



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

**Dublin City University**

Dublin City University (DCU) is a young, ambitious and vibrant university, with a mission 'to transform lives and societies through education, research, innovation and engagement'. Known as Ireland's 'University of Enterprise', DCU is a values-based institution, committed to the delivery of impact for the public good. DCU was named Sunday Times Irish University of the Year 2021.

DCU is based on three academic campuses in the Glasnevin-Drumcondra region of north Dublin. More than 18,000 students are enrolled across five faculties – Science and Health, DCU Business School, Computing and Engineering, Humanities and Social Sciences and DCU Institute of Education.

DCU is committed to excellence across all its activities. This is demonstrated by its world-class research initiatives, its cutting-edge approach to teaching and learning, its focus on delivering a transformative student experience, and its positive social and economic impact. The university continues to develop innovative programmes in collaboration with industry, such as the DCU Futures suite of degrees, which are designed to equip graduates with the skills and knowledge required in a rapidly evolving economy.

DCU's pursuit of excellence has led to its current ranking among the top 2% of universities globally. It is also one of the world's Top Young Universities (QS Top 100 Under 50, Times Higher Top 150 Under 100). In the Times Higher Education University Impact Rankings 2021, DCU ranked 23rd in the world for its approach to widening participation in higher education and its ongoing commitment to eradicating poverty, while it ranks 38th globally for its work in reducing inequality and 89th globally for gender equality.

The university is ranked 23rd in the world and first in Ireland for its graduate employment rate, according to the 2020 QS Graduate Employability Rankings. Over the past decade, DCU has been the leading Irish university in the area of technology transfer, as reflected by licensing of intellectual property.

**Role Profile**

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 or mechanobiology. We are particularly interested in applicants who have experience in teaching and have established significant 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 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, Associate Dean of Teaching and Learning 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.

### **Principle Duties and Responsibilities:**

#### **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 both, 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**

The post holder 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 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 and Experience**

- Applicants must hold an honours degree in a relevant discipline, and should be qualified to a post-graduate level with a PhD specialism in Biomedical Engineering, or a related discipline.
- The successful candidates should ideally have a minimum of three years' relevant post-doctoral experience.

- 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.
- 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
- The successful applicants will also have demonstrated 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

### **Further Information**

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

### **Essential Training**

The post holder 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.

*Dublin City University is an equal opportunities employer.*

*In line with the Employment Equality Acts 1998 – 2015, the University is committed to equality of treatment for all those who engage with its recruitment, selection and appointment processes.*

*The University's Athena SWAN Bronze Award signifies the University's commitment to promoting gender equality and addressing any gender pay gaps. Information on a range of university policies aimed at creating a supportive and flexible work environment are available in the [DCU Policy Starter Packs](#)*