### I-SHOU UNIVERSITY Department of Civil Engineering

### 4-Year Curriculum for Students Admitted in Academic Year 2024

#### \*本系總畢業學分數為128學分,分下列七項:

### **Required Credits for Graduation: 128 Credits**

- 1. 通識核心課程必修 18 學分 GE Core 18 Credits
- 2. 通識博雅課程選修 10 學分 GE Elective 10 Credits
- 3. 體育健康課程必修 0 學分 Physical Education Courses 0 Credit
- 4. 院必修課程 14 學分 International College Core 14 Credits
- 5. 系必修課程 53 學分: 土木專業必修 51 學分、總結課程 2 學分 Department Core 53 Credits: Including Department- required Courses 51 Credits, Capstone Courses 2 Credits
- 6. 系選修課程 13 學分

Department Elective Courses 13 Credits

7. 其他選修 20 學分

Other Electives 20 Credits, including courses from other departments.

學生可從本系或外系課程自由選課 20 學分,若超過 15 學分則應包含『永續工程設計與實踐』 學分學程內之課程至少 6 學分。

Students are allowed to freely choose 20credits from courses within or outside the department. If they exceed 15 credits, at least 6 of those credits must include courses from the "Sustainable Engineering Design and Practice" program.

#### 備註 Note:

1. 學生於修業年限內,除須修滿總畢業學分外,並應通過本系「英語能力」畢業資格檢定作業規定,方具畢業資格。

Students are required to meet the requirements set by the Department for "English Proficiency," "Information Competency," and "Professional Certification," in addition to earning the required number of credits to be eligible for graduation.

2. 學生於畢業至少應修畢一門外院共同基礎核心必修課程,並以實際修畢之學分數承認為通識博 雅學分,以4學分為上限。(各院共同基礎核心必修課程表,請參閱課務組網頁公告)

Before graduation, students are required to take at least one required cornerstone course offered by another college. The credits earned from such courses may be recognized as part of the credits under the category of Liberal Arts Education, but only a maximum of four credits will be recognized accordingly. (For more details about required cornerstone course offered by different colleges, please refer to the announcement on the website of the Curriculum Section.)

3. 鼓勵同學利用其他課程修習跨院系學分學程或發展其他多元能力。
Encourage students to participate in different programs, developing diverse abilities

# 大一課程表(113) Freshman Year(2024)

類別	課程代碼	理和夕採 Cubiaat	上學期	下學期	必/選修	備註
Category	Code	課程名稱 Subject	Fall	Spring	(C/E)	Remark
	A93A22	華語文學 1.0: 閱讀與敘事溝通 Chinese Literature 1.0-Reading, Narration and communication		2	必/ C	Core
	A93A30	實用英語<一> English in Practice I	1		必/ C	Core
-7 M	A93A31	實用英語<二> English in Practice II		1	必/ C	Core
通識必修 GE Core	A93A28	健康醫學密碼 Unraveling the Mystery of Health	2		必/ C	Core
02 0010	A93A20	程式設計 Programming		2	必/ C	Core
	A93A21	全球化之公民素養 Civic Literacy in the Era of Globalization		2	必/ C	Core
	A93A29	智慧科技密碼 Secret Codes in Intelligent Technologies		2	必/ C	Core
	A83817	微積分(一) 數位學習 Calculus (1) Digital Learning	1		必/ C	
	A83819	微積分(一) Calculus (1)	2		必/ C	
院必修	A83815	普通物理(一) Physics(I)	3		必/ C	
College-required Courses	A83818	微積分(二) 數位學習 Calculus (II) Digital Learning		1	必/ C	
	A83820	微積分(二) Calculus (II)		2	必/ C	
	A83E03	綠色永續密碼 Deciphering sustainable development		2	必/ C	
	A06193	工程識圖 Introduction to Engineering drawing	2		必/ C	
	A06131	測量學 Surveying	3		必/ C	
<b>系必修</b>	A06223	測量實習(一) Surveying Practice(I)	1		必/ C	Practical
Department of Civil	A06132	電腦輔助設計與製造實習 Computer Aided Design and Manufacturing Internship	1		必/ C	Practical
Engineering	A06300	設計思考工程應用 Engineering design thinking	2		必/ C	
Core	A06143	發現土木 Discovering Civil Engineering	1		必/ C	
	A06224	測量實習(二) Surveying Practice(II)		1	必/ C	Practical
	A06832	静力學 Statics		3	必/ C	
院選修 College Elective	A83906	營造業趨勢與展望 Trends of Outlook of Construction Industry	:	1	選/E	
糸選修	A06294	環境化學 Environmental Chemistry	3	3	選/E	
Department of	A06522	生態工程 Ecological Engineering	2	2	選/E	
Civil Engineering	A06144	應用生物學 Applied Biology	2	2	選/E	
Elective	A06617	工程生態學 Engineering Ecology	2	2	選/E	
本學 5	本學年度必修學分數 Total Required credits for this year 37					

# 大二課程表(114) Sophomore Year (2025)

Category   Code	類別	課程代碼	課程名稱 Subject	上學期	下學期	必/選修	備註
通識分移	Category	Code		Fall	Spring	(C/E)	Remark
通過から   A93A33		A93A23		2		必/ C	Core
A93A15   世京 (一) Physical Education (I)	通識必修	A93A32	實用英語<三> English in Practice III	2		必/ C	Core
A93A16 離育(二) Physical Education (II)	GE Core	A93A33	實用英語<四> English in Practice IV		2	必/ C	Core
R		A93A15	體育(一) Physical Education (I)	0		必/ C	
A06834		A93A16	體育(二) Physical Education (II)		0	必/ C	
A06837	College-required	A83809	工程數學 Engineering Mathematics(I)	3		必/ C	
A06838 水境村料實驗實作 Experimental practice of custainable materials  A06346 探索地工實驗實作 Experimental practice of Explore Geotechnical Engineering  A06347 土壤力學 Rock Mechanics  A06348 基礎工程學 Foundation Engineering  A06328 水文學與實驗 Hydrology and Experiment  A06327 結構學 Structural Analysis  A06349 结構設計實驗實作 Structural design experiment implementation  A06349 接近計畫與估價 Contruction Planning and Cost Estimation  A06398 限定件學實驗 Environmental Chemistry Laboratory  其常工程概論 Introduction to Architectural Engineering Elective  A06492 工程經濟學 Engineering Ecology  3 必/C  Practical  2 次/C  Practical  2 次/C  Practical  3 少/C  Practical  3 少/C  Practical  3 少/C  Practical  406218 基礎工程學 Foundation Engineering  3 少  Practical  3 少  Practical  406329 結構設計實驗實作 Structural design experiment implementation  406349		A06834	材料力學 Strength of Materials	3		必/ C	
A06346 探索地工實驗實作 Experimental practice of Explore Geotechnical Engineering  A06347 上環力學 Rock Mechanics Engineering Core  A06348 基礎工程學 Foundation Engineering  A06327 結構學 Structural Analysis  A06327 結構學 Structural Analysis  A06349 結構设計實驗實作 Structural design experiment implementation  A06491 地工計畫與估價 Contruction Planning and Cost Estimation  A06295 環境化學實驗 Environmental Chemistry Laboratory  A06398 建築工程機論 Introduction to Architectural Engineering Elective  A06492 工程經濟學 Engineering Ecology  A06492 工程經濟學 Engineering Ecology  3 少 グレーアでは、  A06525 に表現の表現の表現の表現の表現の表現の表現の表現の表現の表現の表現の表現の表現の表		A06837	工程材料學 Construction Materials	1		必/ C	
条必修       Department of Civil Engineering Core       A06347       土壤力學 Rock Mechanics       3       必/C         A06348       基礎工程學 Foundation Engineering       3       必         A06238       水文學與實驗 Hydrology and Experiment       3       必         A06327       結構學 Structural Analysis       3       必         A06349       結構學 Structural Gesign experiment implementation       1       必       Practical         A06349       地構學 Kanal Analysis       2       選/E         A06491       地域學實驗 Environmental Chemistry Laboratory       1       必       Practical         A06295       環境化學實驗 Environmental Chemistry Laboratory       1       選/E         A06398       建業工程概論 Introduction to Architectural Engineering       3       選/E         A06525       土木應用科技導讀 Guide reading of applicable technology for civil engineering       3       選/E         A06492       工程經濟學 Engineering Ecology       3       選/E		A06838		1		必/ C	Practical
A06347 土壌力學 Rock Mechanics 3 歩/C A06348 基礎工程學 Foundation Engineering 3 歩 A06238 水文學與實驗 Hydrology and Experiment 3 歩 A06327 結構學 Structural Analysis 3 歩 A06349 結構設計實驗實作 Structural design experiment implementation 1 歩 Practical 差別を対象を関係 Contruction Planning and Cost Estimation 2 選/E  A06491 様本計畫與估價 Contruction Planning and Cost Estimation 2 選/E  A06295 環境化學實驗 Environmental Chemistry Laboratory 1 選/E  A06398 世籍工程概論 Introduction to Architectural Engineering Elective A06492 工程經濟學 Engineering Ecology 3 選/E	系必修	A06346		1		必/ C	Practical
Core       A06348       基礎工程學 Foundation Engineering       3       必         A06238       水文學與實驗 Hydrology and Experiment       3       必         A06327       結構學 Structural Analysis       3       必         A06349       結構設計實驗實作 Structural design experiment implementation       1       必       Practical         A06491       施工計畫與估價 Contruction Planning and Cost Estimation       2       選/E         A06295       環境化學實驗 Environmental Chemistry Laboratory       1       選/E         A06398       建築工程概論 Introduction to Architectural Engineering       3       選/E         A06525       土木應用科技導讀 Guide reading of applicable technology for civil engineering       3       選/E         A06492       工程經濟學 Engineering Ecology       3       選/E	of Civil	A06347	土壤力學 Rock Mechanics	3		必/ C	
A06327   結構學 Structural Analysis   3   必		A06348	基礎工程學 Foundation Engineering		3	必	
A06349 结構设計實驗實作 Structural design experiment implementation  A06491		A06238	水文學與實驗 Hydrology and Experiment		3	必	
A06349   implementation   1		A06327	結構學 Structural Analysis		3	必	
A06491 Estimation 2 選/E  A06295 環境化學實驗 Environmental Chemistry Laboratory 1 選/E  A06398 Department of Civil Engineering Elective A06525 土木應用科技導讀 Guide reading of applicable technology for civil engineering Engineering Engineering Ecology 3 選/E		A06349			1	必	Practical
系選修 Department of Civil Engineering Elective       A06398       建築工程概論 Introduction to Architectural Engineering       3       選/E         A06525       土木應用科技導讀 Guide reading of applicable technology for civil engineering       3       選/E         A06492       工程經濟學 Engineering Ecology       3       選/E		A06491		2		選/E	
Department of Civil Engineering Elective A06525 Engineering Elective A06492 工程經濟學 Engineering Ecology 3 選/E		A06295	環境化學實驗 Environmental Chemistry Laboratory	1		選/E	
of Civil Engineering Elective A06525		A06398		3		選/E	
A06492 工程經濟學 Engineering Ecology 3 選/E	of Civil Engineering	A06525		3		選/E	
+ 銀左立y 佐銀入地 Total Daguinal and lite for this man	Elective	A06492	工程經濟學 Engineering Ecology	3		選/E	
上銀左立y 按銀入社 Total Daggins Jame Site for this man.							
	本學年度必修學分數 Total Required credits for this year					28	

# 大三課程表(115) Junior Year (2026)

類別 Category	課程代碼 Code	課程名稱 Subject	上學期 Fall	下學期 Spring	必/選修 (C/E)	備註 Remark
	A06835	結構工程特論 Special topics on Structural Engineering	3	1 0	必/ C	
	A06345	零碳建築實驗實作 Experimental practice of Zero carbon building	1		必/ C	Practical
系必修 Department	A06243	流體力學與實驗 Fluid Mechanics and Experiment	3		必/ C	
of Civil Engineering	A06323	環境工程 Environmental Engineering	3		必/ C	
Core	A06326	交通工程 Traffic Engineering		3	必/ C	
	A06241	工程管理特論 Special topics on Construction Management		2	必/ C	
	A06521	工程統計學 Engineering Statistics		3	必/ C	
	A06344	發現新穎材料 Discovering New Materials	3		選/E	
	A06361	開創土木新世紀 Venturing in Construction Industry	3	3	選/E	
	A06343	綠建築 Green Buildings	2	2	選/E	
	A06688	中等結構學 Intermediate Structural Analysis	3	3	選/E	
	A06659	運輸工程 Transportation Engineering	3	3	選/E	
	A06411	邊坡工程 Slope Engineering	3	3	選/E	
	A06678	綠建築 Green Buildings	3	3	選/E	
久、祀 <i>1</i> 夕	A06797	廢棄物處理工程 Waster Management	2	2	選/E	
系選修 Department of Civil Engineering Elective	A06677	給水與污水工程 Water Supply and Waste Waste Treatment	3	3	選/E	
	A06392	土木施工學 Construction Engineering	3	3	選/E	
	A06412	專案管理 Project Management	3	3	選/E	
	A06357	瀝青混凝土配比設計 Asphalt Concrete Design	2	2	選/E	
	A06686	工程財務管理 Engineering Financial Management	3	3	選/E	
	A06334	水土保持學 Soil and Water Conservation	3	3	選/E	
	A06413	軌道運輸系統 Rail Transportation System	3	3	選/E	
	A06145	AI在土木工程之應用 AI Applications In Civil Engineering	2	2	選/E	
	A06524	大地工程特論二 Special Topics on Geotechnical Engineering II	2	2	選/E	
本導	<b>基年度必修</b>	學分數 Total Required credits for this year			18	

# 大四課程表(116) Senior Year (2027)

Category       Code       課程名稱 Subject       Fall       Spring       (C/E)       Remark         系必修 Department of Civil Engineering Core       A06511       畢業專題 Independent Study       2       必/C       Capstone         A06420       英語能力 English Proficiency Enhancement       0       必/C       Graduatio	Jr 1	and an also are	The management real (202	. 29 11-	/A V-		nt v
Department of Civil Engineering Core	類別 Category	課程代碼 Code	課程名稱 Subject	上學期 Fall	下學期 Spring	必/選修 (C/E)	備註 Remark
Regimering Core	Department of	A06511	畢業專題 Independent Study	2		必/ C	Capstone
A06800	Engineering	A06420	英語能力 English Proficiency Enhancement	0		必/ C	畢業門檻 Graduation threshold
A06807		A06799	智慧防災工程 Intelligent disaster prevention	3	3	選/E	
A06342   管理科學 Management Science   3		A06800		3	3		
A06303		A06687	工地實務 Construction Site Practice	2	2	選/E	
A06410		A06342	管理科學 Management Science	3	3	選/E	
A06416		A06303	施工安全管理 Construction Safety Management	3	3	選/E	
A06414		A06410	工程計算方法 Engineering computation	3	3	選/E	
A06415		A06416	高等基礎工程 Advanced Foundation Engineering	3	3	選/E	
A06432		A06414		3	3	選/E	
A06027 環境規劃與管理 Environmental Planning and Management   2   選/E		A06415	-	3	3	選/E	
A06774   空氣污染控制與樂音管制 Air Pollution and Noise Control   3   選/E		A06432	結構動力學 Dynamics of Structures	3	3	選/E	
A06737		A06027	環境規劃與管理 Environmental Planning and Management	2	2	選/E	
A06431		A06774	空氣污染控制與噪音管制 Air Pollution and Noise Control	(3)	3	選/E	
系遷修 Department of Civil Engineering Elective       A06795       結構耐震評估與補強 Seismic Assessment and Retrofit Techniques of Structures       3       選/E         A06769       道路生態工程 Road Ecological Engineering       3       選/E         A06769       道路生態工程 Road Ecological Engineering       3       選/E         A06769       道路生態工程 Road Ecological Engineering       3       選/E         A06770       A06788       生態調查評估與工程應用 Ecological assessment and Engineering application       3       選/E         A06814       土壤及地下水整治 Soil and Groundwater Remediation       3       選/E         A06437       鋪面工程 Pavement Engineering       3       選/E         A06439       土未法規 Civil Engineering Regulations       3       選/E         A06439       工程品質管理 Quality Control for Civil Engineering       3       選/E         A06829       工程實習 Engineering Internship       3       選/E         A06426       建築資訊模型 Building Information Modeling       3       選/E         A06336       地理資訊系統 Geographic Information Systems       3       選/E         A06768       環境大地工程 Environmental Geotechnical Engineering       3       選/E         A06738       高等上環力學 Advanced Rock Mechanics       3       選/E         A06409       設施規劃與管理 Facility Planning and Management       2 <td></td> <td>A06737</td> <td></td> <td>3</td> <td>3</td> <td>選/E</td> <td></td>		A06737		3	3	選/E	
A06795	<b>多器</b> 像	A06481		3	3	選/E	
Engineering Elective         A06769         道路生態工程 Road Ecological Engineering         3         選/E           A06788         生態調查評估與工程應用 Ecological assessment and Engineering application         3         選/E           A06814         土壤及地下水整治 Soil and Groundwater Remediation         3         選/E           A06437         鋪面工程 Pavement Engineering         3         選/E           A06493         土木法規 Civil Engineering Regulations         3         選/E           A06439         工程品質管理 Quality Control for Civil Engineering         3         選/E           A06830         實務實習 Practical Internship         3         選/E           A06829         工程實習 Engineering Internship         3         選/E           A06426         建築資訊模型 Building Information Modeling         3         選/E           A06336         地理資訊系統 Geographic Information Systems         3         選/E           A06768         環境大地工程 Environmental Geotechnical Engineering         3         選/E           A06738         高等土壌力學 Advanced Rock Mechanics         3         選/E           A06409         設施規劃與管理 Facility Planning and Management         2         選/E           A06744         高等岩石力學 Advanced Rock Mechanics         3         選/E	Department	A06795		3	3	選/E	
A06788   Engineering application   3   選/E	Engineering	A06769		3	3	選/E	
A06437鋪面工程 Pavement Engineering3選/EA06493土木法規 Civil Engineering Regulations3選/EA06439工程品質管理 Quality Control for Civil Engineering3選/EA06830實務實習 Practical Internship3選/EA06829工程實習 Engineering Internship3選/EA06426建築資訊模型 Building Information Modeling3選/EA06336地理資訊系統 Geographic Information Systems3選/EA06768環境大地工程 Environmental Geotechnical Engineering3選/EA06738高等土壤力學 Advanced Rock Mechanics3選/EA06409設施規劃與管理 Facility Planning and Management2選/EA06744高等岩石力學 Advanced Rock Mechanics3選/E	Elective	A06788	<u> </u>	3	3	選/E	
A06493 土木法規 Civil Engineering Regulations 3 選/E A06439 工程品質管理 Quality Control for Civil Engineering 3 選/E A06830 實務實習 Practical Internship 3 選/E A06829 工程實習 Engineering Internship 3 選/E A06426 建築資訊模型 Building Information Modeling 3 選/E A06336 地理資訊系統 Geographic Information Systems 3 選/E A06768 環境大地工程 Environmental Geotechnical Engineering 3 選/E A06738 高等土壤力學 Advanced Rock Mechanics 3 選/E A06409 設施規劃與管理 Facility Planning and Management 2 選/E A06744 高等岩石力學 Advanced Rock Mechanics 3 選/E		A06814	土壤及地下水整治 Soil and Groundwater Remediation	3	3	選/E	
A06439 工程品質管理 Quality Control for Civil Engineering 3 選/E A06830 實務實習 Practical Internship 3 選/E A06829 工程實習 Engineering Internship 3 選/E A06426 建築資訊模型 Building Information Modeling 3 選/E A06336 地理資訊系統 Geographic Information Systems 3 選/E A06768 環境大地工程 Environmental Geotechnical Engineering 3 選/E A06738 高等土壌力學 Advanced Rock Mechanics 3 選/E A06409 設施規劃與管理 Facility Planning and Management 2 選/E A06744 高等岩石力學 Advanced Rock Mechanics 3 選/E		A06437	鋪面工程 Pavement Engineering	(3)	3	選/E	
A06830實務實習 Practical Internship3選/EA06829工程實習 Engineering Internship3選/EA06426建築資訊模型 Building Information Modeling3選/EA06336地理資訊系統 Geographic Information Systems3選/EA06768環境大地工程 Environmental Geotechnical Engineering3選/EA06738高等土壤力學 Advanced Rock Mechanics3選/EA06409設施規劃與管理 Facility Planning and Management2選/EA06744高等岩石力學 Advanced Rock Mechanics3選/E		A06493	土木法規 Civil Engineering Regulations	3	3	選/E	
A06829工程實習 Engineering Internship3選/EA06426建築資訊模型 Building Information Modeling3選/EA06336地理資訊系統 Geographic Information Systems3選/EA06768環境大地工程 Environmental Geotechnical Engineering3選/EA06738高等土壤力學 Advanced Rock Mechanics3選/EA06409設施規劃與管理 Facility Planning and Management2選/EA06744高等岩石力學 Advanced Rock Mechanics3選/E		A06439	工程品質管理 Quality Control for Civil Engineering	3	3	選/E	
A06426 建築資訊模型 Building Information Modeling 3 選/E  A06336 地理資訊系統 Geographic Information Systems 3 選/E  A06768 環境大地工程 Environmental Geotechnical Engineering 3 選/E  A06738 高等土壤力學 Advanced Rock Mechanics 3 選/E  A06409 設施規劃與管理 Facility Planning and Management 2 選/E  A06744 高等岩石力學 Advanced Rock Mechanics 3 選/E		A06830	實務實習 Practical Internship	(3)	3	選/E	
A06336地理資訊系統 Geographic Information Systems3選/EA06768環境大地工程 Environmental Geotechnical Engineering3選/EA06738高等土壤力學 Advanced Rock Mechanics3選/EA06409設施規劃與管理 Facility Planning and Management2選/EA06744高等岩石力學 Advanced Rock Mechanics3選/E		A06829	工程實習 Engineering Internship	3	3	選/E	
A06768環境大地工程 Environmental Geotechnical Engineering3選/EA06738高等土壤力學 Advanced Rock Mechanics3選/EA06409設施規劃與管理 Facility Planning and Management2選/EA06744高等岩石力學 Advanced Rock Mechanics3選/E		A06426	建築資訊模型 Building Information Modeling	3	3	選/E	
A06738高等土壤力學 Advanced Rock Mechanics3選/EA06409設施規劃與管理 Facility Planning and Management2選/EA06744高等岩石力學 Advanced Rock Mechanics3選/E		A06336	地理資訊系統 Geographic Information Systems	3	3	選/E	
A06409設施規劃與管理 Facility Planning and Management2選/EA06744高等岩石力學 Advanced Rock Mechanics3選/E		A06768	環境大地工程 Environmental Geotechnical Engineering	3	3	選/E	
A06744 高等岩石力學 Advanced Rock Mechanics 3 選/E		A06738	高等土壤力學 Advanced Rock Mechanics	3	3	選/E	
		A06409	設施規劃與管理 Facility Planning and Management	2	2	選/E	
A06784 環境微生物 Environmental Microbiology 3 選/E		A06744	高等岩石力學 Advanced Rock Mechanics	3	3	選/E	
<u>,                                     </u>		A06784	環境微生物 Environmental Microbiology	3	3	選/E	
A06766 結構矩陣法 Matrix Structural Analysis 3 選/E		A06766	結構矩陣法 Matrix Structural Analysis	3	3	選/E	
A06468 環境影響評估 Environmental mpact Assesment 3 選/E		A06468	環境影響評估 Environmental mpact Assesment	3	3	選/E	

	A06371	作業研究 Operation Research	3	選/ E
	A06492	工程經濟學 Engineering Economics	3	選/E
	A06393	數值分析 Numerical Analysis	3	選/E
	A06429	職能與倫理 Working Capability and Occupational Ethics	2	選/E
	A06339	工址調查 Site Invespigapion	3	選/E
A 06610 環境工程特論 Special Topics on environmental			3	選/E
A06045 生態工程特論 Special Topics on Ecological Engineering			3	選/E
	A06414	永續與環境議題 Sustainable and Environmental Issues	3	選/E
	A06660	智慧運輸系統 Intelligent Transportation System	3	選/E
本	本學年度必修學分數 Total Required credits for this year			2