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②图 i 東華大學 教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese						學年/學期 Academic Year/Ser	112/2		
課程名稱(英文) Course Name in English			Optical waves						
科目代碼 Course Code			OE52300	系級 Department & Year	碩士	開課單位 Course-Offering Department	光	電工程學系	
		修別 Type	選修 Elective	學分數/時) Credit(s)/Hou	3	3.0/3.0			
	授課教師 Instructor								
		修課程 equisite							
	課程描述 Course Description								
介紹光偏振、偏振光在晶體中的傳播特性和雙折射性質,也介紹其積體光電元件和相關應用。									
			課	程目標 Cour	se Objecti	ives			
建立電	建立電磁波與晶體中傳遞行為之觀念及分析能								
課程目標與系專業能力和關性 系專業能力 Correlation between Course Objectives Basic Learning Outcomes and Dept.'s Education Objectives						力相關性 relation between urse Objectives and Dept.'s Education			
A								0	
В	B 具有光電工程的專業知識及應用能力。Professional knowledge and application ability of Opto-electronic engineering							•	
С	Opto-electronic engineering 具有設計與執行實驗、超生撰宜與數據解釋之能力。Abilities to design and execute								
D									
Е	使用儀器進行物件的分析及測試。Analysis and test of devices by instruments 具備適當的英文能力,應用於學習與交流。English language ability to study and interact								
F									
G	具有創	新思維及終身學習的	的能力。Creative	thinking and 1	ife-long le	earning ability		0	
圖示	説明Il	lustration :	高度相關 Hi	ghly correla	ated 〇中	度相關 Moderatel	y corre	lated	
授課進度表 Teaching Schedule & Content									
週次Week 内容 Subject/Topics					備註Remarks				
1	1	Electromagnetic plane wave							
2	2 electromagnetic plane wave, Irradiance, and Poynting Vector								
į	3 Polarization of light								
4	4 Polarization of light & Jones Vector								
	5	Polarization d	levices: Jones	Matrix					

6	Polarization devices: Jones Matrix							
7	Fresnel Reflection, phase shift, Brewster angle, and Dispersion relation of refractive index							
8		民族掃墓節 (放假)						
9								
10	Propagation in Anisotropic Media							
11	Propagation in Anisotropic Media							
12	Wave propagation in Biaxial and uniaxial crystals							
13	Wave propagation in Biaxial and uniaxial crystals							
14	4 Refraction and Poynting vector at a uniaxial crystal surface							
15	Electo-optic devices and Integrated Optical Modulators							
16	Electo-optic devices and Integrated Optical Modulators							
17	17 期末考試週 Final Exam							
18 Electo-optic devices and Integrated Optical Modulators								
	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Mis	scellaneous:							
	教 學 創 新 自 評 Teaching Self-Evaluation							
創新教學(Innovative Teaching)							
問題導	向學習(PBL) 解決導向導	學習(SBL)						
翻轉教	問題導向學習(PBL) 團體合作學習(TBL) 解決導向學習(SBL) 翻轉教室 Flipped Classroom 磨課師 Moocs							
社會責任(Social Responsibility)	Teaching)						
在地實	踐Community Practice 產學合作 Industy-Academia Cooperati	图體合作學習(TBL) 解決導向學習(SBL) assroom 磨課師 Moocs nsibility)						
— — — — — — — — — — — — — — — — — — —								
□ 跨界教:								
業師合								
其它 other:								

學期成績計算及多元評量方式 Grading & Assessments									
配分項目	配分比例 Percentage	多元評量方式 Assessments							
Items		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)	10%								
期中考成績 Midterm Exam	25%								
期末考成績 Final Exam	25%								
作業成績 Homework and/or Assignments	20%								
其他 Miscellaneous (小考6次)	20%								

評量方式補充說明

Grading & Assessments Supplemental instructions

教科書與參考書目(書名、作者、書局、代理商、說明)

Textbook & Other References (Title, Author, Publisher, Agents, Remarks, etc.)

1. Chapter 6, Optoelectronics and Photonics: Principles and Practices, Author: S.O. Kasap and Ravindra Kumar

Sinha

- 2. Chapter 6, Fundamentals of Photonics, 作者: Saleh, Bahaa E. A./ Teich, Malvin Carl
- 3. Chapter 5 and Chapter 6, Physics of Light and Optics, authors: Justin Peatross and MichaelWare, Brigham Young University
- 4. Optical Waves in Crystals: Propagation and Control of Laser Radiation, Authors: Amnon Yariv, Pochi Yeh

課程教材網址(含線上教學資訊,教師個人網址請列位於本校內之網址)

Teaching Aids & Teacher's Website(Including online teaching information.

Personal website can be listed here.)

其他補充說明(Supplemental instructions)