



Candidate Information

Position:	Electronics/Laboratory Technician
School/Department:	School of Natural and Built Environment
Reference:	24/112278
Closing Date:	Monday 6 January 2025
Salary:	£33,785 - £38,765 per annum
Anticipated Interview Date:	Thursday 23 January 2025
Duration:	5 Months

JOB PURPOSE:

To provide an effective and efficient technical service to staff, students and external collaborators of the University. The role will focus on the delivery of electronics and electrical system design and build in support of both teaching and the development of new research initiatives within the School. To advise / assist with the deployment of modern data acquisition systems in all laboratories. To be responsible for the electrical / electronic maintenance and servicing of existing laboratory apparatus and to undertake training as required to keep up to date with technical advances and to meet the needs of the School. The holder of the post should also be available to work on field sites as required.

MAJOR DUTIES:

1. Design and manufacture complex electronic apparatus/equipment according to agreed specifications for teaching, research and related purposes.
2. Diagnose, modify and rectify faults within workshop, laboratory and fieldwork equipment and procedures, including electronic, electrical, mechanical, hydraulic and environmental issues.
3. Develop an understanding of software used to control sophisticated measuring devices used in the set up and conduct research investigation. Manage equipment for measuring and data logging and manufacture all necessary connection required for a combination of measurement system.
4. Design and build hardware and software for data capture. Assist with the calibration and acquisition of test data within the laboratory or on a field test site and interpret results and compile commissioning reports on all new equipment.
5. Provide consultation and advice on specialist activities such as strain gauge applications, computer vision measurements and the use of LDA and PIV systems to all School staff and their collaborators.
6. Ensure high standards are maintained in the quality of work produced and in the efficient operation of equipment and machinery to meet customer needs.
7. Plan and allocate work and responsibilities using discretion to determine priorities and resolve conflicts to meet targets and deadlines agreed through Head of School nominee.
8. Contribute information about equipment requirements to meet the needs of research and teaching in the School.
9. Provide specialist technical advice and training to staff in the relevant techniques, drawing upon considerable depth of knowledge, skills, experience and expertise.
10. To advise staff on how best to employ modern electronics and data acquisition system to best achieve their teaching and research outcomes.
11. Carry out analysis of information, data and/or calculations identifying issues which require to be addressed.
12. Ensure maintenance of current and future stock requirements of equipment/apparatus in the School. Test, fault find and repair equipment, and components, to ensure compliance with relevant statutory safety regulations.
13. Working with the School technical team, providing supervision and mentoring to more junior staff and students as required to ensure work is carried out safely and efficiently.
14. Monitor and maintain a safe working environment in accordance with Health and Safety procedures.
15. Maintain relevant operational documentation about equipment and keep detailed records of all projects using the equipment.
16. Oversee budget accounting of materials, stocks and equipment to monitor and control finances.

17. Carry out any other duties as may be reasonably be requested through the Head of School or nominated Supervisor.

ESSENTIAL CRITERIA:

1. HND/HNC and/or NVQ level 4 in electronic engineering or higher (or equivalent).
2. 4 years relevant demonstrable work experience to include: in depth understanding of electronics, diagnosis, testing methodologies and equipment, analogue circuitry and wiring diagrams.
3. Demonstrable experience in design and manufacture of complex electronic apparatus/equipment.
4. Demonstrable experience in designing and building hardware / software for data capture.
5. Comprehensive technical knowledge and experience in own scientific or technical specialism.
6. Proven ability to understand and interpret the technical requirements of staff, students and their collaborators.
7. Well-developed understanding of relevant regulations and procedures including Health and Safety requirements.
8. Demonstrable skills in managing budgets/resources.
9. Well-developed communication skills.
10. Demonstrable experience training staff and students in use of equipment and techniques in area of expertise.
11. Proven ability to work on own initiative, or as part of a team, with solid decision making to resolve time conflicts and to meet targets and deadlines.

DESIRABLE CRITERIA:

1. Demonstrable experience in data logging and electronic data acquisition.
2. Working knowledge of Excel, MATLAB, PCB drafting and LabView.
3. Demonstrable experience of writing software programmes.
4. Demonstrable good all-round knowledge of mechanical, hydraulic and pneumatic disciplines.
5. Supervisory skills.

ADDITIONAL INFORMATION:

Informal Enquiries to Dr Patrick Gleeson: p.gleeson@qub.ac.uk