

The Chinese University of Hong Kong
Faculty of Science
Science Academy for Young Talent

Summer Courses 2020
Course Outline

SAYT1005 Introduction to University Physics
大學物理入門

Introduction:

Systematically introduce the basic concepts for university physics in mechanics, including the concept of vectors, motions in 2 dimensions and 3 dimensions, and the relation between force and motion described by Newton's three fundamental laws. It will lay a solid foundation for the students to start the physics courses at the university level.

本課程將系統講授大學物理的力學，包括矢量、運動學、以及運動與受力的關係。牛頓三大定律在平動與轉動中的應用、動量與能量守恆等關鍵物理知識將是本課程強調的重點。本課程將為學生的大學物理學習打下堅實的基礎。

Medium of Instruction: English

Organising Unit:

Department of Physics, Faculty of Science, CUHK

Teacher:

Prof. Xu Lei

Department of Physics, Faculty of Science, CUHK

Rm. G06, Science Centre, CUHK

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Demonstrator:

To be determined

Course Content:

17 August 2020 (Monday)	9:30 am – 12:00 pm	<u>Lecture:</u> • Ch0-Introduction, Ch1-Vectors and Motion <u>Assessment:</u> Attendance, homework
18 August 2020 (Tuesday)	9:30 am – 12:00 pm	<u>Lecture:</u> • Ch1.5-Motion in 2D and 3D <u>Assessment:</u> Attendance, homework
19 August 2020 (Wednesday)	9:30 am – 12:00 pm	<u>Lecture:</u> • Ch2-Force and Motion <u>Assessment:</u> Attendance, homework
20 August 2020 (Thursday)	9:30 am – 12:00 pm	<u>Lecture:</u> • Ch3-Kinetic Energy <u>Assessment:</u> Attendance, homework
21 August 2020 (Friday)	9:30 am – 12:00 pm	<u>Lecture:</u> • Ch4-Potential Energy and Energy Conservation <u>Assessment:</u> Attendance, homework
24 August 2020 (Monday)	9:30 am – 12:00 pm	<u>Lecture:</u> • Ch5-Momentum Conservation <u>Assessment:</u> Attendance, homework
25 August 2020 (Tuesday)	9:30 am – 12:00 pm	<u>Lecture:</u> • Ch6-Rotation and Moment- Part I <u>Assessment:</u> Attendance, homework
26 August 2020 (Wednesday)	9:30 am – 12:00 pm	<u>Lecture:</u> • Ch6-Rotation and Moment- Part II <u>Assessment:</u> Attendance, homework

Duration	8 half day sessions (total 20 contact hours)
Date	17 – 21, 24 – 26 August 2020
Time	9:30 am – 12:00 pm
Teaching Platform	Zoom
Enrollment	15 – 40
Expected Applicants	Students who are promoting to or studying S5 - S6
Tuition Fee	HKD 2,640.00
Credit	1 University Unit Certificates or letters of completion will be awarded to students who attain at least 75% attendance.