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②國玄東華大學 教學計劃表 Syllabus

	名稱(中文) me in Chinese	半導體元件模擬	AB		學年/學期 Academic Year/Seme	113/1		
	課程名稱(英文) Course Name in English Simulation and Modeling of Semiconductor Devices							
科目代碼 Course Code		EEMOO3AB	系級 Department 碩士 & Year		開課單位 Course-Offering Department	雪	電機工程學系	
	修別 Type 選修 Elective							
	授課教師 Instructor /劉耿銘							
	先修課程 Prerequisite							
課程描述 Course Description								
使學生對半導體元件物理及半導體元件之模擬有基本之認識								
課程目標 Course Objectives								
讓學生在修習此一課程後,能對半導體元件模擬有概念,以利研究工作的進行。								
系專業能力 Basic Learning Outcomes						Cor	課程目標與系專業能 力相關性 Correlation between Course Objectives and Dept.'s Education Objectives	
A 培育具備電機電子資訊工程等專業技術研發之能力。To cultivate the research and developing ability of electrical, electronics and information engineering。								
B 培育系統分析、模擬驗證、實作實現之能力。To cultivate the advanced ability of analysis, verification and implementation of systems。							0	
C 訓練軟體工具使用與硬體實務驗證相互輔助之能力To train the auxiliary ability between the utilization of software tool and the verification of the hardware practice。							0	
D 訓練電機電子資訊專業知識與工程實務相互結合運用之能力。To train the integrate ability between professional EECS knowledge and engineering practice								
	茨曾論文研究之群體討論與闡隊合作之互助能力。To fulfill the research ability in							
F 落實發掘問題、邏輯分析、克服瓶頸與持續學習之能力。To fulfill the ability of question finding, logical analyzing, bottleneck overcoming and continuous learning								
了解學術倫理與智慧財產觀念,掌握國內外產業更迭需求與具備多元專長之能力。To obtain G the ability of multi-specialization and to meet the industry demand as well as to have the ability of academic ethics and concept of intellectual property							0	
了解國內外市場變化,具備科技英文閱讀溝通與科技論文寫作之能力。To understand the change of global market and to have the ability of reading, conversation and technical writing in English。							0	
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				cs		備註Remarks		
1 課程簡介,能帶和載子濃度								
2 能帶和載子濃度								

3	能帶和載子濃度							
4	載子傳導現象							
5	載子傳導現象							
6	p-n接面							
7	p-n接面							
8	p-n接面							
9	期中考試週 Midterm Exam							
10	數值方法							
11	用數值方法解Poisson Equation							
12	用數值方法解Poisson Equation							
13	MOS 二極體							
14	MOS 二極體							
15	MOSFET 基本特性							
16	MOSFET 基本特性							
17	MOSFET 基本特性							
18	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:							
	th 紹 kil th 与 to Tanahina Calif Finalization							
教學創新自評 Teaching Self-Evaluation 創新教學(Innovative Teaching)								
	<u> </u>	토평(SRL)						
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								
在地實踐Community Practice								
跨域合作(Transdisciplinary Projects)								
跨域音作(HailsutsCrpffinary Trojects) 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 othe	r:							

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%								筆記與點名
期中考成績 Midterm Exam	30%	>							
期末考成績 Final Exam	30%	~							
作業成績 Homework and/or Assignments	30%		~	~	~				須繳交紙本報告以 及上台報告
其他 Miscellaneous									

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.)

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)