

Module Specification

Module Title Module Code

Credit Value Level Mode of Delivery

Pre-requisite modules	Co-requisite modules	Overlapping modules
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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 appropriate to first-year students undertaking degree programmes in the chemical sciences. It provides training in the principles and practice of key techniques of practical chemistry – including analytical methods, synthetic procedures, methods of purification and the use of a range of instrumental techniques. Topics such as good laboratory practice, health and safety in the laboratory, the preparation of laboratory reports and data analysis techniques are also covered.

2) Module Aims

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

The module aims to provide students with a broad training in the basic techniques of practical chemistry, commensurate with the requirements for the successful pursuit of a chemistry degree. Emphasis is placed on expanding and improving existing skills by providing training in the full range of fundamental laboratory skills, instilling a culture of safe working practice, and developing an understanding of the underlying principles of the various practical techniques.

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	Understanding of the principles relating to a range of laboratory procedures for the preparation, isolation and purification of different types of chemical compounds.
A 2	Understanding of the principles relating to a range of analytical techniques, including instrumental techniques and various forms of spectroscopy.
A 3	Knowledge of techniques for the handling and analysis of quantitative data obtained from experimental measurements.

Disciplinary skills - able to:

B1	Conduct chemical reactions/simple synthetic procedures, by following detailed written instructions.
B2	Conduct investigations of physic-chemical properties such as the kinetics and thermodynamics of reactions.
B3	Conduct analyses of chemical compounds and mixtures to determine their structure, composition and concentrations.

Attributes:	
C1	Gain knowledge and understanding of the principles and practices of practical chemistry.
C2	Produce analyses which are grounded in experimental evidence.
C3	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.

Practical Skills in Chemistry, by J.R. Dean et al. (Prentice-Hall, 2nd edn, available also as e-book)
 Experimental Organic Chemistry, by L.M. Harwood et al. (Blackwell Sci, 2nd edn)
 Foundation Chemistry Labskills (<http://qm-web.chem.qmul.ac.uk/labskills/>)

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)
Pre – Laboratory Training	Scheduled	30
In-Laboratory Training	Scheduled	10
Directed Practical Laboratory	Scheduled	80
Total		120

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	120	80
Placement	0	0
Independent Study	30	20
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	Assessment Type	KIS Category	Duration/Length	Percentage Weighting	Final element of assessment	Qualifying Mark
Practical	Written assignment, inc Essay	Practical		90%	Yes	
COSHH Risk Assessments/Laboratory Record Keeping	Portfolio	Coursework		10%	No	75%

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.

- Synoptic Reassessment
 Standard 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