

明志科技大學115入學年化學工程系碩士班 課程表
Ming Chi University of Technology 「2026 SchoolYear」 MS Program in Chemical Engineering Curriculum

115/07/07校課程委員會議通過
115/06/02院課程委員會議通過
115/03/24系課程委員會議通過

Examination at School Curriculum Committee Meeting on July 7, 2026

Examination at College Curriculum Committee Meeting on June 2, 2026

Examination at Department Curriculum Committee Meeting on March 24, 2026

Examination at Department Curriculum Committee Meeting on March 24, 2020							
類別 category	課程名稱 Course name	上學期 Semester I		下學期 Semester II		備註	
		學分 Credits	時數 Hours	學分 Credits	時數 Hours		
必修課程 Required Courses	產業實務與書報討論(I) Industrial and Practical Discussion(1)	1	2			演講式課程 Lecture series	
	產業實務與書報討論(II) Industrial and Practical Discussion(2)			1	2	演講式課程 Lecture series	
	科技論文寫作 Technical English Writing	1	2			全英語授課 English-medium instruction	
	專題研究 (I) Special Topics(1)	1	2			全英語授課 English-medium instruction	
	專題研究 (II) Special Topics(2)			1	2	全英語授課 English-medium instruction	
	小計	3	6	2	4		
核心選修課程 Core Elective Courses	高等工程數學 Advanced Engineering Mathematics	3	3			全英語授課 English-medium instruction	
	高等化工熱力學 Advanced Chemical Engineering Thermodynamics	3	3				
	高等生物化學與分子生物學 Advanced Biochemistry and Molecular Biology	3	3			全英語授課 English-medium instruction	
	電池技術 Technology of Battery	3	3			全英語授課 English-medium instruction	
	高等輸送現象 Advanced Transport Phenomena			3	3	全英語授課 English-medium instruction	
	高等反應工程 Advanced Reaction Kinetics			3	3	全英語授課 English-medium instruction	
	高等高分子化學 Advanced Polymer Chemistry			3	3	全英語授課 English-medium instruction	
	半導體薄膜製程與化工儀器分析 Semiconductor Thin-Film Processes and Chemical Engineering Analysis			3	3	全英語授課 English-medium instruction	
	小計	12	12	12	12	1.學生應於上、下學期各修習一門3學分之核心課程，共計完成二門核心課程（6學分）。 2.除規定應修之二門核心課程外，其餘修習之核心課程得認列為專業選修課程。 1.Students shall complete one 3-credit core course in each semester, totaling two core courses (6 credits). 2.Except for the two required core courses, credits earned from additional core courses may be counted toward professional elective credits.	
	前瞻應用化學領域 Emerging Applied Chemistry	結晶技術 Crystallization Technology	3	3			奇數年開授 Offered in odd-numbered academic years
		光催化：基本原理與應用 Photocatalysis: Fundamentals and Applications	3	3			全英語授課 English-medium instruction
		高等細胞生物學 Advanced Cell Biology	3	3			全英語授課 English-medium instruction
		生醫複合材料 Biomedical composites	3	3			全英語授課 English-medium instruction
		生醫材料檢測應用 Biomaterial Detection Applications			3	3	
		高等有機化學 Advanced Organic Chemistry			3	3	
		先進化工製程領域 Advanced Chemical Engineering Processes	化工程序模擬 Chemical Engineering Process Simulation	3	3		
	分離技術 Separation Technology		3	3			
	光電顯示與半導體製程 Photoelectric Display & Semiconductor Manufacturing		3	3			
	高等電化學工程 Advanced Electrochemical Engineering		3	3			全英語授課 English-medium instruction
	穿透式電子顯微鏡實務 Transmission Electron Microscopy Practice		3	3			全英語授課 English-medium instruction
	綠色資源與技術 Green Resources and Technology		3	3			
	生化儀器分析暨實作 Biochemical Analysis Technology and Practice		3	3			全英語授課 English-medium instruction
	工程數值分析與應用 Engineering Numerical Analysis & Application				3	3	
	應用熱力學 Applied Thermodynamics			3	3	偶數年開授 Offered in even-numbered academic years	

		深度學習之化工應用 Deep Learning for Chemical Engineering			3	3	偶數年開授 Offered in even-numbered academic years
		X光繞射原理與應用 Principle & Application of X-Ray Diffraction			3	3	全英語授課 English-medium instruction
		觸媒原理與應用 Concepts and applications of catalysis			3	3	
		超臨界流體應用 Application of Supercritical Fluid			3	3	
		生醫工程技術 Techniques in biomedical engineering			3	3	全英語授課 English-medium instruction
		基因工程暨實務 Genetic Engineering Technology and Practice			3	3	全英語授課 English-medium instruction
		小計	33	33	30	30	專業選修課程至少18學分 Professional elective courses must be a minimum of 18 credits

- 1.畢業學分下限為29學分 (不含論文 6 學分) 。每學期修課上限為 17學分，開課人數最低為 5 人。
The minimum graduation credits for degree are 29 (excluding 6 credits for the thesis). The maximum credits earned are 17 per semester. The minimum enrollment for a course is 5 students.
- 2.必修科目5學分；核心課程6學分；選修科目18學分(經指導教授簽名同意，可跨所選課，最多3門)；合計29學分。
There are a total of 29 credits for graduation, including 5 credits of required courses, 6 credits of core elective courses, and 18 credits of professional elective courses. The transferable credits of 3 courses only from other institutes are earned with the agreement of the advisor.
- 3.奇偶數年開授課程以學年度為準。
Courses offered in alternate years are subject to the content announced for that academic year

