



## **JOB DESCRIPTION**

**Assistant Professor in Biotechnology  
School of Biotechnology  
Faculty of Science & Health  
Fixed Term Three Year Contract**

### **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 DCU 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. This initiative will help us transform the learning experience of undergraduate students at DCU, reconceptualizing learning opportunities, creating authentic connections between the classroom and enterprise, and embedding digital literacies, disciplinary competencies and transversal skills required to truly future-proof our graduates for the rapidly changing workplace. DCU is joined in this project by a strong consortium of enterprise partners, representing key employment sectors in the Irish economy and with a strong presence in DCU's primary catchment area. This programme of innovation is funded under the Irish government's Human Capital Initiative (HCI) supported by the National Training Fund. It will deliver on the ambitions we have to reimagine undergraduate curricula and to embed innovative pedagogies, enhanced use of technology and deep industry engagement.

### **School of Biotechnology**

The School of Biotechnology ([www.dcu.ie/biotechnology](http://www.dcu.ie/biotechnology)) is the academic unit that leads biotechnology and bioprocessing education and research within the Faculty of Science & Health at Dublin City University (DCU). The school delivers both undergraduate BSc (e.g. Biotechnology, Environmental Science & Technology) and taught MSc postgraduate degree programmes (e.g. Bioprocessing Engineering) in addition to the education and training of research MSc and PhD students under its structured PhD programme, BioTranslate. It is an active centre of basic, applied and multi-disciplinary research, supporting clusters of intersecting research themes which link closely with the School's teaching programs. The School has recently invested in upgrading its Bioprocessing Engineering infrastructure and is now home to the Microbial Bioprocessing Facility (MBF), a facility

that is equipped with the most modern pilot scale bioreactors in Ireland. Fully automated bioreactors range in size from 3.7 L to 150 L. All Bioprocess Engineering laboratory modules are taught within this facility which is rapidly becoming the “go-to” location for bioprocess engineering teaching, industrial training in process analytical technology (PAT), industrial product development and brewing.

### **Relationships**

Reporting to the Head of School, the appointee will 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.

### **The Role**

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

- Developing and delivering a new bachelors specialism in Bioprocess Engineering, ensuring an industry engaged, research-led approach, integration of challenge based learning, digital tools and hybrid delivery.
- The 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.

The role includes teaching, supervision of laboratory sessions, student mentoring and supervision of taught projects and research.

### **Duties & Responsibilities**

To support the new HCI program, the BSc in Bioprocessing, the School now plans to make an appointment at Assistant Professor level. As well as providing support to the BSc in Bioprocessing ‘Champion’, the appointee will take responsibility for modules employing the novel pedagogy, Challenge Based Learning (CBL). In particular, the appointee will develop and contribute to the delivery of the following modules:

- A 2<sup>nd</sup> year CBL module on the design and large-scale production of vaccines
- A 3<sup>rd</sup> year CBL module in the broad area of sustainability and environmental management
- A 4<sup>th</sup> year CBL/PBL module in product innovation.

Developing detailed templates, SOPs and scaffolding materials for the delivery of these modules, the appointee will engage with other schools within the Faculty, and the School of Mechanical and Manufacturing Engineering, the DCU Business School and, especially, industrial partners, to ensure that these modules remain true to the multidisciplinary, real-world philosophy of Challenge Based Learning.

The appointee will be expected to undergo training in CBL.

As well as developing the CBL aspect of the bioprocessing programme, the appointee will provide

support to colleagues as they modify existing (shared) modules to make them consistent with the Futures philosophy.

### **Applicant Requirements**

- Applicants must hold an honours degree in biochemical/bioprocess engineering, biotechnology or a related discipline, as well as a PhD in Chemical/Bioprocess Engineering with a track record of research in microbial bioprocessing that includes corresponding and senior/first author publications and/or significant experience of working in an industrial microbial bioprocessing environment.
- A flexible, growth mindset with a strong desire to teach outside their specialist area.
- Familiarity with digital learning tools and strong computational skills.
- Experience in high quality university-level teaching (Level 8 and/or 9).
- Experience of module design in both theory and laboratory contexts is highly desirable.
- Have a current research profile that demonstrates a pathway to future research independence such as Fellowship, Co-Investigator, Collaborator and/or Principal Investigator grant applications to date.
- Have excellent interpersonal and communication skills consistent with the highest quality of teaching and learning, together with evidence of successful teamwork and a collegial approach.
- Ensure objectives are met across the lifecycle of the project, including the developing, delivering and monitoring of academic programmes / microcredentials / specific projects.
- Provide leadership, guidance and identified points of escalation for issues and challenges.
- Provide expert advice and support to the programme / projects administration enable effective decision making and achievement of outcomes.
- Deliver strategic change with peers and senior internal staff through a combination of project and business-as-usual activity; balancing competing priorities within resources.
- Support governance and programme/project committee requirements by working closely with steering committees, programme management team and/or external institution leads.
- Provide reporting to the programme management team and steering committees, engaging with financial management and oversight of the project in line with HCI terms and conditions and participate in institutional or project audits

### **Mandatory Training**

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