PHY8273: SPECIAL TOPICS IN PHYSICS

Effective Term
Semester A 2025/26

Part I Course Overview

Course Title
Special Topics in Physics

Subject Code
PHY - Physics
Course Number
8273

Academic Unit
Physics (PHY)

College/School
College of Science (SI)

Course Duration
One Semester

Credit Units
3

Level
R8 - Research Degree

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses
Nil

Part II Course Details

Abstract

This is an advanced course on a contemporary topic in Pure and/or Applied Physics. The topic will be announced in advance when this course is offered. It will provide a useful supplement to the advanced courses already specified in the programme and to motivate the students for discovery and innovation.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Be aware of the current development in selected areas in Physics.	20	x	x	x
2	Relate the covered progress to fundamental principles in Physics.	30	x	x	x
3	Apply some of the current development in new and useful applications.	30	x	x	x
4	Identify state-of-the-art developments in the relevant area and to form opinions on specific issues, and participate in discovery and innovation.	20	x	x	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.

Learning and Teaching Activities (LTAs)

	LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1		Lecture	1, 2, 3	26/semester
2		Tutorial	1, 2, 3, 4	13/semester

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	Written reports	1, 2, 3	80	-	Yes
2	Oral presentations	1, 2, 4	20	-	Yes

Continuous Assessment (%)

100

Examination (%)

0

Minimum Continuous Assessment Passing Requirement (%)

0

Minimum Examination Passing Requirement (%)

0

Assessment Rubrics (AR)

Assessment Task

Written reports (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

The student can thoroughly identify and explain how the principles are applied to science and technology for solving physics and engineering problems.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not reaching marginal level

Assessment Task

Oral presentations (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

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Assessment Task

Written reports (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

The student can thoroughly identify and explain how the principles are applied to science and technology for solving physics and engineering problems.

Excellent

(A+, A, A-) High

Good

(B+, B) Moderate

Marginal

(B-, C+, C) Basic

Failure

(F) Not reaching marginal level

Assessment Task

Oral presentations (for students admitted from Semester A 2022/23 to Summer Term 2024)

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Part III Other Information

Keyword Syllabus

To be specified once the topic is fixed.

Reading List

Compulsory Readings

	Title
1	Nil

Additional Readings

	Title
1	To be specified.