City University of Hong Kong
Course Syllabus

offered by Department of Physics
with effect from Semester A 2018/19

Part I Course Overview

Course Title:	**Foundation Physics**
Course Code:	**PHY1200**
Course Duration:	**One semester**
Credit Units:	**0**
Level:	**B1**
Proposed Area: *(for GE courses only)*	☐ Arts and Humanities ☐ Study of Societies, Social and Business Organisations ☐ Science and Technology
Medium of Instruction:	**English**
Medium of Assessment:	**English**
Prerequisites: *(Course Code and Title)*	**High-school mathematics, some high-school knowledge of science**
Precursors: *(Course Code and Title)*	**Nil**
Equivalent Courses: *(Course Code and Title)*	**AP1200 Foundation Physics**
Exclusive Courses: *(Course Code and Title)*	**Nil**

Part II Course Details

1. Abstract

This course is a preparation course for the college requirement course AP1201 General Physics I. It is designed for students in CSE, who have not taken any physics or combined science physics in DSE exams, and students who have not studied any high-school physics. This course covers some foundation knowledge in mechanics, heat and wave. The teaching of the course is mainly carried out through a series of PALSI (Peer Assisted Learning through Supplementary Instruction) tutorials. The student and course leader will have meetings to discuss the running of the tutorials.

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs[#]	Weighting* (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
1.	Recognize, and understand some basic and important concepts, technical terms and definitions		✓		
2.	Understand the basic physics laws of mechanics, heat and waves. Explain the physics of some physics phenomena using these laws.			✓	
3.	Understand how suitable mathematical notations are used to formulate these physics laws.			✓	
4.	Apply the physics laws of mechanics, heat and waves in simple situations using suitable mathematical notations. Understand the underlying physics of these problems			✓	
** If weighting is assigned to CILOs, they should add up to 100%.*		100%			

[#] Please specify the alignment of CILOs to the Gateway Education Programme Intended Learning outcomes (PILOs) in Section A of Annex.

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)

(TLAs designed to facilitate students' achievement of the CILOs.)

TLA	Brief Description	CILO No.						Hours/week (if applicable)
		1	2	3	4			
Lectures		✓	✓	✓	✓			2
Tutorials		✓	✓	✓	✓			1

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.						Weighting*	Remarks
	1	2	3	4				
Continuous Assessment: 100 %								
Assignments	✓	✓	✓	✓			100%	
Examination: 0%								
* *The weightings should add up to 100%.*							100%	

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Assignments	demonstrates understanding of the scientific principles and the working mechanisms; ability to solve relevant engineering problems	High	significant	moderate	basic	Not reaching marginal level

Part III Other Information (more details can be provided separately in the teaching plan)

1. Keyword Syllabus

- Mechanics: 1-D motion, velocity, acceleration, motion with constant velocity or acceleration, Newton's Law, momentum, work done, kinetic energy, power conversion of work into kinetic energy.
- Heat: Temperature, internal energy, heat capacity. Pressure of gas, ideal gas Law. Change of state of matter.
- Waves: Nature and properties of wave (water wave, sound wave), wave velocity, frequency, wave length. Standing waves, light sound.

2. Reading List

2.1 Compulsory Readings

(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

Nil

2.2 Additional Readings

(Additional references for students to learn to expand their knowledge about the subject.)

1.	H Young, "College Physics", 13th Edition, Addison-Wesley. (2012).