

Module Specification

Module Title Module Code
Credit Value Level Mode of Delivery Semester A & B

Pre-requisite modules	Co-requisite modules	Overlapping modules

1) Content Description

Provide a description of the module, as it will appear in the Module Directory and on the Student Information System (approx. 70-80 words).

This module is designed for second-year students on the main chemistry degree programmes. The main purpose of this module is to reinforce and integrate existing chemical knowledge, to develop communication skills and information technology skills, and to provide experience of group work and problem solving. Students will also acquire experience in the use of scientific databases and the use of computational approaches in solving problems.

2) Module Aims

Specify the aims of the module, i.e. the broad educational purposes for offering this module.

This module aims to:

- Develop student's IT skills, communication skills and problem-solving skills
- Improve the students' awareness of sources of chemical information and their skills in extracting relevant chemical data
- Reinforce and integrate students' knowledge of fundamental chemical concepts

This module is not primarily designed to teach new chemical information, although some new material may be included.

3) Learning Outcomes

Identify the learning outcomes for this module, i.e. knowledge, skills and attributes to be developed through completion of this module. Outcomes should be referenced to the relevant [QAA benchmark statements](#) and the [Framework for Higher Education Qualifications in England, Wales and Northern Ireland \(2008\)](#). The [SEEC Credit Level Descriptors for Further and Higher Education 2003](#) and [Queen Mary Statement of Graduate Attributes](#) should also be used as a guiding framework for curriculum design.

Academic Content:	
A 1	Knowledge of fundamental chemical concepts, including key concepts which span the traditional sub-disciplines of organic, inorganic and physical chemistry

Disciplinary skills - able to:	
B1	Identify key chemical concepts that relate topics and experimental observations, and apply such concepts in an appropriate fashion to unfamiliar problems
B2	Search for information upon specific chemical topics, collate and synthesize data, and evaluate the reliability of different sources of information

B3	Use information technology to model and assist in the investigation of problems of a chemical nature, and to interpret and rationalize the results of such investigations
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Attributes:	
C1	Connect information and ideas within the field of chemistry
C2	Use of technologies to access and interpret information effectively
C3	Apply analytical skills to investigate unfamiliar problems (individually, or in collaboration with others)
C4	Communicate scientific observations clearly and concisely

4) Reading List

Provide an indicative reading list for the module. This should include key texts and/or journals but **should not** be an exhaustive list of materials.

Information Competencies for Chemistry Undergraduates
 (http://en.wikibooks.org/wiki/Information_Competencies_for_Chemistry_Undergraduates)
 How to Use Excel® in Analytical Chemistry: and in General Scientific Data Analysis R. de Levie (Cambridge, 2001)

Molecular Modelling - Principles and Applications (2nd edition), Andrew R. Leach (2001)

Statistics and Chemometrics for Analytical Chemistry (6th edition) by James N Miller and Jane C Miller (2010)

5) Teaching and Learning Profile

Provide details of the method of delivery (lectures, seminars, fieldwork, practical classes, etc.) used to enable the achievement of learning outcomes and an indicative number of hours for each activity to give an overall picture of the workload a student taking the module would be expected to undertake. This information will form the Key Information Set for each undergraduate programme and will be used to populate the KIS widget found on the QMUL programme information pages. More information can be found [online](#) about KIS. You may also wish to refer to the [QAA guidance on contact hours](#) when completing this section.

Activity Type	KIS Category	Time Spent (in hours)
Lecture	Scheduled	16
Tutorial	Scheduled	0
Practical Classes and Workshops	Scheduled	14
Guided Independent Study	Independent	120
Total		150

Specify the total module notional study hours. This should be a total of the hours given for each activity. The notional study hours for each academic credit point is 10. A 15 credit point module therefore represents 150 notional study hours.

Activity Type	Total Time Spent (in hours)	Percentage of Time Spent
Scheduled learning and teaching	30	20
Placement	0	0
Independent Study	120	80
Total	150	100

Use the information provided in the box above to specify the total time spent and the percentage time spent in each category of teaching and learning activity.

6) Assessment Profile

Provide details of the assessment methods used to assess the achievement of learning outcomes.

Description of	Assessment Type	KIS Category	Duration/Length	Percentage Weighting	Final element of	Qualifying Mark
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Assessment					assessment	
Coursework	Written Assignment, inc Essay	Written		80%	No	
Oral	Oral Assessment & Presentation	Practical		20%	Yes	40

Final element of assessment: The assessment that takes place last. **There should normally be only one element of assessment marked as final unless two assessment or submission dates occur on the same day.**

Qualifying mark: A specified minimum mark that must be obtained in one or more elements of assessment in order to pass a module. **This is in addition to, and distinct from, the requirement to achieve a pass in the module mark to pass the module.**

Reassessment

Provide details of the reassessment methods used, specifying whether reassessment is either standard reassessment or synoptic reassessment.

- Standard Reassessment
 Synoptic Reassessment

Synoptic reassessment details (if you have indicated synoptic reassessment above, please give details)		
Brief Description of Assessment	Assessment Type	Duration/Length of Examination/ Coursework
Resit Examination	Written Exam	2 Hours