Course Specification

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Produced By:	Laura Clode
Status:	Validated

Core Information

Awarding Body / Institution:	University of Wolverhampton		
School / Institute:	Wolverhampton School of Sciences		
Course Code(s):	CH006Q01UV CH006Q31UV	Full-time Part-time	4 Years 8 Years
Course Title:	MChem (Hons) Masters in Chemistry		
Hierarchy of Awards:	Master in Chemistry with Honours Chemistry Bachelor of Science with Honours Chemistry Bachelor of Science Chemistry 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:	25/Sep/2017		
Last Review:	2016/7		
Course Specification valid from:	2016/7		
Course Specification valid to:	2022/3		

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

- GCSE English and Mathematics at grade C or above or equivalent AND
- Minimum 120 UCAS points in the NEW tariff system (e.g. BBB) from three full A-levels (preferably the sciences and maths, one of which must be chemistry with a minimum of B = 40 points). This is equivalent to 300 points with the old UCAS tariff with B = 100 points.

Qualifications considered to be the equivalent of the above will be considered by the university. If you've got other qualifications or relevant experience, please check out the UCAS tariff conversion table via the UCAS website: www.ucas.com.

International student language requirements and application guidance can be found at www.wlv.ac.uk/international/apply

Other requirements: An offer of a place will not be made until you have attended a formal interview.

Internal transfer from BSc (Hons) Chemistry course onto the four-year Integrated MChem course (University of Wolverhampton).

Transfer will be possible using similar conditions to other courses, for example, transfer

will be permitted after successful completion of year two (level 5) of the programme:

The student must accumulate 120 credits at level 4 and 120 credits at year 5 with an average mark no less than 60%, i.e., be on target for a 2/1 BSc degree or better.

Distinctive Features of the Course:

This course aims to:

- Develop your skills and knowledge in the main areas of chemistry (organic, inorganic, physical and analytical chemistry) in an integrated manner with selected areas of specialism such as pharmaceutical chemistry, forensic chemistry, polymer chemistry, environmental chemistry and selected aspects of industrial chemistry.
- In addition, if you choose to undertake a sandwich degree, the course will allow you to acquire technical skills in the workplace and enable you to integrate knowledge gained in the theoretical aspects of the course into the professional environment.
- Build on the skills and knowledge above by providing the opportunity to specialise is selected aspects of organic, inorganic, physical or analytical chemistry at level 7, including a substantial year-long research project.
- Produce a graduate who is "fit for purpose", who satisfies the academic and professional requirements for associate membership of the Royal Society of Chemistry, who is ready for employment in the chemistry or a related industry, or who can progress to teaching, further study or research aspirations.

Educational Aims of the Course:

The MChem degree aims to:

- Develop your skills and knowledge in the main areas of chemistry (organic, inorganic, physical and analytical chemistry) in an integrated manner with selected areas of specialism such as pharmaceutical chemistry, forensic chemistry, polymer chemistry, environmental chemistry and selected aspects of industrial chemistry. In addition, if you choose to undertake a sandwich degree, the course will allow you to acquire technical skills in the workplace and enable you integrate knowledge gained in the theoretical aspects of the course into the professional environment.
- Build on the skills and knowledge above by providing the opportunity to specialise is selected aspects of organic, inorganic, physical or analytical chemistry at level 7, including a substantial year-long research project.
- Produce a graduate who is "fit for purpose", who satisfies the academic and professional requirements for associate membership of the Royal Society of Chemistry, who is ready for employment in the chemistry or a related industry, or who can progress to teaching, further study or research aspirations.

This course is looked upon favourably by potential employers compared to BSc (Hons) Chemistry course because it contains modules studied at Master's level 7 in the final year.

Intakes:

September

Major Source of Funding:

Office for Students (OFS)

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
2020/1	H	Full Time / Sandwich	£9250.00
2020/1	Overseas	Full Time / Sandwich	£12250.00
2020/1	H	Part Time	£3050.00
2020/1	Overseas	Part Time	£6125.00

PSRB:

None

Course Structure:

September (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 1

Module	Title	Credits	Period	Type
4CH001	Concepts in Inorganic Chemistry	20	SEM1	Core
4CH003	Fundamentals of Organic Chemistry	20	SEM1	Core
4CH002	Principles of Physical Chemistry	20	SEM2	Core
4CH004	Introduction to Analytical Chemistry	20	SEM2	Core

Linked Option Group Rule: Select a minimum of 40 credits and a maximum of 40 credits from the linked (*) groups.

*** For this option group you must choose a minimum of 0 credits and a maximum of 40 credits**

4MA007 and 4CH008 are core for FT students only
4CH007 and 4CH006 are for Part-time DR Option students only

4CH006	Skills for Chemistry	20	SEM1	
4CH007	Work-based learning and development 1	20	SEM1	

*** For this option group you must choose a minimum of 0 credits and a maximum of 40 credits**

4MA007 and 4CH008 are core for FT students only
4CH007 and 4CH006 are for Part-time DR Option students only

4CH008	Skills for Chemistry (Year long)	20	YEAR	

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

4MA007	Engineering Mathematics	20	YEAR	

September (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 2

Module	Title	Credits	Period	Type
5CH003	Physical Chemistry	20	SEM1	Core
5CH004	Inorganic Chemistry	20	SEM1	Core
5CH001	Chemical Analysis	20	SEM2	Core
5CH002	Organic Chemistry (Structure and Mechanism)	20	SEM2	Core
5CH008	Integrated Chemistry 2 (Organic and Analytical)	20	SEM2	Core
5CH009	Integrated Chemistry 1	20	SEM1	Core

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

Part-time DR option students only

5CH007	Work-based Learning and Development 2	20	SEM2	

September (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 3

Module	Title	Credits	Period	Type
6CH001	Advanced Organic and Inorganic Chemistry	20	SEM1	Core
6CH003	Quality Assurance and Laboratory Management	20	SEM1	Core
6CH007	Chemistry Research Project	40	YEAR	Core
6CH002	Advanced Chemical Analysis	20	SEM2	Core
6CH004	Advanced Physical and Materials Chemistry	20	SEM2	Core

September (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 4

Module	Title	Credits	Period	Type
7CH001	MCHEM research project	60	INYR	Core

For this option group you must choose a minimum of 60 credits and a maximum of 60 credits

7CH005	Advanced Topics in Organic Chemistry	20	INYR	
7CH007	Advanced Topics in Inorganic Chemistry	20	INYR	
7CH003	Advanced Topics in Physical Chemistry	20	INYR	
7CH006	Advanced Analytical Chemistry	20	INYR	

Please note: Optional modules might not run every year, the course team will decide on an annual basis which options will be running, based on student demand and academic factors, to create the best learning experience.

Learning, Teaching and Assessment

Academic Regulations Exemption:

AFRSC/16/14.4.1 MChem (Hons)

Section 1.2.3 - Exemption for the Year Long delivery of taught modules, outside of the standard University Academic Framework, in order to enable more concentrated laboratory research;

7CH005 Advanced Organic Chemistry (20 credits, Year Long)

7CH006 Advanced Analytical Chemistry (20 credits, Year Long)

7CH003 Advanced Physical Chemistry (20 credits, Year Long)

7CH007 Advanced Inorganic Chemistry (20 credits, Year Long).

Effective date: September 2017.

APPROVED

Section 1.2.7 - Exemption to exceed normal amount of independent study for an undergraduate honours degree (including integrated masters qualifications);

6CH006 Research Project (20 credits, Semester 2)

7CH001 MChem Project (60 credits, Year Long).

Effective date: September 2017.

APPROVED (Validation Panel to give due consideration to the scheduling of assessment points on Year Long taught modules).

Reference Points:

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 Frameworkshttps://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 (including safe working practice) and ability to make and record experimental observations and report results.

CertHE Course Learning Outcome 3 (CHECLO3)

Demonstrate an awareness of the importance of chemical science to a selection of related disciplines, e.g. toxicology, forensic chemistry, polymer science, environmental chemistry, medical and industrial/manufacturing applications.

CertHE Course Learning Outcome 4 (CHECLO4)

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

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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 knowledge of a range of inorganic and organic chemical materials (including structure, bonding, properties, synthesis, isolation, purification and characterisation techniques).

DipHE Course Learning Outcome 5 (DHECLO5)

Demonstrate and apply knowledge of a range of analytical techniques, evaluate and interpret analytical data (including appropriate statistical analysis).

DipHE Course Learning Outcome 6 (DHECLO6)

Demonstrate the qualities and transferable skills necessary for professional development requiring: a) an awareness of a range of issues within chemistry that overlap with other related disciplines

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Ordinary Degree Course Learning Outcome 1 (ORDCLO1)

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

Ordinary Degree Course Learning Outcome 2 (ORDCLO2)

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

Ordinary Degree Course Learning Outcome 3 (ORDCLO3)

Demonstrate a systematic understanding of physical chemistry and physicochemical principles.

Ordinary Degree Course Learning Outcome 4 (ORDCLO4)

Demonstrate and apply knowledge of a range of inorganic and organic chemical materials (including structure, bonding, properties, synthesis, isolation, purification and characterisation techniques).

Ordinary Degree Course Learning Outcome 5 (ORDCLO5)

Demonstrate and apply knowledge of a range of analytical techniques, evaluate and interpret analytical data (including appropriate statistical analysis).

Ordinary Degree Course Learning Outcome 6 (ORDCLO6)

Demonstrate the qualities and transferable skills necessary for professional development requiring: a) an awareness of a range of issues within chemistry that overlap with other related disciplines

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Honours Degree Course Learning Outcome 1 (DEGCLO1)

Demonstrate practical skills, work safely in the laboratory and be fully conversant with standard chemical techniques, instrumentation (and use of appropriate computer software) and any associated health and safety issues.

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, apply numerical skills to scientific data, and work in teams and independently.

Honours Degree Course Learning Outcome 3 (DEGCLO3)

Demonstrate a systematic understanding of physical chemistry and physicochemical principles and apply that knowledge to theoretical and practical problem solving.

Honours Degree Course Learning Outcome 4 (DEGCLO4)

Demonstrate and apply knowledge of a range of inorganic and organic chemical materials (including structure, bonding, properties, synthesis, isolation, purification and characterisation techniques).

Honours Degree Course Learning Outcome 5 (DEGCLO5)

Demonstrate and apply knowledge of a range of analytical techniques, evaluate and interpret analytical data (including appropriate statistical analysis).

Honours Degree Course Learning Outcome 6 (DEGCLO6)

Demonstrate the qualities and transferable skills necessary for professional development requiring: a) an awareness of a range of issues within chemistry that overlap with other related disciplines b) the exercise of initiative and personal responsibility and decision-making in complex and unfamiliar contexts

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Integrated Masters Course Learning Outcome 1 (IMACLO1)

Evidence an extension of your knowledge base to a systematic understanding and critical awareness of current research in selected aspects of chemistry at Master's level.

Integrated Masters Course Learning Outcome 2 (IMACLO2)

Carry out experimental work independently, with evidence of originality and autonomous decision making, and perform appropriate risk assessments at Master's level.

Integrated Masters Course Learning Outcome 3 (IMACLO3)

Deal with problems of an unfamiliar nature (and solve where possible) by application of appropriate knowledge and methodology, including experimental/project work.

Integrated Masters Course Learning Outcome 4 (IMACLO4)

Evidence that a range of professional skills has been developed, for example by use of a skills recording tool, for continuing professional development.

Overview of Assessment:

Module	Title	Course Learning Outcomes
4CH001	Concepts in Inorganic Chemistry	CHECLO1, CHECLO2, DEGCLO1, DEGCLO2, DEGCLO4
4CH002	Principles of Physical Chemistry	CHECLO1, CHECLO2, DEGCLO1, DEGCLO2, DEGCLO3
4CH003	Fundamentals of Organic Chemistry	CHECLO1, CHECLO2, DEGCLO1, DEGCLO2, DEGCLO5
4CH004	Introduction to Analytical Chemistry	CHECLO1, CHECLO2, DEGCLO1, DEGCLO2, DEGCLO5
4CH006	Skills for Chemistry	CHECLO2, CHECLO4
4CH007	Work-based learning and development 1	CHECLO3
4CH008	Skills for Chemistry (Year long)	CHECLO2, CHECLO3, CHECLO4, DEGCLO1, DEGCLO2, DEGCLO6
4MA007	Engineering Mathematics	CHECLO4, DEGCLO3
5CH001	Chemical Analysis	DEGCLO1, DEGCLO2, DEGCLO5, DHECLO1, DHECLO5
5CH002	Organic Chemistry (Structure and Mechanism)	DEGCLO1, DEGCLO2, DEGCLO4, DEGCLO5, DHECLO1, DHECLO4
5CH003	Physical Chemistry	DEGCLO1, DEGCLO2, DEGCLO3, DEGCLO5, DEGCLO6, DHECLO1, DHECLO3
5CH004	Inorganic Chemistry	DEGCLO1, DEGCLO2, DEGCLO4, DHECLO1, DHECLO4
5CH007	Work-based Learning and Development 2	DHECLO5
5CH008	Integrated Chemistry 2 (Organic and Analytical)	DEGCLO1, DEGCLO2, DEGCLO4, DEGCLO5, DEGCLO6, DHECLO1, DHECLO2, DHECLO3, DHECLO6
5CH009	Integrated Chemistry 1	DHECLO2, DHECLO3, DHECLO6
6CH001	Advanced Organic and Inorganic Chemistry	DEGCLO1, DEGCLO2, DEGCLO4, DEGCLO5, ORDCLO1, ORDCLO2, ORDCLO4, ORDCLO5
6CH002	Advanced Chemical Analysis	DEGCLO2, DEGCLO5, ORDCLO2, ORDCLO5
6CH003	Quality Assurance and Laboratory Management	DEGCLO2, DEGCLO5, DEGCLO6, ORDCLO2, ORDCLO5, ORDCLO6
6CH004	Advanced Physical and Materials Chemistry	DEGCLO3, DEGCLO6, ORDCLO3, ORDCLO6
6CH007	Chemistry Research Project	DEGCLO1, DEGCLO2, DEGCLO5, DEGCLO6, ORDCLO1, ORDCLO2, ORDCLO5, ORDCLO6
7CH001	MCHEM research project	IMACLO1, IMACLO2, IMACLO3, IMACLO4
7CH003	Advanced Topics in Physical Chemistry	IMACLO1, IMACLO2, IMACLO3
7CH005	Advanced Topics in Organic Chemistry	IMACLO1, IMACLO2, IMACLO3
7CH006	Advanced Analytical Chemistry	IMACLO1, IMACLO2, IMACLO3, IMACLO4
7CH007	Advanced Topics in Inorganic Chemistry	IMACLO1, IMACLO2, IMACLO3

Teaching, Learning and Assessment:

The University's Learning, Teaching and Assessment Sub-Strategy 2012-2017 was consulted. We aim to develop students who are critically reflective, entrepreneurial, employable, digitally literate, well networked and socially responsible.

It is important that students should be aware of several key industrial, environmental and other applied and research aspects of chemistry. Throughout the course, students will consider the role that chemistry plays in

the broader context of chemistry-related disciplines, and the impact of chemistry upon many walks of life. This will be achieved through several integrated and specialist topic modules, for example, pharmaceutical and forensic chemistry, environmental chemistry, aspects of industrial chemistry etc.

Throughout the course students will use a range of standard and specialist software to prepare and present reports, assignments, presentations, etc across a wide range of modules, with increasing sophistication. Students will be expected to make use of the Universities virtual on-line learning framework for accessing module information, submitting assignments, formative self-testing, engaging in module fora, etc. Students will be expected to make use of email for module and other University communications. One aspect of the course will encompass the use of chemistry based software such as Knowitall, molecular modelling packages and use of packages such as Excel or Graphpad Prism to manipulate data.

By the end of the course, students should be comfortable with, and be competent in, the digital world and have the flexibility to adapt to a wide range of digital activities.

The course develops students' knowledge base and skills in Chemistry using the subject specific module content of all modules. In addition, the development of transferable skills improves and enhances employability beyond the field of chemistry, and indeed science in general. There are many instances of trained chemists switching to careers in chemistry-related disciplines, teaching or further research.

The emphasis on the students moving to a student centred learning approach simultaneously fosters the development of transferrable skills, together with group learning and problem solving approaches. Students are encouraged to reflect upon their learning experience and to extrapolate from this the skills that would make them stand out in their respective career pathways. As part of the level 6 project planning and advanced practical module, students need to consider CV's, job applications, and how best to present themselves, by making a formal written application for the level 6 project. Students will also be directed to the relevant careers support services in the University. In addition, the RSC offers extensive careers support.

There will be a range of learning activities, as indeed there will be a range of assessment patterns. The typical learning activities that will be employed can be listed as follows:

- Traditional face to face lectures with some e-lecture/podcasts.
- Traditional tutorial activity with some e-tutorial work.
- Hands on "in the laboratory" practical activity (working singly, in pairs and in groups where appropriate), with some e-preparation for laboratory skills.
- Workshop/seminars (working in groups and including problem solving, problem-based learning).

Typically, students will be presented with theoretical information in lecture sessions and then will use workshops, group tutorials, seminars, on-line fora, electronic tutorials, directed reading and a range of IT-based activities and formative assessments to develop these concepts.

Practical skills will be developed throughout the course. The level 4 practical work will be directed towards developing basic laboratory skills, which are subsequently built upon at levels 5, 6 and 7. Thus, as the student develops, there is a gradual shift from students carrying out simple practical work, where the practical schedules are provided to them, towards more extensive (multiple week) problem solving practical exercises, and typically culminating in a significant (60 credit) research project at level 7. At level 6, students will be expected to apply many of the practical skills that they have learned throughout the course to a relatively small 20 credit research project in their area of interest.

The learning activities shall be focused on moving from a more tutor-centred approach in the earlier parts of the course towards a student-centred learning approach in the latter stages.

Thus, level 4 modules tend to involve tutor-led sessions, with defined student directed activities, whereas level 6 modules are more student-centred, with tutors acting to facilitate students' learning. Some of the latter theory modules will involve key note lectures only, with students being required to undergo significant independent research and learning to work up selected advanced topics, of direct relevance to industry and/or our research programmes. At level 7 there will be less tutor led activity with an emphasis on the student-centred learning process. For example, there may be a series of key note lectures supplemented by suitable tutorials and workshops but the students will be required to take the initiative to develop and apply their knowledge and critical thinking skills. An ability to "problem solve" will be an important part of the teaching and learning process. In addition, an extensive 60 credit level 7 project will enable students to carry out

experimental work independently, with some evidence of originality, and perform appropriate risk assessments at Master's level.

Assessment

A wide range of assessments shall be used. These include:

- Phase tests/ end Examinations (seen and unseen, MCQ's, extended question and essay type exams)
- Practical reports and/or portfolios
- Case studies and problem solving exercises
- Presentations (oral and visual)
- Written assignments
- Personal Development Portfolios
- Structured assessment of research projects (from planning through to thesis submission)
- Appropriate use of formative, self, tutor and peer assessment methods

Level 4 assessment

There are a range of summative assessment tasks employed in level 4 modules which include Multiple Choice Question tests (MCQs), short essays, portfolio production, mini-poster production, short answer tests, group poster presentations, short oral presentations and portfolios of laboratory practical reports.

The general strategy at level 4 is for more frequent, low volume assessment with less emphasis, or lower weighting, on terminal assessment. The driver in this strategy at Level 4 is to provide good quality and timely feedback to students, to encourage full attendance and participation, and to support the development and acquisition of good study and key, particularly practical, skills.

All modules contain elements of formative assessment (for example practice MCQ tests) and some contain production of practice posters, practice essay writing and practice laboratory report writing. These formative tasks are undertaken early in the module allowing constructive feedback to be given to students prior to the summative assessments. Module tutors will be able to identify those students who may require additional support early in the module.

Module staff will utilise the VLE to embed formative self-assessment exercises so that students can check their progress and their knowledge and understanding of the taught elements of the modules. If deficiencies in the knowledge base are identifed then students will be able to request remedial support from the module team.

Further support is available from the departmental team of Demonstrators who provide drop-in sessions for students who require additional study skill support to achieve the best assessment outcome.

Level 5 assessment

There are a range of summative tasks employed in the assessment of Level 2 theory modules which include MCQ/phase tests, short answer tests, extended writing exercises (specialist topics), and unseen examinations consisting of MCQs, structured questions or short essay questions.

At level 5 students should be less "dependent" learners and should show evidence in their assessed work of some integration of knowledge, beginning to critically evaluate key facts, to problem solve and to use a wider range of information sources other than directed reading. The assessment tasks at this level are designed not just to test basic recall of knowledge but to test a student's ability to synthesise their knowledge in a contextual manner. Students will become aware of the criteria for the summative assessment and will be able to check their performance. Students will be given constructive feedback and encouraged to read around the subject further. There will be a range of formative and self-assessment tasks available (for example, formative practical reports and practice MCQ tests on the VLE). Students who perform less well will be able to ask for further help from the module team.

In Level 5 practical modules assessment will be concerned with an individual student's ability to perform

selected practical skills competently in time restricted, laboratory conditions. Students will be required to demonstrate competent completion of laboratory reports in the standard scientific format (abstract, introduction, methods and materials, results, discussion, conclusions and references), plus other formats as appropriate (e.g. results of analysis and conclusions). Students will be asked to pay attention to the safety aspects of the practical. Short answer and test assessment of laboratory exercises will test student knowledge of the underlying principles and theory of the experimental techniques.

Level 6 assessment

There are a range of tasks utilised to assess level 6 modules. In general, the strategy at Level 6 is for less frequent, high volume tasks, assessing Level 6 students as independent learners. This tests their ability to problem solve, apply numerical skills at an appropriate level, present information in writing to publication standards and to present information orally and by poster at a research seminar/conference level. In all cases, students will be expected to show evidence of integration of their knowledge base and contextual awareness.

The tasks include; critical reviews of primary literature sources; short presentations and keynote research seminar presentations; data interpretation exercises; extended essay writing; unseen examinations; seen question examinations; open book examinations.

The level 6 advanced practical and project preparation module will assess the students' ability to devise practical solutions to problems, their critical thinking skills and their ability to team work. The individual Honours project report will assess level 6 intellectual skills such as scientific skills, practical skills and contextual awareness. Students will be assigned to an individual project supervisor who will work with the student and provide formative guidance and feedback throughout the module as required.

Level 7 assessment

Similar to level 6 in that there will be a range of tasks utilised to assess level 7 modules with a focus on testing students as independent learners and problem solvers. Tasks such as examinations focussing on testing the students' depth of knowledge, rather than breadth of knowledge, portfolios including critical reviews of primary literature and a project report (that may be in the form of a dissertation or a research paper) will be used. Oral presentations, including a poster presentation in the form of a research conference will be used.

Assessment Methods:

At the University of Wolverhampton, a variety of modes of assessment will be used to support and test your learning and progress and to help you develop capabilities that are valued beyond your University studies and into your working life. Your course may include a variety of assessment activities:

Written examinations (including online examinations, open and closed book examinations and quizzes)
Coursework (for example, essays, reports, portfolios, project proposals and briefs, CVs, poster presentation)
Practical (for example, oral and video presentations, laboratory work, performances, practical skills assessment)

In the final year of your undergraduate degree, and at the end of your postgraduate degree, you are likely to be expected to write an extended piece of work or research, such as a dissertation or a practice-based piece of research.

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.

Employability in the Curriculum:

Transferable (professional) skills will be key to the large chemistry element of each programme. The following have been identified as important for our chemistry related programme, the following have been identified as important for accreditation of our Chemistry programmes. Student facing module guides will indicate how each module maps to one or more of the professional/transferable skills.

The following skills will be developed during levels 4-6:

1. communication skills, covering both written and oral communication
2. problem-solving skills, relating to qualitative and quantitative information
3. numeracy and mathematical skills, including such aspects as error analysis order-of-magnitude estimations, correct use of units and modes of data presentation
4. information retrieval skills, in relation to primary and secondary information sources, including information retrieval through online computer searches
5. IT skills
6. interpersonal skills, relating to the ability to interact with other people and to engage in teamworking
7. time management and organisational skills, as evidenced by the ability to plan and implement efficient and effective modes of working
8. skills needed to undertake appropriate further training of a professional nature.

In addition, the following transferable (professional skills) will be extended to level 7.

1. problem-solving skills including the demonstration of self-direction, initiative and originality
2. the ability to make decisions in complex and unpredictable situations
3. the ability to think critically in the context of data analysis and experimental design
4. independent learning skills required for continuing professional development.

The students will be versed in use of the RSC's Undergraduate Skills Recording (USR) tool to annually record and reflect on their skills development as the course proceeds.

The process of ePDP building commences in the first semester, with students being introduced to the RSC Undergraduate Skills recording (USR) platform. Students are encouraged to develop an ability to self-reflect on their weaknesses and strengths and plan how to develop those weaknesses. The USR platform is used as a training tool for continuing professional development.

Some modules will use a "self-monitoring progress chart" to encourage reflective thinking by the students, to identify and address perceived areas of weakness as they progress through their course. This is designed to encourage students to pro-actively engage in taking responsibility for their own learning process, and evidence their own learning.

The advantage of this is that students will start to develop their career and personal development strategies.

The electronic interface means that ePDPs can be made available to prospective employers if students are building evidence-based job applications. In addition, a chemistry graduate who wishes to work towards Chartered Chemistry status via a process of continuing professional development will be well versed with portfolio construction to facilitate this process.