

Post Details		Last Updated: 05/05/22	
Faculty/Administrative/Service Department	FEPS/Physics		
Job Title	Teaching Laboratory Technician		
Job Family	Technical and Experimental	Job Level	3
Responsible to	School of Maths and Physics Technical Manager		
Responsible for (Staff)	None		
<b><u>Job Purpose Statement</u></b>			
<p>To provide technical support and undertake experimental demonstrations in the Physics teaching laboratories in order to support undergraduate and postgraduate teaching activities in experimental Physics. Working within a team of technical staff, the post-holder will provide frontline technical support for undergraduate classes of up to 70 students and up to 50 postgraduate students in the department's laboratories. The post-holder will assist undergraduate and postgraduate students and staff in the maintenance of laboratory equipment and consumables in these laboratories. They will also provide support to the departmental research laboratories when required outside of the teaching timetable. They will assist in the maintenance and development of the Physics teaching laboratories.</p>			
<b><u>Key Responsibilities</u></b>			
<ol style="list-style-type: none"> <li>1. Preparation and technical support for departmental undergraduate and postgraduate practical classes.</li> <li>2. Liaise with academic staff to provide suitable and sufficient materials for experimental work and with UG teaching laboratory colleague or the Radiation Teaching laboratory Manager to ensure that classes are appropriately serviced and that the equipment is operating correctly.</li> <li>3. Provide technical advice, training and assistance to staff and students with the application of techniques and use of equipment for preparation and application of general laboratory techniques.</li> <li>4. Assist academic and research staff and undergraduate and postgraduate students to obtain experimental data, including the performance of research experiments, providing quantitative and qualitative analysis.</li> <li>5. Monitor and maintain a safe working environment in accordance with Health and Safety procedures such as electrical safety testing, COSHH and disposal of waste. Assist the Technical Manager in ensuring that all H&amp;S requirements are met.</li> <li>6. Maintenance and calibration of laboratory equipment to required performance standards in collaboration with their teaching laboratory colleagues.</li> <li>7. Maintain the stock of the teaching laboratories equipment and consumables, assisting the Radiation Teaching Laboratory Manager where appropriate, raising purchase orders when required. Conduct the testing, adjusting, maintenance and repair of teaching laboratory equipment and apparatus.</li> <li>8. Assist in the day-to-day running of departmental research laboratories, such as those laboratories in the areas of laboratory housekeeping, waste disposal and Health and Safety.</li> </ol>			
<b>N.B. The above list is not exhaustive.</b>			
<b>All staff will be expected to:</b>			
<ul style="list-style-type: none"> <li>• Positively support equality of opportunity and equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities Policy.</li> <li>• Work to achieve the aims of our Environmental Policy and promote awareness to colleagues and students.</li> <li>• Follow University/departmental policies and working practices in ensuring that no breaches of information security result from their actions.</li> <li>• Ensure they are aware of and abide by all relevant University Regulations and Policies relevant to the role.</li> <li>• Undertake such other duties within the scope of the post as may be requested by your Manager.</li> <li>• Work supportively with colleagues, operating in a collegiate manner at all times.</li> </ul>			
<b>Help maintain a safe working environment by:</b>			
<ul style="list-style-type: none"> <li>• Attending training in Health and Safety requirements as necessary, both on appointment and as changes in duties and techniques demand.</li> <li>• Following local codes of safe working practices and the University of Surrey Health and Safety Policy.</li> </ul>			

## **Elements of the Role**

This section outlines some of the key elements of the role, which allow this role to be evaluated within the University's structure. It provides an overview of what is expected from the post holder in the day-to-day operation of the role.

### **Planning and Organising**

- The post holder will organise and prioritise their work within the timetabled laboratory classes. They will be expected to have experiments prepared for the students; the experiments are set by the academic lead. They will have the latitude within their daily work routine to organise and prioritise their own work; provided they ensure that students can successfully complete their experimental work.
- This will include successfully managing any conflicting demands, possessing a reasonable awareness of the options available and being able to make effective and appropriate decisions, referring to their line manager where appropriate.
- They will be given the experiment list for a whole semester and be expected to plan ahead to ensure that all experiments are available when required.

### **Problem Solving and Decision Making**

- The post holder will often work within well-established processes and procedures as set out by the department. The post holder is expected to also apply their technical knowledge and practical knowledge of the required laboratory practices in order to provide advice, training and assistance to staff and students regarding the application of techniques and use of common equipment for preparation and application of standard laboratory techniques.
- Whilst the work will usually follow an established pattern, the post holder is expected to apply reasonable personal initiative and judgement when faced with situations where past experience does not apply, referring only in exceptionally complex or unprecedented issues to the School Technical Manager for advice or guidance.

### **Continuous Improvement**

- The post holder is expected to take a pro-active approach to their work, making suggestions for minor improvements in working methods and implementing them under the guidance of their line manager.
- The post holder will work with more senior colleagues to develop the abilities and competence.

### **Accountability**

- The post holder will be required to order miscellaneous material, parts and consumables and ensure adequate stock levels at an appropriate cost. Failure to do so would affect the student's laboratory experience.
- The post holder is expected to also apply their technical and practical knowledge of the required laboratory practices in order to provide advice, training and assistance to staff and students regarding the application of techniques and use of common equipment. Whilst the work will usually follow an established pattern, the post holder is able to refer to well-defined procedures for guidance when required. The post holder is however required to recognise when problems should be referred to a senior member of the team or to their line manager for guidance or resolution. The post holder is expected to confidently provide advice and solutions to routine day-to-day problems in their specialist area.

### **Dimensions of the role**

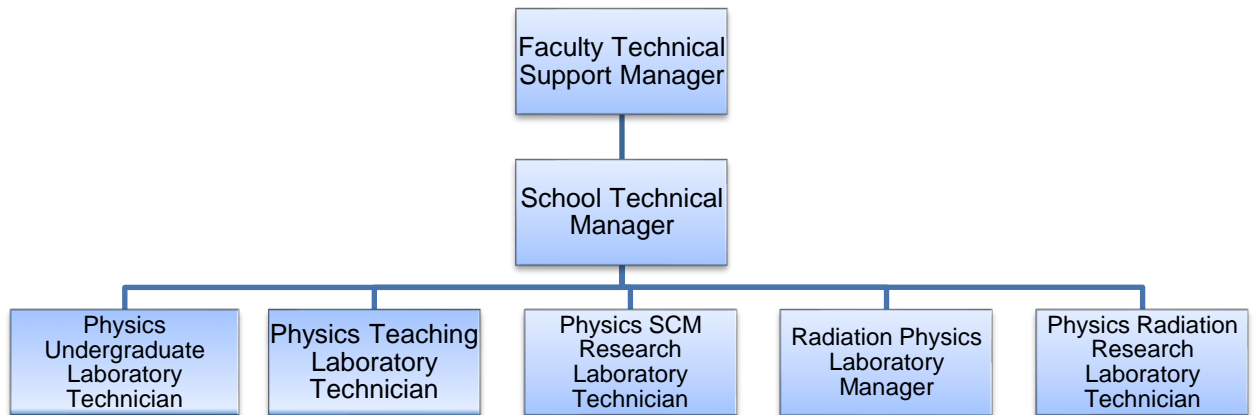
- This role will be based in the Physics teaching laboratories where they will work alongside other technical staff and various academic staff. The role will involve training the post graduate demonstrators and working alongside them to provide frontline technical support for undergraduate classes of up to 70 undergraduate or postgraduate students in the department's laboratories. The post impacts the student and staff experience in terms of its provision of service and its contribution to learning.
- Undertake demonstrations to and training of other technical staff in their own areas of expertise/specialities e.g. radiation Physics, electronics.
- The post holder is responsible for monitoring and maintaining a safe working environment within the teaching laboratories, ensuring that the environment meets Health and Safety requirements and procedures such as electrical safety testing, COSHH and disposal of waste chemicals are carried out in compliance with their associated regulations. Errors in judgement or failure to carry out a particular task could result in damaging equipment or risking students and staff's personal safety.
- There are no budgetary responsibilities although the post holder will be required to order miscellaneous material, parts and consumables and ensure adequate stock levels under their own initiative.

### **Supplementary Information**

This role will have a fluid balance of working in the undergraduate teaching laboratories and the Radiation teaching laboratories in a flat hierarchy under the direction of the School Technical Manager. They should therefore be prepared to adapt to needs which directly affect the students' experience. See the Departmental structure.

<b>Person Specification</b> This section describes the sum total of knowledge, experience & competence required by the post holder that is necessary for standard acceptable performance in carrying out this role.		
<b>Qualifications and Professional Memberships</b>		
Minimum HNC in Physics / electronics or equivalent and relevant technical experience		E
<b>Technical Competencies (Experience and Knowledge)</b> This section contains the level of competency required to carry out the role (please refer to the Competency Framework for clarification where needed and the Job Matching Guidance).	<b>Essential/ Desirable</b>	<b>Level 1-3</b>
Ability to work independently with minimal supervision	E	2
Good interpersonal skills and flexibility. The ability to interact with staff/students at all levels	E	3
Understanding of relevant Health & Safety	E	2
Knowledge and experience of maintenance and first-level fault finding in equipment	E	3
Competent with the principles of operating general Physics equipment	E	3
Experience of working with lasers and optical systems	D	1
Experience of working with ionising radiation	D	1
Experience of handling cryogenes and gases	D	1
<b>Special Requirements:</b>		<b>Essential/ Desirable</b>
Candidate must be physically fit to participate in manual handling and for access to the labs.		E
<b>Core Competencies</b> This section contains the level of competency required to carry out this role. (Please refer to the competency framework for clarification where needed). n/a (not applicable) should be placed, where the competency is not a requirement of the grade.		<b>Level 1-3</b>
Communication Adaptability / Flexibility Customer/Client service and support Planning and Organising Continuous Improvement Problem Solving and Decision Making Skills Managing and Developing Performance Creative and Analytical Thinking Influencing, Persuasion and Negotiation Skills Strategic Thinking & Leadership		2 3 2 2 2 2 n/a 2 1 n/a
<p>This Job Purpose reflects the core activities of the post. As the Department/Faculty and the post holder develop, there will inevitably be some changes to the duties for which the post is responsible, and possibly to the emphasis of the post itself. The University expects that the post holder will recognise this and will adopt a flexible approach to work. This could include undertaking relevant training where necessary.</p> <p>Should significant changes to the Job Purpose become necessary, the post holder will be consulted, and the changes reflected in a revised Job Purpose.</p>		
<b>Organisational/Departmental Information &amp; Key Relationships</b>		
<b>Background Information</b> The Faculty of Engineering and Physical Sciences is built on the core engineering disciplines of aeronautical engineering, civil engineering, chemical engineering, electronic engineering and mechanical engineering, together with the core scientific disciplines of computing, mathematics and physics. Within these fields the Faculty enjoys a reputation for excellence in research and teaching. This role will be based within the Physics teaching laboratories.		

## Department Structure Chart



## Relationships

### Internal

- The post holder is expected to communicate with the other departmental technical staff and the academic staff.
- The post holder will communicate with other users of the University services.

### External

- The post holder will communicate with external consultants and suppliers.