

National Chin-Yi University of Technology Continuing Education Office  
Curriculum for 2025 Department of Artificial Intelligence and Computer Engineering Four-Year Bachelor  
Program of Semiconductor Packaging and Testing

113.09.06.系課程會議審議通過  
113.11.01.系課程會議審議通過  
113.11.20.院課程委員會審議通過  
113.12.05.校課程委員會及113.12.24.臨時教務會議審議通過  
114.04.14.系課程會議審議通過  
114.05.07.院課程委員會審議通過  
114.5.20.校課程委員會及114.6.5.臨時教務會議審議訂通過

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
共同必修科目(24學分)General Required Courses(24credits hours)							
第一學年First Year							
職場職能安全與倫理	Occupational Safety and Ethics	2	2	0			
藝術鑑賞	Art Appreciation	1	1	0			
大一英文(一)	Freshman English (I)	2	2	0			
國文(一)	Chinese (I)	2	2	0			
體育(一)	Physical Education (I)	0	2	0			
體育(二)	Physical Education (II)				0	2	0
大一英文(二)	Freshman English (II)				2	2	0
國文(二)	Chinese (II)				2	2	0
微積分(一)	Calculus (I)				3	3	0
第二學年Second Year							
微積分(二)	Calculus (II)	3	3	0			
憲法與民主	Constitution and Democracy	2	2	0			
體育(三)	Physical Education (III)	0	2	0			
體育(四)	Physical Education (IV)				0	2	0
音樂鑑賞	Music Appreciation				1	1	0
第三學年Third Year							
歷史與文化	History and Culture	2	2	0			
人際關係與溝通協調	Interpersonal Communication and Coordination	2	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
專業必修科目(66學分)Department Required Courses(66credits hours)							
第一學年First Year							
Python 語言程式設計	Python Programming	3	3	0			
「AI」人工智慧概論	Introduction to Artificial Intelligence	3	3	0			
●產業實務實習(一)	Industrial Internship Program (I)	3	0	6			
△C語言程式設計	C Language Programming				3	3	0
△●數位邏輯與實習	Digital Logic and Experiment				3	2	1
●產業實務實習(二)	Industrial Internship Program (II)				3	0	6
第二學年Second Year							
基本電學	Basic Electricity	3	3	0			
●計算機組織與結構	Computer Organization and Architecture	3	2	1			
資料結構	Data Structures	3	3	0			
●產業實務實習(三)	Industrial Internship Program (III)	3	0	6			
△物件導向程式設計	Object-oriented Programming				3	2	1
「AI」機器學習	Machine Learning				3	3	0
線性代數	Linear Algebra				3	3	0
●數位影像處理導論	Introduction to Digital Image Processing				3	2	1
●產業實務實習(四)	Industrial Internship Program (IV)				3	0	6
第三學年Third Year							
行動裝置應用實務	Mobile Device Application Design and Practice	3	3	0			
「AI」△●AI實務專題(一)	AI Project Study (I)	3	2	1			
●產業實務實習(五)	Industrial Internship Program (V)	3	0	6			
「AI」△●AI實務專題(二)	AI Project Study (II)				3	2	1
●產業實務實習(六)	Industrial Internship Program (VI)				3	0	6
第四學年Fourth Year							
●產業實務實習(七)	Industrial Internship Program (VII)	3	0	6			
●產業實務實習(八)	Industrial Internship Program (VIII)				3	0	6
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(一)	English for Science and Technology (I)	2	2	0			
半導體概論	Introduction to Semiconductors	3	3	0			

科技英文(二)	English for Science and Technology (II)				2	2	0
電腦軟體應用與設計	Computer Software Application and Design				3	2	1
●工業4.0概論	Introduction to Industry 4.0				3	2	1
機械加工實務	Machining Practice				2	1	2
數位系統與實習	Digital Systems and Experiment				3	3	0
第二學年Second Year							
系統分析與設計	System Analysis and Design	3	2	1			
電子學	Electronics	3	2	1			
電子材料	Electronics Materials	3	2	1			
「AI」AI應用數學概論	Introduction to AI Applied Mathematics	3	2	1			
●資料擷取與感測器實務	Data Acquisition and Sensor Practice	3	2	1			
作業系統	Operating System	3	3	0			
△資料庫概論	Introduction to Databases				3	3	0
人際溝通	Interpersonal Communication				3	3	0
勞動法規	Labor Regulations				3	3	0
△微處理機與實習	Microprocessors and Experiment				3	2	1
材料科學導論	Introduction to Materials Science				3	3	0
電子電路概論	Introduction to Electronic Circuits				3	2	1
第三學年Third Year							
VLSI概論	Introduction to VLSI	3	3	0			
△●積體電路分析與模擬	Integrated Circuit Analysis and Simulation	3	2	1			
IC封裝製程介紹	Introduction to IC Packaging Process	3	2	1			
●Open CV影像處理實務	OpenCV Image Processing Practice	3	2	1			
3D列印工程實務	3D Printing Engineering Practice	3	2	1			
●資料庫管理系統實務	Database Management System Practice	3	3	0			
半導體物理	Semiconductor Physics				3	3	0
Flip Chip製程簡介	Introduction to Flup Chop Process				3	2	1
●物聯網控制實務	Internet of Things Control Practice				3	2	1
Bumping 製程簡介	Introduction to Bumping Process				3	2	1
「AI」AI電腦視覺實務	AI Computer Vision Practice				3	2	1
電腦輔助繪圖	Computer Aided Drafting				3	2	1
生涯規劃	Career Planning				3	2	1
第四學年Fourth Year							
●△「AI」實務專題(一)	Senior Project (I)	3	2	1			
●測試製程簡介	Introduction to Testing Process	3	2	1			
IC封裝結構力簡介	Introduction to IC Packaging Structural Force	3	2	1			
系統性創新方法實務	Systematic Innovation Method and Practice	3	2	1			
科技報告寫作	Technical Report Writing	3	3	0			
●△「AI」實務專題(二)	Senior Project (II)				3	2	1
資通訊專案管理	Information and Communication Project Management				3	2	1
●IC封裝製程簡介	Introduction to IC Packaging Process				3	2	1
「AI」AI產業應用實務	AI Industrial Application Practice				3	2	1
半導體元件	Semiconductor Components				3	2	1
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
共同選修科目General Elective Courses							
第一學年First Year							
●工程實務訓練(一)	Engineering Practical Training (I)	3	3	0			
全民國防教育軍事訓練(一)	All-Out Defense Education Military Training (I)	1	2	0			
全民國防教育軍事訓練(二)	All-Out Defense Education Military Training (II)				1	2	0
●工程實務訓練(二)	Engineering Practical Training (II)				3	3	0
第二學年Second Year							
生命關懷實務	Life Care Practice	3	3	0			
●工程實務訓練(三)	Engineering Practical Training (III)	3	3	0			
全民國防教育軍事訓練(三)	All-Out Defense Education Military Training (III)	1	2	0			
全民國防教育軍事訓練(四)	All-Out Defense Education Military Training (IV)				1	2	0
●工程實務訓練(四)	Engineering Practical Training (IV)				3	3	0
第三學年Third Year							
●工程實務訓練(五)	Engineering Practical Training (V)	3	3	0			
體育選修	Physical Education Elective	1	2	0			
體育選修	Physical Education Elective				1	2	0
●工程實務訓練(六)	Engineering Practical Training (VI)				3	3	0
第四學年Fourth Year							
專業外語(一)	Professional Foreign Language (I)	3	3	0			
●工程實務訓練(七)	Engineering Practical Training (VII)	3	3	0			
體育選修	Physical Education Elective	1	2	0			
體育選修	Physical Education Elective				1	2	0
專業外語(二)	Professional Foreign Language (II)				3	3	0
●工程實務訓練(八)	Engineering Practical Training (VIII)				3	3	0

學分/時數統計 Credit/Hour Total	第一學年First Year				第二學年Second Year				第三學年Third Year				第四學年Fourth Year			
	上學期 First Semester		下學期 Second Semester		上學期 First Semester		下學期 Second Semester		上學期 First Semester		下學期 Second Semester		上學期 First Semester		下學期 Second Semester	
	學分 Credit	學時 Hour	學分 Credit	學時 Hour	學分 Credit	學時 Hour	學分 Credit	學時 Hour	學分 Credit	學時 Hour	學分 Credit	學時 Hour	學分 Credit	學時 Hour	學分 Credit	學時 Hour
必修科目學分/時數 Required Courses Credit / Hour	16	21	16	21	17	22	16	21	13	16	6	9	3	6	3	6
最低選修科目學分/時數 Minimum Electives Courses Credit / Hour	2	2	3	3	3	3	3	3	6	6	9	9	9	9	9	9
總學分數/時數累計 Credits / Hours Total	18	23	19	24	20	25	19	24	19	22	15	18	12	15	12	15

備註Note:

- 一、 畢業至少應修滿 131 學分【必修 90 學分，選修至少 41 學分(其中至少需含本系專業選修 30 學分)】。  
Students should complete at least 131 credits before graduation, including 90 required credits, 41 elective credits (elective credits should have at least 30 credits from department elective courses).
- 二、 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.
- 三、 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.
- 四、 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.
- 五、 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.