Apprentice Mechanical Workshop Technician

Department of Chemistry & Department of Biology

Closing date: 8 June 2018

Interview date: To be confirmed

Vacancy reference: 6651
INTRODUCTION

The University of York strongly believe in bringing new talent into the technical profession. The University is offering a mechanical workshop apprentice programme providing a unique opportunity to join the University of York and undertake nationally recognised qualifications and workplace training whilst working in a challenging and exciting sector.

The Apprenticeship scheme provides a perfect way to earn a wage while you gain vital work experience within a University and study towards a level 3 NVQ in Advanced Manufacturing Engineering. It is an ideal starting point for those who wish to start a career in mechanical engineering.

The scheme is designed for individuals who are living and entitled to work in England, do not have a degree, and are not in full-time education.

This is an exciting opportunity to work within the mechanical workshops within Biology and Chemistry, whose main role is in the design manufacture and construction of high-performance engineering solutions custom made for scientific research within the varying departments.

Both Departments of Biology and Chemistry are renowned internationally for our research. This is combined with a commitment to teaching and outstanding student satisfaction, family-friendly policies and we are proud of our Athena SWAN Gold Awards: https://www.york.ac.uk/biology/equality-diversity/ and https://www.york.ac.uk/chemistry/ed/

We strive to provide a working environment which allows all staff and students to contribute fully, to flourish, and to excel. We aim to ensure that there is a supportive and egalitarian culture at all levels and across all staff groups.

We promote good practice and a strong culture of equality in higher education. Further information can be found within this brief and on our websites: https://www.york.ac.uk/biology/ and www.york.ac.uk/chemistry/
Main purpose of the role

- To provide support to the managers and technicians in the mechanical workshops based in the Departmental Mechanical Workshops within the Science Faculty, to understand, operate and maintain the machinery within each workshop. To repair and resolve faults to teaching and research scientific equipment under the supervision of the workshop managers and senior technicians. To attend a relevant day release course to gain a qualification in Advanced Manufacturing Engineering Level 3 NVQ.

- Develop an understanding of the operations in a mechanical workshop which serves an academic department in the faculty of sciences; developing skills to understand, maintain and operate workshop machinery and develop relationships with workshop users. With time and experience in the latter years of the apprenticeship, learn CAD to aid in the manufacture of equipment.

- The role holder will be based in one of the departmental workshops and have the opportunity to work across the science departments in the mechanical workshops to learn the variances in equipment and machinery. Also to work alongside the 2nd apprentice role in buddy system when workload allows or joint training is decided.

- The role also involves completing Level 3 NVQ in Advanced Manufacturing Engineering.

Key responsibilities

(Role holders will be required to undertake some or all of the duties below)

- To learn about the operation and maintenance of workshop machinery and equipment across the Science Faculty

- To undertake a program of prescribed learning, identified by the above departments, including day release to a vocational learning centre, as well as other relevant, sometimes in-house, training providers

- To develop skills to assist workshop staff with the design, manufacture and repair of bespoke scientific equipment

- In line with externally provided training become skilled in fitting and assembling components, including using hand and powered tools:

- To liaise and develop relationships with workshop staff and users

- To support management of workshop consumable stocks and ensure the workshop is kept clean and ready for use, including disposal of waste

- To maintain accurate records of work activity

- To work in a safe and responsible manner at all times

- Training in the use of CAD/CAM using world leading software through college and in-house in the latter years of the apprenticeship

- Contribute to maintenance, repair, overhaul and improvements to existing equipment

- Carrying out appropriate tasks and duties, which are deemed as contributing towards the development of skills relevant to the position

- Develop an awareness of the electronic and glassblowing workshops and how to work together for meeting the needs of our customers

- To attend day release college and complete coursework and examinations to the best of their ability

- Other duties as deemed appropriate by Senior Workshop Technician/Workshop Managers

The above list of duties is not exhaustive and is subject to change. The post holder may be required to undertake others duties within the scope and grading of the post.
**PERSON SPECIFICATION**

<table>
<thead>
<tr>
<th>Qualifications</th>
<th>Essential / Desirable</th>
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<tbody>
<tr>
<td>GCSEs or equivalent at Grade C or above which must include Maths, English and Design and Technology</td>
<td>Essential</td>
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<tr>
<td>Willingness to attend and work towards an NVQ in Advanced Manufacturing Engineering Level 3 qualification as part of their apprenticeship training</td>
<td>Essential</td>
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<tr>
<td>GCSE Engineering</td>
<td>Desirable</td>
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<tr>
<td>Manufacturing Engineering Extended Diploma Level 3</td>
<td>Desirable</td>
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<thead>
<tr>
<th>Knowledge</th>
<th>Essential / Desirable</th>
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<tr>
<td>General knowledge of mechanical workshop</td>
<td>Desirable</td>
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<td>Basic safety in a working environment</td>
<td>Desirable</td>
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<th>Skills, abilities and competencies</th>
<th>Essential / Desirable</th>
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<tr>
<td>Excellent verbal and written communication skills</td>
<td>Essential</td>
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<td>IT literacy skills with the ability to use Google and Microsoft packages</td>
<td>Essential</td>
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<td>Problem solver</td>
<td>Essential</td>
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## PERSON SPECIFICATION

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<thead>
<tr>
<th>Essential / Desirable</th>
<th>Experience</th>
<th>Personal attributes</th>
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<tbody>
<tr>
<td></td>
<td>Experience of a workshop environment</td>
<td>Desirable</td>
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<td></td>
<td>Interested in Mechanical Engineering and computer aided design</td>
<td>Essential</td>
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<td></td>
<td>Enthusiastic with a drive to learn and develop</td>
<td>Essential</td>
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<td></td>
<td>Dependable and reliable</td>
<td>Essential</td>
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<td></td>
<td>Attention to detail</td>
<td>Essential</td>
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<td></td>
<td>Willingness to learn and develop, and to attend college on a day release basis</td>
<td>Essential</td>
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Department of Biology - workshops

The Department of Biology have a dedicated Mechanical and Electronics Workshops specialising in designing and creating bespoke research and teaching apparatus for the Department, the University and other researchers across the UK and Europe. The Workshops are a high-performance engineering solutions provider and, as such, operates as a one-stop-shop for the conceptualisation, design, testing and final production of novel apparatus, typically in an iterative manner with researchers from a breadth of biological disciplines. The workshop is equipped with a broad range of tools and machinery. Our Mechanical Workshop is equipped with some of the latest manufacturing technologies, providing the engineering staff with outstanding industry standard facilities to support the research scientists to advance the discoveries of tomorrow. Recent investments include Hurco CNC machining centre, Brathwaite 3 axis CNC knee mill, manual precision lathes and milling machines, 3D Printer and a laser cutter, welding/fabrication facilities, in addition to autodesk design and CAM software.

While the Workshop staff are responsible for some of the maintenance, testing and servicing of scientific equipment, the key focus in the highly skilled and diverse team is to design, develop, manufacture and assemble bespoke engineering solutions. Ideas are taken from concept through to reality. Many projects are required to operate under aggressive outdoor conditions, and others of a physically demanding nature. This necessitates careful design and selection of materials to successfully contain the experiments, allowing them to safely operate and obtain research data.

Department of Chemistry - workshop

Key to the Department of Chemistry is the generation, development and application of world-class research tackling major global challenges. To achieve this, the Department is continually developing and reinforcing its international reputation, and relies on first-class mechanical, electronic and glass-blowing workshops. While the Workshop staff are responsible for some of the maintenance, testing and servicing of scientific equipment, the key focus in the highly skilled and diverse team is to design, develop, manufacture and assemble bespoke engineering solutions. Ideas are taken from concept through to reality. Many projects are required to operate under extreme/aggressive conditions; high pressure, vacuum, high temperature, cryogenic temperatures, corrosive environments and others of a physically demanding nature. This necessitates careful design and selection of materials to successfully contain the experiments, allowing them to safely operate and generate research data.

The Department of Chemistry Mechanical Workshop is equipped with some of the latest manufacturing technologies, providing the engineering staff with outstanding industry standard facilities to support the research scientists to
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advance the discoveries of tomorrow. Recent purchases include GFAC VCE100 pro 4 Axis VMC, Bridgeport CNC lathe, HyperMill CAM software, Autodesk Inventor 2018, 3D Printers and laser cutter, as well as manual lathes, mill, grinding machine and welding/fabrication facilities. The Department is committed to supporting further investment and staff development. Further details of past projects and capabilities of the mechanical workshop can be found at: https://sites.google.com/a/york.ac.uk/chemistry-department-precision-mechanical-workshop/

Department of Biology

Our research is focused around fundamental science research foci, which are Cell and Developmental Biology, Molecular and Cellular Medicine, Bioinformatics and Mathematical Biology, Infection and Immunity, Ecology and Evolution, Microbiology, Biochemistry and Biophysics and Plant Biology. The Department has successfully continued to establish state-of-the-art laboratory space and maximise our existing space and a new teaching building opened in Autumn 2016. In the 2014 Research Excellence Framework (REF) exercise, the Department of Biology was again placed in the top 10 in the UK. We are ranked 1st for impact outside academia - our research has had major influence on environmental policy, industry and health.

Although we are a research-intensive department, our teaching is equally important, and the University holds a Silver Teaching Excellence Framework (TEF) award. Our teaching in the department consistently ranks highly which is reflected in our achievements in the National Student Survey (NSS). We are preparing for departmental TEF awards in 2020. Our aim is to maintain a collegiate atmosphere where academic practice encompasses equitably distributed research, teaching and administrative duties throughout the staff group.

As befits a department of our size, we have extensive professional support services which underpin our teaching and research. We also have our Bioscience Technology Facility which is a unique resource providing a purpose-built facility for our world-class scientists and technologists working across six bioscience research capabilities. Collectively it brings together a unique range of expertise and equipment, and is recognised as a leading example of how to provide research support in the 21st Century.

The Department of Biology operates a set of family-friendly policies and welcomes applications that are made on a part-time and job share basis. We will do our best to accommodate such requests where possible. Staff working patterns are flexible and a formal flexitime system is also in operation and the University has a nursery on site. We are proud to foster a supportive culture that helps staff and students reach their full potential and we embrace equality, diversity and inclusion as well as the values of the Athena SWAN Charter in all our departmental activities. Our philosophy is that poor working
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practices discriminate disproportionately against women whereas good practices support all. We have a Gold Athena SWAN award in recognition of our culture, ethos and activity.

The Department of Chemistry

The Department of Chemistry [http://www.york.ac.uk/chemistry](http://www.york.ac.uk/chemistry) is one of the largest and most successful academic departments at York. The Department was placed in the top ten UK universities for Research Power by the 2014 Research Excellence Framework exercise (REF). Amongst our academic staff we have five Fellows of the Royal Society and many national and international prize winners, contributing to a dynamic and thriving department. The excellence of Chemistry at York was recognised in the 2018 Guardian League Table Guide, Complete University Guide and Times University League Tables where it achieved an outstanding 2nd and two 4th places, respectively.

The Department has nearly 60 academic staff (including teaching-only staff), more than 600 undergraduate students, approximately 160 graduate students (mainly studying for PhDs) and over 80 research associates and fellows. The Department has a group of coherent laboratories, recently extended and modernised, which provide an excellent environment for both teaching and research; £35M has been spent on new buildings and equipment in the last seven years.

Staff in the Department of Chemistry undertake research in a wide range of fields and there are particular strengths in analytical and archaeological science, atmospheric chemistry, chemical and structural biology, green chemistry, materials chemistry, metalloproteins, organometallic and catalytic chemistry, synthetic organic chemistry and time-resolved spectroscopy.

We have nearly 30 administrative staff (including those funded externally), as well as over 50 technical staff who provide assistance in the teaching and research laboratories and maintain the workshops (mechanical, glass and electronics) supporting these activities.

The Gold Award from Athena SWAN: [https://www.york.ac.uk/chemistry/ed/](https://www.york.ac.uk/chemistry/ed/) for promoting women in science was won by the Department of Chemistry in 2007 and renewed in 2010 and 2015. This was the first Gold award made in this scheme. The Athena SWAN Charter recognises and celebrates good employment practice for women working in science, engineering and technology (SET) in higher education and research.

The case studies on our Equality and Diversity website: [https://www.york.ac.uk/chemistry/ed/family-friendly-work/](https://www.york.ac.uk/chemistry/ed/family-friendly-work/) illustrate the variety of working arrangements of staff which are supported by the Department.

The Department of Chemistry operates a set of family-friendly practices. Staff working patterns are flexible and a formal Flexitime system is also in operation. The Department has developed a maternity and paternity leave procedure to help provide support for staff and the University has a nursery [http://www.york.ac.uk/univ/nursery/](http://www.york.ac.uk/univ/nursery/) and a Child Care voucher scheme.

The Department provides support for all categories of staff in their applications for promotion, role reviews, awards, prizes and rewarding excellence nominations. Staff are encouraged
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to attend training events and take up opportunities for professional development including those offered by the award-winning University Learning and Development Team: http://www.york.ac.uk/admin/hr/training/. The Department strives to address diversity inequalities to ensure that there is a culture that supports equality and encourages better representation throughout the Department. Support for all staff at all stages of their career is recognised as being extremely important; individuals will be allocated a specific mentor to help support them in future career development. Social events are also held regularly for members of staff.

Opportunities for employment for partners exist across the University, Science City York or within the City of York. The Department recognises that employment for partners can be an issue for new employees and will be understanding if you raise this and will do its best to help.

The Department is committed to establishing a culture of environmental good practice and all staff are asked to go about their duties in a resource efficient way and minimise impacts to the environment wherever possible.

The University has recently invested heavily in Chemistry. The Dorothy Hodgkin Building was completed in two phases. The first, housing Analytical Science and Synthetic Chemistry, opened in 2005, while the second phase housing catalytic, materials and synthetic chemistry was completed in 2012. The department is exceptionally well equipped for NMR spectroscopy and departmental instruments are housed in a purpose-built building opened in 2006, while the Wellcome-Wolfson-funded Centre for Hyperpolarisation in Magnetic Resonance (CHyM) was completed in October 2012. The Wolfson Atmospheric Chemistry Laboratories were opened in 2013 and are currently being extended (2018), while most recently, a two-storey building housing new teaching and research laboratories (to house Green Chemistry) and offices was completed in March 2014. The department has recently secured funding from the Wellcome Trust, the Wolfson Foundation, a generous alumnus and the university to acquire a 200 kV cryo-electron microscope and a building in which to house it. Construction and installation are anticipated in 2018.
Founded on principles of excellence, equality and opportunity for all, the University of York opened in 1963 with just 230 students. In 2018 it is the home of more than 17,000 students across more than 30 academic departments and research centres. Since opening over fifty years ago, we have become one of the world’s leading universities and a member of the prestigious Russell Group.

We are consistently recognised as one of the leading Higher Education Institutes and are ranked 16th in the Times & Sunday Times league table (2017). The University of York has won six Times Higher Education (THE) Awards and five Queen’s Anniversary Prizes.

The University is proud of its association with Athena SWAN, holding 12 awards in support of gender equality, representation and success for all, with gold awards for Chemistry and Biology and a University-wide bronze award.

Of 154 universities that took part in the Research Excellence Framework (REF) in 2014, The University of York ranked 14th overall and 10th for the impact of our research. The University is consistently in the top ten UK research universities and attracts over £60m a year of funding from research alone.

Our vision is to make the University of York a world leader in the creation of knowledge through fundamental and applied research, the sharing of knowledge by teaching students from varied backgrounds and the application of knowledge for the health, prosperity and well-being of people and society.
Attractive workplace

Centred around the picturesque village of Heslington on the edge of the city of York, our colleges are set in an attractive landscaped campus. York enjoys a safe, friendly atmosphere with facilities including bars, shops, theatres and concert halls all within easy walking distance.

The University has undergone an unprecedented period of expansion and renewal since 2000. We have invested in twenty new buildings on the original campus and have completed the first and second phases of a £750m campus expansion. Our investment in new colleges, teaching and learning spaces, laboratories, research facilities and a new sports village mean there has never been a better time to join us.

During this period of change we've worked hard to retain our friendly, informal and collegiate atmosphere, which is important to our core values of inclusivity and interdisciplinarity.

We have a thriving international community and are committed to providing staff moving to York with as much support as possible through our Relocation Package and Welcome Officers.

The University is committed to promoting a diverse and inclusive community - a place where we can all be ourselves and succeed on merit. We offer a range of family friendly, inclusive employment policies, flexible working arrangements, staff engagement forums, campus facilities and services to support staff from different backgrounds.

For further information please visit our employee benefit pages.
The City of York

Internationally acclaimed for its rich heritage and historic architecture, York's bustling streets are filled with visitors from all over the world. Within its medieval walls you will find the iconic gothic Minster, Clifford's Tower and the Shambles - just a few of the many attractions.

But York isn't just a great place to visit - it's also a great place to live and work. While nourishing a vibrant cosmopolitan atmosphere, York still maintains the friendly sense of community unique to a small city.

Visit [www.visityork.org](http://www.visityork.org) for more information on the city of York

Shopping, culture and entertainment

York boasts specialist and unique boutiques but also all the high street stores on its busy shopping streets. Alongside them you will find cinemas, theatres, an opera house, art galleries, a vast range of restaurants, live music venues and clubs. York is particularly renowned for its multitude of pubs and bars, from the modern to the medieval.

Housing and schools

Whether you choose to live close to the city, in one of the surrounding villages or further afield, you will find a wide range of housing within comfortable distance of York and the University. For families, the area has a range of excellent schools both in the state and independent sector.

Great location

York is one of Britain's best-connected cities. Halfway between London and Edinburgh on the East Coast mainline, on intercity trains you can reach London King's Cross in less than two hours and Edinburgh in two and a half hours. York is also well served by road links, and it is easily accessible from the A1, M1 and the M62.

For those travelling from overseas, Manchester Airport is two hours away and Heathrow Airport just three and a half. Flights from nearby Leeds Bradford Airport provide easy access to mainland Europe. By Eurostar from London St Pancras, Paris is just over six hours away.

Yorkshire

The Lonely Planet guide recently declared Yorkshire the third best region in the world to visit. There is something to cater to every taste, whether it be the rugged landscapes of the Moors or the Dales, the picturesque seaside towns of Scarborough and Robin Hoods Bay, the gothic architecture of Whitby or the vibrancy of cosmopolitan Leeds.
Apply online

- Go to https://jobs.york.ac.uk
- Find this job using reference 6651
- Complete the online application form

You will need to submit your completed application by midnight (local UK time) on 8 June 2018

What will I need?

We will ask you for details of:

- your employment history
- relevant qualifications
- two referees

You need to be ready to show us how you meet the requirements of the job, either in a written statement and / or by answering questions.

Help and assistance

Direct any informal queries to mark.bentley@york.ac.uk or mark.roper@york.ac.uk or biol-dmthub@york.ac.uk

If you have any questions about your application, contact the HR Services team:

recruitment@york.ac.uk
+44 (0)1904 324835