

# Capacity Development



The primary focus of the GEMS/Water Capacity Development Centre (GEMS/Water CDC) at University College Cork is to build capacity for ambient freshwater quality monitoring and assessment globally. The GEMS /Water CDC seeks to achieve this by providing education, training, guidance and appropriate support, based on recognized capacity needs at national and regional levels, in ambient freshwater quality monitoring and assessment in countries worldwide.

To ensure the maximum possible impact and availability of GEMS/Water training materials, several approaches are used:

**Online training courses:** our training is primarily available online and is suitable for anyone with an interest in freshwater quality monitoring and management. This includes, for example, staff of water resources and environment agencies responsible for ambient water quality, staff in higher education and research or industry staff responsible for freshwater use.

**GEMS/Water short courses** accredited by University College Cork are offered at regular intervals each year. Current short courses on offer include:

- Freshwater monitoring programme design
- Quality assurance for freshwater quality monitoring
- Data handling, assessment and presentation for freshwater quality monitoring
- Water quality monitoring and assessment of rivers, lakes and reservoirs
- Water quality monitoring and assessment of groundwater
- Freshwater quality monitoring with biota and particulate matter

Unaccredited versions of a number of these courses are also available for self-paced learning through [UNEP's e-learning platform](#), with further courses planned for future.

**Workshops:** the GEMS/Water CDC have developed a series of technical workshops which are currently available to address specific aspects of water quality monitoring and management.

**Postgraduate qualifications:** the [GEMS/Water Capacity Development Centre](#) at UCC offers a 2-year part-time online postgraduate diploma (PGDip) as well as a 3-year part-time online MSc in Freshwater Quality Monitoring and Assessment through University College Cork.

The 2-year Postgraduate Diploma covers many aspects of water quality monitoring and is taught by professionals and experts in these areas. Focus areas include:

- freshwater quality monitoring programme design,
- quality assurance in water quality monitoring,
- analysis and presentation of water quality data,
- monitoring and assessment of rivers, lakes and groundwater, and use of biological and ecological methods in water quality monitoring, and monitoring of particulate matter in freshwaters.

There is usually also an opportunity to take part in a [field course](#) during the second year of the programme. This provides an opportunity to meet experts in freshwater quality monitoring and assessment in person, and to gain important practical hands-on experience in fieldwork for water quality monitoring and assessment.

The MSc in Freshwater Quality Monitoring and Assessment builds on the 2-year Postgraduate Diploma, and students who meet the necessary criteria can progress directly from the PGDip to the MSc programme by completing an MSc dissertation in year 3. MSc students carry out an individual research project on a water quality topic and submit a dissertation for the MSc in Freshwater Quality Monitoring and Assessment under the supervision of experts in their chosen area.

Click on the logo for more information about our capacity development



click on logo to go to the capacity  
development page

For further information:

E-mail: [gemsdcadmin@ucc.ie](mailto:gemsdcadmin@ucc.ie)