南開科技大學　112學年度入學　科技學院車輛工程系車輛與機電產業碩士班課程總表

Nankai University of Technology Course Catalog for the 112th Academic Year, College of Science and Technology, Department of Vehicle Engineering, Master's Degree Program of Vehicle and Mechanical-electrical industry

類別 Class		一年級(112) First Year					二年級(113) Second Year				
			一上		一下			二上		二下	
		科目 Subjects	學分 Credits	時數 Credit Hours	學分 Credits	時數 Credit Hours	科目 Subjects	學分 Credits	時數 Credit Hours	學分 Credits	時數 Credit Hours
共同必修 Compulsory Courses		書報討論(一) Seminar (1)	0	2			碩士論文(二) Master Thesis（2）	3	3		
		書報討論(二) Seminar (2)			0	2					
		碩士論文(一) Master Thesis（1）			3	3					
		小計	**0**	**2**	**3**	**5**	**小計**	**3**	**3**		
專業選修 Elective Courses	車輛核心課程 Vehicle Core Courses	車輛科技專論 Vehicle Sciences and Technology Discussion	3	3			車輛感測與控制實務 Automotive Sensory and Control System	3	3		
		車輛機電系統設計 Mechatronic Design In Automotive Systems	3	3			電腦視覺 Computer Vision	3	3		
		車輛系統動態分析實務 Measurement and Analysis of Vehicle System Dynamics	3	3			潔淨能源與動力 Clean Energy and Power Source			3	3
		物聯網控制專論 Special Topics in IoT Control	3	3			車輛排污控制特論 Vehicle Emission Control			3	3
		中古車輛鑑價與查定師創新創業 Evaluation of Ancient Vehicles and Innovation			3	3					
		嵌入式微處理器系統 The Chip of Embedded System			3	3					
		應用車輛動力學 Vehicle Dynamics			3	3					
	機械核心課程 Mechanical Core Courses	精密加工特論 Topics of Precision Machining	3	3			微系統設計與製造 Micro Electro-Mechanical System Design and Manufacture	3	3		
		產品設計與工程應用 Product Design and Engineering Applications	3	3			切削理論與實務 Cutting Principle and Application			3	3
		工程材料科學特論 Special Topics in Materials Science and Engineering	3	3							
		半導體產業特論 Semiconductor Industry Special Discussion			3	3					
		精密模具設計實務 Precision Die Design and Practice			3	3					
		電腦輔助製造特論 Special Topic on Computer Aided Manufacturing			3	3					
	機電核心課程 Electromechanical Core Courses	線性控制系統 Linear Control System	3	3			機電整合特論 Advanced Mechatronic Practicum	3	3		
		模糊理論 Fuzzy Theory	3	3			視覺自動化控制 Vision Builder for Automated Inspection			3	3
		可程式自動化控制實務 Industrial Automation by PLC	3	3			數位控制實務 Digital Control Practice			3	3
		類神經網路應用 Application of Neural Network			3	3	機器學習 Machine Learning			3	3
		智慧型控制 Intelligent Control			3	3					
		機構設計與應用 Mechanism Design and Application			3	3					
	管理核心課程 Management Core Courses	作業管理專論 Operation management professional topics	3	3			行銷管理專論 Marketing Management	3	3		
		科技管理專論 Management of Technology	3	3			豐田式生產系統 Toyota Production System	3	3		
		企業電子化專論 Electronization Enterprise Monograph	3	3			全面品質管理專論 Professional topics of total quality management			3	3
		高等工程數學 Advanced Engineering Mathematics	3	3							
		智慧財產權專論 Intellectual Property Rights			3	3					
		供應鏈管理專論 Supply Chain Management Monograph			3	3					
		組織與管理 Organization and Management			3	3	書報討論(三)* Seminar (3)	0	2		
	共同選修 Common Elective Courses	有限元素分析 Analysis of Finite Element Method	3	3			最佳化設計 Optimum Design	3	3		
		數值分析 Numerical Analysis	3	3			人因工程專論 Human Factors Engineering Monograph	3	3		
		應用統計學 Applied Statistics			3	3	實驗設計方法 Experimental Design Methods	3	3		
		彈塑性力學 Elasticity and Plasticity			3	3	書報討論(四)* Seminar (4)			0	2
		高等作業研究 Advanced Homework Research			3	3	研究方法 Research Methods			3	3
							振動學 Vibration			3	3
		小計 Subtotal Credits	**42**	**42**	**27**	**27**	**小計 Subtotal Credits**	**27**	**29**	**21**	**21**

附註：

1.本表112學年度日間部碩士班入學新生適用。

1.This curriculum is applicable to students of Daytime Division of Master class admitted for the academic year 2023.

2.最低畢業學分為30學分，其中必修碩士論文6學分。

2.The minimum credits for graduation is 30, including Master Thesis "6" credits for required courses.

3.**書報討論(一)(二)為必修，書報討論(三)(四)為必選修。但一年半畢業者，書報討論(四)得以免修。**

3.Required courses：Seminar(1)(2)，Required-Elective Courses：Seminar(3)(4). Graduated within one and a half years, Exemption from Seminar(4)

4.碩士論文成績以學位口試成績計算，待論文口試通過，賦予6學分。

4.The master's thesis score is calculated based on the degree oral . Once the thesis oral is passed, 6 credits will be awarded.

5.本表業經系課程委員會(112.03.28)、學院課程委員會(112.03.30)、校課程委員會(112.04.11)審議通過。

5This curriculum list has been reviewed and approved by the Department Curriculum Committee (2023.03.28), College Curriculum Committee (2023.03.30), and University Curriculum Committee (2023.04.11).