

# 國立虎尾科技大學 資訊工程系 碩士班課程科目表

(114 學年入學適用)

## Curriculum Table (Since 2025 Academic Year)

### Graduate Class

## Department of Computer Science and Information Engineering National Formosa University

114 年 3 月 26 日 113 學年第二學期資工系第 3 次課程委員會議通過

114 年 6 月 16 日 113 學年第 4 次教務會議通過

114 年 12 月 2 日 114 學年第一學期資工系第 3 次課程委員會議修正通過

115 年 1 月 7 日 114 學年第 2 教務會議通過

Academic Year	First Year					
Semester	First			Second		
Required Courses	Subject	Credit	Hours	Subject	Credit	Hours
	專題研討(一) Project Discussion (1)	0	2	專題研討(二) Project Discussion(2)	0	2
	書報討論(一) Seminar(1)	0	2	書報討論(二) Seminar(2)	0	2
	科技論文寫作 Scientific Writing	3	3			
	<b>碩士班外國學生必修課程</b>					
	<b>Additional Compulsory Courses for Overseas Students in Master's Program (Applicable for Non-Mandarin Native Speakers)</b>					
	Subject	Credit	Hours	Subject	Credit	Hours
	華語教學(一) Mandarin(1)	0	4	華語教學(二) Mandarin(2)	0	4
Elective Courses	物聯網 Internet of Things	3	3	新一代 web 技術 New Generation Web Technology	3	3
	圖形識別 Pattern Recognition	3	3	軟體硬體協同設計與應用 Software and Hardware Co-design and Applications	3	3
	電腦視覺處理 Computer Vision Processing	3	3	數位視訊處理 Digital Video Processing	3	3
	感測網路 Sensor Network	3	3	資料隱藏 Data Hiding	3	3
	感測網路實驗 Sensor Network Experiments	3	3	高等演算法 Advanced Algorithms	3	3
	生物計算 Computational Biology	3	3	智慧型機器人系統應用專題 Intelligent Robot System Application Project	3	3
	可編程系統單晶片設計實務 SOPC Design	3	3	雲端作業系統 Cloud Operating Systems	3	3
	行動商務安全 M-Commerce Security	3	3	行動計算與應用 Mobile Computing and Applications	3	3

	網路安全維運 Network Security Maintenance	3	3	數值方法 Numerical Methods	3	3
	機器人作業系統 Robot Operating System	3	3	生物資訊學 Bioinformatics	3	3
	校外實習-產學研發實習(一) Industrial Research and Development Lab(1)	3	3	嵌入式車載通訊電子網路系統設計 Embedded Telematics Electronic Network System Design	3	3
	<b>巨量資料分析 Big Data Analysis</b>	<b>3</b>	<b>3</b>	數論 Number Theory	3	3
				無線網路協定 Wireless Network Protocols	3	3
				USB 驅動程式實作 USB Device Driver	3	3
				深度學習 Deep Learning	3	3
				物聯網安全 Internet of Things Security (IoT Security)	3	3
				雲端大數據安全 Cloud Computing and Big Data Security	3	3
				行動寬頻網路 Mobile Broadband Network	3	3
				模糊計算 Fuzzy Computing	3	3
				AI 系統建模與應用 (AI Model Programming and Applications)	3	3
				校外實習-產學研發實習(二) Industrial Research and Development Lab(2)	3	3
<b>Academic Year</b>	<b>Second Year</b>					
<b>Semester</b>	<b>First</b>			<b>Second</b>		
Required Courses	Subject	Credit	Hours	Subject	Credit	Hours
	碩士論文(一) Master's Thesis(1)	3	0	碩士論文(二) Master's Thesis(2)	3	0
<b>Elective Courses</b>	<b>Subject</b>	<b>Credit</b>	<b>Hours</b>	<b>Subject</b>	<b>Credit</b>	<b>Hours</b>
	多媒體通訊 Multimedia Communications	3	3	影像擷取裝置設計與應用 Image Capturing Device Design and Application	3	3
	高等隱藏學 Advanced Steganography	3	3	高等人工智慧 Advanced Artificial Intelligence	3	3
	資料壓縮 Data Compression	3	3	網路協定工程 Networks Protocol Engineering	3	3
	多代理人系統 Multiagent System	3	3	平行演算法 Parallel Algorithm	3	3

演化式基因演算法 Evolutionary Genetic Algorithm	3	3	密碼學 Cryptography	3	3
機器學習 Machine Learning	3	3	智慧型最佳化演算法 Intelligent Algorithm of Optimization	3	3
高等數位系統設計 Advanced Digital Design	3	3	下世代行動通訊網路 Next Generation Mobile Communication Networks	3	3
資通訊安全專論 Information and Communication Security	3	3	校外實習-產學研發實習 (四) Industrial Research and Development Lab(4)	3	3
校外實習-產學研發實習 (三) Industrial Research and Development Lab(3)	3	3			

備註：

1. 本系碩士班研究生最低畢業總學分數為 30 學分，其中必修包含論文 6 學分、科技論文寫作 3 學分及二學期之專題研討及書報討論，專業選修至少須修滿 21 學分，其中 6 學分可選修外系課程，唯須經指導教授同意。
  2. 研究生修畢碩士學位應修課程(含通過學術研究倫理教育課程)，得申請學位考試。詳細規定請參閱「國立虎尾科技大學資訊工程系碩士班研究生修業規章」。
  3. 外國學生須於畢業前修畢「華語教學(一)」及「華語教學(二)」，相關規定詳「外國學生修讀華語課程實施要點」。  
外國學生修讀「華語教學(一)」及「華語教學(二)」可免修「書報討論(一)」及「書報討論(二)」；修讀「華語教學(三)」或「華語教學(四)」可擇一抵免「專題研討(一)」。外國學生開放選修外系全英文授課課程，唯須經指導教授同意，不受上述 6 學分限制。
1. Please note that for students in the CSIE Department the minimum requirement for completing postgraduate study is four-consecutive semesters of study and 30 credits. At least 6 of the required credits must be for the successful completion of a thesis, 3 credits for scientific research writing, and at least 21 credits from elective courses. Up to 6 elective course credits can be taken from other departments, however students wanting to enroll in courses outside of the CSIE Department must first secure permission from their supervisor.
  2. The Postgraduate students who completed all the required subjects of a master's degree course(including passing an academic research ethics education course) must apply for a degree examination. For detailed regulations, please refer to the "Provisional Regulations for Graduate Studies of the Department of Computer Science and Information Engineering, National Formosa University".
  3. International Students of NFU are required to take and pass "Mandarin (1)" and "Mandarin (2)" courses before graduation. For more details, please refer to "Mandarin Course Requirements for NFU International Students". Seminar Course (1) and Seminar Course (2) can be exempted if students receive the required credits for Mandarin (1) and Mandarin (2) subjects. Students can choose Mandarin (3) or Mandarin (4) subject to waive credits for the Special Discussion Course (1). Enrolling in English instructed other than the CSIE department courses at NFU needs to first obtain permission from their supervisors beforehand. Otherwise, they will be subject to the aforementioned 6 elective credits limit.