

淡江大學 111學年度 機械與機電工程學系精密機械組 日間學制入學新生課程規劃表  
Curriculums of the Department of Mechanical and Electro-Mechanical Engineering

Division of Precision Machinery at Tamkang University (Applicable to Newly-Admitted Students for the 2022 Academic Year)

科目名稱 /Subjects		學分 Credits	第1學年		第2學年		第3學年		第4學年		備註 Remarks
			1st Academic Year		2nd Academic Year		3rd Academic Year		4th Academic Year		
			1st Semester	2nd Semester							
基本知能課程12學分 12 credits for Fundamental Courses	外國語文學門(Q) Foreign Languages (Field Q)	8	2	2	2	2					大1英文必修、大2外文自由選 4 credits of freshman English + 4 credits of any foreign language
	中國語文能力表達 Ability of Expressing in Spoken and Written Chinese	2									語文表達 Ability of Expressing
	大學學習 Learning in University	1	1								學習與發展學門(N) Learning and Development (Field
	社團學習與實作(K) Learning and Practice of Clubs	1		1							課外活動與團隊發展 Extracurricular Activities and Team-Ship Development (Field K)
通識核心課程14學分 14 credits for General Education and Core Courses	AI與程式語言 AI and Programming Language	1	1								
	探索永續 Exploring Sustainability	1	1								
	文學經典學門(L) Classics in World Literature (Field L)	2									人文領域至 少2學分 Humanities (2 credits required)
	歷史與文化學門(P) History and Culture (Field	2									
	哲學與宗教學門(V) Philosophy and Religion (Field V)	2									社會領域至 少2學分 Social and Culture (2 credits required)
	藝術欣賞與創作學門(M) Arts Appreciation and Invention (Field M)	2									
	全球視野學門(T) Global Outlook (Field T)	2									科學領域至 少2學分 Science Inquiry (2 credits required)
	未來學學門(R) Futures Studies (Field R)	2									
	社會分析學門(W) Social Analysis (Field W)	2									
	公民社會及參與學門(S) Civil Society and Participation (Field S)	2									
資訊教育學門(O) Information & Computer Education (Field O)	2										
全球科技革命學門(Z) Global Technology Revolution (Field Z)	2										
自然科學學門(U) Natural Sciences (Field U)	2										
服務與活動課程 Service and Extra- curricular Activities	體育 Physical Education	0	0	0	0	0					
	全民國防教育軍事訓練(一)- 國防科技 All-Out Defense Education Military Training(I)- National Defense Technology	0									1年級；單學期0學分 1st year; zero credits in a single semester.
	校園與社區服務學習 Campus and Community Service-Learning	0	0	0							
■本系必修課程：72 學分 Required Courses： 72 credits	普通物理 General Physics	4	2	2							
	普通物理實驗 General Physics Lab.	1		1							
	微積分 Calculus	6	3	3							
	工程圖學 Engineering Graphics	2	1	1							
	應用力學(一) Applied Mechanics (I)	2		2							
	工場實習 Workshop Practice	2	1	1							
	工程數學 Engineering Mathematics	6			3	3					
	電腦繪圖 Computer Graphics	1				1					
	電路學 Circuit Theory	3				3					

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機動學 Mechanism	3				3					
機械畫 Mechanical Drawing	1			1						
應用力學(二) Applied Mechanics (II)	3			3						
材料科學與工程 Materials Science and Engineering	3				3					
材料力學(-) Strength of Materials (I)	3			3						
熱力學 Thermodynamics	4			2	2					
自動控制 Automatic Control	3					3				
流體力學 Fluid Mechanics	3					3				
熱傳學 Heat Transfer	3					3				
精密機械製造 Precision Manufacturing	3						3			
精密機械設計 Fundamentals of Precision Machine Elements	4					2	2			
應用物理學 Applied Physics	3					3				
畢業專題 Key Issues in Career Planning	2						1	1		
精密機械實驗(一) Precision Mechanical Engineering Laboratory (I)	1					1				
精密機械實驗(二) Precision Mechanical Engineering Laboratory (II)	1						1			
精密機械實驗(三) Precision Mechanical Engineering Laboratory	1							1		
精密機械實驗(四) Precision Mechanical Engineering Laboratory (IV)	1								1	
<p>■本系系選修課程：至少須修14學分以上。</p> <p>Department Elective Courses: A minimum of 14 credits must be completed.</p>	金屬材料顯微組織觀察和實務 Metallic Material Microstructure Observation and Practice	2	2							<p>附註： 系選修課程之開設科目，將依據本校規定可開課學分數開課。不是每個科目都會開課。</p> <p>Note: The elective courses offered by the department will be arranged based on the number of credits permitted under the university's regulations. Not all listed courses will necessarily be offered.</p>
	智慧機械概論與實務 Introduction and Practices of Intelligent Machine	3	3							
	數位邏輯設計 Digital Logic Design	3		3						
	電腦程式設計 Computer Program Design	3			3					
	微處理機 Microprocessors	3			3					
	人因工程學 Human Factor	3			3					
	基礎實驗設計 Fundamental Design of	3			3					
	材料力學(二) Strength of Materials(II)	3				3				
	CNC操作與加工實務 CNC Operating Practice	3				3				
	電腦輔助製造 Computer Aided	3					3			
	動態系統分析 Analysis of Dynamic Systems	3					3			
	工業材料應用 Application of Industrial Materials	3					3			
	工程光學 Engineering Optics	2					2			
	能源工程 Energy Engineering	3					3			
	機器人學 Robotics	3					3			

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		第1學期	第2學期	第1學期	第2學期	第1學期	第2學期	第1學期	第2學期	
		1st Semester	2nd Semester							
電子構裝技術 Electronic Packaging Technology	3					3				
3D 列印設計 3D Printing Design	3						3			
電腦輔助設計 Computer Aided Design	3						3			
數位訊號處理 Digital Signal Processing	3						3			
電子計算機工程應用 (一) Engineering Application of Computers(I)	2					2				
電子計算機工程應用 (二) Engineering Application of Computers(II)	3						3			
機構設計 Mechanism Design	3						3			
機電整合 Mechatronics	3							3		
可靠度工程 Reliability Engineering with Applications	3							3		
有限元素法概論 Intro. to Finite Element Method	3								3	
機械振動 Mechanical Vibration	3								3	

(1)必修科目總學分數：98學分(含通識教育課程26學分)

(1)Total Credits for Required Courses: 91 credits (including 26 credits in General Education courses)

(2)最低應修本系選修科目總學分數：14學分

(2)Minimum Credits Required for Departmental Elective Courses: 21 credits

(3)其他選修總學分數：16學分

(3)Minimum Number of Credits Required for Other Elective Courses: 16 credits

**畢業總學分數：128學分**

**Total Number of Credits Required for Graduation: 128 credits**