

APPROVED

Bachelor of Science (Honours) in Analytical Chemistry with Quality Assurance
Faculty of Engineering & Science

Award Class					
Awards					
BSc (Hons)					
Programme Code	CR_SCHQA_8	Mode of Delivery	Full Time, ACCS	No. of Semesters	8
NFQ Level	8	Embedded Award	No	Programme Credits	240
Next Review Date					
Review Type				Date	
Programmatic Review				01/09/2023	
Department	PHYSICAL SCIENCES				

Programme Outcomes

Upon successful completion of this programme the graduate will be able to demonstrate... :

#	PO Domains	Programme Learning Outcome
PO1	Knowledge - Breadth	A knowledge of specific areas of chemistry and related areas relevant to work in the BioPharmaChem industry, including a detailed knowledge of the theory and practice of analytical chemistry and quality assurance, validation and management
PO2	Knowledge - Kind	The ability to apply principles and methodologies of chemistry in both routine and problem resolution contexts, together with a knowledge of advanced analytical and quality assurance principles used in the BioPharmaChem industry and related areas
PO3	Skill - Range	The ability to critically assess, synthesize, and implement a broad range of analytical methodologies and techniques applicable to the BioPharmaChem sector
PO4	Skill - Selectivity	The ability to design, implement, and manage new protocols, and ensure regulatory compliance
PO5	Competence - Context	The ability to apply advanced data management and data (nb statistical) analytics, communication and teamwork skills, and literature research techniques for the resolution of chemical problems and in the imparting of chemical knowledge
PO6	Competence - Role	The ability to provide team leadership, training and organisation in a BioPharmaChem analytical environment
PO7	Competence - Learning to Learn	An awareness of the need for, and the ability to benefit from, continuing professional development
PO8	Competence - Insight	The ability to adapt to a variety of changing technologies, protocols and standards for the responsible practice of analytical science

Semester Schedules

Year 1 / Semester 1

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
BIOL6007	<u>Biomolecules and Cells</u>	Brigid Lucey	3	5
CHEM6002	<u>Chemical Principles</u>	Donagh OMahony	4	5
CMOD6001	<u>Creativity Innovation&Teamwork</u>	MARESE BERMINGHAM	3	5
PHYS6011	<u>Introduction to Physics</u>	Donagh OMahony	4	5
OCCH6002	<u>Laboratory Practices</u>	Donagh OMahony	3	5
MATH6060	<u>Maths for Physical Sciences</u>	David Goulding	1	5

Year 1 / Semester 2

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
ENVI6002	<u>Environmental Instrumentation</u>	Donagh OMahony	3	5
BIOT6001	<u>Introduction to Biotechnology</u>	Brigid Lucey	3	5
CHEO6001	<u>Organic Chemistry Fundamental</u>	Donagh OMahony	4	5
CHEM6013	<u>Physical Chemistry Principles</u>	Donagh OMahony	1	5
MATH6019	<u>Technological Maths 2 & Maple</u>	David Goulding	2	5
Elective				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
FREE6001	<u>Free Choice Module</u>	PAUL GALLAGHER	3	5
PHYS6042	<u>Fundamental Physics</u>	Donagh OMahony	3	5

Year 2 / Semester 1

Year 2 Semester 1 Elective Regulation

A previously completed elective module may not subsequently be selected from the list of electives of another semester

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
CHEA6001	Analytical Chemistry	Donagh OMahony	3	5
BIOM6005	Fundamentals of Microbiology	Brigid Lucey	2	5
CHEM6006	Inorganic Chemistry	Donagh OMahony	3	5
STAT6014	Intro Stats for Phys. Sc.	David Goulding	1	5
CHEO6005	Organic Chemistry	Donagh OMahony	2	5
Elective				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
FREE6001	Free Choice Module	PAUL GALLAGHER	3	5
PHYS6038	Water Quality Instrumentation	Donagh OMahony	3	5

Year 2 / Semester 2

Year 2 Semester 2 Elective Regulation

A previously completed elective module may not subsequently be selected from the list of electives of another semester

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
CHEA6002	Analytical Chemical Techniques	Donagh OMahony	3	5
STAT7009	Inferential Statistics	David Goulding	1	5
CHEO6006	Pharmaceutical Chemistry	Donagh OMahony	2	5
CHEM6007	Physical Chemistry	Donagh OMahony	3	5
CHEM8002	Process & Production Chemistry	Donagh OMahony	3	5
Elective				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
FREE6001	Free Choice Module	PAUL GALLAGHER	3	5
CHEM6008	Quality & Validation	Donagh OMahony	3	5

Year 3 / Semester 1

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
CHEA7004	Analytical Practice & Protocol	Donagh OMahony	3	5
CHEM7001	Experimental Chemistry	Donagh OMahony	3	5
CHEM7004	Inorganic and Physical Chem	Donagh OMahony	4	5
CHEM7006	QA for Chemists	Donagh OMahony	3	5
CHEO7003	Topics in Organic Chemistry	Donagh OMahony	3	5

Elective				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
BIOM7001	Analytical Microbiology	Brigid Lucey	4	5
BIOT7006	Biopharmaceutical Upstream	Michael J. O Mahony	3	5
FREE6001	Free Choice Module	PAUL GALLAGHER	3	5

Year 3 / Semester 2

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
CHEO7004	BioPharmaChem Applications	Donagh OMahony	2	5
CHEA7003	Environmental Analysis	Donagh OMahony	3	5
PLAC7005	Industrial Placement	Donagh OMahony	3	15
CHEM7005	Topics in Inorg/Phys Chemistry	Donagh OMahony	3	5

Year 4 / Semester 1

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
CHEA8001	<u>Advanced Chromatography</u>	Donagh OMahony	3	5
STAT8013	<u>Chemometrics</u>	David Goulding	1	5
CHEA8004	<u>Instrumental Methods</u>	Donagh OMahony	3	5
CHEM8007	<u>Quality Management Systems</u>	Donagh OMahony	3	5
CHEA8007	<u>Scientific Research Practice</u>	Donagh OMahony	1	5

Elective				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
FREE6001	<u>Free Choice Module</u>	PAUL GALLAGHER	3	5
PHYS8017	<u>Process Analytical Technology</u>	Donagh OMahony	2	5
CHEM8008	<u>Specialist Topics</u>	Donagh OMahony	3	5

Year 4 / Semester 2

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
CHEA8002	<u>Advanced Spectroscopy</u>	Donagh OMahony	4	5
CHEA8003	<u>Analytical & Regulatory Stds.</u>	Donagh OMahony	3	5
CHEA8006	<u>Chem. Info. & Data Validation</u>	Donagh OMahony	3	5
CHEM8010	<u>Experimental Project</u>	Donagh OMahony	2	10
CHEM8004	<u>Pharmaceutical Quality</u>	Donagh OMahony	3	5

