

PHY4216: PROJECT

Effective Term

Semester A 2022/23

Part I Course Overview

Course Title

Project

Subject Code

PHY - Physics

Course Number

4216

Academic Unit

Physics (PHY)

College/School

College of Science (SI)

Course Duration

One Semester

Credit Units

3

Level

B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

60% of credits completed (Students admitted via Advanced Standing II can seek for special approval from Final Year Project Committee, if appropriate.)

Precursors

Nil

Equivalent Courses

AP4216 Project

Exclusive Courses

- (1) AP4217/PHY4217 Dissertation
- (2) CSCI4001 Co-operative Education Scheme for Science Students or FS4001 Co-operative Education Scheme (CES)
- (3) CSCI4003 Co-operative Education Placement Project for Science Students or FS4003 CSE Placement Project

Part II Course Details

Abstract

To present the student with an opportunity to extend his/her knowledge on a specific topic of practical interest in a way that encourages integration of the knowledge gained through the BScAP program. To build self-confidence, demonstrate independence, and develop a professional approach to real-world problem-solving.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if DEC-A1 DEC-A2 DEC-A3 app.)		
1	Integrate knowledge gained through previous courses to design a component or a system, or to conduct an investigation related to physics or engineering			x
2	Design and conduct a critical review of a specific subject with the depth and breadth adequate to demonstrate abilities for: (i) organization and planning skills; (ii) synthesis and integration of knowledge from multiple sources; (iii) communicate project details professionally.			x
3	Demonstrate independence and ability to identify a scientific problem and present a convincing potential approach to address it.			x
4	Demonstrate initiative, innovative abilities, and critical thinking			x

A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Teaching and Learning Activities (TLAs)

	TLAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Meeting with supervisor	Provide guidance and orientation	1, 2, 3, 4	9 hours/13 weeks
2	Independent studies	Practice the ability to engage in long term self-directed learning, demonstrate and communicate the results of critical thinking, and team work.	1, 2, 3, 4	106 hours/13 weeks

Assessment Tasks / Activities (ATs)

ATs		CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Progress report	1, 2, 3, 4	0	
2	Project report	1, 2, 3, 4	65	
3	Oral examination	1, 2, 3, 4	20	
4	Oral presentation	1, 2, 3, 4	15	

Continuous Assessment (%)

100

Examination (%)

0

Additional Information for ATs

A Project Committee, which consists of no less than three members of academic staff members including the project coordinator, will take full responsibility for course assessment.

The oral presentation is assessed by a team of assessors, appointed by the Project Committee, according to style, structure and clarity, and response to questions. The assessment procedures are arranged to incorporate a uniformity of treatment across the student cohort.

Each project report is assessed by two assessors appointed by the Project Committee to each particular project. The report is assessed as to presentation (clarity, conciseness), technical knowledge and understanding, and accomplishment (technical competence, initiative creativity, effort). Guidelines on the form of project presentation and the assessment criteria and related weightings are given to the students at the start of the course.

The oral examination is used to validate the extent of the student's understanding of the project and the degree of self-guidance achieved.

Quality assurance of the assessment process is approached through each assessor being involved in assessing 5 or more projects, as first or second assessor, and through careful monitoring by the Project Committee. The Project Committee shall have the power to determine the final marks of all projects for submission to the Assessment Panel.

Assessment Rubrics (AR)**Assessment Task**

Project report

Criterion

Capacity for self-directed learning and ability to explain key findings, theories, and concepts related to the subject of study.

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Assessment Task

Oral examination

Criterion

Ability to sustain an informed discussion on the subject of the project report, demonstrate critical thinking skills to argue and defending own ideas and position.

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Assessment Task

Oral presentation

Criterion

Ability to communicate effectively and concisely the main findings, results, pending issues and/or open questions involved in the subject of the project report.

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Part III Other Information

Keyword Syllabus

Varies according to the topic selected for the project

Reading List

Compulsory Readings

Title	
1	Varies as per recommendation of project supervisor

Additional Readings

Title	
1	Varies as per recommendation of project supervisor