

彈性學期週數試行計畫書

申請彈性課程名稱及時數：

課程資訊 (Course Information)					
科號 Course Number	11120BMES224200	學分 Credit	3	人數限制 Size of Limit	
中文名稱 Course Title	電磁學 Electromagnetism				
任課教師 Instructor	林曉均 Hsiao Chun Lin				
上課時間 Time	T7T8R7	上課教室 Room	419		
課程大綱 (Syllabus)					
<p>一、課程說明(Course Description)</p> <p>The aim of this undergraduate course is to develop and consolidate understanding in electrostatics, magnetostatics, magnetic materials, Maxwell's equations, and electromagnetic wave equation. This course will be taught in English.</p>					
<p>二、教學方式(Teaching Method)</p> <p>Lectures will be given in-class to cover all topics. Questions will be posed throughout to stimulate critical thinking and concept comprehension. Pop-quizzes will be conducted to highlight and revise key points. Homework will be given in the form of exercises throughout the semester and expected to be completed outside of class. To ensure all content will be covered in 16 weeks, the quantity of take-home problems will be increased, as well as additional discussion sessions will be setup.</p> <p><u>Textbook</u>: "Fundamentals of Engineering Electromagnetics" 工程電磁學 by David K. Cheng</p>					
<p>三、教學進度(Syllabus)</p> <ol style="list-style-type: none">1. Electrostatic Field in a Vacuum: Coulomb's Law, Gauss Theorem, Electrostatic Potential, Graphic Representation of the Electric Field, Poisson and Laplace Equations2. Conductors in Equilibrium: Equilibrium in an Electrostatic Field, Electrostatic Capacitance3. Electrostatic Energy: Energy of a Continuous Charge Distribution, Energy in the Electrostatic Field4. Dielectrics: Polarization of a Dielectric, Electrostatic Equations in a Dielectric5. Magnetostatics: Hall Effect, Motion of Charges in a Magnetic Field, The Vector Potential in Simple Cases, The Ampère-Laplace Law6. Electromagnetic Induction: Induced Electric Field, Faraday's Law, Alternating Current Circuits7. Magnetic Energy: Energy of a Dipole, Energy of the Magnetic Field8. Magnetic Properties of Matter: B and H Fields in Matter, Dia- and Para-magnetism, Ferromagnetism9. Maxwell Equations: Displacement Current, Electromagnetic Waves, Energy Density in the Electromagnetic					

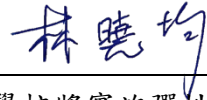
四、成績考核(Evaluation)

40% General performance 上課表現 (attendance, homework)

30% Midterm exam 期中考

30% Final exam 期末考

教師簽名：



前言：依 110 年 03 月 18 日校教務會議事項提及，110~112 學年，學校將實施彈性學期週數試行計畫，說明如下。

➤ 彈性學期週數：16 至 18 週

➤ 試行時間：110~111 學年

1、由教師提出學習模態改變之課程規劃（由 18 週調整為 16 週或 17 週），創新教學模式，由中高密度學習變成高密度學習，提升學生自主性學習，課程內容不打折。

2、擬申請需提課綱計畫申請案（不限課程數）經系、院課程委員會通過後實施，並送校課程委員會備查。內容應包含：18 週課程內容如何融入 16 或 17 週（需含原 18 週課程內容對照表）、配套措施等。

3、兼任教師申請 16 或 17 週課綱計畫完成上述程序者（系、院課程委員會通過、校課程委員會備查），鐘點費維持 1 學分以 18 小時計算，惟體育課程依上課時數列計鐘點費。