

CH155-30 Practical and Professional Chemistry Skills I

21/22

Department

Chemistry

Level

Undergraduate Level 1

Module leader

Dani Pearson

Credit value

30

Module duration

20 weeks

Assessment

100% coursework

Study location

University of Warwick main campus, Coventry

Description

Introductory description

This module complements the set of theory modules, CH160, CH161 and CH162, enabling students to solve problems practically in the main branches of chemistry. The laboratory component is intended to develop students' practical skills and their facility for processing their own data, both with the aim of achieving a professional standard.

[Module web page](#)

Module aims

This module complements the set of theory modules, CH160, CH161 and CH162, enabling students to solve problems practically in the main branches of chemistry. The laboratory component is intended to develop students' practical skills and their facility for processing their own data, both with the aim of achieving a professional standard.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be

covered. Actual sessions held may differ.

Practice of Computers in Chemistry

Practice of Inorganic Chemistry

Practice of Organic Chemistry

Practice of Physical Chemistry

Professional Skills

Learning outcomes

By the end of the module, students should be able to:

- Have a good understanding of basic practical techniques relating to inorganic, organic and physical chemistry.
- Be able to use a range of chemical software, including basic molecular modelling codes, plus access relevant databases to support their practical chemistry.
- Have an understanding of basic research methodology and be able to solve a problem using practical methods.
- Understand how the theory of chemistry is developed from its practice.
- Develop intermediate, effective communication skills in scientific writing, oral presentations and 1:1 oral discussions

Research element

research-based investigative experiments.

Interdisciplinary

Crosses into multiple other disciplines e.g. biology, physics, maths, computer science, engineering.

Subject specific skills

Practical chemistry

Theoretical chemistry

Problem solving

Written communication

Information literacy and research skills

Transferable skills

Problem solving

Written communication

Oral communication

Reasoning

Information literacy and research skills

Study

Study time

Type	Required
Lectures	6 sessions of 1 hour (2%)
Practical classes	22 sessions of 6 hours (44%)
Other activity	9 hours (3%)
Private study	153 hours (51%)
Total	300 hours

Private study description

On-line self-study and pre-lab tests associated with each experiment.

Other activity description

6 hours Orientation
2hrs academic writing workshops
Assessed results discussion sessions 2 x 20 minutes.

Costs

No further costs have been identified for this module.

Assessment

You do not need to pass all assessment components to pass the module.

Assessment group A2

Assessment component	Weighting	Study time	Eligible for self-certification
Laboratory and Assessed Work	100%		Yes (extension)
Reassessment component is the same			

Feedback on assessment

Written feedback provided for each laboratory report submitted.\r\n\r\nVerbal and/or written feedback for results-discussions and in-lab assessed practical work.\r\n\r\n

Availability

Post-requisite modules

If you pass this module, you can take:

- CH222-15 Practical and Professional Chemistry Skills II

Courses

This module is Core for:

- UCHA-4 Undergraduate Chemistry (with Intercalated Year) Variants
 - Year 1 of F101 Chemistry (with Intercalated Year)
 - Year 1 of F122 Chemistry with Medicinal Chemistry (with Intercalated Year)
- UCHA-3 Undergraduate Chemistry 3 Year Variants
 - Year 1 of F100 Chemistry
 - Year 1 of F121 Chemistry with Medicinal Chemistry
- UCHA-F110 Undergraduate Master of Chemistry (with Industrial Placement)
 - Year 1 of F100 Chemistry
 - Year 1 of F110 MChem Chemistry (with Industrial Placement)
 - Year 1 of F112 MChem Chemistry with Medicinal Chemistry with Industrial Placement
- Year 1 of UCHA-F107 Undergraduate Master of Chemistry (with Intercalated Year)
- UCHA-F109 Undergraduate Master of Chemistry (with International Placement)
 - Year 1 of F109 MChem Chemistry (with International Placement)
 - Year 1 of F111 MChem Chemistry with Medicinal Chemistry (with International Placement)
- UCHA-4M Undergraduate Master of Chemistry Variants
 - Year 1 of F100 Chemistry
 - Year 1 of F105 Chemistry
 - Year 1 of F110 MChem Chemistry (with Industrial Placement)
 - Year 1 of F109 MChem Chemistry (with International Placement)
 - Year 1 of F125 MChem Chemistry with Medicinal Chemistry
- Year 1 of UCHA-F127 Undergraduate Master of Chemistry with Medicinal Chemistry (with Intercalated Year)