Course Credit List for Graduated Students of the Department of Electronic Engineering, National Yilan University in Academic Year 109

類別	科目名稱	英文課名	選別	學分數	演講時數	實習時數	第一學年		第二學年		備註Remarks AY 2019 means academic year 2019
							上	下	上	下	
Professional compulsory	專題討論 一 R4ET000025	Seminar Ⅰ	必	2	2	0	2				AY 2020, Change hours
	科技英文 R4ET000019	Technical English	必	3	3	0		3			
	專題討論 二 R4ET000026	Seminar Ⅱ	必	2	2	0		2			AY 2020, Change hours
				7	7	0					
	專題討論 三 R4ET020001	Seminar Ⅲ	選	1	1	0			1		AY 2020 changed to elective
	專題討論 四 R4ET020002	Seminar Ⅳ	選	1	1	0				1	AY 2020 changed to elective
	RFID電路設計 R4ET000003	RFID Circuit Design	選	3	3	0	3				U course
	化合物半導體元件 R4ET000004	Compound Semiconductor Devices	選	3	3	0	3				
	光電子學 R4ET000008	OptoElectronics	選	3	3	0	3				
	先進VLSI元件理論 R4ET000012	Theory of Advanced VLSI Devices	選	3	3	0	3				
	次微米元件物理 R4ET000014	Submicron Device Physics	選	3	3	0	3				
	行動計算 R4ET000015	Mobile Computing	選	3	3	0	3				U course
	金氧半元件理論 R4ET000017	MOS Device Theory	選	3	3	0	3				
	計算機輔助電路設計 R4ET000020	Computer-Aided Circuit Design	選	3	3	0	3				
	高速元件 R4ET000022	High-Speed Devices	選	3	3	0	3				
	高速網路 R4ET000023	High Speed Networks	選	3	3	0	3				
	最佳化理論 R4ET000029	Optimization Theory	選	3	3	0	3				
	微光學元件設計 R4ET000032	Design of Micro-Optic Elements	選	3	3	0	3				U course
	微波工程 R4ET000033	Microwave Engineering	選	3	3	0	3				U course
	新世代網際網路(IPv6)整合技術 R4ET000035	Next Generation Internet Protocol －IPv6	選	3	3	0	3				U course
	電磁理論 R4ET000037	Electromagnetic Field Theory	選	3	3	0	3				
	演算法分析與設計 R4ET000039	Analysis and Design of Algorithms	選	3	3	0	3				U course
	數位影像處理 R4ET000043	Digital Image Processing	選	3	3	0	3				U course
	數位積體電路設計 R4ET000044	Digital Integrated Circuit Design	選	3	3	0	3				U course
	模糊系統 R4ET000045	Fuzzy Systems	選	3	3	0	3				
	積體光學 R4ET000046	Integrated Optics	選	3	3	0	3				U course
	微波電路設計 R4ET000050	Microwave Circuit Design	選	3	3	0	3				
	編碼理論 R4ET000051	Coding Theory	選	3	3	0	3				U course
	展頻通信 R4ET000052	Spread Spectrum Communications	選	3	3	0	3				
	高等作業系統 R4ET000053	Advanced Operating Systems	選	3	3	0	3				
	系統晶片設計 R4ET010002	System-on-Chip Design	選	3	3	0	3				
	計算生物學 R4ET010006	Computational Biology	選	3	3	0	3				
	微感測器及感測電路設計 R4ET010018	Design of Microsensors and Sensing Circuits	選	3	3	0	3				U courseAY 2015, New addition
	無線射頻識別與近場通訊 R4ET010020	Radio Frequency Identification and Near Field Communication	選	3	3	0	3				U course AY 2016, New addition
	模糊理論與應用	Fuzzy Theory and Applications	選	3	3	0	3				U courseAY 2017, New addition

R4ET010023	Fuzzy Theory and Applications	選	3	3	0	3				0 courseAY 2017, New addition

Professional electives	物聯網核心技術與應用 R4ET010024	IoT Core Technology and Applications	選	3	3	0	3				U courseAY 2017, New addition
	數位訊號處理 R4ET010028	Digital Signal Processing	選	3	3	0	3				U course 1AY 2017 renamed, original course name: Digital Signal Processing
	調適訊號處理 R4ET010029	Adaptive Signal Processing	選	3	3	0	3				AY 2017 renamed, original course name:Adaptive signal processing
	電腦網路工程 R4ET010036	Computer Network Engineering	選	3	3	0	3				U course
	DSP積體電路設計 R4ET000001	DSP Integrated Circuit Design	選	3	3	0		3			U course
	RFID天線設計 R4ET000002	RFID Antenna Design	選	3	3	0		3			U course
	手持裝置天線設計 R4ET000005	Antenna Design for Portable Devices	選	3	3	0		3			U course
	平行與分散式處理 R4ET000007	Parallel and Distributed Computing	選	3	3	0		3			U course
	光電半導體 R4ET000009	OptoElectronics Semiconductor	選	3	3	0		3			
	光纖通訊原理與應用 R4ET000011	Fiber Optics Communication Theory and Applications	選	3	3	0		3			U course
	行動通訊 R4ET000016	Mobile and Wireless Communicatons	選	3	3	0		3			U course
	型態辨識 R4ET000018	Pattern Recognition	選	3	3	0		3			U course
	射頻積體電路設計 R4ET000021	RF Integrated Circuit Design	選	3	3	0		3			U course
	密碼學 R4ET000024	Cryptography	選	3	3	0		3			U course
	無線網路 R4ET000031	Wireless Networks	選	3	3	0		3			U course
	微波元件 R4ET000034	Microwave Devices	選	3	3	0		3			
	演化式計算 R4ET000038	Evolutionary Computation	選	3	3	0		3			U course
	類比積體電路設計 R4ET000047	Analog Integrated Circuit Design	選	3	3	0		3			
	類神經網路 R4ET000048	Neural Networks	選	3	3	0		3			U course
	RFID晶片設計 R4ET000054	RFID Chip Design	選	3	3	0		3			
	嵌入式系統設計與應用 R4ET010001	Design and Application of Embedded Systems	選	3	3	0		3			U course
	無線通信系統 R4ET010007	Wireless Communication Systems	選	3	3	0		3			
	排隊理論 R4ET010011	Queueing Theory	選	3	3	0		3			
	網路資訊安全 R4ET010012	Network Information Security	選	3	3	0		3			
	資料探勘 R4ET010013	Data Mining	選	3	3	0		3			U course
	雲端技術 R4ET010016	Cloud Computing Techniques	選	3	3	0		3			U course
	高等計算機結構 R4ET010017	Advanced Computer Architecture	選	3	3	0		3			
	語音訊號處理 R4ET010030	Speech Signal Processing	選	3	3	0		3			U course AY 2017 renamed, original course name: Voice Signal Processing
	多媒體訊號處理 R4ET010031	Multimedia Signal Processing	選	3	3	0		3			U course AY 2017 renamed, original course name: multimedia signal processing
	大數據理論與應用 R4ET010032	Theory and Application of Big Data Analytics	選	3	3	0		3			
	機器學習 R4ET010033	Machine Learning	選	3	3	0		3			
	運算模型建構與推論方法 R4ET010034	Computation Modelling and Inference Method	選	3	3	0		3			
	電腦視覺 R4ET010035	Computer Vision	選	3	3	0		3			
				186	186	0					
專業必修學分數(Major compulsory credits)				7							
專業選修學分數(Professional elective credits)				21							
畢業最低學分數(Minimum credits for graduation)				28							

Remarks	1.The total graduation credits are 34 credits, which are 7 credits for major compulsory courses (including 4 credits for topic discussion and 3 credits for scientific English), 6 credits for master's thesis, and 21 credits for professional elective courses.
	2.Before applying for the oral examination of the master's degree, it is necessary to attach more than one proof of submission of seminar paper or proof of publication of more than one research paper.