Materials Technician

Job Ref: REQ17969

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.

School / Department Summary

The Wolfson School of Mechanical, Electrical and Manufacturing Engineering is one of the UK's largest engineering schools. It is home to around 250 academic and research staff, 92 professional staff, 1,620 undergraduate students, 180 post graduate MSc students and 215 research students.

As a part of the School's Professional Support Staff Team, the Materials Technician is responsible to the Senior Technician for Materials, Thermofluids and Metrology. Working within a team of highly skilled specialist technicians, the Materials Technician will be and expert in their field and responsible for ensuring that the Schools Materials and Metallurgy laboratory facilities are run efficiently, effectively and are fit-for-purpose.

Job Description

Job Grade: Technical Services Grade 6

Job Purpose: Reporting to the Senior Technician, for Materials, Thermofluids and Metrology, you will be responsible for the day to day running of the Materials and Metallurgy Laboratories in support of the Schools' teaching and research programs and the resident expert in your field. This includes the planning, scheduling and allocation of work in these areas, together with the responsibility for the efficient operation and long-term maintenance of all the associated equipment. The activities involve extensive direct contact with all groups of staff and students in both a specialist advisory and practical capacity during undergraduate teaching, and supporting project and research work.

Job Duties:

- Using a high degree of technical expertise gained through significant experience, provide technical instruction/training, supervision and demonstration within the Materials and Metallurgy laboratories. These activities will include using and managing experimental equipment and apparatus, especially that which is not commercially available.

- Apply a high level of specialist knowledge in order to instruct in the safe use of complex materials testing techniques, analysis, structural examination and the use of specimen preparation equipment. The equipment consists of but not limited to: microscopes, video imaging, photography of microstructures, non- destructive and destructive testing, data collection and analysis by means of computerised methods.

- Carry out the preparation of Material Testing laboratories for teaching sessions. (This will include instrumentation and experiments for scheduled teaching activities. The maintenance of equipment inventory and locations.) This could involve the use of the new STEMLab facility in the future.

- The planning and scheduling of work within the specimen preparation laboratory, including the efficient operation and maintenance of the equipment. Assisting and advising all groups of staff and students with both project and research activities.

- Working with and providing expert advice on sample preparation and testing techniques to the School's

Academics and Researchers to further research programmes.

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

- The daily maintenance and cleaning of tooling and equipment used during the activities undertaken, maintaining stock levels and ordering new materials / chemicals through the University purchase system.

- Ensure that a safe working environment in maintained at all times, maintaining compliance to the Health and Safety at Work regulations (HASAW 1974) and local legislation, following work procedures and maintaining associated documentation.

- Maintaining Safety Documentation, including general risk assessments and CoSHH Assessments, using the Universitys' electronic system, to include conducting new assessments as required within areas of responsibility.

- Adhering to the control of hazardous substances, including correct disposal processes, in line with University guidelines.

- Assist with the design, manufacture & modification of prototype equipment.

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

- To participate in the School's succession planning arrangements by developing skills and knowledge to provide support in other areas, including the Metrology Laboratory.

Wider Activities and Functions

- To take responsibility for the maintenance of plant and machinery to ensure a clean and safe working environment whilst using machinery, tools, equipment and materials. Carrying out the regular testing and fault diagnosis of the equipment, portable appliance testing (PAT), to ensure maximum OEE (Overall Equipment Efficiency) is achieved.

- To support the activities of the laboratory areas through adopting a group focused approach and undertake shadowing and training within other lab areas, to enable support of both undergraduate projects and postgraduate research activities in these areas.

- To work closely as a member of the wider laboratory team to support the Senior Technician in planning the future development of the laboratory areas and teaching activities, identifying opportunities for improvements.

- To undertake responsibility for the Health, Safety and Welfare of all staff and students entering or using the Materials testing laboratory and Metallurgy Laboratory through the use of correct PPE and the appropriate use of equipment, in compliance with Health and Safety at Work regulations and the University's operational procedures.

- Carry out Risk Assessments for teaching sessions and review and authorise project student risk assessments. Carry out CoSHH assessments and maintain area specific records.

Behavioral Expectations

- A positive "can do" attitude to enable students to achieve their goals and the school to achieve its ambitions.

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

- To show and maintain an 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 fully engage with School life, by planning and 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 and using initiative as required

- To share a desire to work towards achieving ILM level 3 qualification.
- A flexible approach to working hours is required due to timetabling teaching sessions and occasional evening and rare weekend working requirements of the position.

Performance Measures

Performance measures will be used to ensure delivery and performance are maintained. Loughborough University's Professional Development Review (PDR) process will annually outline specific measures; however the following examples could be used in the first instance.

- To ensure facility availability. (Opening hours, planned maintenance, breakdown management)
- Maximise machine and equipment availability. (Planned Maintenance, breakdown management)
- Aim to achieve positive Student Feedback scores (Student feedback from taught sessions, project sessions)
- The on-going development of learning material and learning tasks and equipment requirements.
- Budget control and purchase performance (Value for Money)
- To requisition miscellaneous materials, parts and consumables to ensure the smooth and efficient running of the Materials Testing Laboratory and Metallurgy Laboratory.
- To complete Health and Safety, CoSHH & House Keeping Audits throughout the area of responsibility. Ensure actions are completed and any formal reports are compiled. Maintain a record of audits and future planning.
- Ongoing planned development of each specific area. (Learning, Equipment, Process)
- Continual Personal Development (Expectation of 5 days per year as a minimum)
- 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

Laboratories are located in the Wolfson Building with occasional use of surrounding satellite facilities. The post-holder will normally be responsible for working within the main school building. 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 post-holder work with their colleagues will be responsible for ensuring that the lab areas remain open and appropriately staffed during timetabled teaching sessions, sometimes until 6pm to accommodate timetabled classes and during busy project periods, in order to support students safely and 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.

Due to the nature of the job, there may be a requirement to be called upon outside normal working hours if an emergency situation occurs, and the successful candidate will need to ensure they are available for this eventuality.

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: Sarah Fay, Senior Technician, Materials, Metrology and Thermofluids Laboratories

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

Essential Criteria

Area	Criteria	Stage
Experience	Extensive laboratory experience using analytical equipment.	1,3
	Extensive materials testing experience including sample preparation, NDT, microscopy and metrology.	2
	Substantial experience of working in an engineering/laboratory research environment.	1,3
	Experience of working in materials testing and/or metrology laboratories.	2
	Experience of having designed and delivered substantial teaching sessions in an engineering/laboratory environment.	1,3
Skills and abilities	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
	Demonstrable multi-disciplinary abilities and flexible practical skills.	1,2,3
	A fast learner with the desire to enhance own personal skills set and knowledge base within the Wolfson school laboratory and workshop areas.	1,3
	Ability to work independently applying own initiative, with minimal supervision.	1,3
	Ability to work as part of a team with excellent interpersonal skills.	1,3
	High level of flexibility and dependability. Demonstrating a “can do” attitude	1,3
	Ability to work with efficiency and accuracy whilst prioritising workload to meet deadlines.	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 e.g. Instrom Bluehill software	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.	3
Qualifications	Qualified in an appropriate science based or engineering subject, for example BSc/BEng, advanced C&G or BTEC Higher National Certificate / Diploma.	1
Other	Commitment to observing Health & Safety regulations and the University’s Equal Opportunities policy at all times.	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
	Served a recognised Engineering apprenticeship	1,3
Skills and abilities	Proven ability to apply engineering principals to design and create drawings conforming to ISO standards using an electronic design package.	1,3
	Proven ability to use CAD software. (NX preferred)	1,3
	NEBOSH or IOSH Managing Safely certificate.	1,3
	Experience in the use of a full range of conventional and CNC machine tools.	1,3
	High level of competence in IT skills and Internet usage and the ability to fluently use Computer Aided Design (CAD) and Computer Aided Manufacture (CAM) software packages	1,3
Qualifications	Degree in an Engineering or related science based subject.	1
	ILM level 3 qualification	1
	Training or teaching qualification.	1

Conditions of Service

The position is **full time** and **open ended**. Salary will be on Technical Services Grade 6, £29,799 - £38,833 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, 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/

Informal Enquiries

Informal enquiries should be made to Mr Simon Fawcett, Operations Manager by email: S.Fawcett@lboro.ac.uk or by telephone on +44(0)1509 227025

Applications

The closing date for receipt of applications is **29 October 2017**