

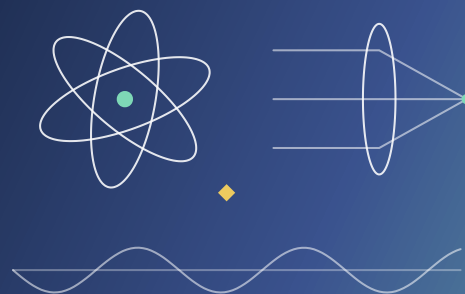
Module code

SPP-2205

Type of module

Undergraduate: Applied Physics – Major Core

Experiments in Physics 2



Modular credits

4

Total student
engagement

56 hours

Prerequisite

**SPP-1201 Experiments
in Physics 1**

Anti-requisite

None

Aims

To develop advanced skills in designing, conducting, analysing, and communicating physics experiments, with emphasis on evidence-based reasoning and professional scientific communication.

Module learning outcomes (MLO)

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

MLO 1

Design and execute physics experiments using appropriate methodologies to collect high-quality, reliable data.

MLO 2

Analyse experimental data using statistical and graphical methods to draw evidence-based conclusions and quantify uncertainties.

MLO 3

Critically evaluate experimental processes and results to identify limitations and suggest improvements.

MLO 4

Synthesise and communicate scientific findings effectively in multiple formats, including written reports and oral presentations.

MLO 5

Defend experimental approaches and conclusions in a critical, peer-review-style setting.

Module contents

Principles of experimental design, data analysis, and uncertainty

Hands-on experiments in wave mechanics, quantum phenomena, and oscillations

Techniques for evidence-based reasoning and scientific conclusion-making

Scientific communication via formal reports, journal articles, and oral defence

Collaborative group work and an independent investigative project

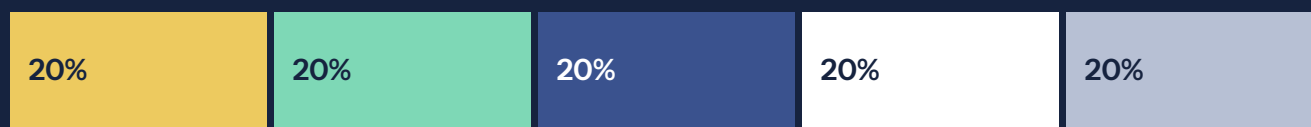
Assessment

0%

Examination

100%

Coursework



■ Lab reports – 20%

■ Continuous Laboratory Assessment – 20%

■ Class tests – 20%

■ Group presentation and viva – 20%

■ Group lab reports – 20%

Formative assessment

Weekly discussion and feedback, exercises and quizzes

Summative assessment

COMPONENT	WEIGHTING
Examination	0%
Coursework	100%
Individual	60%
Lab reports	20%
Continuous Laboratory Assessment	20%
Class tests	20%
Group	40%
Group presentation and viva	20%
Group lab reports	20%

Graduate attributes and skills

Programme learning objectives (PLO) addressed

1	PLO 1 (Core Disciplinary Knowledge)	2	PLO 2 (Critical Thinking and Comparative Analysis)
3	PLO 3 (Experimental and Instrumentation Skills)	4	PLO 4 (Numerical and Analytical Competence)
6	PLO 6 (Communication and Professionalism)		

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)
- Presentation software (e.g. Microsoft PowerPoint)
- Data analysis and processing software (e.g. Microsoft Excel)
- Literature review tools (e.g. Google Scholar)

Micro-credentialling option

No

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

No

Document details

Office **ODVCE** Document date **23 June 2026** Status **New** Approval **GBF (12/02/2026)**