國立虎尾科技大學

動力機械工程系機械與機電工程碩士在職專班課程科目表

National Formosa University

Department of Power Mechanical Engineering

Curriculum for Master's Degree (2014)

	First Academic Year					
	First Semester			**Second Semester**		
	Course Name	**Credit**	**Hour**	**Course Name**	**Credit**	**Hour**
Elective Courses	Numerical Method 數值方法	3	3	Convective Heat Transfer 熱對流	3	3
Elective Courses	Numerical Heat Transfer 數值熱傳	3	3	Computational fluid dynamics 計算流體力學	3	3
Elective Courses	Advanced Engineering Analysis 高等工程分析	3	3	liner System 線性系統	3	3
Elective Courses	Micro Nano Measurement 微奈米量測	3	3	Finite Element Method 有限元素法	3	3
Elective Courses	Electric Motor Controls 電動機控制	3	3	Advanced Mechanism Design 高等機構設計	3	3
Elective Courses	Elasticity 彈性力學	3	3	Principle and Measurement Technology of Photonic Devices 光通訊元件原理與量測技術	3	3
Elective Courses	Machinery Dynamics 機器動力學	3	3	Nano/Micro Tribology 微奈米磨潤	3	3
Elective Courses	Tribological Design 磨潤原理	3	3	MEMS Design 微機電系統設計	3	3
Elective Courses	Digital Image Processing 數位影像處理	3	3	The Analysis of Hybrid Electric System 混成動力系統分析	3	3
Elective Courses	Introduction to MEMS 微機電系統概論	3	3	Reliability Engineering 可靠度工程	3	3
Elective Courses	Design of Experiments 實驗設計	3	3	Heat Transfer Analysis and Experiment for Electro-optic Product Design 光電產品熱傳分析與實驗	3	3
Elective Courses	Micromachining Technology 微細加工學	3	3	Mass Transfer Andlysis 質傳分析	3	3
Elective Courses	Probability and statistics 機率與統計	3	3	Research Methodology and Technical Writing 研究方法與科技論文寫作	3	3

Elective Courses	Plasticity 塑性力學	3	3	Advanced computer-aided mold design 進階電腦輔助模具設計	3	3
Elective Courses	Mechanical vibrations 機械振動學	3	3	Institutional innovation design practices 機構創新設計實務	3	3
Elective Courses	Nonlinear Geometric Modeling 非線性幾何模型	3	3	Object-oriented Programming 物件導向程式設計	3	3
Elective Courses	Solar cells 太陽能電池元件	3	3	Reliability Engineering Practice 可靠度工程實務	3	3
Elective Courses	Tribological Design 磨潤設計	3	3	Systematic Innovation Design Theory 系統化創新設計理論	3	3
Elective Courses	Manufacture Engineering 傳動工程實務	3	3	Rapid Prototyping and Rapid Tooling 快速原型與快速模具	3	3
Elective Courses e	Adaptive Finite Element Method 適應性有限元素法	3	3	Design of Microoptics 微光學元件設計	3	3
Elective Courses	Biosolid Mechanics 生物力學	3	3	Combustion 燃燒學	3	3
Elective Courses	Advanced Quality Control 高等品質管制	3	3	Photomechanics 光測力學	3	3
Elective Courses	Thin Film Engineering 薄膜工程	3	3	Radiation Heat Transfer 輻射熱傳	3	3
Elective Courses	Viscous fluid dynamics 黏性流體力學	3	3	Gear Principle 齒輪原理	3	3
Elective Courses	Biomedical Manufacturing Science 生醫製造學	3	3	Micro-Nano Fabrication and Measurement 微奈米製造與檢測	3	3
Elective Courses	Design and verification technology for automotive electron 車輛電子設計與驗證技術	3	3	Electronic equipment cooling 電子裝備散熱	3	3
Elective Courses	Introduction of Smart Clothing Application 智慧型電子服飾應用概論	3	3	Heat Exchanger Design 熱交換器設計	3	3
Elective Courses				Product competitive analysis of High-tech industry 高科技產業產品競爭力分析	3	3

				Development of intelligent technology for vehicle 車輛智慧化關鍵技術發展	3	3

Second Academic Year						
	First Semester			**Second Semester**		
	Course Name	**Credit**	**Hour**	**Course Name**	**Credit**	**Hour**
Required Courses	Thesis 碩士論文(一)	3	0	Thesis 碩士論文(二)	3	0
Elective Courses	Engineering Optics 工程光學	3	3	Fundamentals of Machine Tools 工具機特論	3	3
Elective Courses	Optimum Design 最佳化設計	3	3	Ultrasound in Medicine 醫用超音波	3	3
Elective Courses	Energy Conversion Principle 電能轉換原理	3	3	CAE computer simulation 電腦輔助模流分析	3	3
Elective Courses	Advanced Computer-aided Mold Design 進階電腦輔助模具設計	3	3			

Note：

※本所碩士在職班畢業學分為 30 學分，其中碩士論文 6 學分，專業選修科目至少 24 學分以上。