



**Assistant Professor in Mathematics
School of Mathematical Sciences
Faculty of Science & Health
Fixed Term Three Year Contract**

Introduction

Dublin City University 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 Mathematical Sciences

The School of Mathematical Sciences www.dcu.ie/maths offers undergraduate and post-graduate degree programmes in Actuarial Mathematics, Financial Mathematics, and Mathematics Teacher Education, in addition to service Mathematics courses across all five Faculties of the University.

The School has a broad research profile in Mathematics, with research carried out in several areas including Actuarial Mathematics, Differential and Difference Equations, Differential Geometry, Financial Mathematics, General Relativity, Group Theory, High Performance Computing, Mathematical Physics, Mathematics Education, Numerical Analysis, Quantum Fields, Statistics, Stochastic Analysis, and Theoretical Astrophysics www.dcu.ie/maths/index.shtml

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 School seeks to recruit an Assistant Professor in any area of Mathematics, including Statistics and Actuarial Science to support the School in implementing an innovative curriculum project, in partnership with the Schools of Chemistry, Physics, and Computing.

The appointee will support the School in implementing the project by:

- developing and delivering a new undergraduate programme/specialism;
- 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;
- engaging with University-wide elements of the initiative including cross faculty cooperation; project evaluation, and reporting.

The role includes teaching, student mentoring and supervision of taught projects and research. Alternatively, supporting the School's implementation of the curriculum project may involve assuming teaching responsibilities of other School members assigned to the project.

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

-Teaching and Learning

The appointee will 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 delivery both on-campus and remotely. 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 redesigned modules and resources;
- Designing and assessing examinations and other types of coursework;
- Using a wide range of teaching and assessment methodologies to equip students with the skills and attributes needed to be lifelong learners, including challenge-based learning and immersive learning experiences;
- Co-designing with other academics and industry partners a suite of tools and initiatives that support the acquisition of transferable skills and embedding them and their 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 related to the approaches embedded in the project.

-Research and Scholarship

The appointee will sustain and conduct high-quality research, generate research funding, supervise postgraduate students, and publish to the highest international standard either individually or in

collaboration with colleagues in DCU and elsewhere. The appointee will have clearly articulated research interests and future plans, which dovetail with the school's current research priorities and assist in the development of final-year 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 a PhD in Mathematics.
- 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.
- Applicants must have strong research credentials and publication record.
- The successful applicant will also have demonstrated potential to establish an independent research programme and attract research funding from competitive research funding schemes and/or industry.
- Applicants 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 post holder will be required to undertake the following mandatory training: GDPR, Orientation, and Compliance.