

# MSC (ENVIRONMENTAL ANALYTICAL CHEMISTRY)

## Overview

**Status:** Active

**National Framework Of Qualifications (NFQ) Level:** 9

**NFQ Award Class:** Major Award

**Duration Full Time:** 12 Month(s)

**Duration Part Time:** 24 Month(s)

**Total Credits:** 90

**Delivery Method:** Blended

### Connected Curriculum:

- Civic and Community Engagement
- Employability
- Global Reach
- Inter-and Transdisciplinary
- Research Based Teaching
- Sustainability

### Sustainable Development Goals (SDGs):

- Industry, Innovation, and Infrastructure
- Quality Education
- Good Health and Well-being
- Clean Water and Sanitation
- Decent Work and Economic Growth
- Responsible Consumption and Production
- Climate Action
- Partnerships to Achieve SDGs
- Life Below Water
- Life on Land

### Graduate Attributes:

- Creator, evaluator and communicator of knowledge
- Digitally Fluent
- Effective global citizen
- Independent and creative thinker
- Socially Responsible

### Work-Integrated Learning (Including Placement):

Yes

### UCC policies applying to applicants/students on this programme:

- Fitness to Practise Policy

3. a dissertation based on individual research and development in the selected field of modern analytical science, under the supervision of an expert staff member.

Candidates may need to secure appropriate day release from industry. Part of the lecture course will also be available through online blended e-learning.

The MSc Degree is awarded to successful candidates after passing written examinations across all taught modules, including the continuously assessed practical module CM6015, and the research project (CM6021), which has to be written up in the form of a dissertation and approved by the external examiner.

## Programme Requirements

For information about modules, module choice, options and credit weightings, please go to Programme Requirements (p. 1).

## Programme Requirements

Code	Title	Credits
Students take <b>90</b> credits as follows:		
<b>Part I</b>		
CM6012	Modern Analytical Techniques, Chemical Data Analysis and GLP	10
CM6013	Separation Science, Sensors and Process Analytical Technology	10
CM6015	Practice of Analytical Chemistry	10
EV6014	Data handling, assessment & presentation for freshwater quality monitoring	5
EV6015	Water quality monitoring and assessment in rivers/lakes/reservoirs	5
CM6026	Industry Led Workshop	5
CM6027	Taught Postgraduate Transferable Skills Development	5
EV6012	Freshwater monitoring programme design	5
EV6013	Quality assurance for freshwater quality monitoring	5
<b>Part II</b>		
<i>Research Project</i>		
Students take <b>30</b> credits as follows:		
CM6021	Research Project and Dissertation in Environmental Analytical Chemistry	30
<b>Total Credits</b>		<b>90</b>

## Examinations

Full details and regulations governing Examinations for each programme will be contained in the *Marks and Standards Book* and for each module in the *Book of Modules*.

## Programme Learning Outcomes

**Programme Learning Outcomes for MSc (Environmental Analytical Chemistry) (NFQ Level 9, Major Award)**

On successful completion of this programme, students should be able to:

- Identify, formulate, analyse and solve environmental analytical chemistry problems;
- Outline fundamental and applied aspects of environmental analytical chemistry;

The MSc may be taken full-time over 12 months or part-time over 24 months from the date of first registration for the programme. It consists of:

1. lectures
2. laboratory work on set experiments and

- Design and carry out a method of environmental chemical analysis, including instrumental analysis;
- Prepare written laboratory reports that provide a description of the experiment, explain the experiment and reasoning clearly, and provide an appropriate conclusion;
- Communicate effectively with the chemistry and environmental science communities;
- Carry out research and method development in environmental analytical science;
- Prepare a written research report in the form of a dissertation.