

111學年度水資源及環境工程學系環境工程組課程規畫表(111學年度入學新生適用)
Division of Environmental Engineering, Department of Water Resources and Environmental Engineering
Curriculum Planning Chart for 111 academic year (2022-2023) 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		
通識核心課程14學分 14 credits for General Education Curriculum	AI與程式語言 AI and Programmiing Language	1	1										
	探索永續 Exploring Sustainablitiy	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		
	未來學學門® Futures Studies (Field R)	2									At least 2 credits in the Social Sciences field.		
	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									科學領域 至少2學分 At least 2 credits in the Science field.		
	*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	0	0	0	0	0							
	全民國防教育軍事訓練（一）、全 民國防教育軍事訓練（一）/護理 （一） ALL-OUT DEFENSE EDUCATION MILITARY TRAINING, ALL-OUT DEFENSE EDUCATION MILITARY TRAINING(I)/NURSING (I)	0	0	0									
	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									
	微積分 CALCULUS	6	3	3									
	環境化學(一) ENVIRONMENTAL CHEMISTRY(I)	2	2										
	工程圖學 ENGINEERING GRAPHICS	2	2										
	環境化學(二) ENVIRONMENTAL CHEMISTRY (II)	2		2									
	環境微生物學 ENVIRONMENTAL MICROBIOLOGY	3		3									
	應用力學 APPLIED MECHANICS	3		3									

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<div>■本系系選修課程：至少須修13學分以上。 Department Elective Courses: A minimum of 13 credits must be completed.</div> <div>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。</div> <div>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.</div>	環境污染物分析(一) ENVIRONMENTAL ANALYSIS(I)	1		1							實驗課程 Laboratory course
	流體力學(一) FLUID MECHANICS(I)	3			3						
	環境土壤學 ENVIRONMENTAL SOIL SCIENCE	3			3						
	環境污染物分析(二) ENVIRONMENTAL ANALYSIS(II)	1			1						實驗課程 Laboratory course
	工程統計(一) ENGINEERING STATISTICS(I)	2			2						
	工程數學 ENGINEERING MATHEMATICS	6			3	3					
	工程統計(二) ENGINEERING STATISTICS(II)	2				2					
	流體力學(二) FLUID MECHANICS II	3				3					
	給水工程 WATER SUPPLY ENGINEERING	3				3					
	流體力學實驗 FLUID MECHANICS LAB.	1				1					實驗課程 Laboratory course
	水文學 HYDROLOGY	3					3				
	污水工程 WASTEWATER ENGINEERING	3					3				
	空氣污染概論 INTRODUCTION TO AIR POLLUTION	2					2				
	固體廢棄物 SOLID WASTES TREATMENT	3					3				
	專題實作(一) PRACTICE OF PROJECTS (I)	2					2				
	專題實作(二) PRACTICE OF PROJECTS (II)	2						2			
	空氣污染控制 AIR POLLUTION CONTROL	3						3			
	電子計算機工程應用 ENGINEERING APPLICATION OF COMPUTERS	3						3			
	專題實作(三) PRACTICE OF PROJECTS (III)	2							2		
	環境規劃與管理 ENVIRONMENTAL PLANNING AND MANAGEMENT	3							3		
	環境生態學 ENVIRONMENTAL ECOLOGY	2	2								
	全球環境議題 GLOBAL ENVIRONMENTAL ISSUES	2	2								
	環境毒物學 ENVIRONMENTAL TOXICOLOGY	2			2						
	工程材料學 ENGINEERING MATERIALS	2				2					
	環境污染物分析(三) ENVIRONMENTAL ANALYSIS (III)	1					1				實驗課程 Laboratory course
	有害廢棄物 HAZARDOUS WASTE	2						2			
	環境經濟學 Environmental Economics	2						2			
環境生物技術概論 INTRODUCTION TO ENVIRONMENTAL BIOTECHNOLOGY	2						2				
企業實習 PRACTICUM IN EDUCATIONAL TECHNOLOGY	1							1		這門課開設於水環系水資源工程組 This course is offered by the Division of Water Resources Engineering, Department of Water Resources and Environmental Engineering	
地下水及土壤污染 GROUNDWATER AND SOIL POLLUTION	4							4		這門課開設於水環系水資源工程組 This course is offered by the Division of Water Resources Engineering, Department of Water Resources and Environmental Engineering	
噪音及振動 NOISE AND VIBRATION CONTROL	2							2			

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。

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	大氣化學與物理 ATMOSPHERIC CHEMISTRY AND PHYSICS	2							2		
	環境儀器分析 ENVIRONMENTAL INSTRUMENTAL ANALYSIS	3							3		
	污水工程設計 WASTEWATER ENGINEERING DESIGN	2								2	
	企業環境管理 CORPORATE ENVIRONMENT MANAGEMENT	2								2	
	環境工程單元操作及實驗 UNIT OPERATION AND LABORATORY FOR ENVIRONMENTAL ENGINEERING	3								3	實驗課程 Laboratory course
	環境影響評估 ENVIRONMENTAL IMPACT ASSESSMENT									2	

(1)必修科目總學分數：99學分(含通識教育課程26學分)

(1)Total Credits for Required Courses: 99 credits (including 26 credits in General Education courses)

(2)最低應修本系選修科目總學分數：13學分

(2)Minimum Credits Required for Departmental Elective Courses: 13 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