College of Engineering and Physical Sciences

What do Birmingham postgraduates do?

School of Civil Engineering

First destinations of postgraduates

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

www.birmingham.ac.uk/civil-engineering
Foreword

I AM DELIGHTED TO INTRODUCE ‘WHAT DO BIRMINGHAM POSTGRADUATES DO?’ WHICH LOOKS IN DETAIL AT THE FIRST DESTINATIONS OF OUR CIVIL 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 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.

‘It is my pleasure and privilege to be amongst the University of Birmingham’s alumni. I was awarded my Masters degree in Construction Management in December 2009. The course provided useful training in construction management skills by addressing the management of engineering techniques and developing practical skills in the management and implementation of construction projects in a professional capacity. My time at the University of Birmingham was fantastic and beneficial for me: a good experience for exploring different cultures and knowledge.

‘I am now working as a senior construction consultant at a governmental organisation funding new industrial projects. The practical training and personal skills gained during my Masters degree enable me to do my job in a professional way. Since graduating from Birmingham, I have participated in technical studies of 95 new industrial projects and I have been in charge of preparing appraisal studies for integrated building and civil works in terms of their specifications and design, estimated costs, execution time, tendering process, scheduling and monitoring of the main stages of construction.’

Eid Almutairi, MSc Construction Management, graduated 2009
Eid is now employed as a Senior Construction Consultant.

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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:

- Working
- Working and studying
- Studying
- Other
- Unemployed

**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:

- Working
- Working and studying
- Studying
- Other
- Unemployed

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‘At Amey, we place great value on employing candidates with postgraduate degrees. They bring a hard work ethic and dedication to their technical discipline, and these qualities are evident when they take on additional responsibility as part of the graduate training programme. A postgraduate qualification also enhances the probability of attaining Chartership.

‘Ramin Akhyani, a former Birmingham postgraduate from Engineering and Physical Sciences, recently joined Amey and immediately took on projects to broaden his knowledge and add business value. This included project leading our prestigious Annual Graduate Conference, which was delivered alongside his day job. Furthermore, Ramin achieved a finalist position in the NCE Graduate of the Year awards. He is now progressing with his ICE Chartership and will hopefully become a Chartered Engineer in the very near future.’

**Simon Fletcher, HR Manager, Amey**
School of Civil Engineering

EMLOYABILITY

Alumni from our postgraduate programmes in Civil Engineering can be found in nearly every country around the world, and are held in high regard by the engineering community.

Highlights
Over the past five years:
- 92.4% of taught postgraduate respondents were in work or further study six months after graduation
- 87.1% of research postgraduate respondents had successfully found work or further study six months after graduating

After specialising and honing their knowledge and skills at postgraduate level, many of Birmingham’s Civil Engineering postgraduates successfully enter careers related to the subject in various sections of the engineering industry. Many of our graduates work for civil engineering companies, construction companies and contractors, consultancies, banks, and local government and government-supported scientific establishments.

The two charts to the right show results from ‘Destinations of Leavers’ surveys for our Civil Engineering postgraduates over the past five years.

‘During my time as a doctoral researcher in Civil Engineering I attended several conferences, including the 4th European and African Conference on Wind Engineering in Prague, where I presented a paper. I also presented my work at the Wind Engineering Society’s University Day, where I was happy to be awarded the prize for the best presentation. However, more memorable than this was when my viva examiners shook my hand and said “Congratulations, Dr Jordan”!

‘After my PhD I worked for a leading wind engineering consultancy as, initially, a project engineer. After gaining this experience I moved into project management within the company. I returned to the University of Birmingham as a research fellow working with railway aerodynamics, and am the manager of the TRAIN rig. This is a purpose-built facility to investigate transient railway aerodynamics, and fires model-scale trains down a 150 metre-long track. I hope to continue working at the TRAIN rig researching various aspects of vehicle aerodynamics.’

Sarah Jordan, PhD Civil Engineering, graduated 2008
Sarah is now employed as a Research Fellow at the University of Birmingham.
School of Civil Engineering

RANGE OF OCCUPATIONS

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

Range of employment sectors
- Construction of residential and non-residential buildings
- Construction of other civil engineering projects
- Defence activities
- Engineering and technical consultancy
- Higher education
- Manufacture of concrete products
- Information technology and computer services
- Public order and safety activities
- Test drilling and boring
- Urban and suburban passenger land transport
- Water collection, treatment and supply

Range of employers
- Amey
- Anglian Water Services
- Atkins
- Balfour Beatty Construction
- Costain Group (engineering and construction)
- Geotechnics Limited
- Home Office
- KPMG
- Mott MacDonald
- Network Rail
- NERC Centre for Ecology and Hydrology
- Parsons Brinckerhoff
- Severn Trent Water
- Structural Soils Ltd
- University of Birmingham

Range of occupations
- Asset Management Consultant
- Civil Engineer
- Climate Change Analyst
- Consultant in Sustainability Services
- Geotechnical Engineer
- Highways Engineer
- HM Inspector of Railways
- Hydrological Data Scientist
- Principal Engineer in Network Modelling
- Researcher
- Senior Industrial Construction Analyst
- Senior Engineer
- Venture Analyst
- Water Resources Technician

‘I work predominantly on projects designing water-retaining and water-conveyance structures, such as dams and pipelines, for clients from both the public and private sectors. Western Australia is currently undergoing a mining boom, so projects are coming thick and fast with great diversity. Although I am predominantly office-based, I have gained significant site exposure, working on large construction sites in extremely remote areas.

‘My Masters degree prepared me perfectly for a career in the water industry. It provided advanced training in theory and design, integrating scientific, engineering and management aspects, all of which are integral to succeed in the consulting practice. The Water Resources Technology and Management course is well established and leading employers are very familiar with the skills and qualities of successful graduates. This was clear in the diverse range of students attending the course, hailing from all corners of the globe. This, in part, is what made the course extra special. The course was very challenging but highly rewarding; diverse enough to provide a good grounding for the water industry, whilst remaining technically detailed to enable specialisation. I use the knowledge I obtained from my Masters on a daily basis and can safely say that I would not be in my current job if I had not undertaken the course.’

Joshua Oliver, MSc in Water Resources Technology and Management, graduated 2008

Joshua is now a Water Engineer for global engineering design consultancy Sinclair Knight Merz, based in Perth, Australia.

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