

國立金門大學資訊工程學系課程規劃表

National Quemoy University Bachelor's Program - Department of Computer Science and Information Engineering

110 學年度入學新生適用

Applicable for Freshmen Admitted in Academic Year 2021

本學系學生畢業時至少應修滿 <u>130</u> 學分，包括 Graduation Requirement: A minimum of 130 credits, including:		修訂歷程 Revision History
共同必修 <u>8</u> 學分 General Core Curriculum: 8 credits	通識課程 <u>16</u> 學分 General Education Courses: 16 credits	114年06月04日113學年度第2學期第1次校級課程規劃委員會通過 Approved on June 4, 2025, during the 1st University Curriculum Planning Committee Meeting of the 2nd Semester, Academic Year 2024
院 必 修 <u>3</u> 學分 College Required Courses: 3 credits	系 必 修 <u>54</u> 學分 Department Required Courses: 54	
專業選修 <u>49</u> 學分(包括 <u>12</u> 學分可選修非本學系所開設之課程) Professional Electives: 49 credits (including up to 12 credits from other departments)		

		一年級 First Year		上學期 Semester	下學期 Semester	二年級 Second Year		上學期 Semester	下學期 Semester	三年級 Third Year		上學期 Semester	下學期 Semester	四年級 Fourth Year		上學期 Semester	下學期 Semester	四年 合計 Total
		學分 Cr	時數 Hr	學分 Cr	時數 Hr	學分 Cr	時數 Hr	學分 Cr	時數 Hr	學分 Cr	時數 Hr	學分 Cr	時數 Hr	學分 Cr	時數 Hr	學分 Cr	時數 Hr	
共同 必修 General Required Courses	通識 General Education	依本校「學生修習通識教育課程辦法」規定。Follow the university's "General Education Curriculum Guidelines" – 16 credits																16
	體育 Physical Education	依本校「體育課程實施辦法」規定。Follow the university's "Physical Education Curriculum Guidelines" – 0 credit																0
	國文(一)Chinese(I)	2	2															8
	英文(一)English(I)	2	2															
	服務教育 Service Education	0	1															
	國文(二)Chinese(II)			2	2													
	英文(二)English(II)			2	2													
	服務教育 Service Education			0	1													
共同必修總計Subtotal		4		4														24
專業 必修 Professional Required Courses	院必修 College Required	微積分 Calculus	3	3														3
	院必修總計 Subtotal		3															3
	系必修 Department Required Courses	程式設計 Programming	3	3		計算機結構 Computer Architecture	3	3		作業系統 Operating System	3	3						54
		數位邏輯 Digital Logic	3	3		資料結構 Data Structure	3	3		專題製作(一) Senior Projects (I)	3	3						
		多媒體概論 Multimedia Introduction	3	3		電路學 Circuits Studies	3	3		專題製作(二) Senior Project(II)		3	3					
		計算機概論 Information to computer	3	3		系統程式 System Programming		3	3									
		線性代數 Linear Algebra			3	3	資料庫系統管理 Database System and Management		3	3								
		程式設計進階 Advanced Programming			3	3	離散數學 Discrete Mathematics		3	3								
		資訊網路 Computer Networks			3	3												
		網頁設計 Web Site Design			3	3												
		資訊科技英文導論 English for Information Technology			3	3												
	系必修總計 Subtotal		12		15			9		9		6		3				54
專業必修總計Subtotal			15		15			9		9		6		3				57
一般選修 General Elective Courses		套裝軟體認證 Package software Authentication	2	2		資訊科技認證 Information technology certification	2	2		機率與統計 Probability and Statistics	3	3		專題研究(一) Directed Research(I)	2	2		
		電腦輔助電路設計與模擬 Computer-aided circuit design and simulation	3	3		智慧型行動裝置軟體設計 Smartphone device software	3	3		軟體工程與演算法 Software Engineering and Algorithm	3	3		工程倫理 Engineering Ethics	3	3		
		電腦應用軟體認證 Computer Application Software Certification			3	3	視窗程式設計 Window Programming	3	3	遊戲程式設計 Game Programming	3	3		校外專業實習(一) Outside exertise (I)	4	4		
		數位邏輯實習 Digital logic internship			3	3	iOS程式設計 iOS Programming		3	3	多媒體應用軟體 Multimedia Applications Softwares	3	3	國際資訊證照導論 Information Authentication	2	2		
							多媒體程式設計 Multimedia Programming		3	3	演算法 Introduction to Algorithms	3	3	雲端資訊認證 Cloud Information Certification	2	2		
										行動科技與生活 Mobile Technology and life		2	2	專題製作(三) Senior Project(III)	3	3		
										VR科技應用導論 Introduction to VR Technology Application		2	2	食微粒子分析應用 Food particle analysis applications	2	2		
										多媒體整合 Multimedia Conformity		3	3	專題研究(二) Directed Research (II)		2	2	

專業
選修
Professional
Electives

																企業實務培訓 Enterprises Practical Training			3	3	
																校外專業實習(二) Extramural Practicum (II)			4	4	
																元宇宙在精準健康產業的應用 pplication of Metaverse Technology in Precision Health Industry			2	2	
網路技術與應用 選修 Elective Courses of Computer Network						TCP/IP協定 TCP/IP Protocol Suite	3	3			伺服器架設 Server Setup & Maintenance	3	3			雲端通訊整合實務 Integration to smart grid technology and cellular communication of practices	3	3			
						網站設計進階 Advanced Web Site Programming	3	3			Linux系統自動化運維 Automatic Operation and Maintenance for Linux System		3	3		資訊安全與隱私 Information Security and Privacy	3	3			
						Linux作業系統實務 Practice of Linux Operating System			3	3	互動式網頁程式設計 Interactive Web Programming			3	3	高等資料庫 Advanced Database System	3	3			
																計算機網路 Computer Network	3	3			
																電腦網路安全概論 Introduction to Computer and Network Security	3	3			
																無線網路 Wireless Networks	3	3			
																網路模擬與分析 Network Simulation and Performance Analysis			3	3	
																雲端運算 Cloud Computing			3	3	
																電腦網路安全實務 Computer Network Security Practices			3	3	
																資訊與網路安全概論 Introduction to Information and Network Security			3	3	
人工智慧選修 Elective Courses of AI						現代程式語言 Modern Programming Language	3	3			數值分析 Numerical analysis	3	3			資料科學 Data Science	3	3			
						演算法與資料分析 Algorithm and Data Analysis			3	3	資料探勘導論 Introduction to data mining	3	3			智慧計算專題講座 Smarter Computing Seminar	3	3			
						資料處理實務 Data Processing Practices			3	3	科學計算 Scientific Computing	3	3			深度學習概論 Introduction to Deep Learning	3	3			
											人工智慧導論 Introduction to Artificial Intelligence	3	3			模式識別 Pattern Recognition	3	3			
											人工智慧 Artificial Intelligence			3	3	人工智慧實務 Practical Artificial Intelligence			3	3	
											商業數據分析應用 Business Data Analytics Applications			3	3	計算式智慧 Computational Intelligence			3	3	
											機器學習 Machine Learning			3	3	深度學習 Deep Learning			3	3	
																影像處理 Image Processing			3	3	
																人工智慧在酒類檢測與分析 Artificial Intelligence in Wine Detection and Analysis			2	2	
智慧物聯網選修 Elective Courses of AIoT						電路學實習 Circuits and internships	3	3			微電腦數位實習 Micro-Computer Digital Practice	3	3			物聯網智慧應用 Intelligent IoT Applications	3	3			
						電子電路 Electronic Circuit			3	3	嵌入式系統概論 Introduction to Embedded System	3	3			互動式程式設計 Interactive programming	3	3			
						單晶片 原理應用 Pinciples and applications of single chip microcomputer lab			3	3	嵌入式微處理器系統 Ebedded processor systems			3	3	硬體描述語言程式設計與模擬 System Design Using Hardware Description Language	3	3			
						電子電路實驗 Electronic Circuit Experiment			3	3						智慧型機器人 Intelligent robots			3	3	
						電腦硬體裝修 Computer Hardware Decoration			3	3											
TAICA選修 Elective Courses of TAICA																機器導航與探索 Robotic Navigation and Exploration			3	3	
																生成式人工智慧的人文導論 Introducing Generative AI for Humanities			3	3	
																生成式AI文字與圖像生成的原理與實務 Generative AI: Text and Image Synthesis Principles and Practice			3	3	

專業選修總計Subtotal		5	6			20	27			36	25			57	42	218
學期總計Subtotal		24	25			29	36			42	28			57	42	283

備註：

1.本表適用於110(含)學年起入學之資訊工程學系學生。

This table applies to students admitted to the Department of Computer Science and Information Engineering from the 110th academic year (inclusive).

2.本系畢業學分最低為130學分，學生必須修畢共同必修課程24學分(共同科目8學分、通識16學分)、專業必修57學分(含院必修6學分)、專業選修至少49學分(包括12學分可選修非本系所開設之專業課程)，且學生須通過「本校學生英文及資訊能力畢業門檻及輔導辦法」相關規定始可畢業。

The total required credits for graduation are 130 credits. Students must complete the following credits: 24 credits of general core (8 credits of general required courses, 16 credits of general education courses), 57 credits of professional required courses (including 6 credits of college required courses), and at least 49 credits of professional elective courses (including 12 credits that can be selected from professional courses offered by other departments). Additionally, students must pass the school's English and information skills requirements in order to graduate.

3.本系要求110入學者須於大學四年中取得本系表列之任一資訊相關專業證照方可畢業。

Students admitted in the 110th academic year and thereafter are required to obtain one of the information-related professional certifications listed by this department during their four years of study.

4.學測成績達70級分同學，可依志願優先推薦成為國内外交換生，於交換學校所修習系之學分，得採計為系上各式之畢業學分，總數以畢業總學分四分之一為限；學測成績達75級分同學，可依其志願採保障名額成為國内外交換生，於交換學校所修習系之學分，得採計為系上各式之畢業學分，總數以畢業總學分二分之一為限。

This is a description about the general scholastic ability test for senior high school in this country and does not apply to international students.

5.大學部學生可選修碩士班課程，依「國立金門大學一貫修讀學、碩士學位辦法」申請抵免。

Undergraduate students may take master's level courses and apply for credit exemption according to the "Five-year study plan for bachelor's and master's degrees".

6.相同課程名稱適用碩士班。

The same course titles apply to the master's course.

7.表列選修科目為預定科目，將視實際需要而調整。

The listed elective courses are planned courses and may be adjusted based on actual needs.