

萬能科技大學 112學年度 精密機械與工業工程系工業工程碩士班 課程規劃表
Curriculum for Master's Degree in Department of Mechanical and Industrial Engineering, Vanung University
Academic Year 2023

學年 Academic Year	一		二			
學期 Semester	上	下	上	下	專業必修學分 Professional Compulsory Credits	4
每學期最高學分限制 Maximum credit limit per semester	15	15	15	15	最低選修學分 Minimum Professional Elective Credits	20
每學期最低學分限制 Minimum credit limit per semester	1	1	1	1	專業應修最低學分(不含碩士論文6學分) Minimum Credits Requirement for Graduation (excluding master's thesis 6 credits)	24

註 Note :
 1. 畢業應修最低學分24學分(不含碩士論文6學分)。The minimum credits required for graduation are 24 credits (excluding master's thesis 6 credits)
 2. 本碩士班未開設之課程可至外系所選修，但課程需與本所相關。並於選課前提出申請，且經所長核准後，始得列入畢業學分。惟畢業學分內最多含6學分外系所課程。碩士論文6學分另計。Courses not offered in this master's program can be taken in external departments, but the courses must be related to this institute. And submit an application before course selection, and only after being approved by the director can it be included in the graduation credits. However, the graduation credits include at most 6 credits of courses from other departments. 6 credits for master's thesis.
 3. 本碩士班研究生每學期修課不得超過15學分。Graduate students of this master's program must take no more than 15 credits per semester.
 1111014系課程會議、1111019系務會議通過。Approved by 1111014 department course meeting and 1111019 department affairs meeting.

學年 Academic Year 課程架構 Course	第一學年 The First Academic Year				第二學年 The Second Academic Year					
	科目 Subject	第一學期		第二學期		科目 Subject	第一學期		第二學期	
		學分 Credits	時數 Hours	學分 Credits	時數 Hours		學分 Credits	時數 Hours	學分 Credits	時數 Hours
專業基礎必修課程 Required Professional Course of Department	專題討論(一) Seminar (I)	1	2			專題討論(三) Seminar (III)	1	2		
	專題討論(二) Seminar (II)			1	2	專題討論(四) Seminar (IV)			1	2
	小計 Subtotal	1	2	1	2	小計 Subtotal	1	2	1	2
專業選修課程 Professional Department Elective Courses	科技英文與論文寫作 Technical English and Paper Writing	2	2			彈性製造系統 Flexible Manufacturing Systems	3	3		
	綠色能源科技 Green Energy Technology	2	2			人機介面設計 Human-Computer Interface Design	3	3		
	全面品質管理 Total Quality Management	3	3			製造能力分析 Manufacturing Capability Analysis	3	3		
	電腦整合製造 Computer Integrated Manufacturing	3	3			先進工具機設計原理 Principles of Advanced Machine Tool Design	3	3		
	電腦輔助設計與製造 Computer-Aided Design and Manufacturing	3	3			全球運籌管理 Global Logistics Management	3	3		
	智慧運輸與物流系統 Smart Transportation and Logistics Systems	3	3			半導體製程製造 Manufacturing Processes of VLSI	3	3		
	機械視覺與機器人學 Machine Vision and Robotics	2	2			供應鏈管理永續成效 Sustainability of Supply Chain Management	3	3		
	高等人因工程 Advanced Human Factors Engineering	3	3			系統模擬 Systems Simulation	3	3		
	作業研究與決策分析 Operations Research and Decision Analysis	3	3			企業資源規劃專論 Enterprise Resource Planning Monograph	3	3		
	製造規劃與控制系統 Manufacturing Planning and Control System	3	3			生產排程 Production Scheduling	3	3		
	進階專案管理 Advanced Project Management	3	3			品質工程 Quality Engineering	3	3		
	物聯網概論與實務 Introduction and Practice of Internet of Things	3	3			創意與專利實務 Creativity and Patent Practice	3	3		
	智慧產品創新設計 Innovative Design of Intelligent Products			2	2					
	安全衛生管理 Industrial Safety and Health Management			2	2					
	生產與精實管理 Production and Lean Management			3	3					
	統計方法 Statistical Methods			3	3					
	人因工程研究方法 Human Factors Engineering Research Methods			2	2					
	知識工程 Knowledge Engineering			3	3					
	智慧製造與自動化 Smart Manufacturing and Automation			3	3					
	組織理論與管理 Organization Theory and Management			3	3					
大數據分析與機器學習 Big Data Analysis and Machine Learning			3	3						
人工智慧實務應用 Practical Application of Artificial Intelligence			2	2						
Python資訊應用 Python Programming Language			3	3						
可靠度工程 Reliability engineering			3	3						
總開課學分 Total Credits										
26										
總開課時數 Total Teaching Hours	最低應選修學分 Minimum Elective Credits	8	8	8	8	最低應選修學分 Minimum Elective Credits	6	6	0	0
30	總計 Total	9	10	9	10	總計 Total	7	8	1	2