



**Assistant Professor in Biomedical Engineering  
Faculty of Engineering and Computing  
School of Mechanical and Manufacturing Engineering  
Fixed Term Two Year Contract**

**Dublin City University**

Dublin City University (DCU) is a leading innovative European University. It is proud to be one of the world's leading Young Universities and is among the world's top 2% globally. DCU is known as Ireland's University of Impact, with a mission to 'transform lives and societies' and focuses on addressing global challenges in collaboration with key national and international partners and stakeholders.

DCU has over 20,000 students in five faculties spread across three academic campuses in the Glasnevin-Drumcondra area of North Dublin. Thanks to its innovative approach to teaching and learning, the University offers a 'transformative student experience' that helps to develop highly sought-after graduates. DCU is currently No. 1 in Ireland for Graduate Employment Rate, and for graduate income (CSO).

DCU is a research-intensive University and is home to a number of SFI-funded Research Centres. The University participates in a range of European and international research partnerships. DCU is also the leading Irish university in the area of technology transfer as reflected by licensing of intellectual property.

As a 'People First' institution, DCU is committed to Equality, Diversity and Inclusion - a University that helps staff and students to thrive. The University is a leader in terms of its work to increase access to education and is placed in the world's Top 10 for reducing inequalities in the Times Higher Education Impact Rankings.

**School of Mechanical and Manufacturing Engineering**

The School of Mechanical & 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, Mechatronics Engineering and Mechanical and Sustainability Engineering. The School is a research-intensive school that is home to key researchers affiliated to research centres including I-Form, Insight, Biodesign Europe, ESIPP, MEDeng and the Water Institute, and has particular strengths in Biomedical Engineering, Advanced Manufacturing and Sustainable Systems and Energy. At postgraduate levels the school offers taught Master's programmes with Majors in

Biomedical Engineering, Simulation Driven Design and Mechanical and Sustainability Engineering, each also with a pathway integrated with Bachelor's degrees.

### **The Role**

The School of Mechanical and Manufacturing Engineering is seeking to recruit a talented and enthusiastic lecturer in Biomedical Engineering. The candidate should be motivated to lead and develop modules at both undergraduate and postgraduate level in the broad areas of tissue, joint or movement biomechanics, mechanobiology, medical devices, medical instrumentation, biomaterials, tissue engineering or regenerative medicine. We are particularly interested in applicants who have experience in teaching and have established a track record in research, ideally with applications to injury or rehabilitation. The post holder will be expected to align with research and knowledge transfer activities with DCU's Biodesign Europe and MEDeng centres. The group's research activities encompass continuum biomechanics, biomaterials science, tissue engineering and regenerative medicine and clinical orthopaedics.

The applicants must be able to demonstrate the capability to conduct independent and collaborative research within the scope of the biomedical engineering discipline, obtain external research funding, and publish in high-impact journals. The appointee will be expected to contribute directly to undergraduate and Master's level programmes through research-led teaching, on-line delivery modes, supervision of laboratory sessions, student mentoring and supervision of capstones projects. Our Biomedical Engineering programmes prepare graduates with the knowledge and competence to meet the interdisciplinary challenges of biomechanical analysis, materials development and medical device development.

The appointee will be expected to support the School in implementing an innovative curriculum project, 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 is also required including cross-faculty cooperation, project evaluation and reporting.

### **Relationships**

The position will report to the Head of School and work closely with other colleagues, the Teaching Convenor, the Research Convenor, Associate Dean of Teaching & Learning and the Associate Dean for Research, as well as 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.

### **Duties and Responsibilities: Principal Duties and Responsibilities**

Key knowledge and skills associated with this position include but are not limited to the following:

#### **Teaching:**

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 delivery and elements of remote delivery. Teaching extends to supporting innovation in curricula development. Typical activities include:

- Contributing to the design and development of new programmes.
- 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.
- Co-designing with other academics and industry partners a suite of tools and initiatives that support the transversal skills pathway and embedding transversal skills development, diagnostics and assessments into new and existing programmes.
- Supervision of laboratory sessions, and 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.
- Undertake professional development for teaching.
- Engage with the development of working relationships with industry, employers and professional bodies.
- Undertake such administration/outreach duties as will be defined by the Head of School and may include some of the following: degree programme coordination; participation in committees; visits to industry; student recruitment.
- Be goal orientated, collaborative, use their initiative and show leadership potential.

#### **Research:**

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 collaboration 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 DCU's Strategic Plan, and which will underpin senior modules and projects related to the degree programme(s) or specialism. The successful applicant will be required to:

- Engage with and lead aspects of research and teaching in areas of biomedical engineering.
- Pursue an active research agenda in the area of biomedical engineering with ongoing research publications in leading international academic journals, peer-reviewed conferences, and with high-profile book publishers, both individually and, where appropriate, in collaboration with colleagues in DCU and elsewhere.
- Undertake professional development in research leadership and management.
- Support the internationalisation agenda of the Faculty and University, including undertaking international travel.
- Engage with the development of working relationships with industry, employers and professional bodies.

#### **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.

### **Qualifications, Skills and Experience Required**

The candidate must hold an honours degree in Biomedical Engineering, Mechanical Engineering with biomedical engineering specialisation or a relevant discipline and should be qualified to a post-graduate level with a PhD specialism in Biomedical Engineering, or a related discipline.

- Applicants must have demonstrated teaching experience at undergraduate and/or postgraduate level, ideally including experience in innovative pedagogies and/or assessments, international and/or online or technology-assisted teaching.
- The successful candidates should ideally have a minimum of two years relevant post-doctoral experience.
- Applications are specifically invited from those with strong research credentials and publication record, particularly in one or more of the following research areas: tissue mechanics, joint mechanics, injury biomechanics, mechanobiology, medical devices, medical instrumentation, biomaterials, tissue engineering or regenerative medicine.
- The successful applicants will ideally have potential to establish an independent research programme and attract research funding from competitive research funding schemes and/or industry.
- 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.

### **Essential Training**

Training required for the role should be entered here. At a minimum, the following should be entered in addition to other applicable, role specific mandatory training:

The postholder will be required to undertake the following essential compliance training: Orientation, Health & Safety and Data Protection (GDPR). Other training may need to be undertaken when required.