

明志科技大學四技部114學年度入學 化學工程系 課程總表  
Ming Chi University of Technology 「2025 SchoolYear」 Department of Chemical Engineering

114/06/17校課程委員會會議通過  
114/06/03校課程委員會會議通過  
114/05/29系課程委員會會議通過  
Examination at School Curriculum Committee Meeting on July 17,2025  
Examination at College Curriculum Committee Meeting on June 3,2025  
Examination at Department Curriculum Committee Meeting on May 29,2025

	科目名稱 Course Name	一上 Grade 1 First Semester		一下 Grade 1 Second Semester		二上 Grade 2 First Semester		二下 Grade 2 Second Semester		三上 Grade 3 First Semester		三下 Grade 3 Second Semester		四上 Grade 4 First Semester		四下 Grade 4 Second Semester		選課 條件 Course Selection Conditions	每班人數 Number of Class	備註 Remarks
		學分 Credits	時數 Hours	學分 Credits	時數 Hours															
基礎課程開設 22 學分 Basic Course (22 Credits)	文學欣賞與情感表達(Appreciation of Literature and Emotional Expression)	2	2																	
	永續發展與社會實踐(Sustainable Development and Social Practice)	1	1																	
	生活與應用英文(English for Life and Business)	3	3	3	3															
	全民國防教育訓練(All-out Defense Education Military Training)	0.5	2	0.5	2															
	體育(Physical Education)	1	2	1	2	1	2	1	2											
	藝術欣賞與社會參與(Art Literacy and Social Participation)					2	2													
	歷史思辨與多元文化領域(Historical Thinking and Multicultural Studies)							2	2											
	英語聽講(Aural-Oral English)							1	2	1	2									
	英文實務(一)(二)(Practical English I)(II))													1	2	1	2			
	合計Total	7.5	10	6.5	9	2	4	4	6	0	0	0	0	1	2	1	2			
核心課程(共2學分) Core Course (2 Credits)	大學之鑑(The Goal of University Education)	1	2																	
	設計思考(Design Thinking)					1	1													
	合計Total	1	2	1	1															
校共同必修(共 18學分) Common School Course (18 Credits)	多元學習前素養訓練(Remiminary Literacy Training for Multimodal Learning)									1	1									
	多元學習模組(一)(Multimodal Learning Module I)											4	40							
	多元學習模組(二)(Multimodal Learning Module II)											4	40							
	多元學習模組(三)(Multimodal Learning Module III)											4	40							
	多元學習模組(四)(Multimodal Learning Module IV)											5	40							
	合計Total	0	0	0	0	0	0	0	0	1	1	17	160	0	0	0				
核心必修 課程 50 學分 Degree Professional Competency (50 Credits)	微積分(Calculus)	3	3	3	3															
	普通物理(General Physics)	3	3																	
	普通化學(General Chemistry)	3	3	3	3															
	計算機程式的設計(Computer Programming )			3	3															
	質能平衡(Material and Energy Balance)	3	3																	
	有機化學(I)Organic Chemistry I)					3	3													
	物理化學(II)Physical Chemistry II)					3	3													
	工程數學(I)Engineering Mathematics I)					3	3													
	單元操作與輸送現象(一)(Unit Operation and Transport Phenomena I)							3	3										全英語授課 English-medium instruction	
	單元操作與輸送現象(二)(Unit Operation and Transport Phenomena II)									3	3									
模組選修課程 20 學分 Elective modules (20 Credits)	化工熱力學(Chemical Engineering Thermodynamics)									3	3									
	儀器分析(Instrumental Analysis)									3	3									
	程序設計(Process Design)																			
	實業專題(I)(II)(Special Topics in Practice, I-II))											1	2	1	2					
	反應工程(Chemical Reaction Engineering)											3	3							
	合計Total	9	9	12	12	9	9	3	3	9	9	0	0	0	0	7	8	1	2	
	普通化學實驗(一)(二)(General Chemistry Experiment, I-II)	2	3	2	3														應用化學模組Applied Chemistry module	
	有機化學(二) (Organic Chemistry II)							3	3										應用化學模組Applied Chemistry module	
	物理化學(二) (Physical Chemistry II)							3	3										應用化學模組Applied Chemistry module	
	化工產業與人工智慧應用(Chemical Engineering Industry and Artificial Intelligence Application)									1	2								化工工程模組Chemical Engineering Processes module	
專業選修課程 至 少 28 學分 Professional Elective (Requires at least 34 Credits)	工程數學(二)(Engineering Mathematics II)									3	3								化工工程模組Chemical Engineering Processes module	
	有機化學實驗(Organic Chemistry Experiment)								2	3									應用化學模組Applied Chemistry module	
	物理化學實驗(Physical Chemistry Experiment)									2	3								化工工程模組Chemical Engineering Processes module	
	工程倫理與實務講座(Engineering Ethics and Professional Topics)															1	2		應用化學模組Applied Chemistry module	
	化學工程實驗(II)(III)(Practice for Chemical Engineering, I-II))															2	4	2	4	
	單元操作與輸送現象(三)(Unit Operation and Transport Phenomena III)															3	3		化工製程模組Chemical Engineering Processes module	
	合計Total	2	3	2	3	0	0	12	14	2	3	0	0	6	9	2	4			
	材料科學導論(Introduction to Material Science)					3	3													
	分析化學實驗(Analytical Chemistry and Experiment)					3	4													
	高分子化學(Polymer Chemistry)							3	3											
專業選修課程 至 少 28 學分 Professional Elective (Requires at least 34 Credits)	生物化學(Biochemistry)					3	3													
	分子生物學(Molecular Biology)							3	3											
	化學技術實驗(Chemical Technology in Practice)							2	4											
	化工實務專題一(Special Topics in Practice of Chemical Engineering I)							1	2											
	能源工程概論(Introduction to Energy Engineering)					3	3													
	能源材料與製程討論(Introduction to Energy Materials and Processes)							3	3											
	高分子加工暨實驗(Polymer Processing and Experiment)									3	4									
	化工實務專題二(Special Topics in Practice of Chemical Engineering II)																			