

**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 Department of Power Mechanical Engineering  
Curriculum for Master's Program (2020)

109年06月16日108學年度第4次教務會議通過  
110年6月25日109學年度第4次教務會議修正通過

First Academic Year						
	First Semester			Second Semester		
	Course Name	Credit	Hour	Course Name	Credit	Hour
Required Courses	<del>Chinese1</del> 華語教學1	0	4	<del>Chinese2</del> 華語教學2	0	4
Required Courses	Seminar 1 專題研討一	0	2	Seminar 2 專題研討二	0	2
Elective Courses	Thin Film Engineering 薄膜工程	3	3	Additive Manufacturing 積層製造學	3	3
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 Methods for Fluid Dynamics 計算流體力學	3	3
Elective Courses	Electric Motor Controls 電動機控制	3	3	Linear System Analysis 線性系統分析	3	3
Elective Courses	Elasticity 彈性力學	3	3	Finite Element Method 有限元素法	3	3
Elective Courses	Mechanical Vibrations 機械振動學	3	3	Reliability Engineering 可靠度工程	3	3
Elective Courses	Tribology Theory 磨潤原理	3	3	Electronic Equipment Cooling System 電子裝備散熱系統	3	3
Elective Courses	Digital Image Processing 數位影像處理	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	Design of Experiments 實驗設計	3	3	Reliability Engineering Practice 可靠度工程實務	3	3
Elective Courses	Probability and Statistics 機率與統計	3	3	Systematic Innovation Design Theory 系統化創新設計理論	3	3
Elective Courses	Micro Electric Machine System (MEMS) 微機電系統	3	3	Heat Exchanger Design 熱交換器設計	3	3
Elective Courses	Object-Oriented Programming 物件導向程式設計	3	3	Product Competitive Analysis of High-tech Industry 高科技產業產品競爭力分析	3	3
Elective Courses	Advanced Vehicle Dynamics 高等車輛動力學	3	3	Development of Intelligent Technology for Vehicle 車輛智慧化關鍵技術發展	3	3
Elective Courses	Design and Verification Technology for Automotive Electron 車輛電子設計與驗證技術	3	3	Artificial Intelligence and Its Applications 人工智慧與應用	3	3

First Academic Year						
	First Semester			Second Semester		
	Course Name	Credit	Hour	Course Name	Credit	Hour
Elective Courses	Advanced Manufacturing 先進製造學	3	3	Design of Intelligent Agricultural Machinery 智慧農業機械設計	3	3

Second Academic Year						
	First Semester			Second Semester		
	Course Name	Credit	Hour	Course Name	Credit	Hour
Required Courses	<del>Chinese 3 華語教學3</del>	0	4	<del>Chinese 4 華語教學4</del>	0	4
Required Courses	Thesis 1 碩士論文	3	0	Thesis 2 碩士論文	3	0
Required Courses	Seminar 3 專題研討三	0	2	Seminar 4 專題研討四	0	2
Elective Courses	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
Elective Courses	Engineering Optics 工程光學	3	3	Special Topic on Machine Tools 工具機特論	3	3
Elective Courses	Optimum Design 最佳化設計	3	3	Mold Flow Computer Simulation 電腦輔助模流分析	3	3
Elective Courses	Energy Conversion Principle 電能轉換原理	3	3			
Elective Courses	Computer-aided Mold Design 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(碩士論文)：6 學分；選修學分：24 學分(選修學分含經核定之跨系所選修學分)。

【Minimum required credit: 30 credits with 6 required credits (Thesis 1、2) and 24 elective credits which may include 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.外籍學生可修科目為華語教學1(0學分/4小時)、華語教學2(0學分/4小時)、華語教學3(0學分/4小時)、華語教學4(0學分/4小時)、可抵免專題研討學分。【Foreign Students Required Courses: Chinese 1、Chinese 2、Chinese 3 and Chinese 4.】~~

3.選修華語教學可抵免專題研討(限外籍生適用)。

【The Course “Mandarin” (0/4) is capable of reaching “Seminar” credits. (Only for foreign students)】

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。

【The Courses “Industrial Research and Development Internship 1、2” are capable of reaching Seminar 3 or 4 credits.】