Abstract
Applications are now open for the new
Master in Science Education programme
at Trinity College Dublin. The aim of
the course is to give participants the
academic and practical skills they need
to develop a critical understanding of the
role of science in society.

Course Background
The course was designed to help scientists and educators meet
the challenges that are facing science and science education
in a time of rapid social and economic change. Science and
Technology are increasingly being regarded as the drivers
of economic growth. Scientists are expected to find ways to
combine their research with the commercialisation of ideas,
while teachers are tasked with guiding the next generation of
scientists towards education and career paths that will see them
sustain a knowledge-based economy. With these challenges in
mind — applicants to the new course can expect to explore the
scientific method through theories of learning and engagement
while taking advantage of opportunities to experience frontier
research in science education, research and communication.
The course is suitable for science educators at all levels. It is
especially suitable for science teachers who wish to gain the
academic theory and research skills needed to help further their
professional development. This programme also caters for
applicants with backgrounds in social science and humanities
who have a professional interest in science education.

Course Content
The course incorporates traditional aspects of science
pedagogy and curriculum design but also includes growing
areas of science education such as informal learning and
public engagement. Course content includes the history of
science, the scientific method, the philosophy of science,
citizen science, responsible research and communication for
different audiences. Emphasis is placed on skills that are becoming
crucial to science in Ireland such as an understanding of science
governance, funding, publishing, policy and ethics.

Course Structure
The course can be taken on a
one year full-time basis or on a
two or three year part-time basis.
This includes a taught component
comprised of four modules
(described below) organised
largely outside of normal work
hours, such as during the evenings
and at weekends, and are held in
Trinity College. There is also a
research component — designing
and implementing a research
project and writing a dissertation
under the guidance of a supervisor.

Course Modules
1. Science in Society: This module
explores the relationship between
science and society and considers the
expectations and limitations of science,
its role in society and how it serves
as a platform to promote cultures of
sustainability and progress.

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.

3. Communicating Science: This module examines the
history and best practices of communicating science to
different audiences as well as critical consideration of
science curricula at all levels of education, formal and
informal.

4. Frontier Research and Current Debates: This module
provides an opportunity to interact with frontier research
being carried out in the university as well as the most
pressing topics and concerns that STEM education faces
nationally and internationally (where “STEM” is science,
technology, engineering and mathematics).

Further Information
The Master of Education (M.Ed.) in Science Education is a
School of Education programme at Trinity College Dublin. For
further information email Master.Education@tcd.ie, call +353
(0) 1 896 3568 or +353 (0) 1 896 1290 and find us on Twitter:
@ScienceTCD. Applications are now open and can be made
at: www.tcd.ie/education/courses/masters/science

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