

工學院學士班工程技術全英語學程 113 學年度入學學生必修科目、學分數暨畢業總學分表

Interdisciplinary Program of Engineering-Engineering Technology (English-Taught Program)

Compulsory course 、Credits & Graduation threshold for Admission in 2024 Fall

類別 Type	科目名稱 Courses		學分數 Credits		備註 Remarks
			上學期 Fall	下學期 Spring	
校定必修 University Compulsory (30 Credits)	大學中文 College Chinese		2		修讀華語課程得免修大學中文，請參考國立清華大學外國學生修讀華語課程實施要點。 Students who complete Mandarin courses are exempt from taking the “College Chinese” required course. Please refer to the Mandarin Course Requirements for NTHU International Students.
	英文 English		8		英文能力檢定通過者，得依學校規定申請免修或減修，請參照語文中心網頁。 Students who pass the official English Proficiency tests could waive credits. Please refer to the attachment of NTHU Center of Language Education.
	通識課程 General Education Course	核心通識 Core General	8-12		至少修畢四門核心通識課程，並須含括四個核心向度。因應外籍生需要，可由本系自開部分課程抵免。 Students are required to register for four Core courses from at least four dimensions. Foreign students could choose to take courses given by this department.
		選修科目 Elective Course	8-12		自由選修，可由本系自開部分課程抵免。 Free electives. Students could also take courses given by this program.
		合 計 Total	20		
	體育 Physical Education		0		1 至 3 年級必修 A required course for freshmen to juniors
	服務學習 Student Service		0		畢業前必修 60 小時 60 hours required before graduation
	操行 Conduct				每學期成績及格 Will be graded each term
學士班必修 Program Compulsory (14 Credits)	微積分 B 一 Calculus I	微積分 B 二 Calculus II	3	3	
	普通物理 B 一 General Physics B (I)	普通物理 B 二 General Physics B (II)	3	3	
	普通物理實驗 General Physics Laboratory		1		
	專題 Undergraduate Research		1		
基礎選修 Basic Courses (23 Credits)	普通化學一、二 General Chemistry (I), (II)		3	3	普通化學一(CHE)、普通化學二(CHE)、普通化學二(MSE)
	普通化學實驗 General Chemistry Laboratory		1		
	質能均衡 Material and Energy Balance			3	
	材料科學與工程一、二 Material Science and Engineering I, II		3	3	
	計算機程式語言 Introduction to Programming Languages		3		計算機程式語言 (IEEM)、程式設計(PME)
	工作研究 Work Study			3	
	工程數學一、二 Engineering Mathematics I, II		3	3	
	熱力學 Thermodynamics		3		化工熱力學(CHE)、基礎熱流學一(PME)、材料熱力學一(MSE)

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基礎選修 Basic Courses (23 Credits)		應用力學一 Applied Mechanics I	2		電路學(PME)、電工原理(MSE)
		機械製造 Manufacturing Processes	3		
		電工原理 Principles of Electrical Engineering	3		
		工程經濟 Engineering Economics	3		
		生物技術概論 Introduction to Biotechnology	3		
專業核心課程 Core Courses (24 Credits)	化工 CHE	物理化學一、二 Physical Chemistry (I), (II)	3	3	1 Major field: 15 credits + 1 Minor field: 9 credits
		化工熱力學 Chemical Engineering Thermodynamics	3		
		化工單操 Chemical Engineering Unit Operations		3	
		化學反應工程 Chemical Reaction Engineering	3		
		儀器分析及實驗一 Instrumental Analysis and Lab.(I)	3		
		輸送現象及單元操作一、二 Transport Phenomena and Unit Operations (I), (II)	3	3	
		程序設計 Process Design	3		
		程序控制 Process Control		3	
		材料科學 Materials Science	3		
		生物技術概論 Introduction to Biotechnology	3		
	動機 PME	應用力學二 Applied Mechanics (II)		2	
		基礎熱流學二 Thermal and Fluid Science II		3	
		材料力學 Mechanics of Materials	3		
		機動學 Kinematics of Machinery		3	
		控制系統一 Control System I	3		
		振動學 Mechanical Vibrations		3	
		機械設計 Machine Design	3		
		機械製造 Manufacturing Processes	3		
		能源工程 Energy Engineering	3		
		電子學 Electronics	3		
		奈米科技與應用 Nanotechnology and its applications		3	
		光機電系統設計 Opto-Mechatronic Systems Design		3	
		電腦輔助設計與製造 Computer Aided Design and Manufacturing	3		
		工程光學 Engineering Optics		3	
		智慧製造導論 Introduction of Intelligent Manufacturing		3	

類別 Type		科目名稱 Courses	學分數 Credits		備註 Remarks
			上學期 Fall	下學期 Spring	
專業 核心 課程 Core Courses (24 Credits)	材料 MSE	材料科學與工程二 Material Science and Engineering II		3	1 Major field: 15 credits + 1 Minor field: 9 credits
		材料熱力學二 Thermodynamics of Materials II		3	
		材料分析 Materials Analysis		3	
		結晶繞射概論 Introduction to Crystal Structure and Diffraction Theories	3		
		機械性質 Mechanical Properties	3		
		量子物理導論 Introduction to Quantum Physics	3		
		晶體缺陷 Various Defects in Crystalline Materials		3	
		應用光電子學 Applied Photonics	3		
		擴散與相變化 Diffusion and phase transformation		3	
	工工 IEEM	線性代數 Linear Algebra		3	
		離散數學 Discrete Mathematics	3		
		機率論 Probability Theory	3		
		生產計劃與管制 Production Planning and Control		3	
		人因工程一 Human Factors (I)	3		
		工程經濟 Engineering Economics	3		
專業選修 Professional Electives (21 Credits)			21		工學院內課程任選至少 7 門並達 21 學分 Choose at least 7 courses from the College of Engineering and achieve 21 credits
自由選修 Free Electives (16 Credits)			16		
最低畢業總學分 Minimum Credits Needed for Graduation			128		
備註 Remarks	1. 中五學制學生畢業總學分應另增加 12 學分，詳細內容請洽詢國際班辦公室。 If you're in the Form 5 school system (Take 5 years to complete Junior High School and High School,) you have to take an extra 12 credits for graduation. Please check the details with the International Bachelor Degree Program office. 2. 113 學年度入學學生可以依據 114 學年度的修課及學分規範修習。 The current students can follow the course and credit requirements for Admission in 2025 Fall. 3. 完成一門課程之學分僅能被認採入一種類別。 A course can only be considered in a specific type when fulfilling graduation requirements. (A course can not be double counted.)				