



教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	作業系統工程		學年/學期 Academic Year/Semester	112/1	
課程名稱(英文) Course Name in English	Operating system engineering				
科目代碼 Course Code	CSIEM0360	系級 Department & Year	碩士	開課單位 Course-Offering Department	資訊工程學系
修別 Type	選修 Elective	學分數/時間 Credit(s)/Hour(s)	3.0/3.0		
授課教師 Instructor	/蔡正雄				
先修課程 Prerequisite					
課程描述 Course Description					
作業系統設計與實作					
課程目標 Course Objectives					
完整實作出一個多工且容易移植到各種不同CPU平台的作業系統(將學習實作 virtual memory, multi-threads, context switches, interrupts, interprocess communication, device drivers, etc)					
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	統合資工知識技術之能力Ability to integrate knowledge and technologies of computer science and information engineering.			●	
B	設計技術理論驗證實驗之能力Ability to design and conduct science experiments and to validate hypotheses.			●	
C	資訊軟硬體設計開發之能力Ability to design and develop computer software and hardware.			●	
D	團隊專案開發之能力Ability to design and develop team projects.			●	
E	批判性思考與創新研發之能力。Ability of analytical thinking, creative research planning, and innovative development.			○	
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				
2	OS structure and memory heap implementation				
3	process manager implementation				
4	process schedule and context switch implementation				
5	alarm system implementation				
6	process synchronization				

7	process synchronization and communication implementation I	
8	process synchronization and communication implementation II	
9	期中考試週 Midterm Exam	
10	cache memory introduction	
11	virtual memory	
12	memory manager introduction	
13	memory manager implementation I	
14	memory manager implementation II	
15	I/O device introduction	
16	I/O device driver framework design	
17	I/O device driver implementation	
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 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 Industry-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	20%		✓						
期中考成績 Midterm Exam	20%		✓			✓			
期末考成績 Final Exam	20%		✓		✓	✓			
作業成績 Homework and/or Assignments	40%								
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)