

**University of the West of Scotland  
Undergraduate Programme Specification**

Session: 2023/24

<b>Named Award Title:</b>	<b>BSc (Hons) Chemistry with Education 2023 Single</b>
<b>Award Title for Each Award:</b>	<b>BSc (Hons) Chemistry with Education 2023 BSc Chemistry with Education Studies Dip HE Science Cert HE Science</b>
<b>Date of Validation:</b>	June 2023
<b>Details of Cohorts Applies to:</b>	Any new students entering at L7 or L8 in Session 2023/24 and any L7 students from Session 2022/23 continuing to L8 in Session 2023/24
<b>Awarding Institution/Body:</b>	University of the West of Scotland
<b>Teaching Institution:</b>	University of the West of Scotland
<b>Language of Instruction &amp; Examination:</b>	English
<b>Award Accredited By:</b>	General Teaching Council for Scotland (GTCS)
<b>Maximum Period of Registration:</b>	8 years
<b>Mode of Study:</b>	Full Time
<b>Campus:</b>	Ayr Paisley
<b>School:</b>	School of Computing, Engineering and Physical Sciences
<b>Programme Board</b>	Physical Sciences
<b>Programme Leader:</b>	Dr Jorge N. Chacon

**Admission Criteria**

Candidates must be able to satisfy the general admission requirements of the University of the West of Scotland as specified in Chapter 2 of the University Regulatory Framework together with the following programme requirements:

**SQA National Qualifications**

Year 1: HIGHERS: BBBC including Chemistry plus English and Mathematics at SCQF Level 5 (eg National 5, Standard Grade (Grade 3 or above), Intermediate 2)

Year 2: ADVANCED HIGHERS: BBC including Chemistry plus English and Mathematics at SCQF Level 5 (eg National 5, Standard Grade (Grade 3 or above), Intermediate 2)

Before progressing to Year 3, students must meet the following requirements:

English at SCQF Level 6 (eg Higher)

Mathematics at SCQF Level 5 (eg National 5, Standard Grade (Grade 1 or 2), Intermediate 2)

**or GCE**

Year 1: A-LEVEL: CDD including Chemistry plus GCSE (Grade C or above) English and Mathematics

Year 2: A-LEVEL: BBC including Chemistry plus GCSE (Grade C or above) English and Mathematics and at least one science subject.

Before progressing to Year 3, students must meet the following requirements:

GCSE English Language and English Literature at C or above

GCSE Mathematics at B or above

**or SQA National Qualifications/Edexcel Foundation**

Year 1: Access to Science - BBB including Chemistry.

Year 2: HNC/BTEC LEVEL 4: Chemistry, or related subject.

Year 3: HND/BTEC LEVEL 5/FOUNDATION DEGREE: Chemistry or related subject.

Before progressing to Year 3, students must meet the following requirements:

Acceptable alternatives to the English and Mathematics qualifications listed above are given in the Memorandum on Entry Requirements to Programmes of Initial Teacher Education in Scotland (General Teaching Council for Scotland (GTCS), 2013).

**Other Required Qualifications/Experience**

Year 1: Irish Leaving Certificate: H3H3H3H4 including Chemistry or International Baccalaureate (IB) Diploma: 27 points including Chemistry.

Year 2: International Baccalaureate (IB) Diploma: 30 points (including Chemistry and 1 science with 4 subjects at Higher).

\* Science subjects: Psychology, Maths, Geography, Chemistry, Physics, Biology, Human Biology

Before progressing to Year 3, students must successfully undertake an interview conducted by School of Education staff.

Students who are offered the opportunity to progress to Year 3 of this programme must apply for and obtain membership of the Protection of Vulnerable Groups Scheme before enrolment.

**Further desirable skills pre-application**

Experience of working with young people and up-to-date knowledge and understanding of secondary education in Scotland will aid progression to Year 3 of this programme.

**General Overview**

The BSc (Hons) Chemistry with Education programme is designed to fulfil the requirements of the QAA subject benchmark statement for Chemistry (2014), the Guidelines for Initial Teacher Education Programmes in Scotland (GTCS, 2013), the benchmark statement for Standard for Provisional Registration (GTCS, 2012) and the QAA subject benchmark statement for Education Studies (2015).

The overall aim of the programme is to develop individuals with a range of transferable graduate skills who will acquire Honours-level knowledge and skills in Chemistry alongside attaining the Standard for Provisional Registration, and thus be eligible to apply for provisional registration with GTCS and entry to the Teacher Induction Scheme as a secondary school teacher of Chemistry with Science.

The programme teaches the fundamentals of Chemistry as a core science and laboratory sessions develop practical and communication skills. Across the four years of the programme,

increasingly complex understanding of principal aspects of chemistry – organic, inorganic, analytical and physical – is developed. Depth of knowledge across a broad range of topics supports the teaching of senior phase courses up to Advanced Higher level.

The study of Education is introduced in year three with a focus on key educational issues, cross-cutting curricular themes, contexts for learning and professional values. Knowledge and understanding of curriculum, pedagogy and assessment of Chemistry and General Science, and the skills and abilities to implement effective teaching and learning, are developed in year four, through campus teaching and school experience placements.

In accordance with the relevant benchmarks, graduates will have demonstrated the attributes, knowledge and skills encompassed by the following core areas:

#### Professional Values and Personal Commitment

The core values defined as Social Justice, Integrity, Trust and Respect, and Personal Commitment, which are integral to, and demonstrated through, all professional relationships and practices.

#### Professional Knowledge and Understanding

The knowledge and understanding of Chemistry and General Science within the secondary curriculum, including contexts for learning to fulfil their responsibilities in literacy, numeracy, health and wellbeing and interdisciplinary learning; the principal features of the education system and their own professional responsibilities within the learning communities in which they will teach; relevant educational principles and pedagogical theories; and the importance of research in informing professional practice.

#### Professional Skills and Abilities

The ability to design, deliver and assess effective, appropriate and stimulating programmes of work in Chemistry and General Science within the secondary curriculum that are suitable for children at different stages of secondary education; and to use reading, research and feedback from a range of sources to inform effective self-evaluation and maintain a record of professional learning and development culminating in an Initial Professional Development Action Plan.

The programme will encourage the student to engage in lifelong learning, study and enquiry and to appreciate the value of education to society. It will also assist the student to develop the skills required for both autonomous practice and team-working.

#### **Opportunities for further study**

The Standard for Provisional Registration is part of a suite of professional standards published by GTCS (2012). Individuals obtaining Provisional Registration aim to progress to Full Registration and are then expected to continue to develop their expertise through 'appropriate and sustained career long professional learning' (GTCS, 2012). The suite of professional standards may be used to guide this learning and includes, for example, the Standards for Leadership and Management. Non-award-bearing courses have always formed an important part of professional development and update for teachers, but many opportunities exist at Masters level and above in subjects and areas relevant to schools and the wider world of education.

Honours graduates may also choose to pursue further study of Chemistry through MSc or PhD programmes at this or other universities.

#### **Teaching, learning and assessment**

Lectures, tutorials, workshops, laboratory classes and use of the Moodle VLE, employing a range of learning and teaching methodologies including group work, investigations, problem-based learning, concept visualisation (eg using drawing and collage), walking, student presentations, online tutor/student-led discussions, and resources such as subject-specific equipment, interactive whiteboards, laptops and the outdoors, will be used, as appropriate, to develop student learning. In order to enable students from the BSc (Hons) Chemistry with Education, BSc (Hons) Physics with Education, PGDE (Secondary) and PGDE (Primary) programmes to benefit from working together, the School & Professional Studies (L9) module will be delivered through a blended approach using the Moodle VLE and some face-to-face lectures, tutorials and workshops. Within the Moodle VLE, students will make use of e-learning methods such as remotely accessing set and extension readings and other course materials, and online and asynchronous communication with peers, and supported by tutors, to address problem-based learning tasks. Students are required to undertake significant independent learning in each module.

Student handbooks and other material made available to students will give more detailed information on the particular learning and teaching methodologies, and combinations of these methodologies, to be used for timetabled student sessions. This will clarify for students both their expectations for timetabled sessions, and their expectations for the overall balance of learning and teaching methodologies to be used during the programme.

On-going formative assessment across the programme will provide feedback to students on their developing thinking on subject knowledge and skills, educational issues and professional abilities. Summative assessment of academic study will take the form of essays, project reports, oral presentations, problem sheets and examinations. Assessment of school experience is outlined under Work Based Learning/Placement Details.

### **Graduate Attributes, Employability & Personal Development Planning**

The programme is designed to develop students' range of skills and attributes that are transferable to other areas of study and professional employment, including: knowing how to access and apply relevant research findings; practising in a range of professional contexts, which include a degree of unpredictability; communicating effectively, both orally and in writing, with a range of audiences; engaging in professional dialogue with peers and senior colleagues; constructing and sustaining reasoned and coherent arguments about professional practices; undertaking critical analysis, evaluation and synthesis of ideas, concepts, information and issues; justifying personal opinions by referring to appropriate evidence from a range of sources; reflecting on and acting to improve the effectiveness of their own practice; adopting an enquiring approach to professional practice, demonstrating some originality and creativity in finding solutions to professional issues; exercising autonomy and initiative in professional activities; working with others and, at times, taking a leading role; and dealing with complex ethical and professional issues in accordance with current professional and/or ethical codes of practice.

Personal Development Planning (PDP) is central to the programme, which aims to develop in every student the professional qualities and capabilities of a reflective practitioner. At Level 7, PDP/transferable skills development is an important part of the core module, Scientific Investigation. The aim is to enable students to become familiar with the ePortfolio that will be used, and to identify and evaluate their own range of skills and aspirations. From Level 7 to 9, exercises used for PDP/transferable skills development will be drawn from core module provision, to ensure that there is a strong link between PDP and the curriculum. In all aspects of PDP, the emphasis will be on students taking personal responsibility for their PDP portfolio, with support from staff as appropriate to each level.

The timetabled PDP sessions will be associated with the following core modules for the BSc (Hons) Chemistry with Education programme:

Level 7	Trimester 1	Structure of Chemistry
	Trimester 2	Chemistry and Reactions
	Trimester 2	Scientific Investigation
Level 8	Trimester 1	Physical Chemistry 2
	Trimester 2	Chemical Analysis & Evaluation
Level 9	Trimester 1	Inorganic Chemistry 3
	Trimester 1	Physical Chemistry 3
	Trimester 2	Introduction to Drug Design
Level 10	Trimester 1	Secondary School Experience
	Trimester 2	Secondary School Experience

At Level 10, while the PDP process is formally embedded within the Secondary School Experience module and is linked to target setting and evaluation on placement, students will also be encouraged to reflect on personal and professional learning in academic work and its impact on developing practice and progress towards achievement of the Standard for Provisional Registration. The PDP process will culminate in the production of an Initial Professional Development Action Plan.

Upon graduation and provisional registration with the GTCS, graduates are eligible for entry to the Teacher Induction Scheme. This scheme is administered by the GTCS, in partnership with the Scottish Learning Directorate, and provides a guaranteed one-year probationary post to every eligible student.

### Work Based Learning/Placement Details

In compliance with the requirements of the GTCS, a total of eighteen weeks, or ninety days, is devoted to school experience, occurring in each school term, with a block of at least four weeks taking place towards the end of the programme, in secondary school environments. At the end of Level 9 and early in Level 10, students will undertake two-week observation placements in order to establish links between theory and practice. Student handbooks and other very detailed materials made available to students will set out the requirements and expectations of the three substantial periods of school experience, including the maintenance of the teaching file. During each placement, students will monitor their progress through target-setting and evaluation in a personal development plan.

Following formative assessment of the first substantial period of school experience, the two subsequent placements will be assessed summatively by the partner school and the visiting University tutor. In addition to written feedback, students will receive Satisfactory or Unsatisfactory grades for each of the eight benchmark areas of the Standard for Provisional Registration. Assessment of the module is on a pass/fail basis, dependent upon satisfactory or unsatisfactory performance in school. The overall assessment of pass or fail is achieved by totalling the grades awarded by the partner school and those awarded by the University tutor. To assure placement partners that students are appropriately prepared to undertake periods of school experience, and in accordance with module and programme handbooks, any student whose attendance has fallen below the 75% minimum requirement for Secondary STEM Subject Studies and Secondary School Experience during any of the three blocks of campus study preceding the periods of school experience (and who is therefore deemed to be unprepared for a period of school experience) will normally be required to undertake a period of further preparation (on campus) when other students are on placement. UWS Regulation 5.7 also applies to periods of school experience, and it should be noted that any student whose attendance has fallen below the 75% minimum requirement may be deemed not to have met the professional requirements of the programme as accredited by the GTCS and, therefore, may not be eligible for assessment on that placement. In either case, the required school experience placement would normally be completed in the August/September diet following that academic year of study.

### Engagement

In line with the [Academic Engagement Procedure](#), Students are defined as academically engaged if they are regularly engaged with timetabled teaching sessions, course-related learning resources including those in the Library and on the relevant learning platform, and complete assessments and submit these on time.

### Equality and Diversity

Further information on the institutional approach to Equality, Diversity and Inclusion can be accessed at the following link: <https://www.uws.ac.uk/about-uws/uws-commitments/equality-diversity-inclusion/>

Programme structures and requirements, SCQF level, term, module name and code, credits and awards ( [Chapter 1, Regulatory Framework](#) )

#### A. Learning Outcomes (Maximum of 5 per heading)

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

Knowledge and Understanding	
A1	Demonstrate a broad knowledge of chemical structures, reactions and equilibria

<b>A2</b>	Relate knowledge to chemical theories, concepts and principles
<b>A3</b>	Show an awareness of the evidence base for chemical science
<b>Practice - Applied Knowledge and Understanding</b>	
<b>B1</b>	Apply basic knowledge and skills in solving routine problems in chemistry
<b>B2</b>	Demonstrate the practice of basic laboratory skills
<b>Communication, ICT and Numeracy Skills</b>	
<b>C1</b>	Tackle a range of numerical and non-numerical problems in theoretical and practical situations
<b>C2</b>	Present information in a variety of forms relevant to the context
<b>C3</b>	Obtain information and data from standard sources
<b>Generic Cognitive Skills - Problem Solving, Analysis, Evaluation</b>	
<b>D1</b>	Present and evaluate information and ideas in the handling of chemical issues
<b>D2</b>	Use a range of approaches to the solution of routine problems
<b>Autonomy, Accountability and Working With Others</b>	
<b>E1</b>	Exercise some initiative in and take responsibility for defined activities
<b>E2</b>	Take supervision especially in unfamiliar laboratory situations
<b>E3</b>	Work with others in defined group exercises

#### Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
7	MATH07001	Analysis of Data	20	✓	✓		
7	APPD07001	ASPIRE	20	✓	✓		
7	CHEM07011	Chemistry & Reactions	20		✓		
7	CHEM07009	Scientific Investigation	20		✓		
7	CHEM07003	Structure of Chemistry	20	✓			

\* Indicates that module descriptor is not published.

Footnotes

Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
		Appropriate Term 1 module worth 20 credit points from CHEM, MATH, PHYS or BIOL					

\* Indicates that module descriptor is not published.

Footnotes

The option should be an appropriate term 1 module worth 20 credit points from chemistry, , mathematics, physics or biology (prefix CHEM, MATH, PHYS or BIOL).

#### Criteria for Progression and Award

Progression to SCQF Level 8 is available to students who fulfil the university progression requirements.

A student may exit with an award of Cert HE Science, with a minimum of 120 credit points.

#### B. Learning Outcomes (Maximum of 5 per heading)

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

<b>Knowledge and Understanding</b>	
<b>A1</b>	Demonstrate a broad knowledge of main areas of chemistry
<b>A2</b>	Display an understanding of some major core theories and principles of chemistry
<b>A3</b>	Show some knowledge of major current issues
<b>A4</b>	Demonstrate specialist knowledge and understanding of the main scientific concepts that underpin topical science issues and the multiple perspectives that impinge on discussion of these issues
<b>Practice - Applied Knowledge and Understanding</b>	
<b>B1</b>	Use a range of routine skills, techniques and practices in chemistry, including some advanced aspects
<b>B2</b>	Carry out routine investigations into practical and theoretical issues
<b>B3</b>	Present information gained through research which demonstrates knowledge and understanding of topical science issues
<b>Communication, ICT and Numeracy Skills</b>	
<b>C1</b>	Use a range of standard applications and instrumentation to obtain and process data
<b>C2</b>	Apply and evaluate numerical and graphical procedures to laboratory and literature data
<b>C3</b>	Present information in numerical, graphical, verbal and written forms to a variety of audiences
<b>Generic Cognitive Skills - Problem Solving, Analysis, Evaluation</b>	

<b>D1</b>	Undertake critical analysis, evaluation and synthesis of information related to the main ideas and concepts within the understanding and practice of chemistry and topical science issues
<b>D2</b>	Use a variety of approaches to develop solutions to defined problems in chemistry and topical science issues
<b>D3</b>	Display a critical evaluation of solutions and explanations of experimental information and chemical phenomena
<b>Autonomy, Accountability and Working With Others</b>	
<b>E1</b>	Exercise autonomy and initiative in defined academic and professional activities
<b>E2</b>	Take responsibility for work planning and time management within specified contexts
<b>E3</b>	Co-operate in group working exercises
<b>E4</b>	Work under guidance on current professional practice and issues

#### Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
8	APPD08001	ASPIRE 2 *	20	✓	✓		
8	CHEM08004	Chemical Analysis & Evaluation	20		✓		
8	CHEM08013	Chemical Laboratory Techniques	20	✓	✓		
8	CHEM08003	Inorganic Chemistry 2	20		✓		
8	CHEM08002	Organic Chemistry 2	20	✓			
8	CHEM08001	Physical Chemistry 2	20	✓			

\* Indicates that module descriptor is not published.

#### Footnotes

#### Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	

\* Indicates that module descriptor is not published.

#### Footnotes

#### Criteria for Progression and Award

Progression to SCQF Level 9 is available to students who fulfil the university progression requirements and the GTCS requirements for entry to programmes of initial teacher education, ie SCQF Level 6 English and SCQF Level 5 Mathematics. Progression is also dependent on a successful interview with School of Education

staff.

A student failing to meet the GTCS entry requirements or being unsuccessful at interview may transfer to the BSc (Hons) Chemistry degree.

A student may exit with an award of Dip HE Science, with a minimum of 240 credit points.

### C. Learning Outcomes (Maximum of 5 per heading)

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

<b>Knowledge and Understanding</b>	
<b>A1</b>	Demonstrate a broad and integrated knowledge and understanding of major aspects of chemistry and current educational issues
<b>A2</b>	Display a critical understanding of principal theories, principles, concepts and terminologies of chemistry and education, including curriculum design, contexts for learning and cross-curricular links
<b>A3</b>	Show a knowledge of specialisms informed by forefront developments in chemistry
<b>A4</b>	Demonstrate knowledge of current educational issues and effective approaches to teaching and learning informed by forefront developments
<b>A5</b>	Demonstrate knowledge of how to access and apply relevant findings from educational research
<b>Practice - Applied Knowledge and Understanding</b>	
<b>B1</b>	Use a selection of skills, techniques and practices in handling chemical concepts and experimental information
<b>B2</b>	Display skills in techniques, practices and information at a specialised level in chemistry
<b>B3</b>	Practise routine and more unpredictable investigations and enquiries in chemistry
<b>B4</b>	Consider how to use skills, practices and materials which are specialised or advanced in a variety of educational settings, environments and circumstances
<b>B5</b>	Consider how to practise in a range of professional contexts, which include a degree of unpredictability
<b>Communication, ICT and Numeracy Skills</b>	
<b>C1</b>	Use a selection of skills, techniques and practices in handling chemical concepts and experimental information
<b>C2</b>	C2 Display skills in techniques, practices and information at a specialised level in chemistry, through practising routine and more unpredictable investigations and enquiries in chemistry
<b>C3</b>	Communicate effectively, using a variety of media including digital technologies, and engage in professional dialogue with peers and university staff
<b>C4</b>	Communicate and report effectively, both orally and in writing

<b>C5</b>	Constructing coherent arguments about educational matters and professional practices
<b>Generic Cognitive Skills - Problem Solving, Analysis, Evaluation</b>	
<b>D1</b>	Undertake critical analysis, evaluation and synthesis of ideas, concepts, information and issues in chemistry and educational contexts
<b>D2</b>	Identify and analyse routine professional problems and issues in chemistry and educational contexts
<b>D3</b>	Draw on a range of sources in making judgments on matters relating to chemistry and educational issues
<b>Autonomy, Accountability and Working With Others</b>	
<b>E1</b>	Exercise autonomy and initiative in dealing with activities at a professional level in chemistry and educational contexts
<b>E2</b>	Take some responsibility for the work of others and for the use of resources
<b>E3</b>	Practise working in group exercises taking account of others' roles and responsibilities
<b>E4</b>	Develop awareness of own and others' roles and responsibilities in educational contexts
<b>E5</b>	Work under guidance with specialist practitioners on aspects of professional skills and ethical codes

#### Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
9	CHEM09002	Analytical Chemistry	20		✓		
9	CHEM09001	Inorganic Chemistry 3	20	✓			
9	CHEM09004	Organic Chemistry 3	20		✓		
9	CHEM09003	Physical Chemistry 3	20	✓			
9	EDUC09048	School & Professional Studies (L9)	40	✓	✓		

\* Indicates that module descriptor is not published.

Footnotes

#### Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	

\* Indicates that module descriptor is not published.

Footnotes

Criteria for Progression and Award

Progression to SCQF Level 10 is available to students who fulfil the university progression requirements.

A student may exit with a BSc Chemistry with Education Studies, with a minimum of 360 credit points. The Progression and Awards Board will award distinction to candidates for undergraduate awards other than Honours degrees where a mean mark of 70% or above is achieved by candidates at their first attempt.

**D. Learning Outcomes (Maximum of 5 per heading)**

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

<b>Knowledge and Understanding</b>	
<b>A1</b>	Demonstrate integrated knowledge and critical understanding of a broad range of facts, concepts, principles and theories relating to main branches of chemistry and to secondary education
<b>A2</b>	Demonstrate detailed knowledge and understanding of a subject area within the secondary curriculum, current educational issues and effective approaches to teaching and learning, including the ways in which they are developed using established techniques of professional enquiry
<b>A3</b>	Show knowledge of modern specialist topics in major areas of chemistry, and awareness of significant issues at the frontiers of chemical research and development
<b>A4</b>	Demonstrate understanding of factors influencing the feasibility, kinetics and mechanisms of chemical reactions, familiarity with the principles and applications of a range of modern instrumentation in analysis and characterisation, and awareness of the importance of safe working practices and of risk assessment
<b>A5</b>	Demonstrate knowledge of how to access and apply relevant findings from chemistry and educational research
<b>Practice - Applied Knowledge and Understanding</b>	
<b>B1</b>	Exhibit practical skills in traditional and modern laboratory practice in synthetic and analytical work
<b>B2</b>	Display familiarity with computers for data handling and, when interfaced with instruments, for monitoring and evaluating properties, events and changes
<b>B3</b>	Design, deliver and assess effective, appropriate and stimulating programmes of work, in a subject area within the secondary curriculum, which are suitable for children at different stages of secondary education, using the results of assessment to evaluate and improve teaching
<b>B4</b>	Use skills, practices and materials which are specialised, advanced or at the forefront of classroom practice in a variety of settings, environments and circumstances, which include a degree of unpredictability and specialism, and maintain a safe, caring and purposeful learning environment within these contexts
<b>B5</b>	Execute a defined project of professional enquiry related to teaching and learning in secondary school of challenging concepts in chemistry
<b>Communication, ICT and Numeracy Skills</b>	

<b>C1</b>	Communicate effectively, using a variety of media including digital technologies, to promote and develop positive relationships, and to stimulate pupils and achieve the objectives of lessons
<b>C2</b>	Communicate effectively and engage in professional dialogue with peers, university staff and school colleagues
<b>C3</b>	Utilise information management skills, including computer-based searches
<b>C4</b>	Communicate and report effectively, both orally and in writing
<b>C5</b>	Construct and sustain reasoned and coherent arguments about educational matters and professional practices
<b>Generic Cognitive Skills - Problem Solving, Analysis, Evaluation</b>	
<b>D1</b>	Undertake critical analysis, evaluation and synthesis of ideas, concepts, information and issues in chemistry-related and educational contexts
<b>D2</b>	Justify a personal stance on chemistry-related and educational issues by referring to appropriate evidence from a range of sources
<b>D3</b>	Reflect on and act to improve the effectiveness of their own practice and contribute to the processes of curriculum development, school development planning and meeting the educational needs of school communities
<b>D4</b>	Adopt an enquiring approach to professional practice, demonstrating some originality and creativity in finding solutions to professional issues
<b>D5</b>	Develop record of personal professional learning and development into an Initial Professional Development Action Plan
<b>Autonomy, Accountability and Working With Others</b>	
<b>E1</b>	Exercise autonomy and initiative in academic and professional activities, including managing time and prioritising workloads
<b>E2</b>	Work effectively under guidance in a peer relationship with qualified practitioners and other agencies and individuals
<b>E3</b>	Work effectively with others and, at times, take a leading role in bringing about change, development and new thinking relating to an aspect of chemistry or secondary education
<b>E4</b>	Deal with complex ethical and professional issues in accordance with current professional and/or ethical codes of practice and in accordance with the needs of schools and wider communities
<b>E5</b>	Demonstrate achievement of all aspects of the Standard for Provisional Registration

#### Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
10	CHEM10003	Organic Chemistry 4	20	✓			
10	CHEM10004	Physical & Inorganic Chemistry 4	20		✓		

10	EDUC10049	Secondary School Experience	40	✓	✓		
10	EDUC10050	Secondary STEM Subject Studies	40	✓	✓		

\* Indicates that module descriptor is not published.

#### Footnotes

Students who do not pass Secondary School Experience on the second attempt may undertake STEM Work Based Learning, which offers an alternative form of assessment of school experience but will not enable provisional registration with the GTCS.

#### Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	

\* Indicates that module descriptor is not published.

#### Footnotes

#### Criteria for Award

Honours degrees are classified in accordance with university regulations.

Students who complete a minimum of 480 credit points, including Secondary School Experience, will exit with BSc (Hons) Chemistry with Education, enabling provisional registration with the GTCS.

Students who complete a minimum of 480 credit points, including STEM Work Based Learning, will exit with BSc (Hons) Chemistry with Education Studies, which will not enable provisional registration with the GTCS.

The BSc (Hons) Chemistry with Education programme is an example of a professional programme where a Progression and Awards Board has the power to terminate the programme progress of a student whose continuation on placement is judged to be unacceptably damaging to the interests of placement partners, ie schools and their pupils, during school experience. Student handbooks will provide further details. In such cases, students may exit with a BSc Chemistry.

<p><b>Regulations of Assessment</b></p> <p>Candidates will be bound by the general assessment regulations of the University as specified in the <a href="#">University Regulatory Framework</a>. An overview of the assessment details is provided in the Student Handbook and the assessment criteria for each module is provided in the module descriptor which forms part of the module pack issued to students. For further details on assessment please refer to Chapter 3 of the Regulatory Framework. To qualify for an award of the University, students must complete all the programme requirements and must meet the credit minima detailed in Chapter 1 of the Regulatory Framework.</p>
<p><b>Combined Studies</b></p>

There may be instances where a student has been unsuccessful in meeting the award criteria for the named award and for other more generic named awards existing within the School. Provided that they have met the credit requirements in line with the SCQF credit minima (please see Regulation 1.21), they will be eligible for an exit award of CertHE / DipHE or BA / BSc in Combined Studies.  
For students studying BA, BAcc, or BD awards the award will be BA Combined Studies.  
For students studying BEng or BSc awards, the award will be BSc Combined Studies.

#### **Changes**

**Changes made to the programme since it was last published:**

**Version Number: 1**