

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

Spring Courses 2022
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
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Demonstrator: To be determined

Course Content:

4 April 2022 (Monday) 9:30 am – 12:00 pm	<u>Lecture:</u> • Ch0-Introduction, Ch1-Vectors and Motion <u>Assessment:</u> Attendance, homework
5 April 2022 (Tuesday) 9:30 am – 12:00 pm	<u>Lecture:</u> • Ch1.5-Motion in 2D and 3D <u>Assessment:</u> Attendance, homework
6 April 2022 (Wednesday) 9:30 am – 12:00 pm	<u>Lecture:</u> • Ch2-Force and Motion <u>Assessment:</u> Attendance, homework
7 April 2022 (Thursday) 9:30 am – 12:00 pm	<u>Lecture:</u> • Ch3-Kinetic Energy <u>Assessment:</u> Attendance, homework
11 April 2022 (Monday) 9:30 am – 12:00 pm	<u>Lecture:</u> • Ch4-Potential Energy and Energy Conservation <u>Assessment:</u> Attendance, homework
12 April 2022 (Tuesday) 9:30 am – 12:00 pm	<u>Lecture:</u> • Ch5-Momentum Conservation <u>Assessment:</u> Attendance, homework
13 April 2022 (Wednesday) 9:30 am – 12:00 pm	<u>Lecture:</u> • Ch6-Rotation and Moment- Part I <u>Assessment:</u> Attendance, homework
14 April 2022 (Thursday) 9:30 am – 12:00 pm	<u>Lecture:</u> • Ch6-Rotation and Moment- Part II <u>Assessment:</u> Attendance, homework
16 April 2022 * (Saturday) 9:30 am – 12:00 pm	Make-up Classes if needed

Duration	8 half day sessions (total 20 contact hours)
Date	4 – 7, 11 – 14 April 2022 16 April 2022* (make-up class)
Time	9:30 am – 12:00 pm
Teaching Mode#	Online (Zoom)
Enrollment	15 – 40
Expected Applicants	Students who are promoting to or studying S5 - S6
Tuition Fee	HKD 3,300.00
Credit	1 University Unit Certificates or letters of completion will be awarded to students who attain at least 75% attendance.

* This date is reserved for make-up classes in case there is any cancellation of classes due to unexpected circumstances.

This course is offered online lessons via zoom platform.