

113學年度水資源及環境工程學系課程規畫表(113學年度入學新生適用)  
Department of Water Resources and Environmental Engineering  
Curriculum Planning Chart for 113 academic year (2024-2025) incoming freshmen

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			
			上 1st semester	下 2nd semester	上 1st semester	下 2nd semester	上 1st semester	下 2nd semester	上 1st semester	下 2nd semester		
基本知能課程12學分 12 credits for general education curriculum	外國語文學門(Q) Foreign Language (Field Q)	8	2	2	2	2					大1英文必修、大2外文自由選 Required English in freshman year; elective foreign language in sophomore year.	
	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 N)	
	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12學分 12 credits for General Education Curriculum	AI與程式語言 AI and Programmiing 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 At least 2 credits in the Humanities field.	每學門至多修習2科4學分 Students may take up to 2 courses (4 credits) in each academic field.
	歷史與文化學門(P) History And Culture (Field P)	2										
	哲學與宗教學門(V) Philosophy and Religion (Field V)	2										
	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									社會領域 至少2學分 At least 2 credits in the Social Sciences field.	
	未來學學門® Futures Studies (Field R)	2										
	社會分析學門(W) Social Analysis (Field W)	2									科學領域 至少2學分 At least 2 credits in the Science field.	
	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										
	*商管學院學生請另詢所屬學系 Students of the College of Business Management, please consult your respective departments.											
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											
其他課程 other subjects	體育 Physical Education	4	1	1	1	1					不計入畢業學分 Not counted toward graduation credits.	
	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 First-year; zero credits in a single semester.	
校園與社區服務學習 CAMPUS AND COMMUNITY SERVICE-LEARNING		2	1	1							不計入畢業學分 Not counted toward graduation credits.	
■本系必修課程：58學分 Required Courses：58 credits	普通物理 GENERAL PHYSICS	2	2									
	微積分 CALCULUS	3	3									
	環境化學 ENVIRONMENTAL CHEMISTRY	3	3									
	水資源及環境工程概論 INTRORODUCTION TO WATER RESOURCES AND ENVIRONMENTAL ENGINEERING	2	2									
	基礎工程數學 BASIC ENGINEERING MATHEMATICS	3		3								
	水文學 HYDROLOGY	3		3								
	應用力學 APPLIED MECHANICS	3		3								
	水質實驗 WATER QUALITY ANALYSIS	1		1							實驗課程 Laboratory course	
	工程數學 ENGINEERING MATHEMATICS	6			3	3						

<p>■本系系選修課程：至少須修24學分以上。 Department Elective Courses: A minimum of 24 credits must be completed.</p> <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>	流體力學(一) FLUID MECHANICS(I)	3			3							
	工程統計 ENGINEERING STATISTICS	3			3							
	流體力學(二) FLUID MECHANICS(II)	3				3						
	工程圖學 ENGINEERING GRAPHICS	2				2						
	給水工程 WATER SUPPLY ENGINEERING	3				3						
	明渠水力學 HYDRAULICS AND OPEN CHANNELS	3					3					
	污水工程 WASTEWATER ENGINEERING	3					3					
	土壤力學 SOIL MECHANICS	3					3					
	流體力學實驗 FLUID MECHANICS LAB.	1					1				實驗課程 Laboratory course	
	數值方法 NUMERICAL METHOD	3						3				
	水資源工程 WATER-RESOURCES ENGINEERING	3						3				
	專題實作 PRACTICE OF PROJECTS	2						2				
	工程經濟學 ENGINEERING ECONOMICS	2	2									
	水環境生態學 WATERSHED ECOLOGY AND THE ENVIRONMENT	2	2									
	工程材料學 ENGINEERING MATERIALS	2	2									
	程式設計 PROGRAM DESIGN	2		2								
	環境微生物學 ENVIRONMENTAL MICROBIOLOGY	3		3								
	環境永續概論 INTRODUCTION TO ENVIRONMENTAL SUSTAINABILITY	2		2								
	材料力學 STRENGTH OF MATERIALS	3			3							
	水文測量與實習 PRACTICE & SURVEY OF HYDROLOGY	2			2							
	環境土壤學 ENVIRONMENTAL SOIL SCIENCE	2			2							
	環境毒物學 ENVIRONMENTAL TOXICOLOGY	2			2							
	環境污染物分析(一) ENVIRONMENTAL ANALYSIS(I)	1			1						實驗課程 Laboratory course	
	中等水文學 INTERMEDIATE HYDROLOGY	3				3						
	結構學 STRUCTURAL THEORY	2				2						
	環境生物技術概論 INTRODUCTION TO ENVIRONMENTAL BIOTECHNOLOGY	2				2						
	循環經濟 CIRCULAR ECONOMY	2				2						
	水利工程應用軟體 HYDRAULIC MODELING SOFTWARES	2					2					
	鋼筋混凝土 REINFORCED CONCRETE	3					3					
	固體廢棄物 SOLID WASTES TREATMENT	3					3					
	環境儀器分析 ENVIRONMENTAL INSTRUMENTAL ANALYSIS	2					2					
	環境污染物分析(二) ENVIRONMENTAL ANALYSIS(II)	1					1				實驗課程 Laboratory course	
	水資源規劃 WATER RESOURCES PLANNING	3						3				
	基礎工程 FOUNDATION ENGINEERING	3						3				
	防洪工程 FLOOD ENGINEERING	2						2				
	渠道水力學實驗 OPEN CHANNEL HYDRAULICS EXPERIMENTS □	1						1			實驗課程 Laboratory course	
	空氣污染控制 AIR POLLUTION CONTROL	3						3				
	有害廢棄物 HAZARDOUS WASTE	2						2				

資源回收再利用 RESOURCE RECOVERY AND REUSE	2						2				
灌溉及排水工程 IRRIGATION AND DRAINAGE ENGINEERING	2							2			
環境規劃與管理 ENVIRONMENTAL PLANNING AND MANAGEMENT	3							3			
環工專業實務設計 PRACTICAL DESIGN IN ENVIRONMENTAL ENGINEERING FIELD	2							2			
污水工程設計 WASTEWATER ENGINEERING DESIGN	2							2			
地理資訊在工程上之應用 GIS AND ITS ENGINEERING APPLICATION□	2							2			
地下水及土壤污染 GROUNDWATER AND SOIL POLLUTION	3							3			
企業實習 PRACTICUM IN EDUCATIONAL TECHNOLOGY	2							2			
海岸工程 COASTAL ENGINEERING	3								3		
水土保持工程 SOIL AND WATER RESERVATION ENGINEERING	2								2		
企業永續管理 SOIL AND WATER RESERVATION ENGINEERING	2								2		
噪音及振動 NOISE AND VIBRATION CONTROL	2								2		

(1)必修科目總學分數：82學分(含通識教育課程24學分)

(1)Total Credits for Required Courses: 82 credits (including 24 credits in General Education courses)

(2)最低應修本系選修科目總學分數：24學分

(2)Minimum Credits Required for Departmental Elective Courses: 24 credits

(3)其他選修總學分數：22學分

(3)Minimum Number of Credits Required for Other Elective Courses: 22 credits

**畢業總學分數：128學分**

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