmaceutical drug products	10
Design and development of drug delivery systems	10
Powder technology	10
Developing food structure through thermal processing	10
Hygienic food processing	10
Food flavour	10
Modern genome based bioscience	10
Nanochemistry	10
Materials Characterisation	10
Research	
Project	120

† This module is compulsory for students without an appropriate engineering degree. Students with relevant prior experience will take an additional 10 credits from the optional modules.

Fees and funding

Tuition fees for home/EU students (2015/2016)

Research programmes (including Masters by research) **£4,090***
*Research fees are yet to be confirmed by Research Councils UK, and may change.
Part-time programmes
Most part-time programmes run for two years and their fees are one half of the standard full-time programme fees.

Tuition fees for international students (2015/2016)

International student tuition fees are set at **£17,365** .
For further information please view the **fees for international students (http://www.birmingham.ac.uk/international/students/finance/fees.aspx)** page.

Part-time programmes
UK student visa regulations mean that students classed as overseas for fees purposes may normally only register on a full-time basis.

Standard fees (/postgraduate/pgt-fees/fees.aspx) apply
Learn more about **fees and funding (/postgraduate/pgt-fees/index.aspx)**

Scholarships and studentships
Sources of funding may include the EPSRC, the BBSRC, the Knowledge Transfer Partnership (KTP), the European Union and industrial funding for UK and EU students.International students can often gain funding through overseas research scholarships, Commonwealth scholarships or their home government.

For further information contact the School directly or email **sfo@contacts.bham.ac.uk (mailto:sfo@contacts.bham.ac.uk)**

Entry requirements

The normal entrance qualification for MRes study is either at least an upper second-class Honours degree, or a first degree of a lower classification, along with an MSc or evidence of substantial relevant industrial experience.

Learn more about **entry requirements (http://www.birmingham.ac.uk/students/pg/requirements)**

International entry requirements
We accept a range of qualifications from different countries – learn more about **international entry requirements (http://www.birmingham.ac.uk/students/pg/requirements/international)**

Standard English language requirements (/postgraduate/requirements-pgt/international/index.aspx) apply

How to apply

Learn more about **applying (/postgraduate/courses/apply-pg/index.aspx)**

Apply now (https://pga.bham.ac.uk/lpages/EPS022.htm)

When clicking on the Apply Now button you will be directed to an application specifically designed for the programme you wish to apply for where you will create an account with the University application system and submit your application and supporting documents online. Further information regarding how to apply online can be found on the **How to apply pages (http://www.birmingham.ac.uk/students/courses/postgraduate/apply-pg/index.aspx)**

Apply now (https://pga.bham.ac.uk/lpages/EPS022.htm)

Related links

Postgraduate degree courses - School of Chemical Engineering (/schools/chemical-engineering/postgraduate/index.aspx)

The Centre for Formulation Engineering (/research/activity/chemical-engineering/index.aspx)

Related news and events

University of Birmingham wins Queen's Anniversary Prize for Higher Education (/news/latest/2011/11/queens-prize.aspx)

Learning and teaching

This is a one year, full-time programme comprising a major research project and six taught modules which are taken intermittently throughout the year.

Related research

- **The Centre for Formulation Engineering (/research/activity/chemical-engineering/index.aspx)**

Related staff

Dr Richard Greenwood (/staff/profiles/chemical-engineering/greenwood-richard.aspx)

Employability

University Careers Network

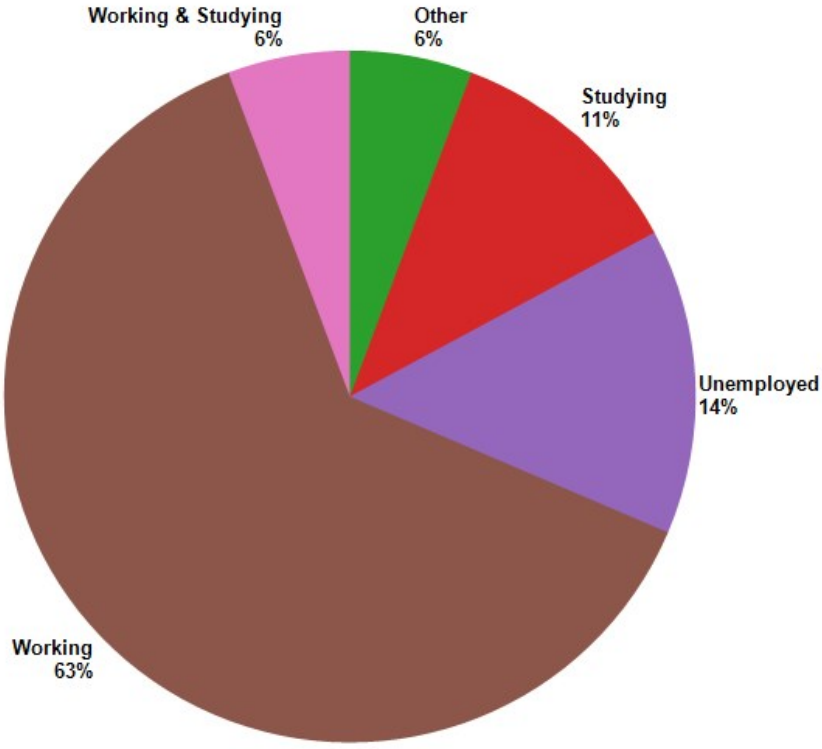
Preparation for your career should be one of the first things you think about as you start university. Whether you have a clear idea of where your future aspirations lie or want to consider the broad range of opportunities available once you have a Birmingham degree, our Careers Network can help you achieve your goal.

Our unique careers guidance service is tailored to your academic subject area, offering a specialised team (in each of the five academic colleges) who can give you expert advice. Our team source exclusive work experience opportunities to help you stand out amongst the competition, with mentoring, global internships and placements available to you. Once you have a career in your sights, one-to-one support with CVs and job applications will help give you the edge.

If you make the most of the **wide range of services (https://intranet.birmingham.ac.uk/as/employability/careers/college/eps/index.aspx)** you will be able to develop your career from the moment you arrive.

Destinations of Leavers from Higher Education (DLHE) 2011/12 (postgraduate taught graduates)

The DLHE survey is conducted 6 months after graduation.



Examples of employers

- Siemens
- Rolls Royce PLC
- Optical Performance Centre
- KPMG
- Microsoft Ltd
- King Edwards Consortium
- J.Sainsburys PLC
- Mondrago Investigations Limited
- Self employed
- NHS

Examples of occupations

- Software Engineer
- Trainee Clinical Scientist
- Technology Graduate
- Secondary School Teacher - Physics
- Research Analyst
- Nuclear Manufacturing Engineer Intern
- Musician
- Recruitment Consultant
- Internet Application Engineer
- Data Analyst

Further study - examples of courses

- MSc Astrophysics
- MSc Computer Science
- MSc Forensic Ballistics
- MSc Medical Imagery
- MSc Nuclear Physics
- MSc Physics and Technology
- MRes Chemical Engineering
- PhD Electronic Engineering
- PhD Physical Sciences

Visit the **Careers section of the University website (https://intranet.birmingham.ac.uk/as/employability/careers/college/eps.aspx)** for further information.