

**City University of Hong Kong  
Course Syllabus**

**offered by Department of Physics  
with effect from Semester A 2022/23**

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**Part I Course Overview**

**Course Title:** Directed Advanced Studies for Postgraduate Students

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**Course Code:** PHY8003

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**Course Duration:** One semester

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**Credit Units:** 3

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**Level:** R8

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**Medium of Instruction:** English

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**Medium of Assessment:** English

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**Prerequisites:**  
*(Course Code and Title)* Nil

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**Precursors:**  
*(Course Code and Title)* Nil

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**Equivalent Courses:**  
*(Course Code and Title)* Nil

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**Exclusive Courses:**  
*(Course Code and Title)* Nil

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## Part II Course Details

### 1. Abstract

The course is designed for the students enrolled in the research degree programmes to participate in collaborative projects directed by academic staff members in PHY in relevant areas recommended by the department. The course will on one hand encourage the students to broaden their vision in scientific researches via discovery-based learning and research, and on the other hand will give them solid experience in the specific areas which can help them pursue related careers after their PhD graduation.

### 2. Course Intended Learning Outcomes (CILOs)

No.	CILOs	Weighting* (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	A2	A3
1.	Broaden the knowledge and vision in a specific area by conducting collaborative research.			√	√
2.	Deepen the understanding of the research background by participating in collaborative research.			√	
3.	Identify the key issues for further developments and discoveries in the subject area.		√	√	
4.	Apply the achieved knowledge to formulate the research methodology for a research topic.			√	
5.	Participate in research group presentations and discussions.			√	√
		100%			

*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 self-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.*

### 3. Teaching and Learning Activities (TLAs)

TLA	Brief Description	CILO No.						Hours/week (if applicable)
		1	2	3	4	5		
1.	Lectures	✓	✓	✓	✓			2
2.	Independent Studies	✓	✓	✓	✓			32
3.	Presentations and Group Discussions					✓		5

### 4. Assessment Tasks/Activities (ATs)

Assessment Tasks/Activities	CILO No.						Weighting*	Remarks
	1	2	3	4	5			
Continuous Assessment: 100%								
Written reports	✓	✓	✓	✓			80%	
Presentation					✓		20%	
Examination: 0% (duration , if applicable)								
							100%	

The student will be required to submit a written report half-way through and at the end of the semester on the above listed activities. The student will also give an oral presentation at the end of the semester, and at least one presentation no later than half-way through the semester. The supervisor or the collaborator will be requested to confirm the presentations and discussions of the student in his/her group meeting by signing on a prepared Form sheet. The student will be required to submit his/her presentation file each time to the course leader for assessment.

## 5. Assessment Rubrics

Applicable to students admitted in Semester A 2022/23 and thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
1. Written reports	Understand and explain the scientific principles and the working mechanisms behind the project. Envision and explain how the project advances science and technology. Demonstrate the novelty, significance, and scientific rigor of the project.	High	Moderate	Basic	Not reaching marginal level
2. Presentation	Understand and explain the scientific principles and the working mechanisms behind the project. Envision and explain how the project advances science and technology. Demonstrate the novelty, significance, and scientific rigor of the project.	High	Moderate	Basic	Not reaching marginal level

Applicable to students admitted before Semester A 2022/23

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Written reports	Understand and explain the scientific principles and the working mechanisms behind the project. Envision and explain how the project advances science and technology. Demonstrate the	High	Significant	Moderate	Basic	Not reaching marginal level

	novelty, significance, and scientific rigor of the project.					
2. Presentation	Understand and explain the scientific principles and the working mechanisms behind the project. Envision and explain how the project advances science and technology. Demonstrate the novelty, significance, and scientific rigor of the project.	High	Significant	Moderate	Basic	Not reaching marginal level

## Part III Other Information

### 1. Keyword Syllabus

- Participating in collaborative research
- Forming ideas for discovery-based research
- Formulating research methodology
- Participating in research group presentations and discussions

### 2. Reading List

#### 2.1 Compulsory Readings

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3.	
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#### 2.2 Additional Readings

1.	
2.	
3.	
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