Please consult Intellectual Property Rights before making a photocopy. Please use the textbook of copyrighted edition.

# ②图玄東華大學

## 教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	電動力學(一)				學年/學期 Academic Year/Semester		113/1
課程名稱(英文) Course Name in English	Electrodynamics (I)						
科目代碼 Course Code	APH_D0040	系級 Department & Year	ment 博士		開課單位 Course-Offering Department		物理學系
修別 Type	必修 Required	學分數/時間 Credit(s)/Hour(s)		3.0/3.0			
授課教師 Instructor	/紀信昌						
先修課程 Prerequisite							
現現社法 Course Description							

### 課程描述 Course Description

https://drive.google.com/file/d/1-91pCbVmn403AtYQb3U0pL50e4Wd0Coo/view?usp=drive\_link

#### 課程目標 Course Objectives

1.延續電磁學的理論基礎,介紹靜電學,邊界值問題,多極問題,介質,靜磁學,時間變化場,馬克士威方程式,守恆定律,磁單極問題,對稱性,平面波等。導波管與共振腔,簡單輻射系統,散射與折射,狹義相對論,電磁場中的帶電粒子,物體內能量損耗,運動電荷的輻射,多極場,輻射阻尼,導波管與共振腔等問題。

2. 於理論的形成及解題的運算技巧給予必要的訓練。

課程目標與系專業能 力相關性 Correlation between 系專業能力 Course Objectives Basic Learning Outcomes and Dept.'s Education **Objectives** 具備物理與相關應用領域之專業知識Possessing professional knowledge in physics and A related application fields. 能以物理知識與邏輯推理,分析解決物理問題Being able to analyze and solve physics problems based on basic knowledge in В physics as well as logical reasoning. 瞭解當代實驗儀器之原理,並具備操作實驗儀器之能力Understanding the principles of up-C to-date equipment and being able to operate them for performing physics experiments. 能利用電腦處理各類物理問題Being able to use computers for solving various physics D Е 對學術倫理有清楚正確之認知Properly and clearly acknowledging the academic ethics. 具備以口頭報告及論文寫作發表研究成果之能力Possessing the skills of oral presentation F and scientific writing for publishing research findings. 具備科技發展之國際觀及外語溝通能力Having an international view of the technology  $\bigcirc$ developments and being able to use a foreign language for communications.

圖示說明Illustration :● 高度相關 Highly correlated ○中度相關 Moderately correlated

### 授課進度表 Teaching Schedule & Content

週次Week	內容 Subject/Topics	備註Remarks
1		

2						
3						
4						
5						
6						
7						
8						
9	期中考試週 Midterm Exam					
10						
11						
12						
13						
14						
15						
16						
17						
18	期末考試週 Final Exam					
	教 學 策 略 Teaching Strategies					
課堂講	授 Lecture 分組討論Group Discussion 參觀實習」	Field Trip				
其他Mi	scellaneous:					
	教 學 創 新 自 評 Teaching Self-Evaluation					
創新教學(	Innovative Teaching)					
l	向學習(PBL)                       解決導向學	· 월(SBL)				
翻轉教室 Flipped Classroom						
	Social Responsibility)					
l	踐Community Practice         產學合作 Industy-Academia Cooperati	on				
	Transdisciplinary Projects)					
l	學Transdisciplinary Teaching     跨院系教學Inter-collegiate Teaching					
業師合	授 Courses Co-taught with Industry Practitioners					
其它 othe	r:					

	學期成績計算	草及多元	.評量方:	弋 Gradi	ng & As	sessmen	ts			
配分項目 Items	配分比例 Percentage	多元評量方式 Assessments								
		測驗 會考	實作觀察	口頭 發表	專題 研究	創作 展演	卷宗 評量	證照 檢定	其他	
平時成績(含出缺席) General Performance (Attendance Record)										
期中考成績 Midterm Exam										
期末考成績 Final Exam										
作業成績 Homework and/or Assignments										
其他 Miscellaneous ()										
	Grading & A		量方式 ents Sup			ruction	s			
	41 61 dt di 62 t	<b>4</b> 0 (	<del>1. 12 1L</del>		<b>口</b> 小四	٠٠ - ١٠٠ الد	m \			
Textbook & Ot	教科書與參考 her References							ks, etc.)		
	教材網址(含線 .ds & Teacher' Persor	s Websi	ite(Incl	uding c		eaching				
	其他補	充說明	(Supple	mental:	instruct	tions)				