

國立虎尾科技大學 電子工程系碩士班課程科目表
[114學年入學適用] (Since 2025 Academic Year)

National Formosa University Curriculum of the master program of the Department of Electronic Engineering

學年 Academic Year	第一學年 First Year						
學期 Semester	上學期 First			下學期 Second			
必修科目 Required Course	科目 Subject	學分 Credit	時數 Hours	科目 Subject	學分 Credit	時數 Hours	
	書報討論(一) Seminar(I)	0	2	書報討論(二) Seminar(II)	0	2	
	科技論文閱讀與寫作(一) Technical paper reading and writing(I)	0	2	科技論文閱讀與寫作(二) Technical paper reading and writing(II)	0	2	
專業選修科目 Elective Courses	展頻通訊技術 Spread spectrum communication technology	3	3	電磁波傳播 Electromagnetic wave propagation	3	3	
	無線通訊 Wireless communications	3	3	微波電路設計 Microwave circuits design	3	3	
	微波工程 Microwave engineering	3	3	語音處理技術 Voice processing technology	3	3	
	正交分頻多工技術 (OFDM)Orthogonal frequency division multiplex technology	3	3	數位通訊技術 Digital communication technology	3	3	
	高等數位訊號處理 Advanced digital signal processing	3	3	行動通訊技術 Mobile communication technology	3	3	
	隨機程序 Random process	3	3	電腦視覺 Computer visions	3	3	
	機器人學 Robotic theory	3	3	高速網路 High-speed networks	3	3	
	光電能源元件 Optoelectric energy device	3	3	高速半導體元件 High-speed semiconductor device	3	3	
	顯示器元件 Displaying device	3	3	表面分析 Surface analysis	3	3	
	壓電元件 Piezoelectric device	3	3	薄膜工程技術專論 Special topics on thin film technology	3	3	
	高速半導體元件物理 High-speed semiconductor physics & device	3	3	電子材料製程與分析 Technology and analysis of electronic material	3	3	
	固態物理 Solid state physics	3	3	奈米科技應用 The application of nanotechnology	3	3	
	超大型積體電路製程 VLSI processing	3	3	嵌入式微處理器程式設計 Embeded microprocessor programs	3	3	
	嵌入式系統設計與應用 Design and application of embedded	3	3	類比積體電路分析與設計 Analog IC design and analysis	3	3	
	數位積體電路分析與設計 Digital IC analysis and design	3	3	鎖相迴路分析與設計 Design and analysis of phase-locked	3	3	
	混合模式積體電路設計 Mixed-mode IC design	3	3	FPGA系統設計實務 Practical training of FPGA system design	3	3	
	高等數位系統設計 Advanced digital systems design	3	3	系統晶片設計 SOC design	3	3	
	超大型積體電路分析與設計 VLSI analysis and design	3	3	智慧型系統設計 Intelligent system design	3	3	
	奈米光能電池 Nano photoenergy cells	3	3	高科技專利取得與攻防 Advanced technology patents acquisition and defense	3	3	
	類神經網路 Artificial neural network	3	3	光電元件 Opoelectric device	3	3	
	多媒體通訊 Multimedia communications	3	3	光學薄膜設計 Optical thin film design	3	3	
	進階物件導向程式 Advanced Object-Oriented Programming	3	3	智慧型機器人系統應用專題 Intelligent robot system application	3	3	
	應用電路學 Applied Electric Circuits	3	3	校外實習 Internship	2	2	
	專業選修科目 Elective Courses	深度學習 Deep Learning	3	3	進階物件導向程式設計實務 Advanced Object-Oriented Programming Design and Practice	3	3
		高等演算法 Advanced Algorithms	3	3	應用電子學 Applied Microelectronic Circuits	3	3

學年 Academic Year	第二學年 Second Year					
學期 Semester	上學期 First			下學期 Second		
必修科目 Required Course	科目 Subject	學分 Credit	時數 Hours	科目 Subject	學分 Credit	時數 Hours
	碩士論文(一) Master Dissertation(I)	3	0	碩士論文(二) Master Dissertation(II)	3	0
	書報討論(三) Seminar(III)	0	2	書報討論(四) Seminar(IV)	0	2
專業選修科目 Elective Courses	科技論文閱讀與寫作(三) Technical paper reading and writing(III)	0	2	科技論文閱讀與寫作(四) Technical paper reading and writing(IV)	0	2
備註 Note	<p>1.最低畢業學分：30學分。其中必修科目6學分，最低選修科目：24學分。</p> <p>2.研究生因研究需要，經系主任之同意得選修他所開授之科目，其學分准列入畢業學分之計算，外所選修課至多承認6學分；以同等學力或非相關科系畢業而考取者，依需要加修大學部相關學系開授之科目，其學分不得列入畢業學分之計算。</p> <p>3.選修華語教學可免修書報討論學分(限外籍生適用)。外國學生開放選修外系(電資、工程學院)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。</p> <p>4.學生於畢業前須至「台灣學術倫理教育資源中心」線上平台修習指定課程，課程測驗成績達及格標準，並於線上取得修業證明，經指導教授推薦並提出論文(含提要及論文原創性比對系統檢測結果)，始得申請學位考試。</p> <p>5.校外實習之實習時數需滿320小時。</p> <p>6.外國學生必修「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」。</p> <p>7.114學年度起適用。</p> <p>1.Minimun credits for graduation is 30, which includes required courses at least 6 credits and elective courses at least 24 credits.</p> <p>2.For research purposes, with the approval of the head of the department, students are allowed to take courses from other departments and those credits are counted in the required graduation credits (at most 6 credits). For students who possess B.S. equivalent certificates, or non-electronic engineering related diplomas, should take additional necessary undergraduate courses and those course-credits are not counted in the required graduation credits.</p> <p>3.Having passed any one course of "Mandarin (1) to (4)" can be applied for waiving the course of " Seminar(I)" or " Seminar(II)". (Only for International Students)</p> <p>Besides the department of Electronic Engineering, international students can also take the English speaking courses from the departments of the college of Electrical and Computer Engineering and the college of Engineering. Otherwise, unless with the approval of their advisers, the courses they take will be subjected to the 6 elective course credits limits mentioned above.</p> <p>4.The postgraduate students who enroll in the Master's degree of the NFU EE department must attend the designated online course provided by the Taiwan Academic Ethics Education Resource Center online platform before graduation. they can apply for their oral examination for Master's degree only after they pass the required course, acquire the course certificate of fulfillment, and recommend to submit their thesis (which also include thesis abstract and pass the Turnitin plagiarism Checker system mandated by the University) by their supervisors.</p> <p>5.The Internship is at least 320 hours.</p> <p>6.International Students of NFU are required to take "Mandarin (1)" and " Mandarin (2)" courses, for more details please refer to "Mandarin Course Requirements for NFU International Students".</p> <p>7.The above regulations are valid since the academic year 2025.</p>					