國立東華大學

教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	光纖通訊			學年/學期 Academic Year/Semester	113/1
課程名稱(英文) Course Name in English	Optical Fiber Communications				
科目代碼 Course Code	OE__52940	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/時間 Credit(s)/Hour(s)	3.0/3.0		
授課教師 Instructor	/賴建智				
先修課程 Prerequisite					

課程描述 Course Description

培養學生具備基本物理學知識, 包含一維及二維古典物理, 波動學, 電磁學及近代物理, 並為未來習修專業課程作準備.

課程目標 Course Objectives

簡介光纖通訊之基本理論及元件與系統

	系專業能力 Basic Learning Outcomes	課程目標與系專業能力相關性 Correlation between Course Objectives and Dept.'s Education Objectives
A	具有獨立研究能力Equipped with abilities of independent research.	○
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	●
C	具有設計與執行實驗、報告撰寫與數據解釋之能力。Abilities to design and execute experiment, write reports, and explain data	○
D	使用儀器進行物件的分析及測試。Analysis and test of devices by instruments	○
E	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	具有良好的溝通與團隊合作的能力。Ability to communicate and teamwork	○
G	具有創新思維及終身學習的能力。Creative thinking and life-long learning ability	○

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	Introduction to fiber	◎9/9（一）開學
2	Introduction to fiber	
3	Fiber structures and fabrication	◎09/17（二）中秋節
4	Fiber structures and fabrication	
5	Fundamentals of fiber optics	◎10/10（四）國慶日

6	Fundamentals of fiber optics	
7	Signal propagation in fibers	
8	Signal propagation in fibers	
9	期中考 Midterm Exam	◎期中考週
10	Fiber light source	◎11/13（三）全校運動會（停課一天）
11	Fiber light source	
12	Optical detector and receiver	
13	Optical network system	
14	Testing of optical communication	
15	期末考 Final Exam - Oral presentation	
16	期末考 Final Exam - Oral presentation	
17	期末考 Final Exam - Oral presentation	◎期末考週
18		

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Miscellaneous:

教 學 創 新 自 評 Teaching Self-Evaluation

創新教學(Innovative Teaching)

☐ 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)

☐ 在地實踐Community Practice ☐ 產學合作 Industy-Academia Cooperation

跨域合作(Transdisciplinary Projects)

☐ 跨界教學Transdisciplinary Teaching ☐ 跨院系教學Inter-collegiate Teaching

☐ 業師合授 Courses Co-taught with Industry Practitioners

其它 other:

學期成績計算及多元評量方式 Grading & Assessments									
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 General Performance									
期中考成績 Midterm Exam									
期末考成績 Final Exam	80%			✓					
作業成績 Homework and/or Assignments									
其他 Miscellaneous (Attendance)	20%								課堂簽到

評量方式補充說明
Grading & Assessments Supplemental instructions

*期中考與期末考均無補考。
*期中考與期末考分數不得為0分或個位數。
*請假請依校規辦理，未依校規者依曠課或缺考辦理。

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.)

參考書：Fundamentals of Optical Fibers, by John A. Buck, Wiley; 2nd edition (2004)
Fiber-Optic Communication Systems, by Govind P. Agrawa, Wiley; 4th edition (2010)
Fiber Optic Test and Measurement, by Dennis Derickson, Prentice Hall (1997)

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)