

Post Details		Last Updated: 18/03/2025	
Faculty/Administrative/Service Department	Faculty of Engineering and Physical Sciences		
Job Title	Engineering Workshop Technician		
Job Family	Technical and Experimental	Job Level	3
Responsible to	University Design & Engineering Manager		
Responsible for (Staff)	No		
<u>Job Purpose Statement</u> <p>The post holder is responsible for the development and manufacture of high -precision components and apparatus for teaching and research within the university, working from CAD drawings, sketches, and verbal instructions. Additionally, the role includes assisting in the design of products when required, providing expert advice on manufacturing feasibility, and actively contributing to the department services. The post holder also plays a key role in teaching and supporting students, delivering practical instruction, providing technical guidance, and ensuring they develop essential hands-on skills. They are also responsible for maintaining equipment, ensuring a high-quality learning and research environment for both students and staff.</p>			
<u>Key Responsibilities</u> This document is not designed to be a list of all tasks undertaken but an outline record of the main responsibilities (5 to 8 maximum)			
<ol style="list-style-type: none"> 1. Development and construction of components and apparatus for particular research experiments and teaching requirements, to a high degree of precision. 2. Construction and modification of apparatus and instruments from interpretation of verbal instructions and/or design drawings for research and student projects, using standard and specialised workshop equipment and techniques and precision measuring equipment. 3. Advising on and assisting with the design, construction and provision of research and laboratory equipment. 4. Technical advice on the practicalities of research proposals and subsequent workshop investigations/practices. 5. Maintenance, servicing, adjustment and repair to workshop machinery and equipment. 6. Teaching students, delivering practical instruction with hands-on engineering skills. 7. Responsibility for the efficient operation of mechanical engineering equipment and the maintenance of health and safety requirements, ensuring good practice is employed. 8. To advise and assist students with their projects over a four-week period during April/May <p>N.B. The above list is not exhaustive.</p>			

All staff are expected to:

- Positively support equality of opportunity and equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities Policy.
- Work to achieve the aims of our Environmental Policy and promote awareness to colleagues and students.
- Follow University/departmental policies and working practices in ensuring that no breaches of information security result from their actions.
- Ensure they are aware of and abide by all relevant University Regulations and Policies relevant to the role.
- Undertake such other duties within the scope of the post as may be requested by your Manager.
- Work supportively with colleagues, operating in a collegiate manner at all times.

Help maintain a safe working environment by:

- Attending training in Health and Safety requirements as necessary, both on appointment and as changes in duties and techniques demand.
- Following local codes of safe working practices and the University of Surrey Health and Safety Policy.

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 an established operating environment, guided by health and safety guidelines and workshop best practices.
- On a day-to-day basis, the post holder will generally work with limited guidance from the Workshop Manager. They will have the latitude within their daily/weekly work routine to organise and prioritise their own work, to ensure that key deadlines and objectives are met. This will include successfully managing any conflicting demands, possessing a basic awareness of the options available and being able to make effective and appropriate decisions, referring only to their line manager where appropriate.

Problem Solving and Decision Making

- During their day-to-day activities, the post holder is expected to apply an in-depth knowledge of mechanical engineering to provide technical support, advice and solutions (within their specialist technical area) to staff and students. This will include applying their experience to develop and construct components, apparatus and instruments.
- The post holder will at times be required to work from full planned drawings, where the appropriate course of action is usually a matter of choice, influenced by their previous experience/exposure to similar problems and the availability of materials within the workshop. However, at other times the post holder will be expected to work from brief written functional specifications or verbal communications alone, requiring a higher level of judgement.
- The post holder is expected to identify and address the majority of these problems/issues with minimal guidance from their line manager; however, when faced with new or unfamiliar problems, advice on the best course of action should be sought from their line manager. It is expected that the post holder applies their skills and knowledge in order to make recommendations for improvements to the efficiency and effectiveness of the service offered is expected to ensure the optimum utilisation of staff, machinery and equipment.

Continuous Improvement

- To keep abreast of new technology and manufacturing processes, promote and deliver innovative solutions to increase the productivity of core services provided by the workshop.

Accountability

- This post impacts across areas of the faculty in terms of its provision of service.

- The post holder is responsible for maintaining a safe working environment at all times through compliance with Health and Safety at work legislation and the University's operational procedures.

Dimensions of the role

- Whilst the post does not hold any budgetary responsibility, they are expected to make recommendations to the University Design & Engineering Manager for the purchase of equipment for the Workshops.

Person Specification 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.

Qualifications and Professional Memberships		Essential/ Desirable
Advanced City & Guilds or BTEC Higher National Certificate/Diploma in an Engineering subject		E
Served a recognised Engineering apprenticeship		E
Technical Competencies (Experience and Knowledge) 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).	Essential/ Desirable	Level 1-3
Ability to use a full range of conventional and CNC machine tools	E	3
Understanding of Health and Safety legislation and issues in a workshop setting	E	2
Significant experience in an engineering environment	E	2
The ability to advise staff and students on the practicalities of research proposals	E	2
Previous experience of working in a tool room or research and development workshop and an understanding of the issues to be faced in such a workshop.	D	2
Welding experience (Electric and gas)	D	2
Sheet metal Fabrication and Additive Manufacturing experience	D	2
Core Competencies 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.		Level 1-3

Communication	2
Adaptability / Flexibility	2
Customer/Client service and support	2
Planning and Organising	2
Continuous Improvement	2
Problem Solving and Decision Making Skills	2
Managing and Developing Performance	1
Creative and Analytical Thinking	2
Influencing, Persuasion and Negotiation Skills	1
Strategic Thinking & Leadership	1

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.

Should significant changes to the Job Purpose become necessary, the post holder will be consulted and the changes reflected in a revised Job Purpose.

Organisational/Departmental Information & Key Relationships

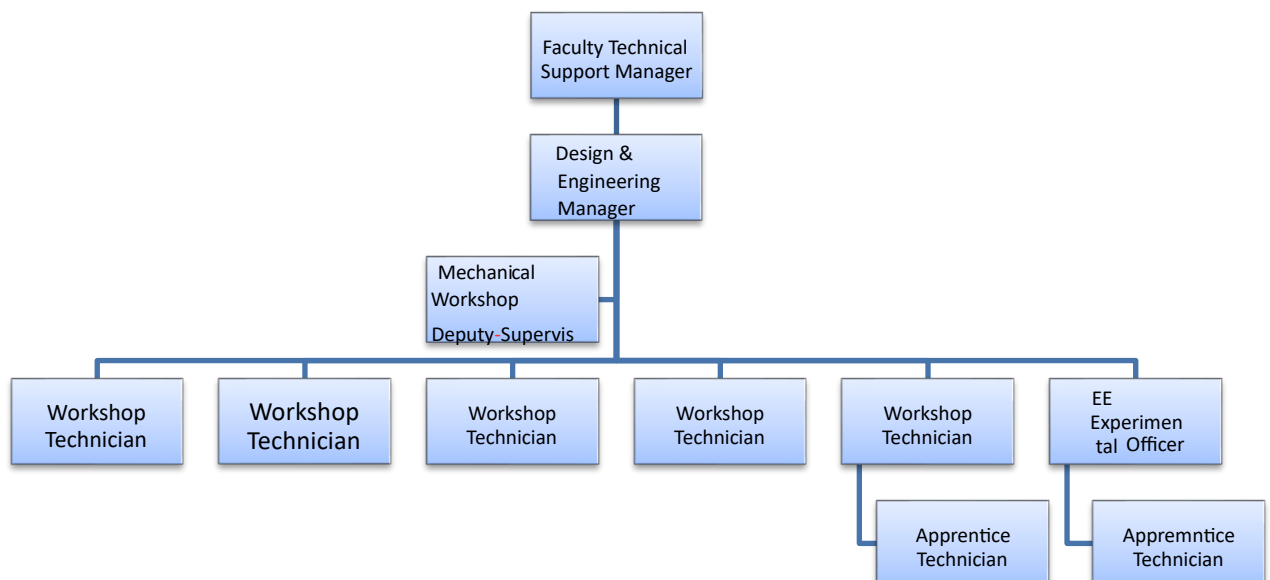
Background Information

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 of excellence in research and teaching.

The Faculty has a training programme for 1st year mechanical engineering students in a variety of workshop disciplines. The course will be run on an annual basis and will run for approximately 10 – 12 weeks in the autumn semester and will enable the students to have an understanding of basic machine shop and fabrication skills.

The Mechanical Workshop produces high precision components and equipment plus repairs and modifications to existing equipment for research and teaching activities across the Faculty.

Department Structure Chart



Relationships *This is not an exhaustive list of every relationship the post holder has, but is a brief description of those that play an important part in the post holder successfully carrying out the role. It should identify the significant internal and external relationships and contacts that the post holder has in their job and describe the overall purpose and nature of those relationships (i.e. exchanging information, negotiating, networking, etc.)*

Internal

- The post holder will use their specialist knowledge of designing and manufacturing high specification products and tooling to provide technical expertise and advice, to workshop staff, academics, researchers and students at undergraduate and postgraduate level.

External

- The post holder will also have contact with external customers and suppliers.