

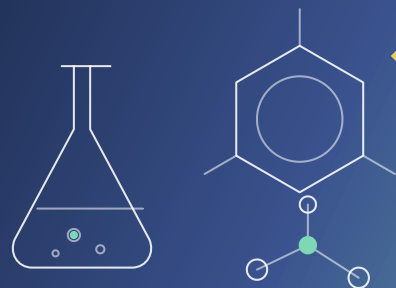
Module code

SPC-2201

Type of module

Undergraduate: Chemistry – Major Core

Essential Laboratory Skill II



Modular credits

4

Total student
engagement

56 hours

Prerequisite

None

Anti-requisite

None

Aims

To develop essential practical skills in organic, inorganic, physical, and analytical chemistry. Students apply theory in the lab, practice safe and ethical conduct, analyse data, interpret results, and communicate findings effectively.

Module learning outcomes (MLO)

On successful completion of this module, a student will be expected to be able to:

MLO 1

Analyse and perform standard laboratory experiments in organic, inorganic, physical and analytical chemistry, following appropriate experimental protocols and demonstrating safe laboratory practices.

MLO 2

Analyse experimental data using appropriate chemical principles and interpret results to draw valid scientific conclusions.

MLO 3

Communicate experimental methods, results, and interpretations effectively through structured laboratory reports.

MLO 4

Demonstrate the ability to work independently and collaborate effectively.

Module contents

Preparation, purification, and characterisation of chemical compounds	Qualitative and quantitative chemical analysis	Thermochemical investigations and calorimetric measurements
Volumetric and titrimetric analysis	Spectroscopic techniques and applications	Chromatographic separation and analysis
Electrochemical measurement techniques	Atomic and elemental analysis methods	Experimental data analysis and scientific reporting
Specific experiments may vary to align with learning outcomes, current laboratory facilities and curriculum requirements		

Assessment

0%

Examination

100%

Coursework



■ Online quiz – 20%

■ Laboratory reports – 80%

Formative assessment

Weekly discussion and feedback

Summative assessment

COMPONENT	WEIGHTING
Examination	0%
Coursework	100%
Individual	100%
Online quiz	20%
Laboratory reports	80%

Graduate attributes and skills

Programme learning objectives (PLO) addressed

1	PLO 1 (Fundamental Knowledge in Chemistry)	2	PLO 2 (Experimental Competence and Technical Skills)
3	PLO 3 (Critical Thinking and Problem-Solving Skills)	4	PLO 4 (Communication and Collaborative Skills)
5	PLO 5 (Project Management Skills and Ethics)	6	PLO 6 (Digital Literacy and Lifelong Learning Skills)

Sustainability concept addressed

4	SDG 4 Quality Education
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Digital skills/software used (not limited to)

- Word processing software (e.g. Microsoft Word)
- Data processing software (e.g. Microsoft Excel)
- Organisational tools (e.g. Outlook calendar)
- Chemical drawing software (e.g. ChemSketch or ChemDraw)
- Learning management system (e.g. Canvas)

Micro-credentialling option

No

Stackable towards GenBESTARI Undergraduate Degree Programme or other relevant Lifelong Learning Programmes

No

Document details

Office **ODVCE** Document date **27 June 2026** Status **New** Approval **GBF (12/02/2026)**