



## 課 綱 Course Outline

## 環境暨海洋學院學士班

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	CEO_30040	班 別 Degree	學士班 Bachelor's		
修別 Type	學程 Program	學分數 Credit(s)	3.0	時 數 Hour(s)	3.0
先修課程 Prerequisite					

課程目標  
Course Objectives

By introducing the origins, history, architecture, and other related contents of the Internet of Things and wireless communication technology, students can acquire basic concepts first. Together with various experiments and industry cases, they can gain experience in developing IoT-related applications.

院教育目標  
College's Education Objectives

1	培養兼具國際視野與本土關懷的學生 To develop students who care about local issues and have an international perspective
2	培養具備自然科學與社會科學知識的人才 To educate students to have knowledge of both the natural and social sciences
3	培養具備環境倫理與人文素養的環境公民 To teach students to be environmental citizens (i.e., knowledgeable about environmental ethics and human issues.).

院基本素養與核心能力  
College Basic Learning Outcomes課程目標與院基本素養與核心能力  
Correlation between Course Objectives and Basic Learning Outcomes

A	具備自然科學與社會科學的基礎知識 To be knowledgeable of fundamental theories in the natural and social sciences.	
B	具備觀察、理解、闡釋自然環境與人類社會互動及變遷關係的能力 To be able to observe, understand, and interpret the changing interactions of natural resources and human society.	

C	具備多元資料收集策略、閱讀論文、撰寫環境報導及創意口頭報告的能力 To have the ability to collect data, understand scientific literature, and write and present environmentally related reports.	
D	能終身學習、對環境維持熱情、關懷、並願意做出對在地環境獻身的承諾 To cultivate the values of lifelong learning, to maintain enthusiasm and concern for the environment, and to develop commitment to the local environment.	
E	具備環境倫理觀、社會責任感與社會實踐 To develop and implement environmental ethics and social responsibility.	
F	具備獨立思考、溝通協調與團隊合作的能力 To think independently, to communicate effectively, and to cooperate with others as a team.	
G	具備基本外國語文能力 The be able to communicate in a foreign language.	

圖示說明 Illustration : ● 高度相關 Highly correlated ○中度相關 Moderately correlated

課程大綱 Course Outline	
-智慧物聯網介紹(Introduction of AIoT)	
-物聯網的架構(Architecture of IoT)	
-物聯網：感知層技術(Perception layer)	
-物聯網：網路層技術(Network layer)	
-物聯網：應用層技術(Application layer)	
-物聯網雲端平台/物聯網感測器平台(IoT platform)	
-智慧物聯網實驗(AIoT experiment)	

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.)

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