MSC (ANALYTICAL CHEMISTRY)

Overview

NFQ Level 9, Major Award

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
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 (CM6020)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 **90** credits as follows:		
Part I		
Students take **60** credits as follows – all listed core modules (**50** credits) and **10** credits of elective modules:		
Core Modules		
CM6012	Modern Analytical Techniques, Chemical Data Analysis and GLP	10
CM6013	Separation Science, Sensors and Process Analytical Technology	10
CM6014	Materials, Pharmaceutical and Bio-analysis	10
CM6015	Practice of Analytical Chemistry	10
CM6026	Industry Led Workshop	5
CM6027	Taught Postgraduate Transferable Skills Development	5
Elective Modules		
Students take modules to the value of **10** credits from the following:		10
EV4002	Environmental Monitoring and Assessment ()	
PF6301	Biopharmaceuticals: Formulation, Secondary Processing and Regulation ()	
Part II		
Research Project		
Students take **30** credits as follows:		
Core Modules		
CM6020	Research Project and Dissertation in Analytical Chemistry	30
Total Credits		**90**

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 (Analytical Chemistry) (NFQ Level 9, Major Award)

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

- Identify, formulate, analyse and solve analytical chemistry problems;
- Outline fundamental and applied aspects of analytical chemistry;
- Design and carry out a method of 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 analytical science communities;
- Carry out research and method development in analytical science;
- Prepare a written research report in the form of a dissertation.