

中國文化大學 理工學院 化學工程與材料工程學系 必修科目表

113 學年度起入學新生實施

必修類別	科目名稱	規定學分	一年級		二年級		三年級		四年級		備註
			上	下	上	下	上	下	上	下	
通識科目	國文	4	2	2							五選一課程
	外文：閱讀與聽講（一）	3	1.5	1.5							
	外文：閱讀與聽講（二）	3			1.5	1.5					
	跨域專長	12			6	6					
	人文學科領域	4	4	4	2						
	社會科學領域	4									
自然科學與數學領域	2										
共同科目	體育	0	0	0	0	0					
	全民國防教育軍事訓練	0	0								
通識及共同必修學分合計		32	7.5	7.5	9.5	7.5					
專業必修科目	(2021) 微積分	6	3	3							
	(2026) 普通物理學	4	2	2							
	(2019) 普通化學	6	3	3							
	(2020) 普通化學實驗	2	1	1							
	(6003) 工程數學	6			3	3					
	(0682) 材料科學與工程	3			3						
	(6048) 質能均衡	3			3						
	(2025) 有機化學	4			2	2					
	(2148) 有機化學實驗	1			1						
	(2060) 物理化學	4			2	2					
	(2163) 物理化學實驗	1				1					
	(H531) 科技論文閱讀與寫作	2				2					
	(3430) 輸送現象與單元操作I	3				3					
	(3433) 輸送現象與單元操作II	3					3				
	(3434) 輸送現象與單元操作III	3						3			
	(6026) 熱力學	3					3				
	(2215) 儀器分析	2					2				
	(I073) 高分子物理與化學	3						3			
	(I074) 無機材料	3						3			
	(6332) 化學反應工程	3						3			
	(I072) 化工實驗	1							1		
	(C696) 專題研究與實作I	1						1			
	(C697) 專題研究與實作II	1							1		
	(2972) 程序控制	3							3		
	(8799) 材料實驗	1							1		
	(6057) 程序設計	3							3		
	專業必修學分合計		75	9	9	14	13	8	13	9	0
必修學分總計		107	16.5	16.5	23.5	20.5	8	13	9	0	
最低畢業學分數		128 學分									
其他修業規定：											

服務學習	參與服務學習，依本校「服務學習實施辦法」辦理，詳細資訊請參考綜合業務組網頁。 https://cur.pccu.edu.tw/
全球競爭力檢定	通過全球競爭力檢定，依本校「大學部學生全球競爭力檢定實施辦法」辦理，詳細資訊請參考教務組網頁。 https://reg.pccu.edu.tw/
倫理課程	參與「職業倫理」、「中華文化專題」，依本校「職業倫理教育實施要點」及「中華文化專題講座實施要點」辦理，詳細資訊請參考綜合業務組網頁。 https://cur.pccu.edu.tw/
全人學習護照	參與全人學習護照各項學習活動達認證標準，依本校「全人學習護照實施辦法」辦理，詳細資訊請參考課外活動組網頁。 https://activity.pccu.edu.tw/

Chinese Culture University, Required Courses List, Department of Chemical and Materials Engineering

Effective for Students Enrolled in and from the 2024 Academic Year

Categories for Compulsory Courses	Course Title	Credit Hours	1st Year		2nd Year		3rd Year		4th Year		Remark
			1st semester (Sep)	2nd semester (Feb)	1st semester (Sep)	2nd semester (Feb)	1st semester (Sep)	2nd semester (Feb)	1st semester (Sep)	2nd semester (Feb)	
Required Courses											
General Required Courses	CHINESE	4	2	2							
	FOREIGN LANGUAGE READING AND CONVERSATION(1)	3	1.5	1.5							Choose 1 of 5 Courses
	FOREIGN LANGUAGE READING AND CONVERSATION(2)	3			1.5	1.5					
	INTERDISCIPLINARY PROGRAM	12			6	6					
	ART AND HUMANITIES	4									
	NATURAL SCIENCES AND MATHEMATICS	2	4	4	2						
	SOCIAL SCIENCES	4									
Common Courses	PHYSICAL EDUCATION	0	0	0	0	0					
	ALL-OUT DEFENSE EDUCATION	0	0								
	MILITARY TRAINING										
Total General and Common Courses Credits		32	7.5	7.5	9.5	7.5					
Required Courses by Department	(2021) Calculus	6	3	3							
	(2026) General Physics	4	2	2							
	(2019) General Chemistry	6	3	3							
	(2020) General Chemistry Laboratory.	2	1	1							
	(6003) Engineering Mathematics	6			3	3					
	(0682) Materials Science and Engineering	3			3						
	(6048) Mass and Energy Balance	3			3						
	(2025) Organic Chemistry	4			2	2					

Categories for Compulsory Courses	Course Title	Credit Hours	1st Year		2nd Year		3rd Year		4th Year		Remark
			1st semester (Sep)	2nd semester (Feb)	1st semester (Sep)	2nd semester (Feb)	1st semester (Sep)	2nd semester (Feb)	1st semester (Sep)	2nd semester (Feb)	
	(2148) Organic Chemistry Laboratory	1			1						
	(2060) Physical Chemistry	4			2	2					
	(2163) Physical Chemistry Laboratory	1				1					
	(H531) Technical Paper Reading and Writing	2				2					
	(3430) Transport Phenomena and Unit Operations (I)	3				3					
	(3433) Transport Phenomena and Unit Operations (II)	3					3				
	(3434) Transport Phenomena and Unit Operations (III)	3						3			
	(6026) Thermodynamics	3					3				
	(2215) Instrumental Analysis	2					2				
	(I073) Polymer Physics and Chemistry	3						3			
	(I074) Inorganic Materials	3						3			
	(6332) Chemical Reaction Engineering	3						3			
	(I072) Chemical Engineering Laboratory	1							1		
	(C696) Research Project and Implementation (I)	1							1		
	(C697) Research Project and Implementation (II)	1							1		
	(2972) Process Control	3							3		
	(8799) Materials Laboratory	1							1		

Categories for Compulsory Courses	Course Title	Credit Hours	1st Year		2nd Year		3rd Year		4th Year		Remark
			1st semester (Sep)	2nd semester (Feb)	1st semester (Sep)	2nd semester (Feb)	1st semester (Sep)	2nd semester (Feb)	1st semester (Sep)	2nd semester (Feb)	
	(6057) Process Design	3							3		
Total Credits of Required Subjects		75	9	9	14	13	8	13	9	0	
Total Required Credits		107	16.5	16.5	23.5	20.5	8	13	9	0	
Graduate Credits		128									
Other provisions of graduate requirements :											
Service Learning	Participation in service learning shall be conducted in accordance with the 'Implementation Measures for Service Learning' of the university. For detailed information, please refer to the website of the Curriculum Section at https://cur.pccu.edu.tw/										
Global competitiveness	Passing the "Implementation Measures for the Global Competitiveness Assessment of University Students" is mandatory for graduation. Visit the website of the Registration Section for more information.										
Professional Ethics/ Special Topics in Chinese Culture	According to the university's 'Implementation Guidelines for Professional Ethics Education' and 'Implementation Guidelines for Chinese Culture Topics Lectures,' students are required to participate in two-semester courses: 'Professional Ethics' and 'Chinese Culture Topics.' For detailed information, please refer to the website of the Curriculum Section: https://cur.pccu.edu.tw/										
Whole Person Learning Passport	To fulfill the Whole Person Learning Passport requirements, students must actively participate in various learning activities. These activities are organized in accordance with our university's guidelines for the Whole Person Learning Passport. For more detailed information, please visit the website of the Extracurricular Activities Section at https://activity.pccu.edu.tw/ ."										