



## **JOB DESCRIPTION**

### **Assistant Professor in Chemistry/Artificial Intelligence School of Chemical Sciences Faculty of Science and Health Fixed term 3-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 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 Chemical Sciences**

The School of Chemical Sciences, is one of Ireland's most progressive and highest achieving Schools with outstanding facilities, housed within a modern and dynamic city campus. Our goal is to develop graduates with the ability to critically evaluate, and then to solve, chemical and pharmaceutical problems, preparing the highest quality graduates capable of meeting the challenges of modern industry and research. The School is highly successful at attracting large scale research funding, with our researchers having roles within nationally significant university/industry collaborative initiatives and European funded Integrated Training Networks. The School of Chemical Sciences is one of the leading academic schools within DCU. The School is ranked in the top 300 chemistry schools/departments in the world (QS Rankings), a reflection of the School's ambitious research

activities and its undergraduate/postgraduate degree programmes. These programmes include Common Entry into Chemical Sciences, the School's two core undergraduate programmes, namely the BSc in Analytical Science and the BSc in Chemical and Pharmaceutical Sciences as well as the BSc in Environmental Science & Technology and BSc in Science Education. The School is currently expanding the number of undergraduate degree courses to include Chemistry with Artificial Intelligence.

### **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.

### **The Role**

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

- developing and delivering a new bachelors programme/specialism in Chemistry with Artificial Intelligence, 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.

### **Duties and Responsibilities**

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

Specifically, the successful applicant will be required to (inter alia):

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

- Contributing to the design and development of the B.Sc. in Chemistry with Artificial Intelligence.
- 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.

### **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 which will underpin senior modules and projects related to the new degree programme(s) or specialism.

### **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 chemistry, and should be qualified to a post-graduate level with a PhD specialism in chemistry/artificial intelligence/computational chemistry, 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.
- 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

### **Mandatory Training**

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