

國立虎尾科技大學

動力機械工程系(含機械與機電工程博士班、碩士班、碩士在職專班)

碩士班課程科目表

102.06.18 教務會議決議

National Formosa University
Department of Power Mechanical Engineering
Curriculum for Master's Degree (2013)

First Academic Year						
	First Semester			Second Semester		
	Course Name	Credit	Hour	Course Name	Credit	Hour
Required Courses	The teaching of Chinese1 華語教學 1	0	4	The teaching of Chinese2 華語教學 2	0	4
Required Courses	Seminar 1 專題研討 1	0	2	Seminar 2 專題研討 2	0	2
Elective Courses	Advanced Quality Control 高等品質管制	3	3	Object-oriented programming 物件導向程式設計	3	3
Elective Courses	Thin Film Engineering 薄膜工程	3	3	Creative Design of Mechanical Devices 機構創新設計	3	3
Elective Courses	Adaptive Finite Element Method 適應性有限元素法	3	3	Rapid Prototyping and Rapid Tooling 快速原型與快速模具	3	3
Elective Courses	Biosolid Mechanics 生物力學	3	3	Theory of gearing 齒輪原理	3	3
Elective Courses	Dynamics of Multibody Systems 多體動力學	3	3	Micro/Nano Tribology 微奈米磨潤	3	3
Elective Courses	Numerical Method 數值分析	3	3	Mechanical Vibrations 機械振動學	3	3
Elective Courses	Numerical Heat Transfer 數值熱傳	3	3	Design and Application of Microoptics 微光學元件設計	3	3
Elective Courses	Advanced Engineering Analysis 高等工程分析	3	3	Convective Heat Transfer 熱對流	3	3
Elective Courses	Micro Nano Measurement 微奈米量測	3	3	Computational fluid dynamics 計算流體力學	3	3
Elective Courses	Electric Motor Controls 電動機控制	3	3	Linear Systems 線性系統	3	3

Elective Courses	Elasticity 彈性力學	3	3	Finite Element Method 有限元素法	3	3
Elective Courses	Dynamics of Machinery 機器動力學	3	3	Advanced Mechanism Design 高等機構設計	3	3
Elective Courses	Tribology Theory 磨潤原理	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	Digital Image Processing 數位影像處理	3	3	MEMS Design 微機電系統設計	3	3
Elective Courses	Introduction to MEMS 微機電系統概論	3	3	The Analysis of Hybrid Electric System 混成動力系統分析	3	3
Elective Courses	Design of Experiment 實驗設計	3	3	Reliability Engineering 可靠度工程	3	3
Elective Courses	Micromachining Technology 微細加工學	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	Probability and statistics 機率與統計	3	3	Mass Transfer Analysis 質傳分析	3	3
Elective Courses e	Plasticity 塑性力學	3	3	Research Methodology and Technical Writing 研究方法與科技論文寫作	3	3
Elective Courses	Mechanical vibrations 機械振動學	3	3	Reliability Engineering Practice 可靠度工程實務	3	3
Elective Courses	Nonlinear Geometric Modeling 非線性幾何模型	3	3	Systematic Innovation Design Theory 系統化創新設計理論	3	3
Elective Courses	Solar cells 太陽能電池元件	3	3	combustion 燃燒學	3	3
Elective Courses	Tribological Design 磨潤設計	3	3	Photo Mechanics 光測力學	3	3
Elective Courses	Manufacture Design Engineering 傳動工程設計實務	3	3	Radiation Heat Transfer 輻射熱傳	3	3
Elective Courses	Viscous fluid dynamics 黏性流體力學	3	3	Micro-Nano Fabrication and Measurement 微奈米製造與檢測	3	3
Elective Courses	Biomedical Manufacturing Science 生醫製造學	3	3	Introduction of Electronic Equipment Cooling 電子裝備散熱	3	3

Elective Courses				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
Second Academic Year						
	First Semester			Second Semester		
	Course Name	Credit	Hour	Course Name	Credit	Hour
Required Courses	The teaching of Chinese 3 華語教學 3	0	4	The teaching of Chinese 4 華語教學 4	0	4
Required Courses	Thesis 碩士論文	3	0	Thesis 碩士論文	3	0
Required Courses	Seminar 3 專題研討 3	0	2	Seminar 4 專題研討 4	0	2
Elective Courses	Industrial R&D Internship 1 產業研發實習(一)	0	2	Industrial R&D Internship 2 產業研發實習(二)	0	2
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	Foundations of biomedical ultrasound 醫用超音波	3	3
Elective Courses	Electrochemical Energy Conversion 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 :

- 1.最低畢業學分： 30 學分。含必修學分(畢業論文)： 6 學分；選修學分：24 學分 (選修學分含跨所選修學分)。
【Minimum required credit: 30 credits with 6 required credits and 24 elective credits which may include some pre-approved inter-institution elective credits.】
- 2.允許跨所選修不得高於 9 學分【Approving inter-institution 9 elective credits.】
- 3.外籍學生必修科目為華語教學(一)(0 學分/4 小時)、華語教學(二)(0 學分/4 小時)、華語教學(三)(0 學分/4 小時)、華語教學(四)(0 學分/4 小時)、可抵免專題研討學分。【Foreign Students Required Courses: The teaching of Chinese 1、The teaching of Chinese 2、The teaching of Chinese 3 and The teaching of Chinese 4.】