國立台灣科技大學 114學年 第2學期　課程大綱

Spring 2026 NTUST Course Outline

授課教師：樊俊遠

Instructor:Chun-Yuan Fan

課程名稱：物理(下)

Course Title：Physics (II)

2026/5/6

課程代號： EC163B009 Course Code 學分數： 3 Credits	必選修：必修/全學年 Required/Electve:Required/Full Yr. 先修課程： Prerequisites
節次教室： Time/Location	R3(E2-102) R4(E2-102) T2(E2-102) TA(E2-102)
專業核心能力： Core Professional Competencies	運用數學、科學及工程知識的能力。 規劃與執行實驗，並具解析數據之能力。 執行工程實務所需技術、技巧及使用現代化工具的能力
課程網址： Course Website	
課程宗旨： Course Objectives	This course has three main objectives: to provide students with a clear and logical presentation of the basic concepts and principles of physics, to strengthen their understanding of these concepts and principles through a broad range of interesting real-world applications, and to develop strong problem-solving skills through an effectively organized approach. To meet these objectives, we emphasize well-organized physical arguments and a focused problem-solving strategy. At the same time, we attempt to motivate the student through practical examples that demonstrate the role of physics in other disciplines.
課程大綱： Outline of Lectures	電場、高斯定律、電位與電容、磁場、法拉第定律與電感、直流與交流電路、電磁波、光學成像與繞射、相對論 the electric field, Gauss's law, potential and capacitance, magnetic field, Faraday's law and inductance, DC and AC circuits, electromagnetic, optical imaging and diffraction, theory of relativity
授課方式： Method of Instruction	講授 Lecture：100% 分組討論 Group discussion：0% 案例研討 Case study：0% 操做練習 Practical exercises：0% 講授 Lecture：%
教科書： Textbooks	Physics for Scientists & Engineers, 11th Edition | 11th Edition, Raymond A. Serway/John W. Jewett
參考書目： References	
修課須知： Notice	If you need to purchase physical books, please contact Canghai Books (滄海圖書) - 0932597262 Disclaimer: Please note that this is for informational purposes only and is not intended to be the only method of purchase.
評量方式： Grading	

	Midterm 40% Final 40% Homework 20%
備註說明： Notes	It is important that you set up a regular study schedule, preferably a daily one. The lectures will make much more sense if you read the corresponding text material before attending them. If you are having trouble with the course, seek the advice of the instructor or other students who have taken the course.