Candidate Information

Position: Materials and Characterisation Laboratory Technician
School/Department: School of Mechanical and Aerospace Engineering
Reference: 25/112628
Closing Date: Monday 30 June 2025
Salary: £30,948 - £35,492 per annum
Anticipated Interview Date: Wednesday 30 July 2025
Duration: 3 years

JOB PURPOSE:

To provide specialist technical services to academic staff, research staff and students to support research and teaching projects.

MAJOR DUTIES:

1. Carry out tests / experiments using measurement and materials characterisation techniques for the purpose of logging data required for test result analysis.
2. Contribute to the development, testing, construction, and modification of equipment and/or techniques used for projects and research, drawing on the skills from learning and experience.
3. Provide relevant technical information, advice, guidance, and training/demonstration on the use of specialised materials characterisation equipment or techniques to academic staff, students and others.
4. Maintain, test, fault find, rectify, and repair technical equipment / apparatus to ensure it is safe to use and complies with relevant statutory safety regulations. Ensure general workshop / laboratory services tidiness.
5. Responsible for overseeing specific activities and processes of a work area/laboratory/research project and provide technical supervision of students.
6. Ensure compliance with Health and Safety procedures affecting self and others.
7. Compile/update technical information and documentation records of equipment and processes carried out in the laboratories.
8. Monitor and maintain stock levels in stores, to ensure there is always an adequate stock of materials and equipment to supply project and research areas.
9. Prepare materials, set up specialised equipment / apparatus for experiments and teaching demonstrations used by staff and students in laboratory practical classes and research.
10. Carry out any other duties which are appropriate to the post as may be reasonably requested by the Supervisor.

ESSENTIAL CRITERIA:

1. OND/ONC and/or NVQ level 3 or above (or equivalent standard) in a relevant. Electrical or Electronic engineering discipline. OR; a recognised apprenticeship completed in a relevant engineering environment.
2. Three years' recent relevant post qualification/apprenticeship practical experience operating and maintaining scientific characterization instruments (e.g., electron microscopes, spectrometers, X-ray equipment).
3. Three years' recent relevant post qualification/apprenticeship experience of operating, maintaining, and troubleshooting advanced characterization equipment, including but not limited to SEM, TEM, XRD, FTIR, DSC, and mechanical testing systems.
4. Demonstrable experience of:
   • Performing sample preparation for a wide variety of material types using appropriate methods.
   • Mechanical design and assembly with the ability to identify and safely use the most appropriate equipment and tools for the task.
   • Working in a lab or workshop environment with an understanding of the safe working procedure, and manual handling.
5. Proven ability to follow technical diagrams and instructions.
6. Competent manual soldering skills.

7. Demonstrable experience of:
   • mechanical design and assembly with the ability to identify and safely use the most appropriate equipment and tools for the task.
   • Working in a lab or workshop environment with an understanding of the safe working procedure, and manual handling.
8. Ability to follow technical diagrams and instructions.
9. Evidence of good IT literacy skills.
10. Good communication and interpersonal skills.
11. Proven ability to work in a team as well as own initiative.
12. Ability to prioritise own work to meet deadlines.
13. Ability to think logically and formulate plans to solve problems.
14. Willing to gain experience and learn new skills and techniques.

DESIRABLE CRITERIA:

1. Health & Safety Qualifications (e.g. NEBOSH, IOSH).
2. COSHH Qualification or training.
3. Knowledge and experience of Material testing equipment. (Tensile/Compression).
4. Knowledge and experience of single and three Phase motor control systems, and/or DC motor control systems.
5. Knowledge of COSHH and experience of hazardous materials, gasses, composites, and pneumatics would be an advantage.
6. Ability to write basic safe operating procedures and instructions for other staff and students to follow.
7. Well-developed understanding of relevant regulations and procedures including health and safety requirements.

ADDITIONAL INFORMATION:

Informal enquiries can be directed to:
Conor Doherty - c.doherty@qub.ac.uk.