

Faculty of Engineering & Design



UNIVERSITY OF
BATH

Industrial Placements

A guide
for Industry



Industrial Placements

The Faculty of Engineering and Design has built close links with engineering companies through research, projects, placements and graduate employees. We know that working with industry ensures our curriculum is relevant to prospective employers and our students have the right employment skills.

As part of their degree, students have the option of working for a year with major industrial companies, smaller businesses or government research establishments. All students need to develop employability skills while they are at university and industrial placements contribute significantly to a student's development preparing them for the workplace.

The benefits to your organisation of employing a placement student:

- High-quality employees without long-term commitment
- An opportunity to fill a temporary vacancy or get help with a project
- A chance to raise your profile on campus among a future graduate workforce
- Opportunities to develop links with the University, which may lead to joint research and projects
- Investing in the next generation

Our Placement Team

Unlike many other Universities, we have a dedicated Placement Team to help students and businesses with the placement process and ensure that the right student is placed with the right company. We are fully committed to industrial placements and run one of the largest and most established placement schemes in UK higher education.

2	Faculty Departments
3	Why employ a placement student from Bath?
5	How to employ students
	Our students:
7	Architecture
9	Civil Engineering
11	Chemical Engineering
12	Electronic & Electrical Engineering
15	Integrated Mechanical & Electrical Engineering
17	Mechanical Engineering
18	What Industry says
20	Services for Business
Back	Placement Team contact details

Businesses and Universities working together is the way forward for a future talented workforce

CBI Higher Education Task Force



Marcus Johnson
MEng (hons) Mechanical Engineering
Employed in the Production Engines Performance Team at Rolls Royce Defence Aerospace in Bristol

“My placement with Rolls-Royce has given me an invaluable insight into the structure, procedures and operations of a leading engineering company. It was great to have a positive impact on one of the company’s most advanced jet engines. ”

Departments

All departments offer industrial placements:

- Architecture and Civil Engineering
- Chemical Engineering
- Electronic & Electrical Engineering
- Mechanical Engineering

Learning topics and projects covered by engineering undergraduates and the skills they could bring to your business:

Design and Innovation

- Design and development of products and processes
- Product formulation
- Production analysis and control
- Innovation and technology management
- CAD, FEA, CFD, CAM
- Engine technology
- Advanced materials and composites
- Research and development
- Proof of concept and proof of principle research
- Hydraulics
- Structural design and construction

Operations and Production

- Scale up and pilot plant trials
- Commissioning
- Process optimisation
- Dynamic modelling and simulation
- Risk assessment
- Financial appraisals and project decision-making
- Data analysis and management
- Process analysis and control
- Plant modifications
- Surveying and geology
- Project Management

Electronic & Electrical Systems

- Electronic signals, systems and communications
- Digital electronic design and microelectronics
- Power electronics and drives
- Satellite, terrestrial and mobile communication systems
- Digital image processing

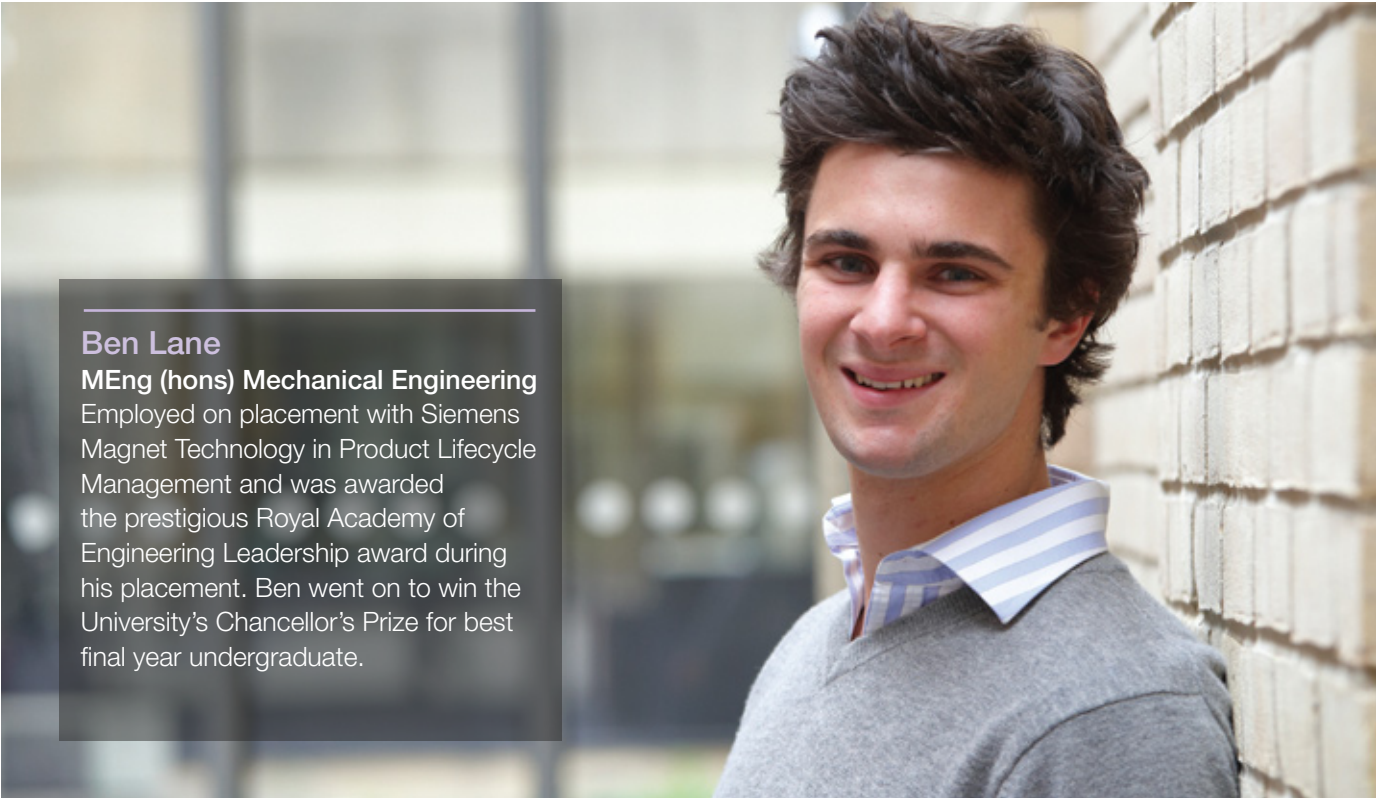
Energy & Environmental

- Environmental impact and sustainability
- Energy and the environment
- Energy management systems
- Safety and environmental reviews
- Water and effluent minimisation and management
- Air pollution control
- Waste minimisation and management

Why employ a placement student from Bath?

The Times Good University Guide confirms Bath’s ranking among the top universities in the UK.

Bath is one of the most successful universities in the UK. We specialise in engineering, the sciences and management. Our reputation is founded on the quality of our teaching, industrial collaboration and research. Our students are taught by staff working at the fore front of technology. We offer high quality MEng and BEng Honours degree programmes to high achieving undergraduates who want to become the leading professional engineers of the future.



Ben Lane
MEng (hons) Mechanical Engineering
Employed on placement with Siemens Magnet Technology in Product Lifecycle Management and was awarded the prestigious Royal Academy of Engineering Leadership award during his placement. Ben went on to win the University’s Chancellor’s Prize for best final year undergraduate.

The benefits of employing a Bath undergraduate:

- Fresh ideas and talent from a motivated student
- A cost effective way of assessing students for future full-time employment
- Support and facilities provided by the Placement Team
- No UK university has more placement experience than we do

A placement can be seen as an extended interview for both parties, and is a very cost-effective way of recruiting. Many of our students return to their placement employers after graduation or apply to companies who are regular placement providers because they are known on campus.

As a planned and budgeted resource student employees can add real value to a business.

The student had a thirst for knowledge which was a delight to be around. His enthusiasm was infectious throughout the business.

Dr David Seaward
3P Innovation





Tom Yates
MEng (hons) Mechanical Engineering
 Employed on placement with Ricardo in Performance and Calibration and the Clean Energy Product Group. Tom was awarded the prestigious Royal Academy of Engineering Leadership award during his placement year. In his final year Tom was Team Manager for Team Bath Racing competing in the IMechE Formula Student competition

Tom was given a key calibration task on a customer project which quickly expanded in complexity. It required data analysis, software comprehension, vehicle testing and a time plan to ensure delivery. The results look very good and meet the customer expectations on something they had struggled to do. I am personally pleased to have worked with Tom and hopes he considers returning to Ricardo.

Raoul Day
 Chief Engineer
 Diesel Performance and Calibration
 Ricardo plc



How to employ students

Our service to you

Our Placement Team provides access to candidates across all engineering disciplines. We also work in collaboration with other Faculties if you want to employ across the degree disciplines from the sciences, computer science or management. Send us a job description and advert that describes your business, area of work and the type of skills you need, and we will advertise your vacancy internally to the right students.

We can arrange for you to give a presentation on campus, visit departments and meet students and staff. We will also collate CVs and cover letters and send them to you, or direct students to your online application process.

Interviews can be held at the University. We arrange the schedule, book the rooms and contact students, making the process easy at no cost to you. You can also interview students at your site. In this case we just ask that travel expenses be reimbursed

When to Start

Recruitment begins in October. We advise companies to start early to secure the right candidates. There are two opportunities to advertise and interview students:

Semester 1: October to mid-December
Semester 2: February to Easter

Exams take place throughout January and May each year and we request that interviews and assessment centres are not scheduled for these months. Students are able to start their placement from June, July, August or September and this is negotiable with the company. Placement contracts are for a 12 month period but can be extended.

Rights and responsibilities

All placements are paid and students earn between £15,000 and £23,000 per year. There is no hard-and-fast rule as to what type of work is suitable since a great deal depends on the student's own maturity, skills and abilities, and the requirements of your organisation.

Students need to be:

- Fully contracted employees of the company
- Offered contracts that are in accordance with the Employment Rights Act 1996
- Work in environments that conform to health and safety standards
- Covered by Employer's Liability Insurance

Employers need to:

- Plan the training and work programme to be undertaken
- Treat the student as a member of the workforce
- Nominate a mentor or supervisor for day to day care

Maintaining Contact

We stay in touch with students to ensure everything is going well throughout the year. Students keep a daily logbook and send us regular reports on their progress. An academic will visit them on site during the year.

At the end of the placement, after appropriate clearance from their supervisor, the student will submit:

- End of placement Final Report
- A1 poster illustrating their experiences
- Employers Assessment Form

Faculty Placement Team

Companies return to us because of the service we offer in connecting them to the right student and the facilities and support we give. For further information and advice on the placement process or to organise a campus event or presentation contact the Faculty Placement Team. Details on back page.

The standard of students is exceptionally high and the advice and support we receive from the Placement Team has been invaluable. It is our opinion that Bath University attracts extremely talented individuals that have a real passion for engineering.

Alison Hallsworth
 OC Robotics





Sarah Gerrard

BSc (hons) Architecture
Employed at Atkins Global in Property
& Design at Bristol.



“I had a great time, working hard, making friends, and getting the jobs done.

My Placements showed me a small dose of real life, which has encouraged me, and excited me through my studies. Working in a professional environment, and realising the potential of the skills that I had gained at university, was very uplifting and exciting.

Taking skills from university into an office environment and back again into my academic studies was a great way to learn more of the realities of the architectural world. It’s an invaluable learning experience.”

Architecture

Professional Placement:
Two compulsory periods in Architectural practice during the 2nd semester of years 2 & 3

- Architecture:**
- BSc (Hons) Architecture - 4 years of academic study, including 2 semesters of professional placement (Part 1)
 - Masters (M.Arch) - 2 years of academic study including 1 semester of professional placement (Part 2)
 - Postgraduate Certificate in Professional Practice - 1 year part time study undertaken after completion of 12 months in practice after achieving the M.Arch degree (Part 3)

One of the special features of studying Architecture and Civil Engineering at Bath is the strong ties between study and practice.

Architecture students acquire workplace skills prior to graduation with Placements in Practice embedded within the four year programme. Therefore undergraduates can apply the knowledge acquired in architectural practice throughout their education. It also allows students to continue Placements over the summer in both second and third years, which fully exploits the calendar year in developing their architectural experience.

Architecture at Bath is taught within the Department of Architecture and Civil Engineering and students benefit from the expertise of leading academics and practitioners in the field of structural and environmental engineering, as well as architecture.

www.bath.ac.uk/ace

The student contributed fully to our office, and carried out every task she was given diligently, responsibly, and to the best of her abilities. She was articulate, interested and behaved professionally at all times. She was a pleasure to have around, and a genuine help during her few months with us at IBLA. I look forward to welcoming her back at sometime in the future.

IBLa
Architects, London





William Davies

MEng (hons) Civil Engineering
Employed at HR Wallingford in Coastal Engineering, Independent Research and Consultancy in Civil Engineering at Wallingford.

“A year-long placement with HR Wallingford resulted in significantly more responsibility than if I were to just be a part of the company for the summer. Being with the company for a whole year meant that it was worth investing more time and energy into my role, and it was not long before I was treated as an independent engineer on projects. Company software and practise quickly became familiar, and by the end of the placement, I was certainly a valued part of the department.”

Civil Engineering

Optional one year placement after year 2

Civil Engineering:

- BEng Civil Engineering
- MEng Civil Engineering
- MEng Civil and Architecture Engineering

Our Civil Engineering programmes develop students ability to work creatively with other professions in the design of buildings and civil engineering projects. The integration of environmental impact and engineering design in the construction and operation of large infrastructure projects is a major focus of the course. All students on the MEng and BEng in Civil Engineering, work with architectural students in design project work.

www.bath.ac.uk/ace

It is a rare for us to employ someone of Will's abilities at the Industrial Placement level. I very quickly realised that I could give him duties and responsibilities that someone in his position would not normally be expected to manage.

Dr Tim Pullen
Senior Engineer
Coastal Structures Group
HR Wallingford Ltd





Amy Lake

MEng (hons) Chemical Engineering

Employed at BP as a Chemical Process Engineer in the Process Safety Department at Sunbury.

“My contribution to the BP team has been varied and enabled me to apply my chemical engineering knowledge to real life problems. I researched flare systems and amine processes, and gathered examples of best practice from operating experience to write a report which will be used to improve the design of these systems in the future. I have contributed at a HAZOP (Hazard and Operability Study) to safely dewater a subsea pipeline.

I made proposals on a CFD (computational fluid dynamics) analysis, checking gravity separator designs and performing orifice calculations on relief valves.

In addition, I applied my software knowledge by creating an energy efficiency website using Microsoft SharePoint and modelled processes using Apsen Hysys.”

Chemical Engineering

Optional one year placement after year 3

Chemical Engineering:

MEng & BEng Degree Programmes:

- Chemical Engineering
- Chemical and Bioprocess Engineering

The majority of Chemical Engineering students who go on placement are on MEng programmes having completed three full academic years of study and are extremely well equipped to deal with a role in industry. On placement, our students perform to a high degree and in many cases have made a substantial financial, technical and operational impact to the employing company. Many of our students are offered permanent employment after graduating, or are fast tracked to graduate schemes.

www.bath.ac.uk/chem-eng

The Department at Bath is a consistent provider of good quality students who deliver real ideas and engineering solutions to the BP project teams.



Hazel E Burrows
BP International Ltd

Electronic & Electrical Engineering

Optional one year placement after year 2

Electronic & Electrical Engineering:

MEng & BEng Degree Programmes

- Electrical & Electronic Engineering
- Electronic & Communication Engineering
- Electronics with Space Science & Technology
- Computer Systems Engineering
- Electrical Power Engineering
- Integrated Mechanical & Electrical Engineering IMEE (An MEng only joint programme with the Dept of Mechanical Engineering)

Electronic and Electrical Engineering students are equipped with the key engineering skills needed for successful careers in the fast-moving global industries of the 21st Century. Project work is a major strength, with the second semester of years 3 and 4 devoted to group and individual project work. Strong partnerships with industry through placements allow students to further develop their engineering skills. These advantages mean the Department's graduates are highly sought after by employers, typically going on to exciting and rewarding careers in telecommunications, aerospace, electronics, project management, computing, power and engineering consultancy.

www.bath.ac.uk/elec-eng

Internships enable Intel to develop future graduates to meet our hiring plans long term. It also ensures we successfully complete projects & corporate objectives with fresh new ideas and latest theoretical knowledge which students bring to the company.

Stephanie Lee
College Programme Manager
Intel



Talini Pinto Jayawardena
MEng (hons) Electronics with Space
Science & Technology
Employed at the Rutherford Appleton
Laboratories (RAL) at Didcot.



“Taking a year-long industrial placement has been one of the best decisions I’ve made in my University life. It was a stepping stone to experiencing life in the real world and provided an excellent opportunity to see theory put in to practice. My placement at RAL let me greatly increase my technical skills and provided a lot of training - which will no doubt be invaluable for me in the future. I was able to steer the placement towards my own interests which was both useful and exciting and, as a bonus, I got to visit particle accelerators in the USA and Switzerland!”



Charles Webber

MEng (hons) Integrated Mechanical and Electrical Engineering
Employed at Rolls Royce in Defence Aerospace at Bristol.

“My time at Rolls-Royce has opened my eyes immensely to the world of opportunity that is engineering. My technical skills have improved rapidly as I apply what I have learnt at University to my everyday work. My ability to communicate and work within a team, as well as my confidence, has come on leaps and bounds in the few very short months I have spent working alongside the years of experience of all the engineers with whom I have day-to-day contact. Everyday brings new challenges that shape and guide me towards my future career.”

Integrated Mechanical & Electrical Engineering (IMEE)

Optional one year placement after year 2

The aim of the MEng IMEE degree programme is to satisfy the needs of both the industrial and research communities for students who can integrate the principles and applications of mechanical, electrical and electronic engineering and apply them in the design and development of products and systems across both engineering and non-engineering sectors.

Traditional engineering education is discipline specific but industrial workplaces and research laboratories today require students to join multi-functional teams engaged in the development of complex projects. This degree programme has been designed, in collaboration with industry, to meet these needs.

www.bath.ac.uk/study/imee



Rolls-Royce

The technical standard of the student is very good and they seem to get good support from the University. I think the work we do in Rolls-Royce is suited to the material content of the degree course. I will definitely be looking into getting another Bath student next year. The work he has contributed to the department is of the standard of a graduate.

Joanne Jamieson
Project Manager, Rolls Royce



Kevin Ukoko Rongione

MEng (hons) Mechanical Engineering

Employed at Williams F1 as a Junior Design Engineer in the Suspension, Steering and Brakes Department at Wantage.

“From a very early age I dreamed of working in Formula 1. With a lot of motivation and great support from the Faculty Placement Office, I was able to work for Williams F1 team for my placement year.

“Due to the fast paced nature of the sport, I was involved in the whole process of creating an F1 car; from initial designs and concepts, to building the car and seeing it race on track. This has been a fantastic experience where I have learned a great deal. Not only has it taught me key skills which have been invaluable in my final two years of my course, but I am now in a great position to find a good graduate job.”

Mechanical Engineering

Optional one year placement after year 2

Mechanical Engineering:

MEng & BEng Degree Programmes

- Aerospace Engineering
- Automotive Engineering
- Mechanical Engineering
- Mechanical with Advanced Design and Innovation
- Mechanical with Manufacturing and Management

Our programmes have a mix of academic rigour and practical experience which equip students to enter industry and prosper on many levels as engineers or in management. We have an excellent reputation with industry and one of the highest records of graduate employment. The first two years involve a core of basic engineering subjects providing a broad base of engineering before the option of a year working in industry. In years 3 & 4 students work together with a group business and design project and an individual research project in one of five specialist degree programmes.

www.bath.ac.uk/mech-eng

Undergraduates quickly become closely integrated members of the team. After an initial period of training in CAD and detail design they make a very strong contribution to the design and development of the car whilst working under the guidance of senior engineers. The scheme has been running for several years with considerable success and Williams benefit from the work output of enthusiastic and passionate engineers at the beginning of their careers.

Ed Wood
Chief Designer
Williams Grand Prix Engineering



What Industry says

Unilever took a strategic decision to strengthen links with the top universities in order to access future talent in the technical disciplines of chemical, mechanical, and electrical engineering. Bath provides high calibre young people hungry and keen to develop and do well. They gain exposure to the real world in a technology driven, business organisation leading the way in FMCG. They add real value as a full member of the team, expected to deliver within our new products, innovation and supply chain capability.

Richard Ward
Innovation Planning Manager
Unilever UK



The undergraduate placement works for both Jaguar Land Rover (JLR) and the student. For JLR it gives an opportunity to see a potential graduate employee at work and make an assessment of their suitability over the year placement. It will also result in a piece of work being done that would have been done by an Engineer, either something that could add value to the product or perhaps pull forward a new feature to appear earlier in the car. For the placement student it gives them a clear idea of the world of work and whether they want to be employed by JLR.

Peter Wright
Calibration and Controls Manager, Hybrid Shared technology



We believe this is a real 'win win' relationship as we get enthusiastic and talented engineers to work with us and the students get an excellent grounding in what it is like to work in this highly technical environment and learn many new skills in the process.

Peter Sheldon
Chief of Hydro-Mechanical Technology
Aero Engine Controls



Marta Ferreira
BSc (hons) Architecture

Organisations providing placement opportunities to University of Bath undergraduates include:



Business

As well as placements, we offer a wide range of services to business which help companies innovate for competitive advantage

Access our expertise

- Research collaboration
- Knowledge Transfer Partnerships
- Licensing and commercialisation
- Consultancy
- Partnerships and networks
- Innovation Centre
- Directory of expertise

Develop your people

- Continuing professional development
- MBA programmes
- Business administration
- Executive development
- Training and courses

Work with students

- Graduate recruitment
- Student placements

How we excel

- Our research
- Specialist facilities and analytical services
- Industry links
- RAE results

www.bath.ac.uk/business

www.bath.ac.uk/research

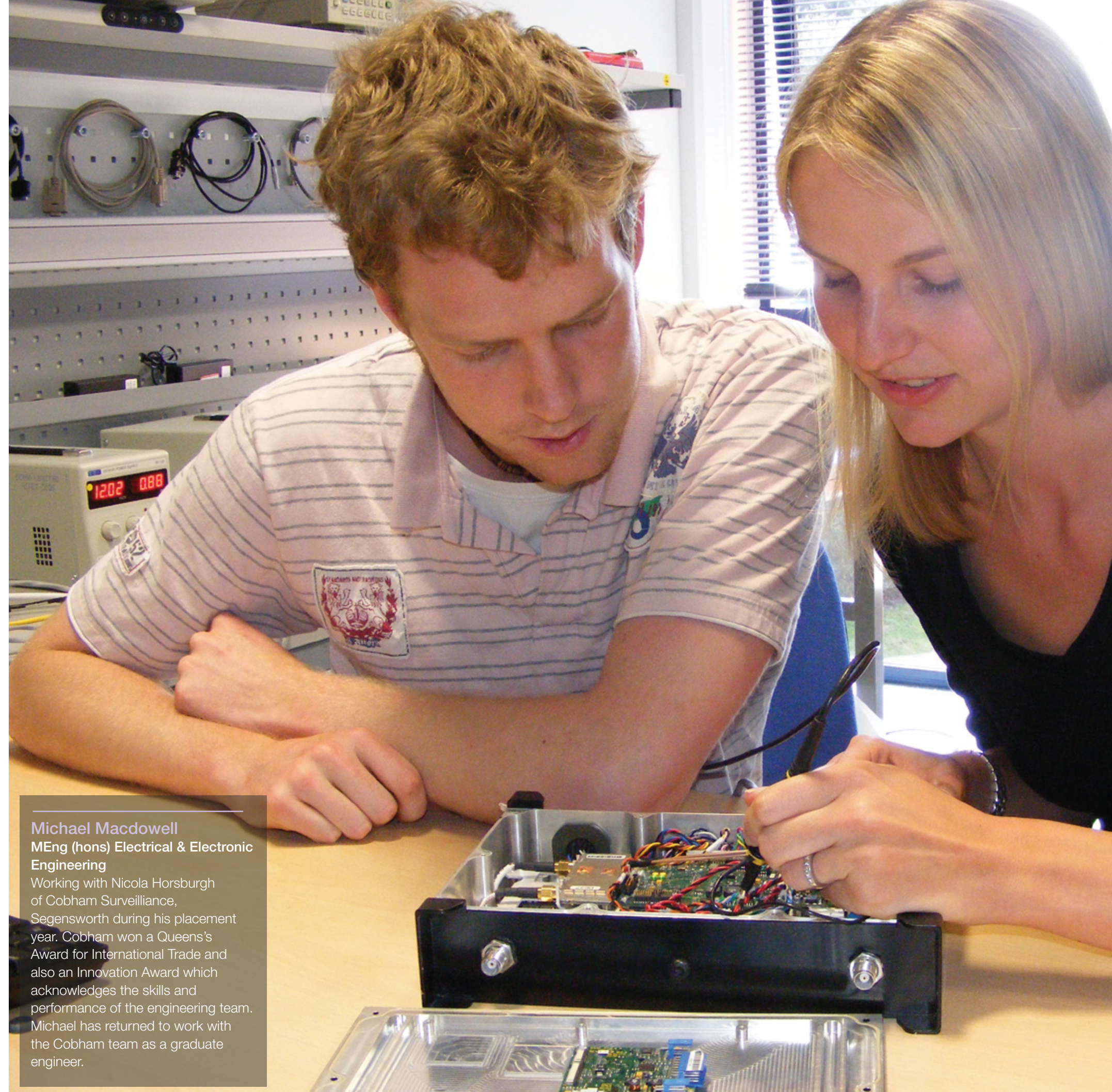
www.bath.ac.uk/careers

Conference Facilities

For conferences, meetings and events including accommodation:

www.haatbath.co.uk/hospitality/events

Information on Faculty of Engineering & Design undergraduate & postgraduate projects, research groups and academic expertise can be accessed through the departmental web sites.



Michael Macdowell

MEng (hons) Electrical & Electronic Engineering

Working with Nicola Horsburgh of Cobham Surveillance, Segensworth during his placement year. Cobham won a Queen's Award for International Trade and also an Innovation Award which acknowledges the skills and performance of the engineering team. Michael has returned to work with the Cobham team as a graduate engineer.



UNIVERSITY OF
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Faculty Placement Team

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www.bath.ac.uk/engineering/placements