

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

【112 學年度入學適用】

Department of Power Mechanical Engineering, National Formosa University

Curriculum for Master's Program of Mechanical and Electro-Mechanical Engineering (2023)

112 年 03 月 20 日 111 學年度第 6 次系課程會議通過

112 年 04 月 11 日 111 學年度第 5 次系務會議通過

112 年 06 月 26 日 111 學年度第 4 次教務會議通過

First Academic Year						
	First Semester			Second Semester		
	Course Name	Credit	Hour	Course Name	Credit	Hour
Required Courses 必修	Seminar 1 專題研討一	0	2	Seminar 2 專題研討二	0	2
Elective Courses 選修	Thin Film Engineering 薄膜工程	3	3	Additive Manufacturing 積層製造學	3	3
	Numerical Method 數值方法	3	3	Convective Heat Transfer 熱對流	3	3
	Elasticity 彈性力學	3	3	Numerical Heat Transfer 數值熱傳	3	3
	Digital Image Processing 數位影像處理	3	3	Electric Motor Controls 電動機控制	3	3
	Design of Experiments 實驗設計	3	3	Computational Methods for Fluid Dynamics 計算流體力學	3	3
	Probability and Statistics 機率與統計	3	3	Mechanical Vibrations 機械振動學	3	3
	Electronic Equipment Cooling System 電子裝備散熱系統	3	3	Tribology Theory 磨潤原理	3	3
	Micro Electric Machine System (MEMS) 微機電系統	3	3	Linear System Analysis 線性系統分析	3	3
	Reliability Engineering Practice 可靠度工程實務	3	3	Finite Element Method 有限元素法	3	3
	Object-Oriented Programming 物件導向程式設計	3	3	Reliability Engineering 可靠度工程	3	3
	Advanced Vehicle Dynamics 高等車輛動力學	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
	Design and Verification Technology for Automotive Electron 車輛電子設計與驗證技術	3	3	Systematic Innovation Design Theory 系統化創新設計理論	3	3
	Advanced Manufacturing 先進製造學	3	3	Heat Exchanger Design 熱交換器設計	3	3
	Design of Intelligent Agricultural Machinery 智慧農業機械設計	3	3	Product Competitive Analysis of High-tech Industry 高科技產業產品競爭力分析	3	3
Engineering Optics 工程光學	3	3	Development of Intelligent Technology for Vehicle 車輛智慧化關鍵技術發展	3	3	

First Academic Year						
	First Semester			Second Semester		
	Course Name	Credit	Hour	Course Name	Credit	Hour
	Optimum Design 最佳化設計	3	3	Artificial Intelligence and Its Applications 人工智慧與應用	3	3
Elective Courses 選修	<u>Sustainable Energy and Energy Saving Technology</u> 永續能源與節能技術	<u>3</u>	<u>3</u>	<u>Engineering Application of Bio-energy Based Heat and Power Generation</u> 生質能熱電聯產工程應用	<u>3</u>	<u>3</u>

Second Academic Year						
	First Semester			Second Semester		
	Course Name	Credit	Hour	Course Name	Credit	Hour
Required Courses 必修	Thesis 1 碩士論文	3	0	Thesis 2 碩士論文	3	0
	Seminar 3 專題研討三	0	2	Seminar 4 專題研討四	0	2
Elective Courses 選修	Industrial R&D Internship 1 產業研發實習(一)	1	2	Industrial R&D Internship 2 產業研發實習(二)	1	2
	Special Topic on Machine Tools 工具機特論	3	3	Energy Conversion Principle 電能轉換原理	3	3
	Computer-aided Mold Design 電腦輔助模具設計	3	3	Mold Flow Computer Simulation 電腦輔助模流分析	3	3

備註:

- 1.最低畢業學分：30 學分。含必修學分(碩士論文)：6 學分；選修學分：24 學分。
- 2.外所選修至多 9 學分。
- 3.選修華語教學可抵免專題研討(限外籍生適用)。
- 4.產業研發實習(一)(1 學分/2 小時)、產業研發實習(二)(1 學分/2 小時)可抵免專題研討三或專題研討四。

Note :

- 1.Minimum required credit: 30 credits with 6 required credits (Thesis 1、2) and 24 elective credits.
- 2.Approving 9 elective credits of non-our-institute courses.
- 3.The Course "Mandarin" (0/4) is capable of reaching "Seminar" credits. (Only for foreign students)
- 4.The Courses "Industrial Research and Development Internship 1、2" are capable of reaching Seminar 3 or 4 credits.