MSC IN FRESHWATER QUALITY MONITORING AND ASSESSMENT

Overview

The MSc in Freshwater Quality Monitoring and Assessment is a part-time programme delivered online over three academic years. The programme is offered on a cyclical basis with an intake of students every second year.

Students take **90** credits over three academic years. All modules are delivered online with the exception of the elective module EV6004 in Year 2 which is a residential or virtual fieldwork module.

Postgraduate Certificate in Freshwater Quality Monitoring and Assessment (NFQ Level 9, Minor Award)

Upon successful completion and passing of modules to the value of 30 credits, students may opt to exit the programme and be conferred with a Postgraduate Certificate in Freshwater Quality Monitoring and Assessment.

Postgraduate Diploma in Freshwater Quality Monitoring and Assessment (NFQ Level 9, Major Award)

Upon successful completion and passing of modules to the value of 60 credits, students may opt to exit the programme and be conferred with a Postgraduate Diploma in Freshwater Quality Monitoring and Assessment.

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 **90** credits as follows:		
Year 1 (not on offer 23/24)		
Core Modules		
EV6001	Monitoring Programme Design for Freshwater Bodies	10
EV6002	Quality Assurance in Freshwater Quality Monitoring Programmes	10
EV6003	Data Handling and Presentation for Freshwater Quality Monitoring Programmes	10
Year 2 (not on offer 23/24)		
Students take **30** credits as follows - all listed core modules (**20** credits) and **10** credits of elective modules:		
Core Modules		
EV6005	Monitoring and Assessment of Surface Waters	10
EV6007	Monitoring and Assessment of Groundwater	10
Elective Modules		
Students take modules to the value of **10** credits from the following:		10
EV6004	Freshwater Quality Monitoring in the Field (5) [1]	
EV6008	Water Quality Monitoring using Biological and Ecological Methods (5)	
EV6009	Freshwater Quality Monitoring with Particulate Material (5)	
Year 3		
Students take **30** credits as follows:		
Core Modules		
EV6010	Dissertation in Freshwater Quality Monitoring and Assessment (not on offer in 2022/23)	30
Total Credits		**90**

[1] EV6004 is delivered *in situ* or online GEMS/Water students may be funded to attend EV6004 via the agreement with the UN Environment Programme. Non-GEMS/Water students wishing to take EV6004 can do so on a self-funded basis. If sufficient EU students enrol, EV6004 may be delivered in Ireland for self-funded students.

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 (Freshwater Quality Monitoring and Assessment) (NFQ Level 9, Major Award)
On successful completion of this programme, students should be able to:

- Describe the steps involved in designing a monitoring programme and the different factors that must be considered in each step of the design.
- Recommend appropriate monitoring approaches and select appropriate monitoring stations for specific monitoring objectives;
- Select suitable methods for use in the field and laboratory and prepare the appropriate operating procedures;
- Explain how hydrological, ecological and chemical features of rivers, lakes, reservoirs and groundwaters might influence water quality and the interpretation of water quality monitoring data;
- Produce a quality assurance plan for a monitoring programme;
- Analyse monitoring data using a range of graphical, statistical and GIS-based approaches;
- Write a water quality assessment report suitable for technical and non-technical audiences.
- Plan, research, execute and oversee a substantial research project, critically analyse and interpret the data and effectively disseminate the results.