資訊工程系　博士班　114 學年度入學課程結構規劃表

2025 Curricula for the Ph.D. 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					
			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
	必修 Required	應修學分數 14 學分 Credits Needed14	專題研討(一) Seminar (1)	2	2	專題研討(二) Seminar (2)	2	2	專題研討(三) Seminar (3)	2	2	專題研討(四) Seminar (4)	2	2
												論文 Thesis	6	6

專業課程 Professional Courses	選修 Elective	應修學分數 18 學分 Credits needed18				
			生物計算/3/3 Biomedical Algorithms/3/3 高等計算機網路/3/3 Advanced Computer Network/3/3 高等演算法/3/3 Advanced Algorithms Analysis/3/3 數位影像處理/3/3 Digital Image Processing/3/3 資料探勘/3/3 Data Mining/3/3 高等物件導向程式設計/3/3 Advanced Object-Oriented Programming/3/3 網路協定工程/3/3 Network Protocol Engineering/3/3 高等 Linux 系統整合應用/3/3 Advanced Integrated Application of Linux System 3/3 基因演算法/3/3 Genetic Algorithm/3/3	電腦視覺/3/3 Computer Vision/3/3 圖型辨識/3/3 Pattern Recognition/3/3 高等人工智慧/3/3 Advanced Artificial Intelligence/3/3 網路安全/3/3 Network Security/3/3 密碼學/3/3 Cryptography 巨量資料分析/3/3 Big Data Analysis/3/3 智慧計算/3/3 Intelligent Computation/3/3 高等資料庫/3/3 Advanced Database/3/3 雲端計算與服務/3/3 Cloud Computing and Services/3/3	圖形理論/3/3 Graphic Theory/3/3 類神經網路/3/3 Neural Networks/3/3 計算機圖學/3/3 Computer Graphics/3/3 生物資訊學/3/3 Introduction To Computational Biology/3/3 自然語言處理/3/3 Natural Language Processing/3/3 區塊鏈技術與應用/3/3 Blockchain Technology and Application/3/3 量子電腦程式設計/3/3 Programming Design of Quantum Computers/3/3 量子電腦進階程式設計/3/3 Advanced Quantum Programming of Quantum Computers/3/3 網路科學與社會計算/3/3 Network Science and Social Computing/3/3	機器學習/3/3 Machine Learning/3/3 深度學習/3/3 Deep Learning/3/3 強化學習/3/3 Reinforcement Learning/3/3 整合學習/3/3 Ensemble Learning/3/3 機率學習/3/3 Probabilistic Learning/3/3 資料科學/3/3/3 Data Science 資料科學專題/3/3 Seminar on Data Science/3/3	

備註：

一、畢業總學分數為 32 學分。

二、必修 14 學分，選修 18 學分。

三、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。

四、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）其他系所所開設之選修課程至多可承認 3 學分。

（二）若有計畫型之課程要開設，需經系務會議通過。

Notes:

1. Minimum credit required to graduate: ___32___ .
2. Required coursess: ___14___ credits; elective courses: ___18___ credits.
3. Credits earned by students from the common courses offered by their respective colleges shall be accepted as their affiliated department's professional courses. However, credits earned from interdisciplinary courses offered either by their college or by other colleges will be accepted as credits earned from departments outside their own.
4. Departmental requirements (programs, certifications, licenses, recognition of external department credits, prerequisite requirements, credits needed for each teaching division, and other requirements):
   (1) Elective courses offered by other departments may be credited up to a maximum of 6 credits.
   (2) If a planned course is to be offered, it must be approved by the department meeting.