

朝陽科技大學 097學年度第1學期教學大綱
Physics 電子物理

當期課號	2672	Course Number	2672
授課教師	劉省宏	Instructor	LIU,SHING HONG
中文課名	電子物理	Course Name	Physics
開課單位	資訊工程系(四日)—C	Department	
修習別	必修	Required/Elective	Required
學分數	3	Credits	3
課程目標	本課程主要介紹物理學當中關於電子電路的基本概念，學生在完成本課程後，將可了解關於電與磁的基本原理，其主要涵蓋的範圍有：電荷 - 電場 - 高斯定律 - 電位 - 電容 - 電流與電阻 - 電路 - 磁場 - 馬克斯威爾方程式	Objectives	The goal of this course is to provide the students with a basic knowledge of physics. The students will realize the following important electromagnetism theories in this course: Electrostatics: Forces - Electric Fields - Electrostatics: Energy - Capacitance - Direct Current: Ohm's Law, Resistance, Electric Current, Voltage, Power - Circuits - Magnetism: Magnetic field, - Currents and Ampere's law - Magnetic force - Faraday's law, Maxwell equation.
教材	1. 教科書 "Serway's essentials of college physics" 滄海書局 2. 使用黑板和簡報教授課程 3. 指定作業練習和平實考 4. 實施中中和期末考	Teaching Materials	1. Text book. "Serway's essentials of college physics" 2. speak teaching by board and PPT 3. Home work and test 4. Midterm and final exam.
成績評量方式	1. 期中和期末各30% 2. 小考和作業外加出席率40%	Grading	1. Midterm/ final exam: 30% 2. Home work, test, and learning attitude 40%
教師網頁	-		
教學內容	1. 培養學生基礎數理思考能力. 2. 上半學期以電學為主: 電荷,庫倫定律,電場,連續電荷電場,高斯定理,電容和電位能,電場和電位能,歐姆定律,直流分析 3. 下半學期以電磁學為主: 磁力與磁場關念,安培定律,法拉第定律,冷次定律,自感與互感,濾波電路和交流電路	Syllabus	1. The aim to study students' thinking ability to physics. First part: charge, charge force, electrical field, Gauss thm., potential and energy, ohm's law, and DC circuit analysis. 2. Second part: magnetic force and field, Ampere's thm., Faraday thm., inductance and mutual inductor, filter and AC circuit analysis

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