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②图玄束至大學

教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	嵌入式系統設計		學年/學期 Academic Year/Semester		113/2		
課程名稱(英文) Course Name in English	Introduction to Embedded System Design						
科目代碼 Course Code	CSIEB0380	系級 Department 學三 & Year		開課 Course-C Depar	ffering	資訊工程學系	
修別 Type	學程 Program	學分數/時 Credit(s)/Hou	•	3.0/3.0			
授課教師 Instructor	/紀新洲						
先修課程 Prerequisite							

課程描述 Course Description

This course introduces the basic concepts of embedded systems design as well as the implementation issues. A platform will be employed to demonstrate how an embedded system is developed and realized. A few labs will be done to obtain the hands-on experience.

課程目標 Course Objectives

嵌入式系統在現代已經是無所不在。這門課主要介紹嵌入式系統設計的基本概念與設計流程,使學生對於嵌入式系統如何構築有一深入的瞭解,並且透過一些實驗來獲得實作上的經驗。

Embedded systems are ubiquitous with diversified applications nowadays.

This course presents the basic concepts and design process of embedded systems. It aims at making the students understand how an embedded system is built, and obtain hands-on experience through labs.

	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	資訊專業終身學習能力Ability of lifetime learning in information profession	•
В	實驗驗證資訊科學能力Ability of validate experimental result validation in information science field	•
С	資訊工具整合運用能力Ability of integrated applications of information technology	•
D	資訊系統應用設計開發能力Ability of information application system design and development	0
E	團隊合作溝通協調能力Ability of teamwork, communication, and coordination	•
F	資通訊科技問題解決能力Ability of problem solving regarding information and communication technology	•
G	瞭解資訊科技多元影響能力Ability to understand information technology's multiple influences	•
Н	房負資訊人社會責任能力Ability of bearing the social responsibilities being among information professionals	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	備註Remarks
1	Introduction	
2	Design and Implementation of Embedded Systems	

3	ARM Instruction Set & Programming					
4	ARM Instruction Set & Programming					
5	Plateform and I/O Interfacing					
6	LED Control					
7	Holiday (no class)					
8	Dot Matrix Control					
9	Midterm Exam					
10	Keyboard Scanning					
11	LCD Display					
12	Timer					
13	Term Project Proposal					
14	Embedded Operating Systems					
15	Real-time Operating Systems					
16	Final Exam					
17	Term Project Presentation & Demo					
18						
	教學策略 Teaching Strategies					
✓ 課堂講	授 Lecture					
 其他Mi	scellaneous:					
	教學創新自評 Teaching Self-Evaluation					
創新教學(权字刷制目前Teaching Self Evaluation Innovative Teaching)					
	向學習(PBL) 解決導向學習(SBL)					
	室 Flipped Classroom					
	Social Responsibility)					
○ 在地實踐Community Practice						
	Transdisciplinary Projects)					
	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	多元評量方式 Assessments								
Items	配分比例 Percentage	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	40%		~						Labs
期中考成績 Midterm Exam	15%	>							
期末考成績 Final Exam	15%	~							
作業成績 Homework and/or Assignments	25%		✓	~					Term Project
其他 Miscellaneous (Class Participation)	5%								Attendance

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.)

Lecture slides

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)