

國立虎尾科技大學110學年度電機工程系碩士班課程規劃表
Curriculum of the master program of the department of electrical engineering, National Formosa University (Academic year 2021)

	碩士班一年級/1st academic year			碩士班二年級/2nd academic year		
	科目/course	上/1st semester	下/2nd semester	科目/course	上/1st semester	下/2nd semester
		學分數/時數 credits/hours	學分數/時數 credits/hours		學分數/時數 credits/hours	學分數/時數 credits/hours
必修 /Required Courses	專題研究(一)/Research Project(1)	0/2		碩士論文(一)/Thesis(1)	3/0	
	書報討論(一)/Seminar(1)	0/2		碩士論文(二)/Thesis(2)		3/0
	專題研究(二)/Research Project(2)		0/2			
	書報討論(二)/Seminar(2)		0/2			
選修/ Elective Courses	能源轉換/Energy Conversion	3/3		電力系統穩定度分析/Power System Stability Analysis	3/3	
	高等電機機械/Advanced Electrical Machinery	3/3		不斷電電源系統設計/UPS System Design	3/3	
	電力系統運轉與控制/Power System Operation and Control	3/3		強健控制/Robust Control	3/3	
	切換式電源供應器/Switching Mode Power Supply	3/3		視訊通訊/Video Communication	3/3	
	電力品質/Power Quality	3/3		正交分頻多工/Orthogonal Frequency Division Multiplexing	3/3	
	高等電力電子/Advanced Power Electronics	3/3		電磁應用/Electromagnetic Application	3/3	
	數位訊號處理/Digital Signal Processing	3/3		電子安定器/Electronic Ballasts	3/3	
	線性系統理論/Linear System Theory	3/3		5G行動通訊技術應用/5G mobile communication technology application	3/3	
	模糊系統/Fuzzy Systems	3/3		混合訊號積體電路佈局設計/Mixed Signal IC Layout and Design		3/3
	FPGA電路設計/FPGA Circuits Design	3/3		校外實習/Practicum Training		3/3
	高等數位通訊/Advanced Digital Communications	3/3		5G物聯網與通訊技術/5G IoT and Communications Technologies		3/3
	嵌入式系統/Embedded Systems	3/3				
	超大型積體電路設計/Very Large Scale Integrated Circuits Design	3/3				
	功因修正電路設計/Power Factor Correction Circuit Design	3/3				
	無線網路協定技術實務與應用/Wireless Network Technologies Principles Protocols and Applications	3/3				
	機器學習/Machine Learning	3/3				
	物聯網平台應用開發/ Internet of Things Application Development Platform	3/3				
	智慧生活科技系統設計/Intelligent Living Technology System Design	3/3				
	科技論文寫作/Technical Paper Writing		2/2			
	交直流馬達驅動/AC/DC Motor Driver		3/3			
	電力轉換器設計實務/Power Converter Design Practice		3/3			
	電子電路設計實務/Power Electronics Design Practice		3/3			
	適應性濾波器/Adaptive Filtering		3/3			
	線性控制器設計/Linear Controller Design		3/3			
	電腦視覺/Computer Vision		3/3			
	非線性系統/Nonlinear System		3/3			
	智慧型控制/Intelligent Control		3/3			
	通信與網路/Communications and Networks		3/3			
	電力電子磁性元件與應用/ Magnetic Device and Application of Power Electronics		3/3			
	高等FPGA系統設計與實務/ Advanced FPGA System Design and Practice		3/3			
	行動通訊/Mobile Communications		3/3			
	網路效能分析與模擬/ Network Performance Analysis and Simulations		3/3			
	無線感測網路/Wireless Sensor Networks		3/3			
適應性訊號處理/Adaptive Signal Processing		3/3				
機器學習/Machine Learning		3/3				
系統應用設計與實務/Application System Design and Practice		3/3				
多核心晶片設計實作/Multicore Chip Design Laboratory		3/3				
照明驅動電路/Lighting Drivers		3/3				
物聯網核心技術與應用/Key Technologies and Applications of IoT		3/3				
4G/5G行動寬頻協同網路/4G/5G Mobile Broadband Collaborative Network		3/3				
高等電路理論/Advanced Circuit Theorem		3/3				
智慧機器人應用/Applications in Intelligent Robotics		3/3				

- 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、二學期之書報討論及專題研究，選修至少修滿24學分，並須通過碩士學位考試。
M.S. students in the program must complete at least 30 credits of coursework, including 24 credits elective course, 6 credits of thesis, seminar coursework through 2 semesters and the master degree examination must be passed.
- 2.畢業學分必須包含2學分之「科技論文寫作」；外系選修課至多承認6學分。
The 2 credits technical paper writing coursework is required and students may elect other academic department courses to satisfy up to 6 hours of elective credit.
- 3.110學年度起適用。
This program is commenced from the academic year 2021.