



**December 2020**

Applications are invited from suitably qualified candidates for the following position

**Assistant Professor in Advanced Manufacturing Technologies  
School of Mechanical and Manufacturing Engineering  
Faculty of Engineering and Computing  
Fixed Term Contract to March 2025**

**Introduction**

Dublin City University ([www.dcu.ie](http://www.dcu.ie)) is a young, dynamic and ambitious university with a distinctive mission to transform lives and societies through education, research and innovation. We are a research-intensive, globally-engaged institution, distinguished by both the quality and impact of our graduates, and focus on the translation of knowledge into societal and economic benefit. Excellence in education and research activities has led to DCU's consistent presence in the rankings of the world's top young universities.

Over its relatively short history has developed a strong reputation nationally and internationally for pioneering innovations in higher education. The university is embarking on a period of significant investment in learning innovation across all of its Faculties helping us transform the learning experience of students at DCU - reconceptualizing learning opportunities, creating authentic connections between the classroom and enterprise, and embedding digital literacies, disciplinary competencies. DCU is joined in these project by a strong consortium of enterprise partners, representing key employment sectors in the Irish economy. The programme of innovation is funded under the Irish Government's Human Capital Initiative (HCI) supported by the National Training Fund. As part of this a new graduate certificate in Novel Materials for Industry 4.0 will be developed and delivered over the coming four years. This role is being advertised to help develop and implement this programme. It will deliver on the ambitions we have to reimagine curricula and to embed innovative pedagogies, enhanced use of technology and deep industry engagement.

**School of Mechanical and Manufacturing Engineering**

The School of Mechanical and Manufacturing Engineering has been at the forefront of Teaching, Learning, Research and Innovation in engineering since its establishment in 1987. Current programmes include Mechanical and Manufacturing Engineering, Biomedical Engineering and Mechatronics. The School is a research-intensive school that is home to key researchers affiliate to the I-Form, the SFI Research Centre for Advanced Manufacturing, EPSRC/SFI Advanced Metallic Systems Centre for Doctoral Training, the Advanced Processing Technology Research Centre and also to ESIPP, MEDeng and the Water Institute, and has particular strengths in Advanced Manufacturing and Biomedical Engineering, Sustainable Systems and Energy.

## **Relationships**

The position will report to the Head of School, and work closely with the programme lead for the Grad Cert., other colleagues, the Teaching Convenor/Associate Dean of Teaching and Learning and academic and industry partners. Building positive relationships with professional support staff and technical and pedagogy specialists and engagement with key stakeholders within and outside of DCU is an important part of this role.

## **The Role**

The appointee will be expected to support the School in implementing an innovative curriculum project, specifically:

- developing and delivering a new postgraduate certificate programme focussed on novel materials for industry 4.0, with specialism in innovative materials processing, ensuring an industry engaged, research-led approach, integration of challenge based learning, digital tools and hybrid delivery.
- broader implementation of teaching approaches into other target programmes in the school, and
- engaging with university-wide elements of the initiative including cross faculty cooperation, project evaluation and reporting
- teaching, student mentoring and supervision of taught projects and research

The role will encompass activities across the three domains, as follows:

### **Teaching and Learning**

Prepare, deliver and assess a range of core subjects in a manner consistent with DCU's high academic standards and in a hybrid environment which involves campus and elements of remote delivery. Teaching extends to promoting innovation in curricula development. Typical activities include:

- Contributing to the design and development of the new programme.
- Developing and delivering new or reconceptualised modules and resources.
- Designing and assessing examinations and other types of coursework.
- Using a wide range of teaching and assessment methodologies which foster a deep approach to learning and equip students with the skills and attributes needed to be lifelong learners including challenge based learning and concentrated and immersive learning experiences.
- Student mentoring.
- Proactive engagement with the renewal of existing courses and programmes.
- Engagement with professional development for teaching particularly in that related to the approaches embedded in the project

### **Research and Scholarship**

He/she will be expected to sustain and conduct research, engage in scholarship of quality and substance, generate research income, supervise postgraduate students and publish to the highest international standard both individually and, where appropriate, in partnership with colleagues in DCU and elsewhere. The appointee will be expected to have clearly articulated research interests and research profile development plans that support the school's current research priorities, and which will underpin modules and projects related to the new postgraduate certificate programme.

### **Contribution to the School, Faculty, University and Profession**

Examples include:

- Engagement with planning, quality review and improvement processes, and external programme accreditations.

- Involvement with appropriate professional bodies and associated initiatives.
- Development and delivery of the international activities of the School including international travel to do so.
- Adoption of some administrative functions related to the activities of the School, the Faculty, and the wider University. Such duties will be defined by the Head of School and may include some of the following: degree programme coordination; participation in committees; visits to students on industrial placement within the DCU INTRA programme; student recruitment.

### **Applicant Requirements**

- Applicants must hold an honours degree in a relevant discipline, and should be qualified to a post-graduate level with a PhD specialism in materials processing, laser surface processing or other advanced materials processing related discipline.
- The successful candidates should ideally have a minimum of three years' relevant post-doctoral experience related to advanced manufacturing technologies
- Applicants must have experience in research collaboration and engagement with (Irish, European, and International) companies
- Applicants must have demonstrated teaching experience at postgraduate level, including experience in using innovative pedagogies and/or assessments in the area of additive manufacturing, as well as international and online, or technology-assisted teaching
- Candidates should demonstrate excellent interpersonal and communication skills consistent with the highest quality of teaching and learning, together with evidence of successful teamwork and a collegial approach

Ideally the applicants would have

- provided assistance to enterprises for technology development
- strong research credentials and publication record, particularly in one or more of the following research areas: additive manufacturing, advanced materials engineering, and laser processing
- demonstrated potential to establish an independent research programme and attract research funding from competitive research funding schemes and/or industry.
- experience in postgraduate programme pathway/structure development and module development

### **Further Information**

More information on the School of Mechanical and Manufacturing Engineering and its programmes can be found at: <https://www.dcu.ie/mechanicalengineering>

### **Mandatory Training**

The post holder will be required to undertake the following mandatory compliance training: GDPR, Orientation, and Compliance.