

College of Engineering  
and Physical Sciences

# What do Birmingham postgraduates do?



## School of Mechanical Engineering

*First destinations of postgraduates*

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- Analysis of first employment destinations for the College of Engineering and Physical Sciences
- Employability data for our postgraduates, 2009–13
- Illustration of the range of occupations undertaken by our postgraduates

# Foreword

I AM DELIGHTED TO INTRODUCE 'WHAT DO BIRMINGHAM POSTGRADUATES DO?' WHICH LOOKS IN DETAIL AT THE FIRST DESTINATIONS OF OUR MECHANICAL ENGINEERING POSTGRADUATES AND AT EMPLOYMENT PROSPECTS FOR ALL POSTGRADUATES WITHIN THE WIDER COLLEGE OF ENGINEERING AND PHYSICAL SCIENCES.



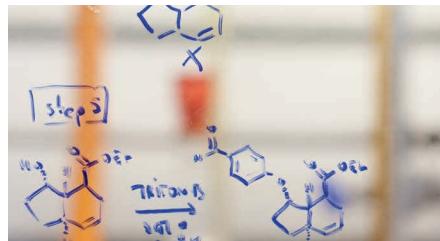
In addition to providing accessible information on employment destinations, this publication is also designed to give an insight into the kinds of employment sectors and jobs for which a postgraduate degree at Birmingham can prepare you.

Pursuing a postgraduate degree offers you the opportunity to explore your chosen area of interest in depth, as well as developing your knowledge and understanding in a subject area about which you are truly passionate. Beyond the transferable skills that you will take with you into the workplace, your postgraduate



'At Atkins, most of our roles have a minimum requirement of a Masters degree. We value technical knowledge and academic achievement, which we can then build on for the graduate programme. This is why we require most of our graduates to have a Masters.'

**Kate Poade**, Assistant Graduate Recruitment Advisor, Atkins.



qualification will give you the chance to engage in critical enquiry, to grow as a scholar and even to become an expert in your field.

Here, we show you how your postgraduate qualification can help you make that knowledge and expertise work for you after graduation. For the school that is most relevant to you in the College (Chemical Engineering; Chemistry; Civil Engineering; Computer Science; Electrical, Electronic and Systems Engineering; Mathematics; Mechanical Engineering; Metallurgy and Materials; or Physics and Astronomy) you will see a snapshot of the achievements of our postgraduates six months after graduation. All data is taken from the results of a 'Destinations of Leavers' survey issued to our postgraduates after this time.

You will be able to see, by school, how many of the postgraduates who replied to this survey successfully entered employment and/or further study within just six months, along with a range of the diverse and exciting career opportunities that will be open to you after studying

for a postgraduate degree in the College of Engineering and Physical Sciences.

Accompanying the data are case studies in which recent postgraduate alumni share their experiences of postgraduate study at Birmingham. Here, our alumni talk about the value inherent in postgraduate study, the knowledge and skills they developed during their degrees and where their qualifications have taken them since graduation.

I hope you find the information presented here useful and our alumni stories inspiring. We very much look forward to welcoming you to our campus soon.

Professor Mark Sterling  
Director of Postgraduate Programmes  
College of Engineering and Physical Sciences



## College of Engineering and Physical Sciences

# Employability

The College of Engineering and Physical Sciences is at the leading edge of modern science and engineering, transforming our understanding of the world to make life easier, healthier and more sustainable.

The College covers a broad range of world-leading research, from developing micro-engines to particle physics research at CERN. With a century of excellence in research and teaching, the College offers exciting initiatives in new fields of study and spearheads activities in strategically important STEM subjects – Science, Technology, Engineering and Mathematics.

The College of Engineering and Physical Sciences plays a significant role in creating new knowledge, training new generations of engineers and scientists, and interfacing with industry.

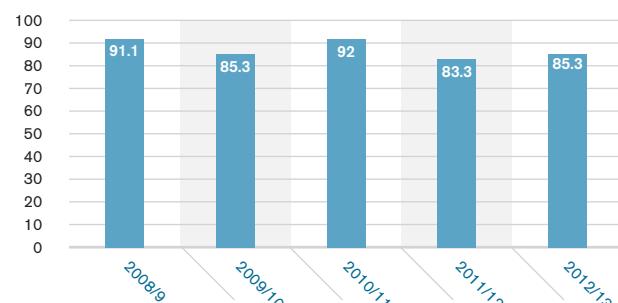
The College consists of the following nine schools:

- Chemical Engineering
- Chemistry
- Civil Engineering
- Computer Science
- Electronic, Electrical and Systems Engineering
- Mathematics
- Mechanical Engineering
- Metallurgy and Materials
- Physics and Astronomy

Over the last five years, 90.9% of taught postgraduates and 92.5% of research postgraduates from the College of Engineering and Physical Sciences have been in work and/or further study just six months after graduating.

The two charts to the right show the breakdown of these statistics for each year, for taught postgraduate and research postgraduate respondents.

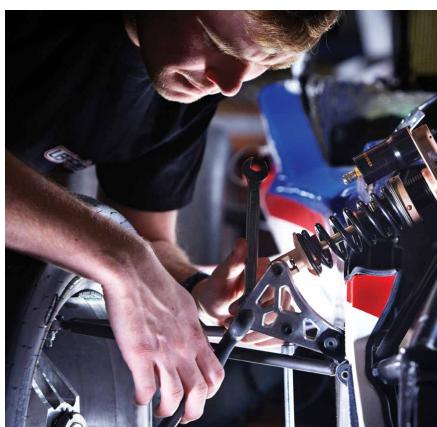
**Percentage of Engineering and Physical Sciences taught postgraduate respondents in work and/or further study six months after graduation**



**Percentage of Engineering and Physical Sciences research postgraduate respondents in work and/or further study six months after graduation**



SOURCE: *Destinations of Leavers from Higher Education Institutions*, Higher Education Statistics Agency, 2009–13



'Studying an MSc in Operations Management in the School of Mechanical Engineering at Birmingham was one of the best decisions I made for both my personal and career goals. I made contact with very helpful lecturers who ensured that the students, from diverse educational backgrounds, understood what was taught. The contacts I made with my professors enabled me get a job in my field of interest, and the University's strong research culture motivated me to apply for a PhD. It is satisfying to be able to apply the things I learnt

to real life and I am now looking forward to doing my part-time PhD at Birmingham too!'

**Diana Kabeizi, MSc Operations Management**  
*Diana now works for WSP Transportation, Cambridge.*

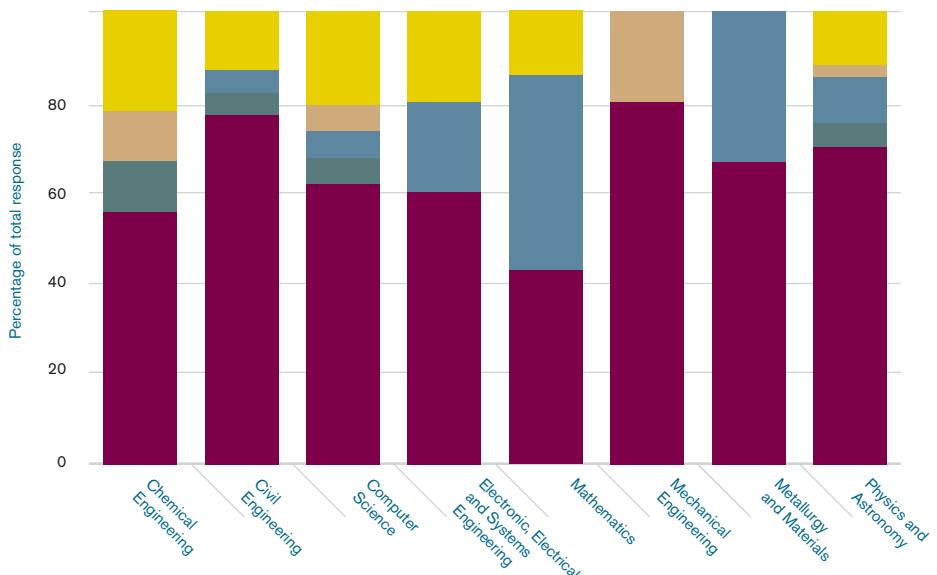
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## College of Engineering and Physical Sciences

# Postgraduate destinations

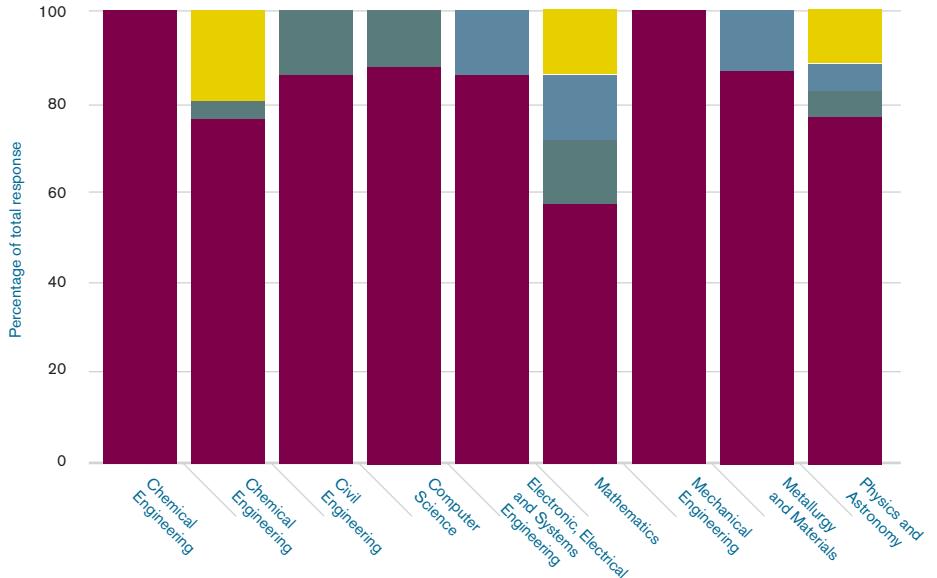
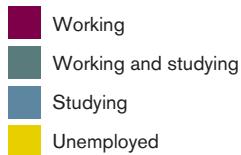
### Taught postgraduate destinations

The chart to the right summarises the destinations of Engineering and Physical Sciences taught postgraduates from the 2012/13 academic year, six months after graduation:



### Research postgraduate destinations

The chart to the right summarises the destinations of Engineering and Physical Sciences research postgraduates from the 2012/13 academic year, six months after graduation:



SOURCE: *Destinations of Leavers from Higher Education Institutions*, Higher Education Statistics Agency, 2009–13

'The support that I received from my supervisor and colleagues at Birmingham was excellent. My PhD was a fantastic way to learn new approaches to system design. Initially, I was a bit cautious about moving to a big city, but Birmingham offers you a great deal of options in terms of what to do in your spare time. The people are friendly and welcoming too, which always helps when you're away from your home town. I'm now working in the mental health field. Since graduating I have created a community interest company – Pervasive Technology Lab (CIC) – to develop computer applications to help people with mental

health problems. In association with a local mental health charity, we won an award from the Big Lottery Fund to develop a serious game to help people with depression. My PhD made me aware of approaches to system design which should involve human factors as well as technical considerations. My supervisor encouraged me to publish scientific papers in order to disseminate my findings, meaning that other researchers can benefit from my work. I'd definitely advise any prospective doctoral researcher to apply to Birmingham – the quality of teaching is high, the University

is well established and Birmingham is a great place to study.'

**David Haniff, PhD Mechanical Engineering, graduated 2005**

*David is now Director of the Pervasive Technology Lab (CIC), a non-profit company looking into the use of new technology to help people with mental health problems.*

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# School of Mechanical Engineering

## EMPLOYABILITY

Mechanical Engineering at Birmingham produces graduates who are creative, highly numerate and skilled at solving problems and delivering results. From nanotechnology to vehicle and aero-technology, our research scales the full range of engineering disciplines to support manufacturing industry world-wide.

### Highlights:

- 85.3% of all postgraduate respondents from Mechanical Engineering over the past five years were in work or further study six months after graduation
- 100% of all Mechanical Engineering postgraduate respondents from 2013 successfully found work or further study within six months of graduation

Many of Birmingham's Mechanical Engineering postgraduates successfully enter careers

related to the subject in various sections of the engineering industry. It is increasingly common for students in this subject area to undertake specialist postgraduate study after an undergraduate degree. Our postgraduates then go on to work for a range of companies including mechanical engineering companies; vehicle and aeronautical manufacturing companies; construction companies and contractors; energy companies; consultancies; and government-supported scientific establishments.



## RANGE OF OCCUPATIONS

**Below is an overview of the kinds of employment sectors, organisations and professions that recent Mechanical Engineering postgraduates have entered, based on responses to 'Destinations of Leavers' surveys conducted six months after graduation.**

### Range of employment sectors

- Aerospace industry
- Architectural and engineering activities and related technical consultancy
- Higher education
- Legal activities
- Manufacture of electrical and electronic equipment for motor vehicles
- Manufacture of engines and turbines
- Printing
- Transmission of electricity

### Range of employers

- Alstom
- Appleyard Lees (patent and trademark attorneys)
- Ford European Research Centre
- Moog Aircraft Group
- National Printing Bureau
- Rolls-Royce
- United Technologies Aerospace Systems
- University of Birmingham
- University of British Columbia

### Range of occupations

- Assistant Manager
- Lecturer
- Mechanical Design Engineer
- Patent Attorney
- Project Manager
- Research Fellow
- Senior Engineer

'The MSc in Operations Management combines engineering knowledge and skills with management and science, providing a wide range of employment opportunities in both technical and managerial environments across the world.'

'The taught modules enabled me to understand the application of business and management expertise in the industrial and engineering sectors; the summer project allowed me to apply my understanding to real-life problems. The lecturers are very helpful and have considerable experience in both academia and in industry. I consider studying my MSc at the University of Birmingham one of my most influential experiences and I had no hesitation in staying on for full-time research and completing my PhD.'

**Khalid Al-Ghamdi, MSc Operations Management and PhD Mechanical Engineering, graduated 2011**

*Khalid is now an Assistant Professor of Industrial Engineering at King Abdulaziz University and an Honorary Research Fellow in the School of Mechanical Engineering at the University of Birmingham.*

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