資訊工程系 四技 114 學年度入學課程結構規劃表

2025 Curricula for the Day School (4-year College Program) in Department of Computer Science and Information Engineering

課程類別 Course Category				一年級 1st Academic Year						二年級 2nd Academic Year						三年級 3rd Academic Year						四年級 4th Academic Year					
				第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2		
				課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours
校共同必修課程 University-wide Common Core Requirements			應修學分數 12 學分 (12 credits)	中文閱讀與表達(一) Chinese Reading and Expression (I)	2	2	中文閱讀與表達(二) Chinese Reading and Expression (II)	2	2																		
				實用英文(一) Practical English (1)	2	2	實用英文(二) Practical English (2)	2	2	實用英文(三) Practical English (3)	2	2	實用英文(四) Practical English (4)	2	2												
				體育(一) Physical Education (1)	0	2	體育(二) Physical Education (2)	0	2	體育(三) Physical Education (3)	0	2	體育(四) Physical Education (4)	0	2												
通識課程 General Education Courses	校訂通識 University General Education Domains	基礎探索入門 Introduction to Basic Exploration	應修學分數 至少 2 學分 (min. required: 2 credits)	校訂通識/2/2 University General Education /2/2 校訂(一)藝術美感探索 Exploration in Arts and Beauty、校訂(二)運算與程式設計 Computing and Programming、校訂(三)生命與倫理 Life and Ethics、 校訂(四)走讀高雄 Field Study of Kaohsiung、校訂(五)海洋科技與永續 Sustainable Marine Science and Technology、校訂(六)創意與創新 Creativity and Innovation																					
	博雅通識 Liberal Curriculum Domains	人文與創意美感 Humanities and Creative Aesthetics	應修學分數 14 學分 （至少任選 3 課群） (min. required: 14 credits across at least 3 different course groups)	博雅通識/學分數/時數 Course Name/Credits/Hours																						
		科技與數位知能 Technology and Digital Literacy		博雅通識/學分數/時數 Course Name/Credits/Hours																						
		社會與身心關懷 Society and Physical and Mental Well-being		博雅通識/學分數/時數 Course Name/Credits/Hours																						
		歷史與多元思維 History and Diversity of Thought		博雅通識/學分數/時數 Course Name/Credits/Hours																						
		全球與永續議題 Global and Sustainable Issues		博雅通識/學分數/時數 Course Name/Credits/Hours																						

課程類別 Course Category			一年級 1st Academic Year						二年級 2nd Academic Year						三年級 3rd Academic Year						四年級 4th Academic Year					
			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2		
			課程名稱 Course Name	學分數 Credits	時數	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours
	通識微學分 General Education Micro-credits		通識微學分(一)/1 General education micro-credits course 1/1、通識微學分(二)/1 General education micro-credits course 2/1、通識微學分(三)/1 General education micro-credits course 3/1、通識微學分(四)/1 General education micro-credits course 4/1、通識微學分(五)/1 General education micro-credits course 5/1、、通識微學分(六)/1																							
學院共同課程（由學院開課）College Common Courses	選修 Elective		工程實作實習/3/3Engineering Practice/3/3、物理實驗與演示/1/3 Physics Experiments and Demonstrations/3/3																							
學院跨領域課程（由學院開課）College Interdisciplinary Courses	選修 Elective		光：訊號與能源/3/3Light: signal and energy/3/3、機器人程式編程與演算法概念/2/2Basic concept of programming and algorithms for robotics/2/2、虛擬實境互動實務/1/3The Practice of Virtual Reality Interaction/1/3、3D 列印實務/1/33D Printing and Practice/1/3、智慧科技應用專論/3/3Topics on Applications of Smart Technology/3/3、車用電子應用及實務/3/3Special Topics for Automotive Electronic Industry/3/3、機光電半導體封測/3/3Mechantronic and Optoelectronic semiconductor packaging and test/3/3、半導體設備真空系統實務/3/3Semiconductor Manufacturing Process and Equipments:Vacuum Technology and Practice/3/3、半導體製程設備實務培訓/3/3 Hands-on Training in Semiconductor Manufacturing Process and Equipments/3/3、半導體設備基礎技能實務/3/3Fundamental Knowledge and Skills of Semiconductor Processing Equipment/3/3、半導體設備元件儀控系統實務/3/3Semiconductor Equipment Instrumentation & Control Engineering/3/3、數位治理與數位轉型/3/3Digital Governance and Digital Transformation/3/3。																							
系專業課程 Departmental Professional Courses	必修 Required	應修學分數 53 Number of Courses Needed/ Credits Needed53	數位邏輯設計 Digital Logic Design	3	3	計算機結構 Computer Architecture	3	3	物件導向程式設計 Object-oriented Programming	3	3	線性代數 Linear Algebra	3	3	演算法 Algorithms	3	3	實務專題(二) Special Topics (2)	1	3						
			微積分(一) Calculus (1)	3	3	網際網路暨應用 Internet and Its Applications	3	3	資料結構 Data Structures	3	3	計算機網路 Computer Networks	3	3	作業系統 Operating Systems	3	3									
			計算機程式設計 Computer Programming	3	3	微積分(二) Calculus (2)	3	3	離散數學 Discrete Mathematics	3	3	機率與統計 Probability and Statistics	3	3	資料庫 Database Systems	3	3									

課程類別 Course Category			一年級 1st Academic Year						二年級 2nd Academic Year						三年級 3rd Academic Year						四年級 4th Academic Year					
			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2		
			課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours
			計算機概論 Foundation of Computer Science	3	3							微處理機 Microprocessor	3	3	實務專題(一) Special Topics (1)	1	3									
	選修 Elective	應修學分數 47 Number of Courses Needed/ Credits Needed47	計算機程式設計實習/2/3 Computer Programming/2/3						物件導向程式設計實習/2/3 Object-Oriented Programming Design Practice/2/3						網際網路協定/3/3 Internet Protocols/3/3						高速網路/3/3 High-Speed Networks/3/3					
			數位邏輯設計實習/2/3 Digital Logic Design Practice/2/3						微處理機實習/2/3 Practice on microprocessor programming/2/3						數位信號處理/3/3 Digital Signal Processing/3/3						生物資訊資料庫/3/3 Biomedical Databases/3/3					
			多媒體程式設計/3/3 Multimedia Programming/3/3						工程數學/3/3 Engineering Mathematics/3/3						資料壓縮/3/3 Data Compression						影像壓縮/3/3 Image Compression/3/3					
			互動式網頁程式設計/3/3 Design and Implementation of Interactive Web Services/3/3						資料結構實務/3/3 Data Structures Practice/3/3						電腦圖學概論/3/3 Introduction To Computer Graphics/3/3						語音壓縮/3/3 Speech Compression/3/3					
			資訊工程概論/3/3 Introduction for Information Engineering/3/3						系統程式/3/3 Systems programming/3/3						硬體描述語言設計/3/3 Design with Hardware Description Language/3/3						電腦遊戲設計實務/3/3 Computer Games Programming Project/3/3					
			數位電子學/3/3 Digital Electronics/3/3						通訊系統概論/3/3 Introduction To Communication Systems/3/3						數值分析/3/3 Numerical Analysis/3/3						虛擬實境/3/3 Virtual Reality Systems/3/3					
			組合語言程式設計/3/3 The Programming Design of Assembly Languages/3/3						網路程式設計實務/3/3 Internet Program Design Project/3/3						嵌入式系統/3/3 Embedded Systems/3/3						資訊安全/3/3 Information Security/3/3					
			物理(一)/3/3 Physics(1)/3/3						視窗程式設計/3/3 Window Program Design/3/3						網路資料庫程式設計/3/3 Internet Database Program Design/3/3						分散式系統/3/3 Distributed Systems/3/3					
			物理(二)/3/3/ Physics(2) /3/3												生物資訊概論/3/3 Introduction to Bioinformatics/3/3						多媒體資料庫/3/3 Multi-Media Data Base/3/3					
			物理實驗(一)/1/3 Physics Experiment (1) /1/3												無線網路/3/3 Wireless Networks/3/3						程式語言/3/3 Programming Language/3/3					
			物理實驗(二)/1/3												計算分子生物學/3/3						資料探勘/3/3					

課程類別 Course Category			一年級 1st Academic Year						二年級 2nd Academic Year						三年級 3rd Academic Year						四年級 4th Academic Year					
			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2		
			課程名稱 Course Name	學分數 Credits	時數	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours
			Physics Experiment (2)/1/3												Computational Molecular Biology/3/3						Data Mining/3/3					
															數位影像處理/3/3 Digital Image Processing/3/3						IoT 系統實務整合應用/3/3 Practical Integrated Application of IoT system/3/3					
															三維電腦圖學/3/3 Three-dimensional Computer Graphics/3/3						Linux 系統實務整合應用/3/3 Practical Integrated Application of Linux System/3/3					
															語音信號處理/3/3 Speech Signal Processing						網路安全/3/3 Network Security/3/3					
															動畫程式設計實務/3/3 Computer Animation Programming Project/3/3						行動計算/3/3 Mobility Computing/3/3					
															資訊理論/3/3 Information Theory/3/3						平行處理/3/3 Parallel Processing/3/3					
															Linux 系統/3/3 Linux operating system/3/3						多媒體網路通訊/3/3 Multimedia Networks and Communication/3/3					
															人工智慧/3/3 Artificial Intelligence/3/3						數位視訊處理/3/3 Digital Video Processing/3/3					
															編譯器/3/3 Compiler/3/3						電腦視覺/3/3 Computer Vision/3/3					
															嵌入式系統程式設計實務/3/3 Embedded System Programming/3/3						語音辨認/3/3 Speech Recognization/3/3					
															軟體工程/3/3 Software Engineering/3/3						編碼理論/3/3 Coding Theory/3/3					
															APP 程式設計(一)/3/3 APP Programming (1) /3/3						神經網路/3/3 Neutral Network					
															APP 程式設計(二)/3/3 APP Programming (2) /3/3						數學邏輯導論/3/3 Introduction of Mathematical Logic/3/3					
																					深度學習理論與實作/3/3					

課程類別 Course Category			一年級 1st Academic Year						二年級 2nd Academic Year						三年級 3rd Academic Year						四年級 4th Academic Year					
			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2		
			課程名稱 Course Name	學分數 Credits	時數	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours
																					Deep Learning Theory and Practice/3/3					
																					智能合約開發與應用/3/3 Development and Application of Smart Contract/3/3					
																					學期實習(一)/9 Industry Internship for Safety, Health and Environmental Engineering(一) /9					
																					學期實習(二)/9 Industry Internship for Safety, Health and Environmental Engineering(二)					
																					暑期實習/2 Summer Intern/2					
																					專案實習(一)/2 Project practicum(1) /2					
																					專案實習(二)/2 Project practicum(2) /2					

備註：

一、畢業總學分數為 128 學分。

二、必修 53 學分，選修 47 學分。(不含校共同必修課程及通識課程的學分數)

三、校共同必修課程及通識課程 28 學分；相關規定依據本校「共同教育課程實施辦法」、「共同教育課程結構規劃表」及「語言教學實施要點」。

四、須修滿英(外)語 8 學分，本國籍學生英語畢業門檻為等同 CEFR B1 以上程度之各類英檢成績，或通過校內英語畢業門檻檢定考試；各系自訂英語畢業門檻高於校訂者，另依該系規定。在學期間參加一次各類公開英檢考試或八次校內英語畢業門檻檢定考試，未通過者，應提出考試成績證明，重複修讀實用英文(三)或實用英文(四)並獲通過，且該重複修讀課程不計入畢業學分。多益成績達 550 分(或等同 CEFR B1 等級)以上者得免修大一英語(4 學分)；多益成績達 785 分(或等同 CEFR B2 等級)以上者得免修大一、大二英語(8 學分)，但須選修主題式英語或其他外語課程補足語言畢業學分數。其他外語課程請參閱外語教育中心課程結構規劃表。

五、學生修讀所屬學院之「學院共同課程」應認列為本系專業課程學分；修讀所屬學院之「學院跨領域課程」或其他學院開課之

課程，則認列為外系課程學分。

六、系所訂定條件（學程、檢定、證照、承認外系學分、擋修規定、各教學分組之畢業應修學分數及其他）

（一）非本系開設之專業選修課程至多可承認 12 學分(非電資學院內各系所開設之課程至多可承認 6 學分)。

（二）本系學生動手學習之實務專業課程，必修：計算機程式設計 3/3、網際網路暨應用 3/3、物件導向程式設計 3/3、資料結構 3/3、微處理機 3/3、演算法 3/3、作業系統 3/3、資料庫 3/3、實務專題(一)1/3、實務專題(二)1/3；選修：計算機程式設計實習 2/3、多媒體程式設計 3/3、互動式網頁程式設計 3/3、物件導向程式設計實習 2/3、資料結構實務 3/3、網路程式設計實務 3/3、視窗程式設計 3/3、微處理機實習 2/3、資料壓縮 3/3、網路資料庫程式設計 3/3、動畫程式設計實務 3/3、Linux 系統 3/3、編譯器 3/3、嵌入式系統程式設計實務 3/3、高速網路 3/3、電腦遊戲設計實務 3/3、資訊安全 3/3、資料探勘 3/3、網路安全 3/3、平行處理 3/3、校外暑期實習 2、組合語言程式設計 3/3。

（三）其中系專業選修科目得選修本校電子系或電機系課程；大四得選修電機與資訊學院各系所之研究所課程。

Notes:

1. Minimum credits required to graduate: 128 .
2. Required courses: 53 credits; elective courses: 47 credits (excluding credits earned from university-wide common core requirements and general education courses)
3. University-wide common core requirements and general education courses total 28 credits. The relevant regulations are based on the school's "Implementation Regulations of Courses in the College of General Education", "Course Schedule of College of the General Education," and "Implementation Regulations of Language Education".
4. Students are required to complete 8 credits in English or other foreign languages. For domestic students, the English graduation requirement is to achieve a language proficiency equivalent to CEFR level B1 or above through various recognized English proficiency tests, or by passing the university's internal English graduation proficiency test. If a department sets a higher English proficiency requirement than the university standard, students must follow the departmental regulations. During their studies, students must either take at least one official English proficiency test or participate in the internal English graduation proficiency test up to eight times. Those who do not pass must provide proof of test scores and retake "Practical English (III)" or "Practical English (IV)" and pass the course. However, these repeated courses will not count toward graduation credits. Students who obtain a TOEIC score of 550 or above (or an equivalent CEFR B1 level) are exempt from Freshman English (4 credits). Those who achieve a TOEIC score of 785 or above (or an equivalent CEFR B2 level) are exempt from both Freshman and Sophomore English (8 credits), but must take Theme-based English or other foreign language courses to fulfill the total required credits for language studies. For other foreign language course options, please refer to the Curriculum Structure Plan provided by the Foreign Language Education Center.
5. Credits earned by students from the common courses offered by their respective colleges shall be accepted as their affiliated departments' professional courses. However, credits earned from interdisciplinary courses offered either by their colleges or by other colleges will be accepted as credits earned from departments outside their own.
6. Departmental requirements (programs, certifications, licenses, recognition of external department credits, prerequisite requirements, credits needed for each teaching division, and other requirements):
    1. Up to 12 credits can be recognized for professional elective courses not offered by this department (up to 6 credits for courses offered outside the College of Electrical Engineering and Computer Science).
    2. Practical professional courses for students in this department: Required: Computer Programming 3/3, Internet and Applications 3/3, Object-Oriented Programming 3/3, Data Structures 3/3, Microprocessors 3/3, Algorithms 3/3, Operating Systems 3/3, Databases 3/3, Practical Project (I) 1/3, Practical Project

(II) 1/3; Elective: Computer Programming Practice 2/3, Multimedia Programming 3/3, Interactive Web Programming 3/3, Object-Oriented Programming Practice 2/3, Practical Data Structures 3/3, Practical Network Programming 3/3, Windows Programming 3/3, Microprocessor Practice 2/3, Data Compression 3/3, Network Database Programming 3/3, Animation Programming Practice 3/3, Linux System 3/3, Compiler 3/3, Embedded Systems Programming Practice 3/3, High-Speed Networking 3/3, Computer Game Design Practice 3/3, Information Security 3/3, Data Mining 3/3, Network Security 3/3, Parallel Processing 3/3, Off-campus Summer Internship 2, Assembly Language Programming 3/3.

3. Among the department's professional elective subjects, courses from the university's Department of Electronics or Department of Electrical Engineering can be selected; seniors may choose graduate courses from the departments of the College of Electrical Engineering and Computer Science.