



Candidate Information

Position:	Manufacturing Engineer - CNC Machining
School/Department:	Northern Ireland Technology Centre (NITC)
Reference:	20/108404
Closing Date:	Monday 16 November 2020
Salary:	£33,797 to £40,322 per annum
Anticipated Interview Date:	Monday 30 November 2020
Duration:	Available until 30 September 2022

JOB PURPOSE:

To undertake applied industrial research, development and knowledge transfer within the NITC, and in particular CNC manufacturing process development, that will have a direct technical, economic and reputational benefit to NITC. To support manufacturing activities within NITC including the development of new methods and processes, process validation and generation of research outputs. To assist in national and international business development activities as required to secure funding from industry and government sources, nationally and internationally. Working collaboratively with technology providers, national technology centres, academia and industry to deliver key projects focused on CNC manufacturing activities with particular emphasis on the machining of titanium or other hard metals.

MAJOR DUTIES:

1. Undertake high quality industrial research, development and knowledge transfer in the area of manufacturing, and in particular CNC manufacturing process development with particular emphasis on the machining of titanium and other hard metals.
2. Development and implementation of Multi-axis CNC Technology including Milling, Mill/Turn & PKM Machining.
3. Development and implementation of CNC related CAM Technology.
4. Development and implementation of smart factory technologies.
5. Formally evaluate the effectiveness of new or enhanced methods arising from research.
6. Document activities through formal high quality technical reports.
7. Engage with industrial partners to facilitate the transfer of NITC capabilities into commercial R&D teams.
8. Contribute to the planning, development, delivery, maintenance and trialing of NITC projects.
9. Participate constructively in multi-disciplinary research activities, including staff training and development.
10. Help develop the international reputation of NITC and QUB through presentations, attendance at trade-shows and visiting major companies and research & technology centres worldwide.
11. Produce high quality technical reports and demonstrations to assist in generating funding opportunities to support further programme activity.
12. Carry out routine administrative tasks to ensure project goals are completed on time and within budget.
13. Undertake any other duties that may reasonably be requested by management.

Planning and Organising:

1. Plan own work to meet given objectives and processes.
2. Plan, schedule and monitor work activities in order to meet time and quality targets.
3. Plan for the use of research resources and laboratories where appropriate.
4. Plan in advance to meet deadlines as required by management and project requirements.
5. Liaise with other team members to achieve co-ordinated progress against objectives.

Resource Management Responsibilities:

1. Ensure research and development resources are used in an effective and efficient manner.
2. Provide guidance as required to staff and any students who may be assisting with the research project.

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 team over work progress.

ESSENTIAL CRITERIA:

1. Honours Degree, or equivalent, in related engineering discipline with at least three years' recent relevant industrial experience OR minimum HND in related engineering discipline with at least five years' recent relevant industrial experience.
2. Demonstrable evidence of competence in the application of CNC manufacturing equipment for machining and drilling, with clear experience of using CNC related CAD and CAM technologies.
3. Experience of using research tools and techniques resulting in high quality project and technical reports.
4. Strong evidence of complex problem solving skills in an engineering environment.
5. Extensive breadth and depth understanding of fundamental engineering concepts.
6. Evidence of leading and delivering on multifaceted projects within deadlines and budget, displaying strong resource management ability.
7. Evidence of communicating complex technical information to a range of stakeholders.

DESIRABLE CRITERIA:

1. Hold or be about to hold a relevant higher degree or Ph.D.
2. Experience of collaborative research and effective working in a team.
3. Evidence of working with international OEMs and SMEs.
4. Proven experience in the machining of titanium or other hard metals.
5. Demonstrable experience and knowledge of machining dynamics in milling processes.
6. Demonstrable experience in using commercial digital manufacturing/simulation software tools.
7. Experience in using either Mill/Turn or PKM technology.
8. Experience with manufacturing automation.