



課 綱 Course Outline
資訊工程學系資工組

中文課程名稱 Course Name in Chinese	智慧物聯網技術與應用				
英文課程名稱 Course Name in English	Intelligent IoT technologies and applications				
科目代碼 Course Code	CSIE62130	班 別 Degree	碩士班 Master' s		
修別 Type	選修 Elective	學分數 Credit(s)	3.0	時 數 Hour(s)	3.0
先修課程 Prerequisite					
課程目標 Course Objectives					
透過介紹物聯網及無線通訊技術的起源、歷程、架構等內容，讓學生先行具備基本觀念，並搭配各項實驗及產業案例讓學生擁有開發物聯網相關應用的經驗。					
系教育目標 Dept.' s Education Objectives					
1	探究學科知識，善用專業技能 Explore academic knowledge, utilize professional skills.				
2	訓練評析思考，創新解決問題 Exercise analytical thinking, enhance creative problem solving skills.				
3	學習團隊分工，強化溝通表達 Participate in teamwork, strengthen communication skills.				
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		
課程大綱 Course Outline		
1. 智慧物聯網介紹 -物聯網的架構 -物聯網-感知層技術 -物聯網-網路層技術 -物聯網-管理層技術 -物聯網-應用層技術 -物聯網雲端平台/物聯網感測器平台 2. 智慧物聯網實驗 -植物套件感測器操作教學 -植物照顧套件整合實作 -農作物生長環境監測系統製作與開發 -田間機器人資通訊整合應用		
資源需求評估（師資專長之聘任、儀器設備的配合．．．等） Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.)		
Existing suitable full-time teachers		
課程要求和教學方式之建議 Course Requirements and Suggested Teaching Methods		
Class lectures, assignments, lab sessions and term project		
其他 Miscellaneous		