

Module code

SPC-3201

Type of module

Undergraduate: Chemistry – Major Core

Research Project



Modular credits

8

Total student
engagement

112 hours

Prerequisite

**SPC-2201 Essential
Laboratory Skills II**

Anti-requisite

None

Aims

To develop students' ability to conduct independent research through literature review, experimentation, analysis, and communication, enhancing critical thinking, problem-solving and analytical skills for presenting findings and producing structured report.

Module learning outcomes (MLO)

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

MLO 1

Critically analyse and integrate key concepts, literature, methodologies, and underlying theories relevant to the chosen research project.

MLO 2

Apply appropriate experimental techniques and analyse data to evaluate methodologies, identify trends, and justify the chosen research approach.

MLO 3

Evaluate research findings, generate experimental and theoretical data and critique study limitations to propose future research directions.

MLO 4

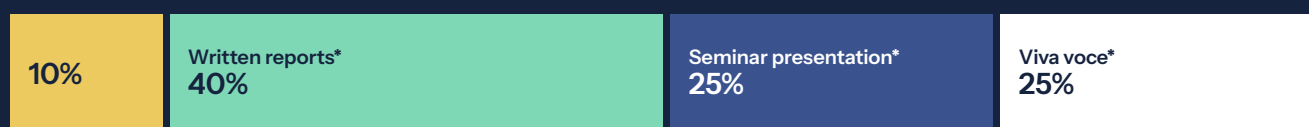
Design optimised methodologies, construct coherent research reports and presentations, and defend research outcomes through structured written and oral presentations.

Module contents

Individual research project selected by students in consultation with supervisors	Introduction to scientific research	Literature review and background of the research
Experimental and theoretical research	Oral presentation and viva examination	Submission of a final written report

Assessment

0% Examination
100% Coursework



■ Supervisor Assessment — 10% ■ Written reports* — 40% ■ Seminar presentation* — 25% ■ Viva voce* — 25%

Formative assessment

Weekly discussion and feedback

Summative assessment

COMPONENT	WEIGHTING
Examination	0%
Coursework	100%
Individual	100%
Supervisor Assessment	10%
Written reports*	40%
Seminar presentation*	25%
Viva voce*	25%

*Assessed by at least two examiners other than the supervisors

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

9 SDG 9 Industry, Innovation and Infrastructure

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)
- Presentation software (e.g. PowerPoint)
- Referencing tools (e.g. Mendeley)
- Infographic and Design Tools (e.g. Canva, Piktochart)

Micro-credentialling option

No

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

No

Document details

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