Job Description

Job title:	**Senior Technician - Electronics and Systems**
Department/School:	**Mechanical Engineering – Instrumentation Section**
Grade:	**6**
Location:	**University of Bath**

Job purpose

To work as a Senior Technician providing technical guidance and support in the design, development and realisation of experimental and prototype systems for the teaching and research activities across the Faculty. They will be skilled in the design, programming , commissioning and configuration of data acquisition (DAQ) and control systems, have general programming, electronics and IT systems expertise, and be able to maintain electronic and computer based systems and services that support the University's research, teaching and professional interests.
The post holder will also be involved in the supervision of undergraduate students during laboratory sessions and project activities.

Source and nature of management provided

The post holder will be line managed by the Instrumentation Services Technical Supervisor but will work closely with both academic and research staff across the various Faculty and Departmental research groups. The post holder will be responsible for managing their own time and workload under the guidance of the Technical Supervisor.

Staff management responsibility

The direct supervision of students / researchers as required and to be responsible for setting their own workload and priorities in conjunction with the Technical Supervisor.

Career and Professional Development Activities

To be identified through the annual Staff Development Performance Review (SDPR) process.

From time to time you may be asked to assist in the facilitation of CPD activities.
This will form part of your substantive role and you will not receive additional payment for these activities, but time will be given.

Main duties and responsibilities	
Using a high degree of technical expertise, provide electronics and programming support for research and teaching across the Faculty, advising and assisting academic, research and technical colleagues and students at all levels including:	
1	To provide technical support for the Department's laboratories and facilities.
2	To advise and assist students and staff with the specification, design and implementation of data acquisition and control systems for experimental projects
3	To determine the capability of data acquisition devices from manufacturer's specifications and to recommend suitable devices as required for a specific project
4	To provide specialist electronics and software support at a systems level to the Department and Faculty.
5	Use of the DAQ Assistant to create simple programs for NI (National Instruments) hardware Development of more complex LabVIEW programs incorporating suitable user interfaces Simplification of program structure and reuse of software
6	To install and configure software and drivers for specialist data acquisition and control hardware, including the installation and integration of third party hardware drivers into LabVIEW (e.g. Adlink, Data Translation, Measurement Computing, …) Development of software to effectively utilise this hardware.
7	Use, support and develop existing LabVIEW software Use of specialist LabVIEW modules as demanded by the project requirements
8	Real time controller implementation in Matlab, Labview, C++ or similar.
9	The development and programming of embedded and computer based systems.
10	To be responsible for maintaining a clean and safe working environment, and to be the designated custodian for assigned laboratory space.
11	To ensure compliance with both statutory and university health, safety and environmental requirements and protocols.
12	To assist Academic and other colleagues: • with the development and delivery of systems and programming related teaching activities and laboratory sessions. • With the specification, design and implementation of specialist laboratory spaces and experimental / development facilities.

13	To assist staff and students: • with the development and design of electronic and computer based systems and software. • with the design and implementation of experimental apparatus.

In addition to University provided training and development, you will undertake sufficient personal development as required, ensuring skills and knowledge are up to date so that the role is performed to the required level.

You will from time to time be required to undertake other duties of a similar nature as reasonably required by your line manager

Supervision

Line Manager:-	Technical Manager, Instrumentation Services
Supervisor:	Technical Supervisor, Instrumentation Services
Supervision received:	Technical Supervisor – operational management of the team, allocates tasks, maintains appropriate records.
Supervision given:	None

Person Specification

Criteria: Qualifications and Training	Essential	Desirable	A/F	I/T	R
Graduate in relevant scientific or engineering discipline.		✓	✓		
C&G or BTEC Higher National Certificate / Diploma in an engineering subject.	✓		✓		

Experience/Knowledge	Essential	Desirable	A/F	I/T	R
Detailed knowledge of electronics hardware at a systems level	✓		✓	✓	
Significant expertise in LabView program development	✓		✓	✓	
Knowledge of sensors, their application and signal conditioning requirements	✓		✓	✓	
Knowledge of electronics software systems eg. Matlab, LabView, C++ etc.	✓		✓	✓	

Experience of developing programs using Matlab and Simulink using xPC hardware.		✓	✓	✓	
Familiarity with Open source hardware / software eg. Arduino, Raspberry Pi, etc.	✓		✓	✓	
Experience of creating interfaces between data loging systems		✓	✓	✓	
Previous experience working in a Research and Development and/or a Higher Education environment		✓	✓	✓	

Skills and Attributes	Essential	Desirable	A/F	I/T	R
Ability to learn / adapt to new technologies	✓		✓	✓	
Excellent organisational skills	✓			✓	
Ability to adapt communication style to suit the audience and to work with staff and students at all levels	✓			✓	
Flexibility and adaptability to take on other Electronic and Mechanical tasks if required.	✓			✓	
Knowledge of Computer Aided Design (CAD) and Computer Aided Manufacture (CAM) software packages		✓	✓	✓	
Soldering and circuit fabrication skills	✓		✓	✓	
Confident and able to engage with students of differing technical abilities	✓		✓	✓	
Embedded programming experience (e.g. PIC, Arduino, Raspberry pi, etc.)		✓	✓	✓	

Code: A/F – Application Form, I/T – Interview/Test, R- References