Wolfson School of Mechanical, Electrical
& Manufacturing Engineering

Loughborough University

Specialist Technical Instructor (Turning)

Job Ref: REQ231059

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.

Job Description

Job Grade: Technical Services Grade 6

Job Purpose

Reporting to the Engineering Applications supervisor the post holder will bring specialist turning expertise to the Engineering Applications / Mechanical Workshops, to complement a team of highly skilled technical staff in supporting Undergraduate (UG) and Postgraduate (PG) Teaching, and Research within the School. The role holder will provide technical support to Undergraduate and Postgraduate students helping them develop the confidence and expertise in the use of manual lathes. In addition, the role holder will be expected to provide cover to other areas of the EA workshop and therefore should be conversant with manual milling, CNC turning and milling, hand fitting and assembly practices including the fabrication of components. The post holder will provide specialist support to academic colleagues engaged in research activities helping in the design and manufacture of proof of principle prototypes.

Reporting to the Engineering Applications workshop Supervisor, you will take day to day responsibility for the turning area and the supervision of students and research staff requiring to use the EA workshop equipment. You will oversee the technical Instruction helping with the design, development, build, test and calibration of mechanical equipment, dedicated instrumentation, and research rigs. You should be conversant with the review and preparation of CAD drawings ensuring the manufacturing process and materials used are appropriate. It is envisaged that you will also undertake instructional work as required to support teaching activities within other area of the school including the workshops within the STEMLab facility. You will support, promote and participate in the University's people strategy, in your staff development and continuous professional development (CPD) including succession planning.

All professional and support staff are responsible for providing students with the best learning experience possible. Providing this learning experience is pivotal to our continued success in providing our graduates with the foundations needed to build a productive and rewarding career.

Job Duties

- You will be responsible for the instruction and the provision of teaching material relating to manual lathes and associated software, delivering a complete technical service supporting teaching and research activities throughout the school. You will be one of the main points of contact for manual lathes instruction within the School supporting both academic and technical staff and over time further develop this side of your role.

- Engage with academic colleagues to develop an understanding of intended learning outcomes for a broad spectrum of taught UG and PG modules; to use this as a basis for the planning and delivery of practical workshop elements to support student learning experience and develop their understanding of the application of engineering principles in the real world.

- To support student learning through timetabled workshop sessions and develop their ability to apply engineering concepts, through practical activities and hands-on use of manual lathes and other associated machines and workshop equipment.

- During specific timetabled sessions instruct and guide in the use of manual lathes associated techniques and processes.

- To support and advise undergraduate and postgraduate students in applying practical skills in project sessions; overseeing their development of individualised risk assessments, advising students' in the production of feasible engineering designs, the use of appropriate materials and overseeing their independent development and execution of machining practises and assembly processes to enable the safe and accurate manufacturing process.

- To support Academic colleagues engaged in funded research projects using their expertise to conceive and generate original ideas and innovative solutions, to design and build specialist testing apparatus. To train colleagues from other areas of the School in the use of manual lathes and other associated equipment to facilitate their work.

- To provide training, support and supervision of apprentices within the Workshop areas, overseeing their work, planning their development and progression and supporting their learning experience.

- To develop and deliver dynamic and engaging demonstrations at School visit days and University Open Days, to inspire the imaginations of potential students and their parents.

- To be responsible for the updating of workshop risk assessments and standard operating procedures, specific to the use of manual lathes. To ensure strict adherence to established School health, safety practices within the Applications Workshop area using correct PPE, and appropriate training in the use of equipment in compliance with Health and Safety at Work legislation and the University's compliance policies.

- To work closely with senior colleagues and be fully engaged ensuring that the Engineering Applications workshop School's programme of succession planning, including training and the operation of machines in other areas including STEMLab and the Mechanical workshop, to ensure that cover can be provided at all times, particularly in the delivery of teaching and projects at critical times.

- To work closely with the Engineering Applications Supervisor to plan staff resourcing and succession planning for the workshop area, to assist in the sourcing of materials for timetabled workshop sessions and bespoke equipment and tooling for research activities. To carry out the regular testing and fault diagnosis of the equipment, portable appliance testing (PAT) and repair and to support other areas in this activity when this is needed.

- To participate fully in the School's PDR (Performance and Development Review) Scheme, identifying and agreeing developmental opportunities for personal and professional development and in response to changing needs within the School.

- Assist the EA supervisor with the development of the school technician training matrix and create area or team matrices. Develop training plans for the technical staff, identify providers if not available in-house.

- Provide supervision of any future apprentices associated with this area.

- Visiting external test facilities/customers/industrial sponsors, as required, for the provision of field support.

Wider Technical Duties & Responsibilities

- To work closely with the other technicians and supervisors to improve working practices (Best Practice) to ensure that service levels are identified and reviewed effectively.

- To oversee and if necessary, undertake the manufacture, assembly and installation of equipment and rigs from drawing and verbal instructions for research staff.

- To assist with technical duties in other areas, if requested by the Technical Resource Manager, or the Operations Manager, due to variations in workload, staff shortages or temporary re-organisations as required to ensure business continuity.

- Liaise with other University Departments and outside contractors with regard to layout, installation, modification, upgrade, repair of plant and equipment.

- To work closely as a member of the workshop team to support the Technical Resources Manager in planning the future development of the workshop areas and teaching activities, identifying opportunities for improvements.

Behavioural Expectations

- To show and maintain and active approach to CPD (Continual Professional Development). Participate fully in the School's PDR (Performance and Development Review) Scheme, identifying and agreeing developmental opportunities for personal and professional development and in response to changing needs within the School.

- To support colleagues in the workshop team; to develop broader skills to deliver taught/ supervised sessions throughout the workshop and campus wide satellite facilities supported by the Wolfson School thus supplementing the School's succession plan.

- To fully engage with School life, by participating in open days, visit days and outreach activities. Participation will include but not restricted to, the setting up & dismantling of events, giving demonstrations and act as a Wolfson School ambassador giving help and guidance.

- A positive "can do" attitude to enable students to achieve their goals.

- A flexible approach to working hours is required due to the occasional evening and weekend working requirements of the position.

- The requisition miscellaneous materials, parts and consumables to ensure adequate maintenance of stock levels.

Performance Measures

- Performance measures will be used to ensure delivery and performance are maintained. The PDR process will outline specific measures; however, the following examples could be used in the first instance.

- To satisfactorily pass Health and Safety Audits and House Keeping Audits within the specific area of responsibility.

- Carry out tasks with the utmost efficiency and quality

- Student Feedback scores (Student feedback from taught sessions, project sessions)

- The on-going development of area of responsibility, such as layout, process, workflow etc.

- Continual Personal Development (Expectation of 5 days per year)

- Ongoing planned development of each specific area. (Learning, Equipment, Process)

- Efficient use of flexible working within the area of responsibility to support providing and efficient service.

- Skills development, Multi-functional ability (Target to achieve three key functional areas)

Points to Note

The purpose of this job description is to indicate the general level of duties and responsibility of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility entailed.

Special Conditions

Teaching and mechanical workshops and Laboratories are located in several buildings across the Wolfson School on the Loughborough University Campus. Due to the specialist nature of this position, there is a large proportion of autonomy in performing this role and therefore significant self-management will need to be demonstrated.

The workshops and lab areas normally remain open and appropriately staffed until 6pm to accommodate timetabled classes and during project periods to support students effectively.

There may be opportunities for accompanying students on industrial visits, however this is not a primary job function, therefore will be by volunteering only.

The Wolfson School has vehicles used to transport equipment across campus; therefore, volunteering to become a registered driver will be welcomed.

All staff have a statutory responsibility to take reasonable care of themselves, others and the environment and to prevent harm by their acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Policy & Procedures.

All staff should hold a duty and commitment to observing the University's Equality & Diversity policy and procedures at all times. Duties must be carried out in accordance with relevant Equality & Diversity legislation and University policies/procedures.

Successful completion of probation will be dependent on attendance at the University's mandatory courses which include Respecting Diversity and, where appropriate, Recruitment and Selection.

Organisational Responsibility

Reports to: EA workshop supervisor or Technical Resource Manager

Responsible for: Ensuring that student and academic staff have adequate information / support within the EA workshop.

Person Specification

Your application will be reviewed against the essential and desirable criteria listed below. Applicants are strongly advised to explicitly state and evidence how they meet each of the essential (and desirable) criteria in their application. Stages of assessment are as follows:

1 – Application
2 – Test/Assessment Centre/Presentation
3 – Interview

Please note that candidates that are invited to Interview will be asked to undergo Testing to confirm their level of competence in operating appropriate work equipment and machinery.

Essential Criteria

Area	**Criteria**	**Stage**
Experience	Served a recognised Engineering apprenticeship with substantial experience in an engineering environment.	1,3
	Ability to use a full range of conventional and CNC machine tools.	1,**2**,3
	Experience in a training or commissioning role developing skills in others.	1,3
	Articulate with strong verbal communication skills and the ability to explain engineering principles and test the understanding of an inexperienced audience	1,3
	Significant experience of using Computer Aided Design (CAD) software packages	1,3
Skills and abilities	Previous experience working with students and / or researchers with the ability to work as part of a team with excellent interpersonal skills in a technical service providing environment.	1,3
	Ability to work with efficiency and accuracy while prioritising workload to meet tight deadlines.	1,3
	Highly professional at all times with the ability to lead and gain buy-in from colleagues.	1,3
	A natural communicator with a passion for explaining complex ideas and procedures to others.	**2,** 3
	Demonstrable multi-disciplinary abilities and flexible practical skills.	1,**2**,3
	Ability to work independently applying own initiative, with minimal supervision.	1,3
	High level of flexibility and dependability. Demonstrating a “can do” attitude	1,3
	High level of computer-based skills including use of MS Office, Outlook, Excel etc and the ability to quickly learn bespoke software packages.	1,3
	Proven knowledge and a working understanding of current Health, Safety and Environmental legislation.	1,3
Training	Evidence of Continual Professional Development (CPD) together with a willingness to undertake training as appropriate and to adopt new procedures in line with the changing needs of the business.	1, 3
Qualifications	C&G or BTEC Higher National Certificate / Diploma in an engineering subject.	1, 3

Other	Commitment to observing Health & Safety regulations and the University's EDI and Equal Opportunities policy at all times.	1, 3

Desirable Criteria

Area	Criteria	Stage
Experience	Previous experience of working in a University Lab, tool room, manufacturing or research and development workshop.	1,3
	Previous experience working with students and / or researchers.	1,3
Skills and abilities	Proven ability to apply engineering principals to design and create working drawings, specifications, operating procedures	1,3
	Previous experience of working in a toolroom, manufacturing or research and development workshop	1,3
	Experience in the use of a full range of conventional and CNC based machines.	1,3
	A fast learner with the desire to enhance own personal skills set and knowledge base within the Wolfson school laboratory and workshop	1,3
	High level of competence in IT skills and Internet usage	1,3
Qualifications	AET (Award in Education and Training)	1

Conditions of Service

The position is **FULL TIME** and **OPEN-ENDED**. Salary will be on **Technical Services** Grade 6, £33,966 - £44,263 per annum, at a starting salary to be confirmed on offer of appointment.

The appointment will be subject to the University's normal Terms and Conditions of Employment for Academic and Related staff/Operational and Administrative staff, details of which can be found here.

The University is committed to enabling staff to maintain a healthy work-home balance and has a number of family-friendly policies which are available at http://www.lboro.ac.uk/services/hr/a-z/family-leave-policy-and-procedure---page.html.

We also offer an on-campus nursery with subsidised places, subsidised places at local holiday clubs and a childcare voucher scheme (further details are available at: http://www.lboro.ac.uk/services/hr/a-z/childcare-information---page.html

In addition, the University is supportive, wherever possible, of flexible working arrangements.

We also strive to create a culture that supports equality and celebrates diversity throughout the campus. The University holds a Bronze Athena SWAN award which recognises the importance of support for women at all stages of their academic career. For further information on Athena SWAN see http://www.lboro.ac.uk/services/hr/athena-swan/