

Senior Technical Specialist - Electrical and Electronics

Job Ref: REQ231436

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.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 specialist electrical and electronic technical support for undergraduate and postgraduate students, and research. You will form part of a team based in the electronics workshop supporting academic staff in the delivery of taught session and research projects across our taught programme portfolio. To liaise, help and develop student skills and assist academic staff on laboratory and workshop practices.

The successful candidate will work closely with the research technical staff across the school by taking day to day responsibility for the production and coordination of both research and relevant student projects ensuring that components/systems are sourced, manufactured and integrated in a timely manner.

The successful candidate will also work alongside the electronics workshop supervisor supporting them in the daily running of the department and during time of the supervisor's absence will act-up to cover for their duties. They will be proactive in supporting academics in introducing new technologies, teaching equipment and supporting the development of new lab sessions, and utilising shared facilities such as the STEMLab and DIGILabs to enhance our student experience.

The successful candidate will support the University's Technician Commitment project by working with the school's apprentice coordinator in the delivery of electric/electronic apprentices training. You will work closely with academic and technical staff to update procedures, plan future projects and manage equipment and laboratory space. You will be responsible for fault diagnosis and repairs to range of electrical and electronic equipment, undertaking all aspects of electrical and electronic maintenance within the school as well as the management of safety checks on school electrical and electronic equipment.

Job Duties and Responsibilities

Electrical/electronics

- Trouble shooting, fault finding to component level and repairing electrical and electronic equipment within the school.
- To support staff, undergraduate and postgraduate students on electrical and electronic queries and associated project activity.
- To overview installations by providing support to queries and associated project activity.
- To assist and provide advice on the software development for PLC and PC control systems for the delivery of both taught and research projects.
- To provide input in the development, construction of specialist equipment in support of new technologies and programmes within the school such as the Energy Engineering Programme and to provide electrical/electronics support to wider university initiatives such as the DigiLab Project.
- To work with other workshops within the school to provide advice on the development of the electrical and electronic aspects of both machine and mechatronic devices.

Managing Electrical & Electronics Workshop Facilities

- When the electronic supervisor is not available the specialist electrical / electronic technician will take over the responsibility for the daily running of the department and the coordination of the technical staff within

the department. Ensuring that work is scheduled through the correct manufacturing processes and manufacturing in a timely manner.

- To Maintain stock control of electrical and electronic components.
- Engage with the electronics team and wider school to provide input into the development of the workshop and associated laboratories with respect to identifying new equipment and materials to keep abreast of technological advancements.
- To provide electrical and electronic costs and requirements for research projects to ensure projects can be delivered within budgetary constraints.
- To have a knowledge and understanding in the methods of Printed Circuit design and layout. This includes the use of E-CAD software, fabrication of Circuit boards and be able to incorporate build and test techniques for the final product.
- Assist in the maintenance of the Electrical and Electronic Workshop and teaching laboratories.

Research Support

- To work closely with Technical Supervisors, Technical Specialists, academics and researchers in the design, development, installation and testing of appropriate electronic systems and equipment.
- To provide specialist electrical and electronic support to the broad research Centres within the school.
- Working from a set of schematic and layout drawings be able to design, Fit, wire, build and assemble electrical safety boxes (with interlocks) and power distribution units.

Health, Safety & Compliance

- To take a lead and responsibility for electrical safety and compliance matters within the school. Demonstrating best practice and undertaking regular physical inspections of equipment and facilities across the school's buildings.
- Together with School safety officers the postholder will undertake a leading role for the implementation, of PUWER regulations and University compliance policy relating to all the school's electrical equipment.
- To take responsibility for recording, maintaining and storage of appropriate documentation and records, including plans and diagrams of all in-house designed and built electrical and electronic equipment and installations in laboratories, workshops and in the field.
- To comply with current statutory health and safety requirements together with the University's health and safety policies.
- Engage with the school's electrical and electronic database and testing electrical appliances according to regulations (PAT portable appliance testing).

Training and Mentoring.

- To be the lead Electrical & Electronics Technician trainer and coordinator undertaking the coordination and development of junior staff and apprentices ensuring that they have the appropriate education, skills and safe in working practices in Electrical and Electronic Engineering workshop.
- To work closely with the Schools Technical Apprenticeship coordinator together the appropriate staff to develop a programme of appropriate training and mentoring for apprentices within the electronics and electrical workshop and associated labs.
- The role holder would be the Technical Apprenticeship Scheme expert in the areas of electronics/Electrical Engineering and feed this expertise into the University Technician Commitment Project team.

Behavioural Expectations

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

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 occasionally will 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 and is therefore on a voluntary basis 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 (EDI) Equality & Diversity policy and Inclusion 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 Belonging and inclusion, Bribery Briefing, Fire Safety, Information security, introduction to health and safety, Welcome to Loughborough and Respecting Diversity.

This post will require a flexible approach to working hours and infrequently may require work on a weekend to support specific events.

Organisational Responsibility

Reporting structure:

- Electronics Workshop Supervisor (direct line manager).
- Technical resource manager (line manager for the technical team).
- Operations manager (senior line manager for all professional and support staff).
- Dean of School (responsible for entire Wolfson School)

Level of supervision received:

The programme of work will vary based upon the research, teaching and enterprise needs within the School. There is no direct supervision, and the post holder will only need guidance on complex problems.

The post holder will be expected to support and assist the Workshop supervisor and Technical Resource Manager. This will include picking up duties during times of absence.

Supervision provided by the post-holder:

Supervisory responsibility of the Electronics Workshops during the supervisors' absence or unavailability.
Supervisory responsibility of apprentices as defined above.

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 or equivalent with extensive experience in a multi-disciplinary electrical/electronic engineering environment.	1,3
	Knowledge in the use of Arduino/Raspberry Pi Microprocessor Boards. Experience in implementation and programming of these or similar types of units.	1,2,3
	Experience in a training or instructing / developing skills in others.	1,3
Skills and abilities	Demonstrable ability to fault diagnose and rectify issues for a large variety of electrical/electronic and specialist equipment.	1,2,3
	Proven ability to take concept ideas and sketches and convert them using E-CAD software into final circuit diagrams and working models.	1,2,3
	Proven ability to create new test methods for new designs and equipment.	1,2,3
	Demonstrable ability to explain complex engineering principles and test the understanding of other staff member and apprentices	1,3
	Previous experience working with students/researchers and or apprentices in a technical / engineering environment.	1,3
	A track record of designing electronic systems to meet the needs of research.	1,3
Training	Evidence of Continual Professional Development (CPD) together with a demonstrated willingness to undertake training as appropriate and to adopt new procedures in line with the changing needs of the department and the University	1,3
Qualifications	BTEC Higher National Certificate / Diploma in an appropriate engineering discipline or relevant vocational qualifications	1,3
Other	Evidence of working within a Health & Safety regulatory environment with proven knowledge and a working understanding of current Health, Safety, PUWER, COSHH and Environmental policies and procedures	1,3
	Commitment to observing the University's Equal Opportunities policy at all times.	1,3

Desirable Criteria

Area	Criteria	Stage
Experience	Experience of electrical/electronic systems in a multi-disciplinary laboratory environment	1,3
	Previous experience of working in a university Lab, electronics, control systems, manufacturing or research and development workshop.	1,3
	Experience of using data acquisition hardware and software (such as LabView/ Raspberry Pi/Arduino)	1,3
	Experience of programming PLC and PC controllers for the automated control of machines, such as Siemens or Schneider controllers.	1,3
	Workshop Supervisory or line management experience	1, 3
Skills and abilities	Proven ability for the installation and maintenance of equipment "On-Site" and in the "Field".	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
Qualifications	Degree or appropriate electrical or electronics engineering discipline or equivalent.	1,3
	AET (Award in Education and Training) or demonstrable experience for the training student, apprentices and/or staff members.	1,3

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/>