

111學年度日間部 土木工程與環境資源管理系 四技課程規劃表

第一學年(111)						第二學年(112)						第三學年(113)					
	科目	上學期		下學期			科目	上學期		下學期			科目	上學期		下學期	
		學分	時數	學分	時數			學分	時數	學分	時數			學分	時數	學分	時數
校 必 修	體育	0	2	0	2	校 必 修	分類通識	2	2	2	2	校 必 修					
	分類通識	2	2	2	2		分類通識	2	2								
	分類通識	2	2	2	2												
	小計	4	6	4	6		小計	4	4	2	2		小計				
院 必 修	微積分(一)(二)	3	3	3	3	院 必 修	科技英文(三)(四)	2	2	2	2	院 必 修					
	物理(一)(二)	2	2	2	2		工程倫理	2	2								
	科技英文(一)(二)	2	2	2	2												
	應用中文(一)(二)	2	2	2	2												
	程式設計	3	3														
	人工智慧概論			3	3												
	小計	12	12	12	12		小計	4	4	2	2		小計				
專 業 必 修	土環專業概論	2	2			專 業 必 修	應用數學	3	3			專 業 必 修	結構學	3	3		
	測量與實習	3	3				水文學	2	2				營建管理	3	3		
	電腦繪圖(一)			3	3		混凝土配比與實務	3	3				土壤力學與實驗	3	3		
	土木材料與實驗			3	3		工程識圖	3	3				工程估價			3	3
							工程力學			2	2		鋼筋混凝土			3	3
							土木施工學			3	3		基礎工程與實務			3	3
							景觀設計與實務			2	2		實務專題	1	1	1	1
							建築BIM建模			3	3						
	小計	5	5	6	6		小計	11	11	10	10		小計	10	10	10	10
專 業 選 修						專 業 選 修	環境工程概論	3	3			專 業 選 修	工程災害與防治	3	3		
							工程地質	3	3				固體廢棄物處理	3	3		
							電腦繪圖(二)	3	3				工址調查實務			3	3
							環境生態學	3	3				安全衛生管理	3	3		
							環境教育與永續發展	3	3				無人機空拍操作實務	3	3		
							工程測量實務	3	3				營建法規	3	3		
							地理資訊系統實務			3	3		BIM應用與管理	3	3		
							水土保持工程			3	3		土環職能實務(一)	2	2		
							水污染防治			3	3		工程品質管理與實務			3	3
							生態工程			3	3		非破壞檢測實務			3	3
							環境資源管理			2	2		橋梁工程			3	3
													契約與規範			3	3
													下水道工程學			3	3
													工程污染防治			3	3
													綠建築			3	3
										智慧環境監測實務			3	3			
										土壤改良實務			3				

第四學年(114)					
	科目	上學期		下學期	
		學分	時數	學分	時數
校 必 修					
	小計				
院 必 修					
	小計				
專 業 必 修					
	小計				
專 業 選 修	環境影響評估	3	3		
	工程規劃與管理實務	3	3		
	山坡地工程	3	3		
	環境品質監測實務	3	3		
	工程法律	3	3		
	施工安全	3	3		
	大地工程技術	2	2		
	土環職能實務(二)	2	2		
	鋼構施工			3	3
	水資源工程			3	3
	工程採購與發包			3	3
	溫室氣體盤查			3	3
	資源再生			3	3
	校外實習	9	9	9	9

專業選修課程開課規劃	
學期	時數
第一學年第一學期	0
第一學年第二學期	0
第二學年第一學期	6
第二學年第二學期	6
第三學年第一學期	9
第三學年第二學期	6
第四學年第一學期	6
第四學年第二學期	0
開課時數總計	33

科目類別：

共同科目：體育

通識科目：分類通識

專業科目：院必修、專業必修、專業選修

副教授廖淑容

土環系主任陳鴻輝

工程學院院長李志鴻

注意事項：

1.本校訂有學生基本能力與畢業門檻實施辦法。

2.學生需修習勞作教育(0學分4小時)，並於第一學年上下二學期實施。

3.一~三年級每學期應修習16~30學分，四年級每學期應修習9~30學分。

4.最低畢業學分：128學分；必修學分：105學分；選修學分：32學分(選修學分含跨系選修學分)；

惟於本系專業選修學分不得低於20學分。

5.畢業年級相當於國內高級中等學校二年級之國外或香港、澳門同類同級學校畢業生，以同等學歷

修讀本校學士學位者，最低畢業學分：140學分；必修學分：96學分；選修學分：44學分

(選修學分含跨系選修學分)，惟於本系專業選修學分不得低於32學分，可延長修業年限三年。

6.學生應修習校外實習課程，相關辦法依「本校_土木工程與環境資源管理_系學生校外實習教學實施要點」辦理。

7.表列選修課程僅供參考，依實際狀況調整。

MUST Curriculum Planning for Undergraduate Students for Academic Years 2022-2025
Department of Civil Engineering and Environmental Informatics

1 st year(111)						2 nd year(112)						3 rd year(113)					
	Course	1 st semester		2 nd semester			Course	1 st semester		2 nd semester			Course	1 st semester		2 nd semester	
		Cr.	hr.	Cr.	hr.			Cr.	hr.	Cr.	hr.			Cr.	hr.	Cr.	hr.
MUST Core Required Courses	Physical Education	0	2	0	2	MUST Core Required Courses	Classified general Education	2	2	2	2	MUST Core Required Courses					
	Classified general Education	2	2	2	2		Classified general Education	2	2								
	Subtotal	4	6	4	6		Subtotal	4	4	2	2		Subtotal	0	0	0	0
School Professional Required Courses	Calculus(I)(II)	3	3	3	3	School Professional Required Courses	Technical English(III)(IV)	2	2	2	2	School Professional Required Courses					
	Physics(I)(II)	2	2	2	2		Ethics for Engineers	2	2								
	Technical English(I)(II)	2	2	2	2												
	Applied Chinese(I)(II)	2	2	2	2												
	Introduction to Computers and Programmine	3	3														
	Introduction to artificial intelligence			3	3												
	Subtotal	12	12	12	12		Subtotal	4	4	2	2		Subtotal	0	0	0	0
Department compulsory courses	Introduction to Civil Engineering & Environment and Resources	2	2			Department compulsory courses	Applied Mathematics	3	3			Department compulsory courses	Structure Analysis	3	3		
	General Surveying & Lab	3	3				Hydrology	2	2				Construction Management	3	3		
	Computer Aided Drafting(I)			3	3		Concrete Mix Design	3	3				Soil Mechanics & Lab	3	3		
	Civil Engineering Materials & Practice			3	3		Illustration of Engineering Drawings	3	3				ConstructionCost Estimating			3	3
							Engineering Mechanics			2	2		Reinforced Concrete			3	3
							Civil Engineering Construction			3	3		Foundation Engineering & Practice			3	3
							Landscape Design & Pratice			2	2		Special Topic Projects	1	1	1	1
							Practice and Concept of BIM			3	3						
	Subtotal	5	5	6	6		Subtotal	11	11	10	10		Subtotal	10	10	10	10
Department Elective Courses						Department Elective Courses	Introduction to Environmental Engineering	3	3			Department Elective Courses	Natural Hazard Mitigation	3	3		
							Engineering Geology	3	3				Solid Waste Treatment	3	3		
							Computer Aided Drafting(II)	3	3				Construction Site Investigation			3	3
							Environmental Ecology	3	3				Safety & Health Management	3	3		
							Environmental Education and Sustainable Development	3	3				UAV Operation Pratice	3	3		
							Engineering Surveying Practice	3	3				Construction Laws	3	3		
							Geographic Information System			3	3		Application and Management of BIM	3	3		
							Water and Soil Conservation Engineering			3	3		Engineering Pratical Training (I)	2	2		
							Water Pollution Control			3	3		Engineering Quality Management			3	3
							Ecological Engineering			3	3		Practice of Non-destructive Testing			3	3
							Environmental and Resources Management			2	2		Bridge Engineering			3	3
													Contract and Specifications			3	3
													Sewer Engineering			3	3
													Engineering Pollution Control			3	3
													Sustainable Building			3	3
													Practice of Intelligent Environmental Monitoring			3	3
													Practice of Soil Improvement			3	3

4 th year(114)					
	Course	1 st semester		2 nd semester	
		Cr.	hr.	Cr.	hr.
MUST Core Required Courses	Subtotal	0	0	0	0
School Professional Required Courses	Subtotal	0	0	0	0
Department compulsory courses	Subtotal	0	0	9	9
Department Elective Courses	Environmental Impact Assessment	3	3		
	Practice of Engineering Planning and Management	3	3		
	Sloped Land Engineering	3	3		
	Environmental Quality Monitoring	3	3		
	Engineering Law	3	3		
	Construction Safety Measures	3	3		
	Geotechnical Engineering Practice	3	3		
	Engineering Practical Training (II)	2	2		
	Steel Structure Construction			3	3
	Water Resource Engineering			3	3
	Project Procurement & Contract Award			3	3
	Greenhouse Gas Evaluation			3	3
	Reusable Resources			3	3
	Off-Campus Practice Training	9	9	9	9

Cr./hr.=Credit/hour

Remarks:

- According to university regulations, students are required to meet the graduation requirement of basic language proficiency and professional skills.
- Students shall take 4 hours Service Education courses (0 credits) in the first and second semester of the first academic year.
- In the first three years, students must take 16-30 credits per semester, and 9-30 credits per semester in the 4th year.
- Minimum credits required for graduation: 128 credits including 96 compulsory credits, and at least 32 elective credits (interdepartmental credits are included), while elective professional course credits shall not be fewer than 20.
- Students having graduated from a foreign country, including Hong Kong and Macau, with the equivalent of the second year of high school study of the ROC's high school sophomore level, or with a high school equivalent degree, need to take 140 credits including 96 compulsory credits, and at least 44 elective credits (including inter-departmental elective credits), while elective professional course credits shall not be fewer than 32. The program can be extended up to 3 academic years.
- Students should take off-campus internship courses, and the relevant measures are handled in accordance with the Implementation of Off-campus Internship Teaching for Students in the Department of Civil Engineering and Environmental Informatics.
- Elective courses are subject to change if necessary.

副教授廖淑容

土環系陳鴻輝
主任

工程學院李志鴻
院長