Technical Expert (Electrical Systems)

1 JOB DESCRIPTION

Faculty / School or Division: Faculty of Science and Engineering
Faculty/School or Division Address: Queen's Building, University Walk, Bristol, BS8 1TR

Job Family:	Technical Services		
Grade:	K	**Salary range:**	£52,788 – 59,390 per annum
Hours of work:	35	**Contract type:**	Full-time
Work pattern:	Full time	**Vacancy Reference Number: SUPP113746**	

1.1 Main Job Purpose

Recognised as an authority within the University in the safe conduct of Electrical Engineering Research and Development . Enable academic endeavours by delivering high-level professional expertise and carrying out sophisticated techniques. Interpret, evaluate and present data from outputs based on expert knowledge in area of practice.

The Electrical Energy Management Group (EEMG) is home to over 50 researchers working on low-carbon electrical systems, enabled by advanced, compact and highly efficient electrical machines and power electronic conversion. This role will support the daily operations of our laboratories, including the design, manufacture, testing, and analysis of novel electrical systems.
This role will support the EEMG by:

- *Inducting and training academic researchers in practical electrical fundamentals, electrical safety systems and good laboratory practice*
- *Helping to meet electrical safety requirements through first-principles assessment in accordance with the Electricity at Work Regulations 1989, while also drawing on industrial best-practice and appropriate application of non-statutory regulations (e.g. EN60204) as appropriate for novel, experimental systems.*
- *Using expert knowledge to help turn abstract experimental requirements into functional research activities, participating as appropriate in the design, risk-assessment, assembly, commissioning and operation of novel electrical research apparatus and electrical safety systems in support of the above*
- *Supervising general laboratory activities, ensuring compliance with applicable safety regulations*

1.2 Main Statement of Responsibilities

<u>Professional Practice</u>
Provision of specialist solutions within a Electrical Engineering; typical duties might include:

- Using high-level expertise, collaborate with key stakeholders (e.g. Principle Investigators, researchers, external customers, or other service users) to deliver specialist technical services.
- Develop creative and innovative solutions in area of expertise, to advance research methods and practices.
- Evaluate, interpret, analyse, and present complex data from outputs
- Contribute to wider developments and changes in Electrical Engineering and safety.
- Operate, service, maintain and calibrate highly specialist equipment; diagnose and rectify complex problems to find short and long-term solutions.
- Design, build and/or adapt specialist capabilities/equipment to provide innovative solutions.
- Expert technical input into specialist purchases, liaise with relevant contacts and suppliers to ensure fit for purpose solutions and cost effectiveness.
- Contribute to or lead on grant applications.
- Write risk assessments and method statements/standard operating procedures (SOPs), or provide guidance to service users, ensure compliance with all relevant guidelines.
- Share professional expertise and contribute to knowledge exchange in specialist field.

The Student Experience

Use specialist experience to provide extensive guidance, troubleshooting, support and training to students conducting research studies or projects.

Planning & Organising Resources

Plan and prioritise own workload to best meet service demands.

Manage a delegated budget, and grant budget(s) as appropriate, ensuring sufficient consumables and resources are available for service delivery.

Contribute to short, medium and long-term planning to improve services impacted upon by the specialism.

Governance and Compliance

Use of expert knowledge to implement and review relevant rules, University Health & Safety policies and legislative requirements; set and uphold standards, e.g. safe working, good laboratory practices and legal frameworks.

Inform, contribute to and influence policy and procedure where appropriate

Leadership and Management

Responsible for management of specialist equipment within the facility, laboratory or designated suite of laboratories.

Consult, collaborate and influence by building and maintaining effective working relationships with key contacts.

Day to day supervision of services users or technical staff where appropriate.

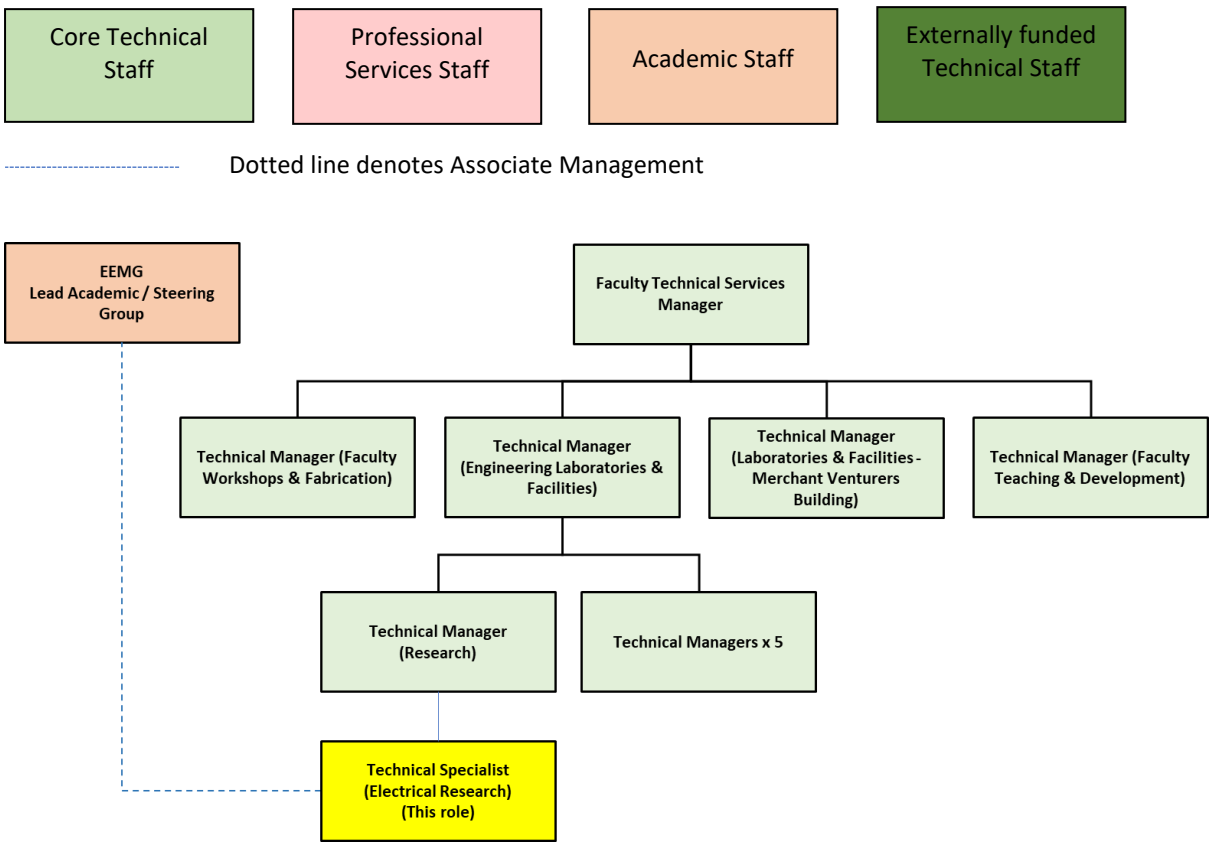
1.3 Relationships

Line manager: Appropriate Technical Manager

Line manager to (where appropriate): Unlikely to have formal line management responsibility but will undertake day to day supervision of service users/technical staff where appropriate

1.4 Organisation Charts

Key for all diagrams



1.5 Job Hazards/Safety Critical Duties (Pre-employment health screening)

The following duties are an intrinsic part of the role and any offer of employment will be conditional upon satisfactory health screening by the University Occupational Health Service:

- Electromagnetic Radiation hazard possible. Working in proximity to equipment emitting electromagnetic radiation that could affect either a passive implanted medical device, active medical implanted device or body worn medical device.
- This role involves physical activity such as manual handling and moving over or around test rigs as a core part of the duties.

2 PERSON SPECIFICATION

2.1 Relevant Experience, Skills and Knowledge

Essential

- An acknowledged authority in Electrical Engineering with:
    - Extensive experience in electrical power systems including electrical drives/inverter systems;
    - A sound first-principles understanding of electrical safety;
    - The ability to advise on electrical safety for practical experimental equipment based on The Electricity at Work Regulations 1989.
- Excellent IT skills, expert knowledge of relevant specialist software
- Excellent organisational skills, with the ability to manage and prioritise a range of ongoing projects at the same time, and to be able to cope under pressure
- Ability to devise, review and deliver complex, innovative and timely solutions
- Ability to work autonomously towards delivering projects/outputs or institutional objectives
- Consistently maintaining a high level of accuracy and precision in all areas of work

2.2 Relevant Qualifications

Essential

- Knowledge gained through relevant qualification (e.g. professional qualification/registration or relevant degree) plus significant relevant professional experience.

Desirable

- Appropriate postgraduate qualification/s
- Appropriate professional registration

2.3 Communication and Interpersonal Skills

Essential

- Polite and courteous approach when dealing with others
- Ability to effectively communicate with a wide variety of internal and external contacts
- Proven track record in negotiation and influencing skills
- Ability to work both independently and as part of a team
- Ability to convey complex knowledge and technical information to both specialist and lay service users

2.4 Additional Criteria

Essential

- Commitment to customer care and to providing a quality service

- Commitment to continuing professional development