

Senior Technician/Nanofabrication Research Technician (Physics) Fixed Term for 18 months

Job Ref: REQ220856

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.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

To provide technical support for the installation and commissioning of a multi-user thin film deposition, lithography and scanning probe microscopy system (nanofabrication system). The role will include providing technical support to staff and students including skilled experimental direction, design and feasibility advice and Health and Safety guidance to research, postgraduate taught and undergraduate students. In addition, the postholder will demonstrate the capability of the new system by depositing, fabricating and characterising several test samples.

Job Duties

Lab Management

- To coordinate delivery and installation of new nanofabrication system comprising of scanning thermal lithography, thin film deposition and scanning probe microscopy.
- To ensure the equipment and laboratory is maintained, tidy and serviceable at all times and to ensure all housekeeping is undertaken to a high standard.
- To meet the needs of multiple users of the nanofabrication system.
- To prepare standard operating procedures for the new equipment.
- To manage usage, and work with external users to coordinate access and training where required.
- To coordinate with other researchers in the Physics Department and elsewhere for necessary characterisation of selected devices.

Health and Safety

- Ensure appropriate risk assessments and COSHH are completed prior to work commencing.
- To ensure safe handling and disposal of laboratory materials and ensure that all work surfaces are free from contamination.
- Working with the School Safety Officer, to take a proactive approach to health and safety within the School and contribute to the continual development of good practice using a risk based approach.

Process Development and Documentation

- To fabricate selected device designs using the new system, as a means of demonstrating its capabilities.
- To prepare reports, recipe handbook and other materials as necessary to advertise the new system.

Training, Supervision and Induction

- To provide technical support and training to users of the new system.
- To organise and provide training to users on various aspects of the equipment.

- To devise standard induction protocols for equipment training to researchers and students.

Other Related Duties

- To undertake any other duties, commensurate with the grade of the role, at the request of the School Technical Facilities Manager or PI Prof. Morrison.

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

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 and Inclusion policy and procedures at all times. Duties must be carried out in accordance with relevant Equality, Diversity and Inclusion legislation and University policies/procedures.

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

There will be a requirement to undertake further training relevant to the role, both in laboratory techniques and specific Health and Safety related areas.

The post holder may be required to work outside of normal office hours if necessitated by the exigencies of the service.

Organisational Responsibility

Reports to: School of Science Technical Facilities Manager

Responsible for: n/a

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	Practical experience of working in a Physics research environment, preferably in a technical or postdoctoral capacity.	1,3
	Experience of working with Ultra High Vacuum (UHV) thin film systems and associated maintenance.	1,3
	Experience of material characterisation techniques such as magnetometry, scanning electron microscopy and X-ray diffraction.	1,3
	Experience of training new users on equipment.	1,3
Skills and abilities	Thorough understanding of the basic theories and principles of physics.	1,3
	Extensive knowledge of experimental techniques within physics.	1,3
	Excellent hands-on practical skills.	1,3
	Knowledge and understanding of COSHH and related safety policies.	1,3
	Excellent organisational skills and ability to work flexibly and independently.	1,3
	Excellent communication skills and ability to interact effectively with students and staff.	1,3
	High level of competency in the use of lab equipment and instrumentation.	3
Training	Demonstrate evidence of continuing professional development relevant to the role.	1
	A willingness and ability to undertake further training, both in lab skills and H&S, as outlined in the above job duties and special conditions.	3
Qualifications	Degree in Physics or a closely related discipline.	1,3
Other	Commitment to observing the University's Equality, Diversity & Inclusion policies at all times.	1,3
	Flexible approach to working hours to ensure scheduled laboratory sessions are supported.	3

Desirable Criteria

Area	Criteria	Stage
Experience	Previous experience of working within an academic and research environment.	1
	Experience of thin film deposition and lithography techniques applied to devices.	1,3
	Experience with scanning probe microscopy (STM/AFM).	1,3
Skills and abilities	Skilled in use of instruments such as XRD, XRR, VSM, PVD thin film, lithography, electromagnets, lasers, cryostats, ultra high/high vacuum.	1

	Methodical approach to diagnostic problem solving.	1
	Knowledge and understanding of DSEAR related safety policies.	
Training	Compressed gas safety.	1
	Ionising/non-ionising radiation safety.	1
	Use of cryogenic liquids.	1
	Vacuum systems.	1
Qualifications	Higher degree/PhD in experimental Physics, Materials Engineering or a related subject.	1
Other	Knowledge of clean room protocols.	1,3

Conditions of Service

The position is FULL TIME and FIXED-TERM for 18 months. Salary will be on a TECHNICAL SERVICES GRADE 6, (£31,406 – £40,927 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 **Technical Services Grade 6**, 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/>