

萬能科技大學 111學年度 電資研究所 碩士班 課程規劃表

Curriculum for Master's Degree in Graduate Institute of Electrical Engineering and Computer Science, Vanung University

Academic Year 2022

學年 Academic Year	一		二			
學期 Semester	上	下	上	下	專業必修學分 Professional Compulsory Credits	4
每學期最高學分限制 Maximum credit limit per semester	15	15	15	15	最低選修學分 Minimum Professional Elective Credits	20
每學期最低學分限制 Minimum credit limit per semester	1	1	1	1	畢業應修最低學分 Minimum Credits Requirement for Graduation	24

註 Note :
 1. 畢業應修最低學分24學分。The minimum credits required for graduation are 24 credits.
 2. 本碩士班未開設之課程可至外系所選修，但課程需與本所相關。並於選課前提出申請，且經所長核准後，始得列入畢業學分。惟專業學分內最多含6學分外系所課程。碩士論文學分另計。Courses not offered in this master's program can be taken in external departments, but the courses must be related to this institute. And submit an application before course selection, and only after being approved by the director can it be included in the graduation credits. However, the graduation credits include at most 6 credits of courses from other departments. 6 credits for master's thesis.
 3. 本碩士班研究生每學期修課不得超過15學分。Graduate students of this master's program must take no more than 15 credits per semester.
 1110310系課程會議、1110310系務會議通過。Approved by 1110310 department course meeting and 1110310 department affairs meeting.

學年 Academic Year Year 課程 Course 架構 Course	第一學年 The First Academic Year				第二學年 The Second Academic Year					
	科目 Subject		科目 Subject		科目 Subject		科目 Subject			
	學分 Credits	時數 Hours	學分 Credits	時數 Hours	學分 Credits	時數 Hours	學分 Credits	時數 Hours		
專業基礎 必修課程 Required Professional Course of Department	專題討論(一) Seminar (I)	1	1			專題討論(三) Seminar (III)	1	1		
	專題討論(二) Seminar (II)			1	1	專題討論(四) Seminar (IV)			1	1
	小計 Subtotal	1	1	1	1	小計 Subtotal	1	1	1	1
專業 選修課程 Professional Department Elective Courses	物聯網應用實務 Application and Practice for Internet of Thing	3	3							
	高等演算法 Advanced Algorithms	3	3							
	人工智慧 Artificial Intelligence	3	3							
	高等雲端程式設計 Programming for Clouding	2	3							
	機器學習 Machine Learning	3	3							
	高等資料庫系統 Advanced Database Systems	3	3							
	高等計算機網路 Advanced Computer Network	3	3							
	資訊安全實務 Practices of Information Security	3	3							
	軟體工程 Software Engineering	3	3							
	資料探勘 Data Mining	3	3							
	數位信號處理 Digital Signal Process	3	3							
	自主性機器人 Autonomous Robot	2	3							
	Python/R資料處理 Data Access using Python or R	2	3							
	感測器融合 Sensor Fusion	2	3							
	區塊鏈與加密貨幣 Blockchain and Cryptocurrency	2	3							
	深度學習 Deep Learning			3	3					
	機器人學 Robotics			2	3					
	高等影像處理 Advanced Image Processing			3	3					
	大數據 Big Data			3	3					
	無線通訊與網路 Wireless Communication Network			3	3					
	行動計算 Mobile computing			3	3					
	網路安全實務 Network Security Practices			3	3					
	密碼學 Cryptography			3	3					
高等計算機結構 Advanced Computer Architectures			2	3						
圖形識別 Pattern Recognition			2	3						
類神經網路與應用 Neural Networks			2	3						
巨資料分析 Big Data Analysis			2	3						
資料視覺化 Data Visualization			2	3						
量子電腦與量子計算 Quantum Computers and Quantum Computation			2	3						
強化學習 Reinforcement Learning			2	3						
總開課學分 Total Credits										
24										
總開課時數 Total Teaching Hours										
最低應選修學分 Minimum Elective Credits	10	12	10	12	最低應選修學分 Minimum Elective Credits	0	0	0	0	
28	總計 Total		11	13	總計 Total		1	1	1	1