



Candidate Information

Position: Engineering Technician
School/Department: School of Mechanical and Aerospace Engineering
Reference: 21/108782
Closing Date: Monday 17 May 2021
Salary: £24,461 - £26,715 per annum.
Anticipated Interview Date: Wednesday 9 June 2021
Duration: This is a fixed term contract position available until 28 February 2023 in the first instance.

Background:

The Northern Ireland Advanced Composites & Engineering Centre (NIACE) is a university-hosted, industry facing centre that has become a technology hub for the research and development of advanced materials technologies, particularly in the area of advanced composites technologies, materials characterisation and nanotechnology. The Centre has established itself as a creative environment to encourage and assist Northern Ireland's manufacturing sector to innovate and develop technical capabilities, to compete more successfully in national and global markets. By developing relevant technological solutions for a breadth of manufacturing applications the Centre has enabled companies to work at a scale and in collaborations not feasible before its creation.

With financial assistance from Invest NI and collaboration between QUB, UU and the National Composites Centre (NCC), NIACE is now entering a new, exciting phase of growth and development as part of the Advanced Manufacturing Innovation Centre (AMIC-NIACE). In particular, it is establishing itself as a fully-functioning R&D centre with staff and technical capability to define, support and deliver industry focused R&D programmes in partnership with clients or on their behalf. The new, enhanced Centre will develop a pipeline of R&D projects that will provide a sustainable, future revenue stream and grow our industrial engagement and presence. As part of the Centre's evolution we are looking to recruit a number of key personnel. Funding has been secured for two years that is the interim period until AMIC is formally created. The expectation is for AMIC-NIACE to transition into an AMIC entity after this interim period with appropriate funding arrangements.

Job Purpose:

You will solve and assess a range of practical engineering tasks and technical challenges in line with specific requirements. You will operate and ensure the upkeep and maintenance of equipment within AMIC-NIACE. This role will also require you to contribute to the development of R&D proposals and to the delivery of R&D projects in the Centre. Reporting directly to the General Manager, you will work collaboratively with wider AMIC-NIACE staff, academia, technology providers, RTO's and industry to support the delivery of industry focused R&D programmes in partnership with clients or on their behalf.

Major Duties:

1. Manufacture of engineering components and test samples to a high level of precision and quality, using a variety of manufacturing techniques & processes (primarily composite focused).
2. Operation of complex processing equipment such as Autoclaves, Hot presses, Ovens, and other automated systems.
3. Programming and operation of general machine shop equipment to include CNC Machine Tools, Primarily Lathes and Milling machines, using CAM software.
4. Interpret detailed engineering drawings and execute appropriate processes and safe working practices to deliver to specification.
5. Autonomously complete complex tasks to support project requirements by performing practical tasks to complete a range of technical activities.
6. Solve problems found with engineering data or documentation. Prepare justified recommendations for any inaccuracies and/ or challenge discrepancies in documentation and specifications. Take an analytical and methodical approach to problem solving, identifying causes and achieve satisfactory solutions.
7. Actively develop or support the development of a technology/ method or process to support future engineering requirements.
8. Construction and assembly of apparatus in house & off-site, if required.

9. Contribute to the planning, development, delivery, maintenance and trialling of AMIC-NIACE projects by advising on a range of complex engineering processes/methods. Analysing requirements and advising on scope and options, within the technical area, in a range of complex and non-complex contexts.
10. Maintenance and servicing of workshop equipment and apparatus. Compliance with relevant statutory safety regulations. Contribution to general workshop tidiness and centre housekeeping.
11. Compliance with Health and Safety procedures affecting self and others. Develop ways to improve safe working practices further.
12. Keep up to date with relevant technical developments to keep the Centre at the forefront of composites technology and processes.
13. Any other duties which are appropriate to the post as may be reasonably requested by the supervisor/line manager.

Planning and Organising:

1. Plan, schedule and monitor your own work activities to meet given objectives and processes, ensuring time and quality targets are met.
2. Plan for the use of research resources and laboratories where appropriate.
3. Liaise with other team members to achieve co-ordinated progress.

Resource Management Responsibilities:

1. Take delegated responsibility for the upkeep, maintenance and repair of equipment.
2. Ensure Centre resources are used in an effective and efficient manner.
3. Provide guidance as required to staff and project partners who may be assisting with programme delivery.

Internal and External Relationships:

1. Participate in external engagements with commercial partners, suppliers, government bodies and academic institutions related to specialisation.
2. Coordinate and liaise with other members of the project teams over work progress.
3. Regular liaison with the Centre Project Engineer and General Manager (Line Manager).

Essential Criteria:

1. OND/ONC and/or NVQ level 3 or above (or equivalent standard) in an engineering discipline and/or apprenticeship in a manufacturing environment.
2. Post qualification, three years' relevant work experience to include programming and operation of general machine shop equipment and / or composite manufacturing related equipment.
3. High level of skill with regard to operation of conventional workshop equipment.
4. Well-developed understanding of relevant regulations and procedures including Health and Safety requirements.
5. Good communication and interpersonal skills.
6. Ability to develop and demonstrate standard procedures processes and techniques in relation to engineering workshop practice.
7. Ability to prioritise own work within a general plan to meet deadlines.
8. Analytical and problem solving skills.
9. Must be willing to additional hours during peak periods needed.

Desirable Criteria:

1. Experience working for a composite / polymer based manufacturing company.
2. Experience of collaborative research and effective working in a team.
3. Experience of working with international OEMs and SMEs.
4. Experience in using commercial manufacturing/simulation software tools.