



Job Title:	Teaching Technician (Engineering Manufacturing)
Grade:	7
Salary:	£39,105 to £45,163 per annum
Department:	College of Science & Engineering
Hours/Contract:	Full time or job share, permanent
Job Family:	Technical and Experimental
Reference:	10435

Role Purpose

The College of Science & Engineering is home to the 5 academic schools of: Chemistry, Computing and Mathematical Sciences, Engineering, Geology and Geography, and Physics and Astronomy. Teaching and research activity in these schools are supported by College Technicians covering a range of specialist areas. One such area is manufacturing of unique devices and prototypes, and supporting the education of students in manufacturing techniques and Design for Manufacture and Assembly (DfMA) principles.

You will be able to operate conventional and CNC engineering manufacture equipment, to include vertical milling and horizontal turning operations. The role also requires you to use a full range of mechanical workshop skills for the manufacture of research equipment & components.

You will be able to provide the staff and students in the School of Engineering in the design and manufacture of unique devices, to include repair, modification and construction of new and existing equipment and components, along with providing specialist technical expertise.

The role also requires the delivery of technical skills training/teaching of undergraduate students to carry out turning and milling operations, bench skills and fitting techniques. You will also support undergraduate and post graduate project manufacture within the School of Engineering, to include extra curricula activities, to include; Formula Student & The Engineering Society. Other responsibilities include supervising the Engineering Manufacture Workshop for task allocation, managing staff, workflow, advice and guidance, best practice procedures and ensure manufacture request deadlines are met.

Main Duties and Responsibilities

- Deliver technical skills training to all levels of students for the successful operation of rapid prototyping, manual milling & turning (including CNC programming and setting), hand skills, bench fitting exercises and a full range of fabrication skills, to include measurement and marking out.
- Manufacture and construct equipment, components for staff and students from technical engineering drawings and verbal instructions. Diagnose faults, repair and maintain as required, carry out any such modifications as necessary.
- Advise and assist staff and students in the design, manufacture, repair, development, construction, modification and commissioning of equipment and components using a full range of 3-axis CNC programming & setting. Use a variety of manual machine tools, bench fitting and fabrication equipment.





- The proficient use of CAD/CAM for post processing to operational programs for the production of components using CNC machinery.
- Workshop supervisory responsibilities to include; managing workflow to ensure manufacturing deadlines are met, allocation of tasks to workshop technicians, liaising with staff and students, identifying staff training and development & monitoring staff performance.
- The maintenance of a clean and safe workshop environment whilst using machinery, tools and materials, ensuring all health and safety processes and documentation are maintained.

Determine requirements for current and future stock and equipment, prepare costings and liaise with external suppliers to source components and materials.

Internal and External Relationships

- To engage and maintain an active approach to CPD (Continual Professional Development). Participate fully in the PDD (Performance and Development Discussion) Scheme, identifying and agreeing developmental opportunities for personal and professional development and in response to changing needs within the College of Science & Engineering.
- Maintain positive working relations and a “can do” attitude with all categories of staff, students and industry partners when discussing job content and progress.
- The flexibility to work within the various Mechanical Engineering elements within the College of Science & Engineering.
- To work closely as a member of the manufacture team to support the Technical Services Manager in planning the future development of the workshop areas, identifying opportunities for improvements and investment.
- Work collaboratively with the academic staff in relation to skills delivery, student’s projects and play an active role in improving the skills training programme. Attend meetings and maintain high levels of communication with all academic and teaching related staff.

Planning and Organising

- Due to the 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, with the ability to plan own workload and the workload of colleagues in the manufacture facility, to ensure work requirements and deadlines are met.
- Maintain effective communication to discuss and confirm job requests with the originator, researcher, designer, academic and academic-related staff & students. Offer advice on Design for Manufacture & Assembly (DfMA) or revisions/adaptions as required.
- Effective teaching delivery planning, communication and managing staff within the manufacture facility to ensure deadlines are met and raise any issues with the Technical Services Manager.
- Use of the Universities purchase system (SAP) to acquire appropriate material, cutting tools and components.
- Maintain contact with Technical Services Manager to discuss progress and work task priorities, attend team meetings when required and advise on manufacture team member’s performance issues.





Qualifications, Knowledge and Experience

Essential

- A recognised engineering apprenticeship and significant, relevant post-apprenticeship experience and trade qualifications to a minimum of level 3.*
- Extensive experience operating the wide range of equipment used in an engineering manufacture facility.*
- Experience in delivering skills training/teaching within an educational environment or equivalent training delivery in an industry setting.*
- Proficient use of CAD/CAM software.*
- EngTech or IEng (or willingness to achieve/work towards).

Desirable

- An ONC/Advanced qualification in Mechanical Engineering.
- Teaching qualification: Cert Ed, PGCE, DTLLS etc.
- HNC/HND Engineering Manufacture qualifications.
- TIG welding proficiency.
- Experience of Siemens NX, SolidWorks, SpaceClaim CAD/CAM software.

Skills, Abilities and Competencies

Essential

- Excellent communication skills to discuss work requirements and allocation of work.*
- Effective skills delivery of practical engineering subjects.*
- Ability to supervise/manage staff in a production environment.*
- Ability to work as part of a team with excellent interpersonal skills.*
- Ability to work efficiently and accurately while prioritising own workload and that of manufacture colleague's work to meet deadlines.*
- To work to a specific tolerance and recognise different material characteristics.*
- Competence in IT skills and Internet usage.*
- Experience of using CAD/CAM Design software packages.*
- Design experience.*
- A complete range of mechanical workshop skills including excellent hand skills and competency in the use of the following equipment:
 - Centre lathes.*
 - Milling Machines.*





- Cylindrical and surface grinders.
- Fabrication equipment.*
- Folding Machines and Guillotines.*
- Hand-operated presses.
- CNC Lathes (programming, setting and operating).*
- 3 -axis CNC Milling (programming, setting and operating).*
- Various hand tools & marking out equipment.*
- Portable power tools.*

Desirable

- MIG & TIG welding experience

****Criteria to be used in shortlisting candidates for interview***

Criminal Declaration

If you become an employee, you must inform your manager immediately, in writing, if you are the subject of any current or future police investigations/legal proceedings, which could result in a criminal offence, conviction, caution, bind-over or charges, or warnings.

Supporting University Activities

As a University of Leicester citizen, you are expected to support key university activities such as clearing, graduation ceremonies, student registration and recruitment open days. We expect all staff as citizens to work flexibly across the University if required.

University Values

Inclusive - We are diverse in our makeup and united in ambition. Our diversity is our strength and makes our community stronger.

Inspiring - We are passionate about inspiring individuals to succeed and realise their ambitions. We challenge our community to think differently, to get involved, and to constantly embrace new ideas.

Impactful - As Citizens of Change we will generate new ideas which deliver impact and empower our community

Equity and Diversity

We believe that equity, diversity and inclusion is integral to a successful modern workplace. By developing and implementing policies and systems that challenge stereotypes across all aspects of our work, we have a culture that recognises and values the diverse contributions of our staff which benefits everyone. Our strong values of inclusivity and equity support our efforts to attract a diverse range of high quality staff and students, and identify our University as a progressive and innovative workplace that mainstreams equity, diversity and inclusion.

