

Course Specification

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Produced By:	Oliver Jones
Status:	Validated

Core Information

Awarding Body / Institution:	University of Wolverhampton			
School / Institute:	Wolverhampton School of Sciences			
Course Code(s):	SE071H01UV	University of Wolverhampton	Full-time	3 Years
UCAS Code:				
Hierarchy of Awards:	Bachelor of Science with Honours Chemistry with Secondary Education (QTS) Bachelor of Science Chemistry with Secondary Education Diploma of Higher Education Chemistry Certificate of Higher Education Chemistry University Statement of Credit University Statement of Credit			
Language of Study:	English			
Date of DAG approval:	19/May/2017			
Last Review:	2019/0			
Course Specification valid from:	2014/5			
Course Specification valid to:	2025/6			

Academic Staff

Course Leader:	Dr Catherine Duke
Head of Department:	Georgina Manning

Course Information

Location of Delivery:	University of Wolverhampton
Category of Partnership:	Not delivered in partnership
Teaching Institution:	University of Wolverhampton
Open / Closed Course:	This course is open to all suitably qualified candidates.

Entry Requirements:

Entry requirements are subject to regular review. The entry requirements applicable to a particular academic year will be published on the University website (and externally as appropriate e.g. UCAS)

- All entrants should have achieved a standard equivalent to a grade 4 in the GCSE examinations in English and Mathematics, or equivalent.
- All entrants, as part of the provider's selection procedures, have taken part in a rigorous selection process designed to assess their suitability to train to teach.
- All entrants have passed the professional skills tests prior to entry.

AND

- CCC grades from A Levels or equivalent including Chemistry (excluding A Level General Studies and A Level Critical Thinking).
- BTEC (QCF) Extended Diploma grade MMM; BTEC (QCF) Diploma DD
- Access to HE Diploma gaining 60 credits in total with at least 45 credits achieved at level 3, of which 36 credits must be in science based units at level 3, including passes in Chemistry units: at least 27 of these 36 credits must be achieved at Merit or above and 9 credits with Pass or above.
- If you've got other qualifications or relevant experience, please contact The Gateway for further advice before applying.
- International entry requirements and application guidance can be found here

Please note we do not accept GCSE Equivalent Tests from other institutions or organisations and be aware that not all equivalency tests are accepted.

Pre-entry Professional Skills Tests

Applicants for initial teacher training (ITT) courses which begin in 2013/14 and beyond are required to have passed the skills tests before the start of the course, further information is available via the following link:

<http://www.education.gov.uk/sta/professional/b00211200/registration>

You will not be eligible to register and take the tests until after you have submitted an application for an ITT programme.

An offer of a place will not be made until you have attended a formal interview. Those successful in the audits and at interview will be subsequently required to meet enhanced DBS checks, fitness to teach, medical check and prohibition order check requirements.

If you have accepted a Conditional Offer made by the University of Wolverhampton you will receive correspondence asking you to complete an enhanced Disclosure and Barring Service (DBS) check. The charge for this will be a DBS fee of £44.00 and a £6.00 ID check service fee. You will also need an Occupational Health Check and a prohibition check prior to starting the course.

All applicants must meet the DfE requirements for Initial Teacher Training.

Those who do not meet the entry requirements may be offered an alternative course.

Distinctive Features of the Course:

The BSc (Hons) Chemistry with Secondary Education (QTS) course will provide you with a direct route to a

recommendation for Qualified Teacher Status as a chemistry teacher in just three years. The course combines a high standard of theoretical and practical chemistry with the pedagogical knowledge and skills required to enable you to enter directly into the secondary science classroom and the launch of a rewarding career as a chemistry teacher. You will be taught by enthusiastic and experienced staff and you will undertake your chemistry practical's in our modern chemical laboratories. The teacher training component of the course starts in your first year and builds up, allowing you time to reflect on and develop your pedagogical understanding and skills. You will have two extended placements in secondary schools in classes covering the 11-16 age range, one in your second year and one in your third year.

Educational Aims of the Course:

The BSc (Hons) Chemistry with Secondary Education (QTS) course aims to develop your theoretical knowledge and practical skills in the main areas of chemistry (physical, organic, inorganic and analytical), while simultaneously giving you the pedagogical knowledge and skills required to enable you to be recommended for Qualified Teacher Status (QTS) to teach chemistry in secondary schools.

Intakes:

September

Major Source of Funding:

National College for Teaching & Leadership (NCTL)

Tuition Fees:

Tuition fees are reviewed on an annual basis. The fees applicable to a particular academic year will be published on the University website.

Year	Status	Mode	Amount
2017/8	H	Full Time / Sandwich	£9250.00
2017/8	EU	Full Time / Sandwich	£9250.00
2017/8	Overseas	Full Time / Sandwich	£11475.00
2018/9	H	Full Time / Sandwich	£9250.00
2018/9	EU	Full Time / Sandwich	£9250.00
2018/9	Overseas	Full Time / Sandwich	£11700.00
2019/0	H	Full Time / Sandwich	£9250.00
2019/0	EU	Full Time / Sandwich	£9250.00
2019/0	Overseas	Full Time / Sandwich	£12000.00

PSRB:

None

Course Structure:

September (Full-Time)

Year 1

Full time and Sandwich Undergraduate Honours students normally study 120 credits per academic year; 60 credits semester 1 and 60 credits semester 2.

Module	Title	Credits	Period	Type
4CH006	Skills for Chemistry	20	SEM1	Core
4CH001	Concepts in Inorganic Chemistry	20	SEM1	Core
4CH002	Principles of Physical Chemistry	20	SEM2	Core
4CH003	Fundamentals of Organic Chemistry	20	SEM1	Core
4CH004	Introduction to Analytical Chemistry	20	SEM2	Core
4SE001	Subject-specific Pedagogy: Justifying the Specialist Subject	20	SEM2	Core

September (Full-Time)

Year 2

Full time and Sandwich Undergraduate Honours students normally study 120 credits per academic year; 60 credits semester 1 and 60 credits semester 2.

Module	Title	Credits	Period	Type
5CH003	Physical Chemistry (Chemical Thermodynamics)	20	SEM1	Core
5CH004	Inorganic Chemistry	20	SEM1	Core
5SE001	Subject-specific Pedagogy: Teaching the Specialist Subject	20	SEM2	Core

Linked Option Group Rule: Select a minimum of 20 credits and a maximum of 20 credits from the linked (*) groups.

***For this option group you must choose a minimum of 0 credits and a maximum of 20 credits**

If you have selected 4SE001 at level 4 then you must select 5CH009.

5CH009	Integrated Chemistry 1	20	SEM1	
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***For this option group you must choose a minimum of 0 credits and a maximum of 20 credits**

If you have not taken 4SE001 at level 4 then you must select 5SE003.

5SE003	Subject Specific Pedagogy 1a: Exploring the Teaching of the Specialist Subject	20	SEM1	
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For this option group you must choose a minimum of 0 credits and a maximum of 20 credits

5CH001	Chemical Analysis	20	SEM2	
5CH002	Organic Chemistry (Structure and Mechanism)	20	SEM2	

For this option group you must choose a minimum of 1 credits and a maximum of 1 credits

5SE002	Professional Development: The Beginning Teacher	20	INJR	
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September (Full-Time)

Year 3

Full time and Sandwich Undergraduate Honours students normally study 120 credits per academic year; 60 credits semester 1 and 60 credits semester 2.

Module	Title	Credits	Period	Type
6CH007	Chemistry Research Project	40	YEAR	Core
			SEM1	Core
6SE008	Subject-specific Pedagogy: Investigating Practice	20	SEM2	Core
6SE007	Professional Development: The Developing Teacher	40	YEAR	Core

Learning, Teaching and Assessment

Academic Regulations Exemption:

Section 1.2.3 - Exemption for delivery outside the standard University Academic Calendar in order to enable students to complete the required hours for two placement modules;

5SE002 Professional Development: The Beginning Teacher.

6SE007 Professional Development: The Developing Teacher.

Including exemption from the standard University Academic Framework, allowing for an unbalanced programme of study at Level 5, by including a Year Long module.

Section 1.3.3 - Exemption to exclude the use of non-subject option modules at Level 4, Level 5 and Level 6 in order to meet QTS requirements.

Section 4.3.3 - Exemption in accordance with the standards required for Qualified Teacher Status (granted by the National College for Teaching and Leadership). There will be no automatic right to a second attempt for any failed practice components at the discretion of the Assessment Board (second attempts are permitted for theory components);

5SE002 Professional Development: The Beginning Teacher.

6SE007 Professional Development: The Developing Teacher.

Section 4.4.3 - Exemption in accordance with the standards required for Qualified Teacher Status (granted by the National College for Teaching and Leadership). Compensation will not be permitted for any core modules which are required in order to meet these standards;

4SE001 Subject-specific Pedagogy: Justifying the Specialist Subject

5SE001 Subject-specific Pedagogy: Teaching the Specialist Subject

5SE002 Professional Development: The Beginning Teacher

5SE003 Subject Specific Pedagogy 1a: Exploring the Teaching of the Specialist Subject

6SE007 Professional Development: The Developing Teacher

6SE008 Subject-specific Pedagogy: Investigating Practice.

Approved by AFRSC on 28th March 2019.

Reference Points:

Department for Education (DFE) Initial teacher training: criteria and supporting advice (Jan 2019)

<https://www.gov.uk/government/publications/initial-teacher-training-criteria>

Ofsted: ITE Inspection framework (Feb 2019)

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/780134/ITE_handbook_Apr

Teachers' standards (July 2011)

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/665520/Teachers_Standards

UK Quality Code for Higher Education <https://www.qaa.ac.uk/quality-code>

UK Quality Code for Higher Education Advice & Guidance <https://www.qaa.ac.uk/en/quality-code/advice-and-guidance>

Subject Benchmark Statements <https://www.qaa.ac.uk/en/quality-code/subject-benchmark-statements>

Qualifications and Credit Frameworks <https://www.qaa.ac.uk/en/quality-code/qualifications-and-credit-frameworks>

Learning Outcomes:

CertHE Course Learning Outcome 1 (CHECLO1)

Show knowledge and understanding of fundamental concepts of organic, inorganic, physical and analytical chemistry.

CertHE Course Learning Outcome 2 (CHECLO2)

Demonstrate practical skills in the laboratory, including safe working practices, and an ability to make and record observations and report results.

CertHE Course Learning Outcome 3 (CHECLO3)

Demonstrate the qualities and transferable skills necessary for professional development requiring the exercise of some personal responsibility.

DipHE Course Learning Outcome 1 (DHECLO1)

Demonstrate practical skills, work safely in the laboratory and be fully conversant with standard chemical techniques, instrumentation and use of appropriate computer software.

DipHE Course Learning Outcome 2 (DHECLO2)

Survey and review scientific information, communicate effectively both orally and in writing, apply numerical skills to scientific data, and work in teams and independently.

DipHE Course Learning Outcome 3 (DHECLO3)

Demonstrate a systematic understanding of physical chemistry and physicochemical principles

DipHE Course Learning Outcome 4 (DHECLO4)

Demonstrate a knowledge and understanding of a range of inorganic materials, including structure, bonding and properties.

DipHE Course Learning Outcome 5 (DHECLO5)

Demonstrate a knowledge of analytical chemistry or organic chemistry appropriate to level 5, building on previous study.

DipHE Course Learning Outcome 6 (DHECLO6)

Demonstrate the qualities and transferable skills necessary for professional development.

Ordinary Degree Course Learning Outcome 1 (ORDCLO1)

Demonstrate an ability to work independently.

Ordinary Degree Course Learning Outcome 2 (ORDCLO2)

Survey and review scientific information, communicate effectively both orally and in writing.

Ordinary Degree Course Learning Outcome 3 (ORDCLO3)

Demonstrate a knowledge and understanding of aspects of chemistry at an advanced level

Ordinary Degree Course Learning Outcome 4 (ORDCLO4)

Act independently, exercise initiative and act as a positive role model in a range of complex teaching and learning situations.

Honours Degree Course Learning Outcome 1 (DEGCLO1)

Demonstrate an ability to plan and execute a research project, and to work independently.

Honours Degree Course Learning Outcome 2 (DEGCLO2)

Survey and critically review scientific information (including at the level of the primary literature), communicate effectively both orally and in writing.

Honours Degree Course Learning Outcome 3 (DEGCLO3)

Demonstrate a knowledge and understanding of aspects of chemistry at an advanced level.

Honours Degree Course Learning Outcome 4 (DEGCLO4)

Act independently, exercise initiative and act as a positive role model in a range of complex teaching and learning situations.

Honours Degree Course Learning Outcome 5 (DEGCLO5)

Display the technical, pedagogical and subject competence to meet the standards required to be recommended for QTS and to teach chemistry in secondary schools.

Overview of Assessment:

Module	Title	Course Learning Outcomes
4CH001	Concepts in Inorganic Chemistry	CHECLO1, CHECLO2
4CH002	Principles of Physical Chemistry	CHECLO1, CHECLO2
4CH003	Fundamentals of Organic Chemistry	CHECLO1, CHECLO2
4CH004	Introduction to Analytical Chemistry	CHECLO1, CHECLO2
4CH006	Skills for Chemistry	CHECLO3
4SE001	Subject-specific Pedagogy: Justifying the Specialist Subject	CHECLO3
5CH001	Chemical Analysis	DHECLO1, DHECLO5
5CH002	Organic Chemistry (Structure and Mechanism)	DHECLO1, DHECLO5
5CH003	Physical Chemistry (Chemical Thermodynamics)	DHECLO1, DHECLO3
5CH004	Inorganic Chemistry	DHECLO1, DHECLO2, DHECLO4
5CH009	Integrated Chemistry 1	DHECLO1, DHECLO2
5SE001	Subject-specific Pedagogy: Teaching the Specialist Subject	DHECLO6
5SE002	Professional Development: The Beginning Teacher	DHECLO6
5SE003	Subject Specific Pedagogy 1a: Exploring the Teaching of the Specialist Subject	DHECLO6
6CH007	Chemistry Research Project	DEGCLO1, DEGCLO2, ORDCLO1, ORDCLO2
6CH008	Advanced Chemistry for Teachers	DEGCLO2, DEGCLO3, ORDCLO2, ORDCLO3
6SE007	Professional Development: The Developing Teacher	DEGCLO4, DEGCLO5, ORDCLO4
6SE008	Subject-specific Pedagogy: Investigating Practice	DEGCLO4, DEGCLO5, ORDCLO4

Teaching, Learning and Assessment:

You will be taught, and develop your knowledge and understanding of Chemistry through a range of learning activities including traditional lectures supported by workshops, tutorials and problem solving sessions. Chemists need to be numerate, and maths is therefore embedded throughout the course, along with other important generic and transferable skills.

Chemistry is a practical subject, and laboratory work will form an essential part of your learning. You will work singly, in pairs or in groups as appropriate, as you move from straightforward practical exercises developing your core laboratory skills, to more extended practicals.

The learning activities related to Chemistry will move from a more tutor-centred approach in the earlier parts of your course towards a student-centred learning approach in the latter stages. Formative assessments and tutorial exercises will help you to assess your own understanding.

In addition to your development as a chemist, you will develop competency in teaching skills. Trainee teachers undertake a minimum of 120 days training in school as part of this course. Successful completion of the school placement modules leads to recommendation for Qualified Teacher Status (QTS). Trainee teachers recommended for the award of QTS will be well-placed to obtain employment in schools as qualified teachers. Throughout the course you are required to complete two placements in secondary schools which contribute towards credit bearing education modules. The trainees will teach across the 11-16 age range across the secondary age phase. In your final year of study you will be required to complete a chemistry-education based project. This provides you with the opportunity to undertake your own research into an education based problem whilst developing an in depth understanding of research methodology and data analysis.

A wide range of assessments are incorporated into the course in order to demonstrate your understanding, including:

- Phase tests and examinations
- Practical reports
- Case studies and problem solving exercises
- Oral and Poster Presentations
- Written assignments
- Structured assessment of an education-related chemistry research project (from planning through to thesis submission)

The assessment requirements of the course include the need for trainee teachers to demonstrate that they

have reached the standards required for Qualified Teacher Status. The assessment methods will include;

- Written assignments and presentations to tutors and peers to demonstrate secure subject knowledge and understanding, the ability to undertake research and the ability to reflect critically on your own teaching practice;
- Completion of school-based activities to demonstrate the ability to observe and research into classroom practice;
- Two sustained periods in school undertaking the full range of the teacher's duties and taking increasing independent responsibility for organising and managing teaching and learning across all of the 11-16 age range within the secondary age phase, groups for which they are being trained. Also, there will be a report on a short placement in a primary school.
- Compilation of two teaching files
- Record of Professional Development.

You will be supported in many ways with module-specific support provided through the module team via face-to-face and electronic tutorials, scheduled drop-in sessions or SAMS (Student Appointment Management System) appointments. Feedback from formative and some summative assessments will support learning by assisting you in identifying and improving areas of weakness, and further developing areas of strength.

The team of Teaching Associates in the Faculty of Science and Engineering provides drop-in sessions for general study skills advice. You will be also supported with study skills and mentoring support by the team of Graduate Teaching Assistants and student Peer Support 'Study Buddies' in the faculty.

You will also have tutorials with the University education mentor to help you prepare for the teaching placement, as well as have a school based mentor, who will support you day to day during your placement.

Learning and Teaching Methods:

This data indicates the proportion of time in each year of study that students can expect to engage in the following activities (expressed as a percentage for each level).

Level	Teaching	Independent	Placement
4	28	72	0
5	30	70	0
6	22	78	0

Assessment Methods:

This data indicates the proportion of summative assessment in each year of study that will derive from the following: (expressed as a percentage for each level).

Level	Written Exams	Practical Exams	Coursework
4	27	0	73
5	37	0	63
6	17	0	83

Student Support:

General University support:

[University Learning Centres](#) are the key source of academic information for students. Learning Centres provide physical library resources (books, journal, DVDs etc.) and offer a range of study areas to allow students to study in the environment that suit them best: Social areas, quiet and silent areas. Learning Centres also provide access to wide range of online information sources, including eBooks, e-Journals and subject databases.

Learning Centres also provide students with academic skills support via the [Skills for Learning programme](#). Students on campus can attend workshops or ask for one-to-one help on a range of skills such as academic writing and referencing. Students can access a range of online skills material at: www.wlv.ac.uk/lib/skills

The [University Student Support website](#) offers advice on a variety of matters (careers, counselling, student union advice, etc.) Students can also access these services by booking appointment with the SU, careers, counselling services, etc.

Course Specific Support

Each student will be allocated a personal tutor who can provide general help, advice, guidance and, if required, direct them to services such as the Student Office, Counselling Services, Student Enabling Centre, Student's Union, Chaplaincy (all Faiths), Study Skills (Learning centre, see below).

The Faculty of Science and Engineering also offers a Student Support Team (located in the Faculty Administration Office) and this is a key additional source of support, particularly for non-academic related matters. This tends to be a student's first port of call and the team can advise students and, if required direct them to further University services as mentioned above.

The Institute of Education will provide face to face tutorials to help prepare students for their teaching placements and trainees will also work with a school based mentor in schools, who will guide trainees on their pedagogy and delivery of curriculum within the classroom.

There are also a range of support facilities (relating to assessment tasks) that are available in the Library for students to access including the Maths Support Centre.

Employability in the Curriculum:

This degree prepares you for a career in teaching Chemistry at secondary level, providing you with a strong grounding of knowledge in your core science subject, and a recommendation for Qualified Teaching Status. You will emerge with the solid capabilities in critical thinking, evidence gathering and evaluation, argument or point-of-view construction and advocacy, and problem solving which are essential for a successful career in education at all levels. The Secondary Education component of the course guarantees a minimum of 120 hours of classroom experience in Years 2 and 3 under the close supervision of experts in the field, providing one-to-one support with all aspects of your development as a teaching professional. The core modules in the course will also satisfy the requirements of the Wolverhampton Enterprise and Employability Award.



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