

國立虎尾科技大學

動力機械工程系機械與機電工程碩士班課程科目表

National Formosa University

103.04.02 第2次課程規劃委員會通過
103.06.17 102學年度第4次教務會議通過

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
Required Courses	Chinese1 華語教學 1	0	4	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 Tooling 快速原型與快速模具	3	3
Elective Courses	Biosolid Mechanics 生物力學	3	3	Gear Principle 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	Electric Motor Controls 電動機控制	3	3	Computational fluid dynamics 計算流體力學	3	3
Elective Courses	Elasticity 彈性力學	3	3	Linear Systems 線性系統	3	3

Elective Courses	Dynamics of Machinery 機器動力學	3	3	Finite Element Method 有限元素法	3	3
Elective Courses	Tribology Theory 磨潤原理	3	3	Advanced Mechanism Design 高等機構設計	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	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 Analysis 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	Reliability Engineering Practice 可靠度工程實務	3	3
Elective Courses e	Mechanical vibrations 機械振動學	3	3	Systematic Innovation Design Theory 系統化創新設計理論	3	3
Elective Courses	Tribological Design 磨潤設計	3	3	Combustion 燃燒學	3	3
Elective Courses	Manufacture Design Engineering 傳動工程設計實務	3	3	Photomechanics 光測力學	3	3
Elective Courses	Viscous fluid dynamics 黏性流體力學	3	3	Radiation Heat Transfer 輻射熱傳	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				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	Chinese 3 華語教學 3	0	4	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	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 :

- 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.】