



Coláiste na Tríonóide, Baile Átha Cliath  
Trinity College Dublin  
Ollscoil Átha Cliath | The University of Dublin

**School of Education  
Trinity College Dublin**

**Master in Education  
(Science Education)**

Applications can now be made for the Master in Education Science Education programme organised by the School of Education Trinity College Dublin.

**Aims of the Programme**

This programme aims to give students the academic and practical skills they need to develop a critical understanding of the role of science education, research and communication in society. The programme explores the scientific method through theories of learning and engagement while providing opportunities for students to experience frontier research and current debates in science education. Modules are delivered by scientists and researchers with input from communications, industry and policy professionals.

**Who is the Programme for?**

The programme is suited to science educators at all levels but in particular to science graduates who wish to gain an insight into the educational underpinnings of their discipline in order to apply their knowledge outside of their specialised field. This programme also caters for students with backgrounds in social science and humanities who have a professional interest in science education and might be seeking the academic theory and research skills needed for career opportunities in science policy, teaching, writing and engagement.

**Structure**

The programme has both taught and research components. It may be taken on a one year full-time basis or on a two year part-time basis. The taught component includes four modules each including 25 hours of direct contact time. The research component of the course involves carrying out a research project and writing a dissertation under the guidance of a supervisor. A course in research methods forms part of the dissertation work. The full-time, one year option requires students to complete the taught modules as well as the research-based dissertation while the part-time two year option requires the taught component to be completed in the first year and the dissertation in the second year. Independent learning as well as group/collaborative learning is actively encouraged.



## Course Modules

- **Module 1: Science Education in Society.** This module explores the relationship between science and society and the pivotal role played by education. It will cover the scientific method, philosophy of science and its part in affecting socio-economic development and systems of belief. The course will equip students with a knowledge of policymaking, funding and ethics that will serve as a platform to examine the historical impact that science has had on society as well as assessing the current state of science education. It will enable students to identify responsible research and to propose models of science education that promote cultures of sustainability and progress.
- **Module 2: Learning Theories.** This module introduces a range of learning theories from education, psychology, machine learning and neuroscience that together generate a new 'science of learning' and will concentrate closely on the work of Lev Semenovich Vygotsky, which is among the most influential in current educational research and practice. The design of the module has been influenced by a number of developments in policy, practice and research in the education and science sector.
- **Module 3: Communicating Science in Education.** This module examines the history and best practises of communicating science to different audiences. The aim of the module is to teach students how to effectively and impactfully communicate scientific stories to a wide range of audiences including industry, policy makers and non technical audiences. Students will be provided with a communications toolkit that will enable them to effectively disseminate scientific material using traditional, online and broadcast media. The module will also explore the central role that mass media and social media plays in science and research.
- **Module 4: Frontier Research and Current Debates in STEM Education.** This module provides an opportunity to interact with frontier research being carried out in the university as well as the most pressing concerns that STEM education faces nationally and internationally (where "STEM" is science, technology, engineering and maths).

## Teaching and Learning Strategies

A variety of teaching and learning strategies are used throughout the programme, including group discussion, problem-based learning, case-studies, lectures and individual reading and research. Assessment of the taught component is via four assignments, and may include essays, case-study reports, and presentations.

## Further Information

For enquiries about course content please contact Dr Joseph Roche (Joseph.Roche@tcd.ie). For all other enquiries, including information on how to apply, please contact Keara Eades/Catherine Minet (00-353-1-896-3568/1290 and MasterEd@tcd.ie).