UNIVERSITY OF LEICESTER

Job Summary

Job Title: Head of Manufacturing & AIV
Grade: 8
Salary: £51,258 to £57,666 per annum, pro-rata if part-time
Department: Space Park Leicester
Hours/Contract: Full time or job share, permanent
Job Family: Technical and Experimental
Reference: 14055

Role Purpose

The Head of Manufacturing & AIV at Space Park Leicester provides specialist support for the manufacture, assembly, integration and verification of hardware, instrumentation and associated equipment across SPL's full range of research, commercial and other technical activities.

The post holder will have a strong practical focus, manufacturing and modifying precision mechanical components in the Precision Manufacturing Facility using traditional and advanced machining techniques and facilities; assembling complex and delicate instrumentation; supporting integration and verification activities; and working in workshop, cleanroom, laboratory and external test environments. Work will be undertaken to approved engineering drawings, procedures, tolerances, quality requirements and configuration controls.

The role will also provide practical engineering input to the design process, particularly design for manufacture and assembly, resolution of problems encountered during build and integration, and planning of mechanical hardware development. The post holder will lead defined manufacturing, build and AIV activities, exercising engineering judgement and taking responsibility for hardware, deliverables and decisions that may lie on the critical path to project, customer and mission delivery.

The role may require travel to partner and test facilities and periods of work outside normal hours to support critical integration, test or deployment activities. The post holder must be comfortable and willing to contribute to defence- and security-related projects under appropriate professional, contractual, ethical and regulatory controls.

Resources Managed

The role formally line manages the Manufacturing Engineers in the Precision Manufacturing Facility, providing practical leadership, task allocation, development and supervision across manufacturing and AIV activities. It is also responsible for the safe use and day-to-day control of assigned machine tools, fabrication and inspection equipment, cleanroom equipment, materials, components and flight or development hardware, including high-value or mission-critical items. The post holder may additionally provide practical guidance and task supervision to colleagues, apprentices, students, contractors and visitors.

Main Duties and Responsibilities
• Manufacture, modify and finish precision mechanical components and assemblies in the Precision Manufacturing Facility using traditional and advanced machining techniques and facilities, working from controlled engineering drawings and tolerances. • Assemble and integrate complex mechanical hardware and instrumentation in workshop and cleanroom environments, applying appropriate product-assurance, contamination-control and handling practices.

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- Provide practical input to engineering design and planning, advising on manufacturability, assembly methods, tolerances and solutions to problems encountered during manufacture, build and integration.
- Undertake and support AIV activities including dimensional inspection, alignment, fit and function checks, mechanical fault-finding and environmental test campaigns.
- Lead and coordinate defined manufacturing, assembly and test activities with engineers, project managers, quality staff, suppliers, external facilities and agency or customer representatives; line manage the Manufacturing Engineers in the Precision Manufacturing Facility and the AIV Technician; and maintain delivery of hardware and activities that may sit on the project critical path.
- Maintain accurate manufacturing, build and inspection records, and support non-conformance investigation, corrective action and configuration control.
- Support the safe operation and upkeep of workshop, cleanroom, laboratory and test facilities, including tools, equipment and consumables. Provide occasional practical support for the delivery of professional training within the post holder's area of expertise.

Internal and External Relationships

- Internal: reporting to the Principal Mechanical Engineer; working with mechanical, systems and electronics engineers; Manufacturing Engineers in the Precision Manufacturing Facility, the AIV Technician and other technical staff; project managers; quality, operations and facilities teams; academic/project leads and students; senior SPL management; and authorised facility users.
- External: maintain direct working relationships with agency representatives, including ESA, NASA and the UK Space Agency, as well as customers, project partners, component manufacturers, specialist suppliers, contractors and test facilities. These relationships may involve representing SPL on technical delivery matters, agreeing practical AIV arrangements, reporting status and risks, and resolving issues affecting critical-path hardware or milestones.

Planning and Organising

- Plan, prioritise and lead manufacture, assembly, integration and test activities across concurrent projects, allocating work to the Manufacturing Engineers in the Precision Manufacturing Facility and the AIV Technician and ensuring that critical-path items are progressed to the required technical, quality and schedule standards.
- Ensure drawings, components, tools, calibrated equipment, facilities and documentation are ready for work to proceed.
- Coordinate manufacturing and test activities with engineers, project teams, agency and customer representatives, suppliers and external facilities; maintain visibility of dependencies, technical risks and schedule status; and escalate issues that could affect agreed milestones or delivery.
- Organise and support external test campaigns, site visits, deliveries and deployments.

Qualifications, Knowledge and Experience

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Essential

- Relevant manufacturing qualification, HNC/HND, apprenticeship or equivalent substantial practical experience in precision mechanical manufacturing.*
- Significant experience of precision mechanical manufacture, assembly and integration of complex instrumentation or comparable high-value engineering hardware.
- Proven understanding of engineering design, with the ability to interpret drawings and tolerances and advise on practical manufacture and assembly problems.*
- Experience of controlled engineering practices, including quality/product assurance, traceability and non-conformance processes.*
- Experience of leading technical activities and supervising or line managing technical staff, with accountability for delivery against demanding quality and schedule requirements.*

Desirable

- Experience using CAD/CAM, CNC machining or precision metrology.
- Experience of cleanroom working, environmental testing, spaceflight hardware or another regulated high-technology engineering environment.

Skills, Abilities and Competencies

Essential

- High standards of practical workmanship, accuracy and attention to detail when working with precision or sensitive hardware.
- Strong practical problem-solving ability and engineering judgement, with the confidence to work independently and take responsibility for defined activities.
- Ability to follow controlled procedures while identifying and communicating technical problems and practical solutions.*
- Ability to work credibly and effectively with design engineers, project teams, senior stakeholders, suppliers, customers and national or international space-agency representatives, communicating the significance of technical dependencies, risks and decisions to non-technical audiences.*
- Good communication, planning and IT skills, with flexibility to travel and support time-critical build and test activities.Ability to manage competing priorities and perform effectively under uncertainty and delivery pressure.

**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.

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Job Summary

Supporting University Activities

As a University of Leicester citizen, you are encouraged to support key university activities such as clearing, graduation ceremonies, student registration and recruitment open days. We encourage all staff as citizens to work flexibly across the University if required. If supporting these activities is likely to affect your workload, please speak to your line manager in the first instance

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

Freedom of Speech

The University is committed to upholding freedom of speech and academic freedom within the law throughout our recruitment processes. We ensure that all candidates are considered based on merit and suitability for the role, without regard to their lawful viewpoints or the expression of challenging or controversial ideas. Our recruitment policies and practices are designed to protect applicants from discrimination or adverse treatment on the basis of their opinions, and to foster an environment where open debate and diverse perspectives are valued as essential to our academic mission.

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 equality 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 equality, diversity and inclusion.