國立勤益科技大學114學年度進修部碩士在職專班電子工程系學分計畫表

National Chin-Yi University of Technology Continuing Education Division
Curriculum for 2025 In-Service Master Program Department of Electronic Engineering

113.11.11課程委員會審議通過
113.11.20 113學年度第1學期第1次院課程會議審議通過
113.12.05 校課程委員會議及113.12.24 臨時教務會議審議通過

科目	Courses	上學期First Semester			下學期Second Semester		
		學分 Credit	正課 Lecture	實習 Internship	學分 Credit	正課 Lecture	實習 Internship
專業必修科目(10學分)Department Required Courses(10credits hours)							
第一學年First Year							
專題討論（一）	Seminar (I)	1	2	0			
專題討論（二）	Seminar (II)				1	2	0
第二學年Second Year							
專題討論（三）	Seminar (III)	1	2	0			
論文	Thesis	3	3	0			
論文	Thesis				3	3	0
專題討論（四）	Seminar (IV)				1	2	0
科目	**Courses**	**上學期First Semester**			**下學期Second Semester**		
		學分 Credit	正課 Lecture	實習 Internship	學分 Credit	正課 Lecture	實習 Internship
專業選修科目Department Electives Courses							
第一學年First Year							
科技英文閱讀	Technical English Reading	3	3	0			
影像辨識	Image Recognition	3	3	0			
電力電子學之電腦輔助設計	Computer-Aided Design of Power Electronics	3	3	0			
科技英文寫作	Technical English Writing				3	3	0
巨量資料分析	Big Data Analysis				3	3	0
電力轉換器分析與設計	Analysis and Design of Power Converters				3	3	0
智慧機器人Intelligent Robotics							
智慧型機器人系統應用專題	Application Project of Intelligent Robotic System	3	3	0			
智慧機器人學	Intelligent Robotics	3	3	0			
智慧型控制	Intelligent Control	3	3	0			
嵌入式系統開發整合實務	Embedded System Development and Integration Practice	3	3	0			
機器人機構與系統設計	Robot Mechanism and System Design	3	3	0			
智慧感測與監控系統	Smart Sensor and Supervisory Control System				3	3	0
自動化光電檢測	Automated Optical and Electrical Inspection				3	3	0
物聯網資訊安全技術	IoT Information Security Technology				3	3	0
網路多媒體Multimedia and Game Machine Design							
高等電腦圖學	Advanced Computer Graphics	3	3	0			
光電量測	Electro-Optical Measurements	3	3	0			
多媒體壓縮	Multimedia Compression	3	3	0			
嵌入式影像處理專論	Image Processing on Embedded System	3	3	0			
嵌入式系統開發整合實務	Embedded System Development and Integration Practice	3	3	0			
背景音樂設計	Design of Background Music	3	3	0			
工業有線通訊技術	Industrial Wired Communication Technology	3	3	0			
工業無線通訊技術	Industrial Wireless Communication Technology				3	3	0
光電系統	Electro-Optical System				3	3	0
感測聯網系統實務	Sensor Networks System Practice				3	3	0
電腦視覺專論	Computer Vision				3	3	0
即時著色	Real-time Rendering				3	3	0
背景音樂的設計與實務	Design and Practice of Background Music				3	3	0
語音處理	Speech Processing				3	3	0
積體電路IC Design and Application							
先進半導體元件與可靠度	Advanced Semiconductor Devices and Reliability	3	3	0			
奈米元件製程技術	Process and Technology of Nano Devices	3	3	0			
積體電路分析與設計	Integrated Circuit Analysis and Design	3	3	0			
積體電路實現專論	Practice of IC Realization	3	3	0			
射頻積體電路	Radio Frequency Integrated Circuit	3	3	0			
電子材料	Electronic Material	3	3	0			
微波電路	Microwave Circuit				3	3	0
光電元件	Optoelectronic Device				3	3	0
半導體元件物理	Physics of Semiconductor Devices				3	3	0
半導體量測	Semiconductor Measurement				3	3	0
材料與應用	Material and Application				3	3	0
數位IC設計	Digital IC Design				3	3	0
類比IC設計	Analog IC Design				3	3	0
第二學年Second Year							
高科技專案管理	High Tech Project Management	3	3	0			

雲端計算與服務	Cloud Computing and Services	3	3	0			
數位電源設計	Digital Power Design	3	3	0			
學術研究論文寫作	Paper Writing in English	3	3	0			
高科技製造與管理	High Tech Manufacturing and Management				3	3	0
智慧型設備通訊	Smart Device Communication				3	3	0
企業實習	Industrial Skill Practice				3	0	3
智慧機器人Intelligent Robotics							
工業機器人系統與應用	Industrial Robot System and Application	3	3	0			
智慧機電系統	Smart Mechatronics System	3	3	0			
自動化薄膜設備與原理	Automatic Film Equipment and Principle	3	3	0			
互動機器人設計與應用	Robots for Interaction Design and Service Application				3	3	0
工業無線通訊技術	Industrial Wireless Communication Technology				3	3	0
輔具科技設計與應用	Assistive Technology - Design and Application				3	3	0
網路多媒體Multimedia and Game Machine Design							
多媒體通訊	Multimedia Communication	3	3	0			
著色語言專論	Shading Language	3	3	0			
統計應用專論	Applied Statistics	3	3	0			
生醫感測系統實務	Biomedical Sensing System and Practice	3	3	0			
遊戲數學	Mathematics for Games				3	3	0
遊戲物理	Physics Simulation in Computer Games				3	3	0
幾何建模專論	Geometric Modeling				3	3	0
虛擬實境研究與開發	Virtual Reality Research and Development				3	3	0
積體電路IC Design and Application							
SoC導論	Introduction to SoC Design	3	3	0			
半導體生醫感測器製作與應用	Fabrication and Application of Biosensor Devices	3	3	0			
進階類比IC設計	Advanced Analog IC Design	3	3	0			
電子醫療器材法規實務	Electronic Medical Device Regulations and Practice	3	3	0			
應用晶片整合實務	Practice of ASIC Integration	3	3	0			
先進元件技術	Advanced Devices Technology				3	3	0
量子力學	Quantum Mechanics				3	3	0
電源IC	Power Integrated Circuit Design				3	3	0
電子構裝技術與應用	Electronic Assembly Technology and Application				3	3	0

備註Note:

一、 畢業至少應修34學分：必修10學分(含論文6學分、專題討論4學分)，選修24學分(專業選修至少18學分)。
Students should complete at least 34 credits before graduation including 10 required credits (containing 6 credits for Thesis and 4 credits for Seminar) and 24 elective credits (at least 18 professional elective credits).

二、 研究生必須通過碩士班論文口試，方准予畢業。畢業時，依法授予工學碩士學位。
The master thesis must be passed by oral defense. Master degree will be conferred in the engineering discipline.

三、 學生應於申請學位考試前至「教育部臺灣學術倫理教育資源中心」網路平臺完成學術研究倫理教育課程，至少 6 小時課程。
Students need to complete the academic research ethics education course for at least 6 hours before the final defence applicaiton.

四、 修業期間必須發表一項實務作品，下列項目擇一通過即可：
(一)1項系級以上之公開實務作品比賽。
(二)獲得1件專利(新型、發明)。
(三)完成1件產學案。
(四)1篇中文或英文論文發表。
Students have to finish one of the following requirements during the studying period:
1. Participate a public practical contest which is held by over the department level.
2. Get a patent (utility model patent or invention patent).
3. Complete an academia and industry project.
4. Publish a thesis in Chinese or English.

五、 課程名稱前有標示「△」符號者，為「程式設計課程」。
Courses with a “△” refers to an application design course.

六、 課程名稱前有標示「●」符號者，為「職能專業課程」。
Courses with a “●” refer to a professional competence course.

七、 課程名稱前有標示「AI」符號者，為「人工智慧相關課程」。
Courses with an “AI” refer to an artificial intelligence related course.

八、 為因應法規變更、評鑑建議或政府計畫規定等外在因素，本系保有調整學分計畫之權利。若有修訂，將於學期開始前公告，並明確說明修訂內容、影響範圍及相關配套措施，以保障學生權益。
The department reserves the right to adjust the curriculum in response to external factors such as changes in regulations, suggestions of evaluation and accreditation, or government program regulations. If there are any revisions, will be announced before the start of the semester, and the revised content, scope of impact, and related supporting measures will be clearly stated to protect the rights and interests of students.