

# 元智大學 電機工程學系(乙組) 物聯網「感知層」深耕跨域微學程 科目規劃表

Department of Electrical Engineering (Program B), Yuan Ze University  
“IoT Perception Layer”Advanced Cross-Domain Micro Program Course Planning Table

(115學年度申請適用)

(For students applied in Academic Year 2026)

115.04.29 一一四學年度第七次教務會議通過

Passed by the 7th Academic Affairs Meeting, Academic Year 2025, on April 29, 2026

## 一、教學目標 Teaching Objectives :

物聯網系統架構涵蓋了感知層、網路層、應用層三層架構。本微學程著重在感知層，內容包括電腦軟硬體系統架構、嵌入式系統、感測器技術等關鍵知識與技能，學生可根據興趣，由各類必修與選修課程自由組合，吸收成為自身充分掌握的專業知識體系

The Internet of Things (IoT) system architecture consists of three layers: the perception layer, the network layer, and the application layer. This micro program focuses on the perception layer, covering essential knowledge and skills such as computer hardware and software system architecture, embedded systems, and sensor technologies. Students may flexibly combine required and elective courses according to their interests, building a well-structured and comprehensive body of professional expertise.

## 二、課程設計 Curriculum Design :

必修課程：3學分

Required Courses: 3 credits

課號 Course ID	課程名稱 Course Name	學分 Credit(s)	學制 Degree structure	開課系所 Department Offered the Present Course(s)	備註 Remarks
EEB108	計算機概論 Introduction to Computer Science	3	大學部 Undergraduate Program	電機系(乙組) Department of Electrical Engineering(Program B)	4 選 1 Choose 1 of the 4 options
EEB209	微電腦系統 Micro-Computer Systems	3	大學部 Undergraduate Program	電機系(乙組) Department of Electrical Engineering(Program B)	
EEB312	通訊網路 Communications Network	3	大學部 Undergraduate Program	電機系(乙組) Department of Electrical Engineering(Program B)	
EEB340	智慧物聯網 AIoT Fundamentals	3	大學部 Undergraduate Program	電機系(乙組) Department of Electrical Engineering(Program B)	

**選修課程：6學分**

Elective courses: 6 credits

課號 Course ID	課程名稱 Course Name	學分 Credit(s)	學制 Degree structure	開課系所 Department Offered the Present Course(s)	備註 Remarks
EEB111	邏輯電路設計 Digital Logic Design	3	大學部 Undergraduate Program	電機系(乙組) Department of Electrical Engineering(Program B)	5 選 1 Choose 1 of the 5 options
EEB310	作業系統 Operation Systems	3	大學部 Undergraduate Program	電機系(乙組) Department of Electrical Engineering(Program B)	
EEB321	嵌入式系統原理及實驗 Embedded Systems: Principles and Experiments	3	大學部 Undergraduate Program	電機系(乙組) Department of Electrical Engineering(Program B)	
EEB336	PCB 電路板設計與 FPGA 韌體開發專題實作 Projects of PCB Circuit Board Design and FPGA Firmware Development	3	大學部 Undergraduate Program	電機系(乙組) Department of Electrical Engineering(Program B)	
EEB436	進階 PCB 電路板設計與 FPGA 韌體開發專題實作 Advanced Projects of PCB Circuit Board Design and FPGA Firmware Development	3	大學部 Undergraduate Program	電機系(乙組) Department of Electrical Engineering(Program B)	
EEC329	感測器與其應用 Sensors and Their Applications	3	大學部 Undergraduate Program	電機系(丙組) Department of Electrical Engineering(Program C)	3 選 1 Choose 1 of the 3 options
EEA483	微感測器及感測電路設計 Design on Micro-Sensor and Sensor Circuits	3	大學部 Undergraduate Program	電機系(甲組) Department of Electrical Engineering(Program A)	
EEA339	數位系統設計 Design of digital System	3	大學部 Undergraduate Program	電機系(甲組) Department of Electrical Engineering(Program A)	

**三、學程證書授予標準 Certificate Award Criteria：**

欲修讀本學程之同學，請先至個人portal進行線上登記作業。

Students who wish to enroll in this program are required to complete the online registration through the personal portal in advance.

**四、領域別 Fields of Study：人工智慧 Artificial Intelligence****五、學程召集人 Program Director：林柏江老師 Prof. Po-Chiang Lin****六、負責規劃單位 Responsible Planning Unit：**

電機系乙組 Department of Electrical Engineering (Program B)