

Secondary Schools - The Hong Kong University of Science and Technology (HKUST)
Dual Program 2018
Level 1 (Physics)

中學／大學雙修課程 2018
階段一（物理）

Course Objectives 課程目標

This is a calculus-based physics course on Newtonian mechanics, thermodynamics, electromagnetism and modern physics. The course will focus not only on technical skills, but also fundamental concepts. By learning at an accelerated pace suitable for talented students, it aims at bridging them to future university-level courses with solid background. 本課程乃以微積分為基礎之物理課。內容包括牛頓力學、熱力學、電磁學及現代物理學。課程內容基本概念與計算技巧並重。資優學生可以其能力所及之較快進度完成中學物理課程，為銜接大學課程打好堅實基礎。

Pre-requisite 修讀條件

Pass or above in DP Pre-stage (Physics) or have obtained equivalent knowledge

- * *Students who have not obtained a pass or above in DP Pre-stage Physics before will be invited to sit for a screening test*
雙修課程物理預備階段取得合格或以上，或掌握同等知識
- * *沒有於雙修課程預備階段取得合格或以上成績的同學將被安排參加甄別試*

Course Instructors 課程導師

Dr Cheung Man Fung (Department of Physics) 張文峰博士（物理系）

Dr Choy Ting Pong (Department of Physics) 蔡定邦博士（物理系）

Medium of Instruction 教學語言

Cantonese / English *, with lecture notes in English
廣東話／英語授課 *，並輔以英文教材

Assessment 評核方式

Classwork / Homework / Final Assessment
(No make-up assessment is arranged)
課堂表現／功課／期終評估（不安排後補評估）

Venue 地點

HKUST Campus 香港科技大學

* *The medium of instruction adopted for this course will depend on the enrolment each year.*
課程最終採取的教學語言將依據每年報讀學生情況而定。

Remarks 備註

Outstanding students will be promoted to DP Level 2. This schedule is tentative and subject to change if necessary. 表現優異的同學可晉升雙修課程階段二。課程時間表為暫定，會應需要而變。



DP Level 1 (Physics) — Course Schedule
雙修課程 階段一（物理） — 課程時間表

Session 節次	Date 日期	Time 時間	Venue 地點	Topic 課題	
1	24/11/2018 (Sat)	To be confirmed 待定	To be confirmed 待定	Commencement Ceremony 開學典禮	
		2:00 – 5:00 pm		I. Mechanics 力學： Kinematics 運動學	
2	1/12/2018 (Sat)	2:00 – 5:00 pm		Newton's Laws of Motion 牛頓運動定律	
				Momentum and Angular Momentum 動量和角動量	
3	8/12/2018 (Sat)	12:30 – 2:00 pm 2:00 – 5:00 pm		▲ Tutorial 1 (Optional) ▲ 導修課 1 (選擇參與)	
4	15/12/2018 (Sat)			Work and Energy 功和能	
		5		5/1/2019 (Sat)	1:00 – 3:00 pm
3:00 – 5:30 pm	* Student Activity Day (Mandatory) 學生活動日 (所有學生必須出席)				
6	12/1/2019 (Sat)	2:00 – 5:00 pm		Thermal System and Ideal Gas (Cont'd) 熱系統和理想氣體 (續)	
7	19/1/2019 (Sat)			First Law of Thermodynamics 熱力學第一定律	
8	26/1/2019 (Sat)			Thermodynamic Processes and Heat Engines 熱力學過程和熱機	
9	2/2/2019 (Sat)			Entropy and the Second law of Thermodynamics 熵與熱力學第二定律	
10	23/2/2019 (Sat)			III. Electrostatic and Magnetism 電和磁： Coulomb's Law, Electric Field, and Electric Potential 電荷、電場和電勢	
11	2/3/2019 (Sat)			12:30 – 2:00 pm	▲ Tutorial 2 (Optional) ▲ 導修課 2 (選擇參與)
				2:00 – 5:00 pm	Current and DC Circuit 電流和直流電路
12	9/3/2019 (Sat)	2:00 – 5:00 pm		Capacitor and Kirchhoff's Rules 電容器和基爾霍夫規則	
13	16/3/2019 (Sat)			Magnetic Force, and Applications of Electrostatic and Magnetism 磁力及電和磁的應用	
14	23/3/2019 (Sat)		IV. Modern Physics 現代物理學： Introduction to Einstein's Relativity 愛因斯坦相對論簡介		
15	30/3/2019 (Sat)	12:30 – 2:00 pm	▲ Tutorial 3 (Optional) ▲ 導修課 3 (選擇參與)		
		2:00 – 5:00 pm	Introduction to Quantum Mechanics I 量子力學簡介之一		
16	6/4/2019 (Sat)	2:00 – 5:00 pm	Introduction to Quantum Mechanics II 量子力學簡介之二		
17	13/4/2019 (Sat)		Assessment 評核		
	27/4/2019 (Sat)	To be confirmed 待定	Make-up session in case of Bad Weather 天氣惡劣的後補課節		

▲ Tutorial: Conducted by Dual Program alumni. **For signed-up students only.** 導修課：由雙修課程舊生指導。 **只限已報名同學參與。**

*Student Activity Day: Students will have a chance to participate in enrichment activities outside classroom. Apart from it, CDGT will organize a wide range of activities and programs such as campus tour and mentorship scheme for students. Details will be announced later.

學生活動日：學生將有機會走出課室參與活動及參觀。除此以外，CDGT 將舉辦更多活動，如：校園探索之旅及師友計劃，以助學生作全面發展。詳情容後公布。