

工學院學士班工程技術全英語學程 114 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 2025 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。可由 IBP 或本系通識課程抵免。 Students are required to register for four Core courses from at least four dimensions. Students may take GE courses given by IBP and IPE.
		選修科目 Elective Course	8-12		自由選修，可由 IBP 或本系通識課程抵免。 Free electives. Students may take GE courses given by IBP and IPE.
		合 計 Total	20		
	體育 Physical Education		0		1 至 3 年級必修 A required course for freshmen to juniors
	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		可由院內四系大學部專題課程抵免。 Students could also take courses given by CHE, PME, MS and IEEM.
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)、普通化學一(MSE)、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		
	機械製造 Manufacturing Processes	3		
	電工原理 Principles of Electrical Engineering	3		電路學(PME)、電工原理(MSE)
	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)	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		
	程序控制 Process Control		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	
	材料科學 Materials Science	3		
	程序設計 Process Design	3		
	生物技術概論 Introduction to Biotechnology	3		
	基礎熱流學二 Thermal and Fluid Science II		3	
	電路學 Electric Circuits	3		
	應用力學二 Applied Mechanics (II)		2	
	材料力學 Mechanics of Materials	3		
	機動學 Kinematics of Machinery		3	
	機械製造 Manufacturing Processes	3		
	控制系統一 Control System I	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	
	振動學 Mechanical Vibrations		3	
	機械設計 Machine Design	3		
	光機電系統設計 Opto-Mechatronic Systems Design		3	
	工程光學 Engineering Optics		3	
	智慧製造導論 Introduction of Intelligent Manufacturing		3	
	電腦輔助設計與製造 Computer Aided Design and Manufacturing	3		

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			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		
		材料之物理性質 The Physical Properties of Materials		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		
		工程經濟 Engineering Economics	3		
		生產計劃與管制 Production Planning and Control		3	
		作業研究 Operation Research	3		
		人因工程一 Human Factors (I)	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. 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.)				