

國立勤益科技大學 111 學年度日間部二年制(2+i)冷凍空調與能源系機電能源與環境控制專班學分計畫表

National Chin-Yi University of Technology

Curriculum Planning of 2022 Two-Year College (2+i) Industry-Academia Collaboration Program for Mechatronics, Energy and Environment Control in Department of Refrigeration, Air Conditioning and Energy Engineering

110.11.04.系課程會議及 110.11.11.系務會議審議通過

110.11.23.院課程會議審議通過

110.12.9.校課程委員會及 110.12.16.教務會議審議通過

111.01.27.系課程會議修訂通過及 111.02.17.系務會議修訂通過

111.05.16~17.院課程會議審議通過

111.06.02.校課程委員會及 111.06.16.教務會議審議修訂通過

	第一學年 First Year							第二學年 Second Year							第三學年 Third Year						
	科 目 Courses	上學期 First Semester			下學期 Second Semester			科 目 Courses	上學期 First Semester			下學期 Second Semester			科 目 Courses	上學期 First Semester					
		學分 Credits	正課 Lecture	實習 Internship	學分 Credits	正課 Lecture	實習 Internship		學分 Credits	正課 Lecture	實習 Internship	學分 Credits	正課 Lecture	實習 Internship		學分 Credits	正課 Lecture	實習 Internship			
必修	共同科目(17 學分) General Required Courses (17 credits hours)																				
	華語聽說 Chinese Listening and speaking	3	5	0																	
	華語讀寫 Chinese Reading and writing	3	5	0																	
	華語主題式讀寫 Theme-based Chinese Reading and Writing	3	5	0																	
	華語主題式聽說 Theme-based Chinese Listening and Speaking	3	5	0																	
	華語檢定輔導 Training for Test of Chinese as a Foreign Languages	3	3	0																	
	體育(一) Physical Education (I)	0	2	0																	
	藝術與哲學 Art and philosophy				2	2	0														
	體育(二) Physical Education (II)				0	2	0														
	小計	15	25	0	2	4	0		0	0	0										
	校訂必修科目(35 學分) Professional Required Courses(35 credits hours)																				
	工程數學(一) Engineering Mathematics (I)	3	3	0				實務專題(一) Project Study (I)	2	0	6										
	熱力學 Thermodynamics				3	3	0	環境控制 Environmental control	3	3	0										
	機電整合實務 Mechatronics integration practice				3	2	2	能源工程與實習 Energy Engineering Principle and Practices	3	2	2										
	空調工程與實習 Air- Condition Engineering and Practices				3	2	2	產業實習(一) Industry practice (I)				9	0	9							
	冷凍工程及實習 Refrigeration Engineering and Practices				3	2	2														
	冷凍空調基礎裝修實務 Basic Practices of Refrigeration and Air-Conditioning				3	2	2														
	小計	3	3	0	15	11	8	小計	8	5	8	9	0	9							
專業選修	校訂選修科目(20 學分) Professional Electives Courses(20 credits hours)																				
	自動控制 Automatic Control	3	3	0				工業安全 Industry Safety	3	3	0				產業實習(二) industry internship (II)	9	0	9			

燃料電池概論 Introduction to Fuel Cells	3	3	0				現代控制 Modern Control	3	3	0				專案研究 Project research	3	3	0
變頻節能控制 Variable Frequency Energy Saving Control	3	3	0				振動與噪音控制 Vibration and Noise Control	3	3	0				通風工程 Ventilation and Air Moving Engineering	3	3	0
虛擬儀控軟體應用 Basic Programming and Application of Virtual Instrument Software	3	3	0				無塵室技術 Cleanroom Technology	3	3	0				綠建築與照明節能 Energy Saving of Green Building and Lighting	3	3	0
模糊控制概論 Fuzzy Control Theory				3	3	0	熱交換器設計 Heat Exchanger Design	3	3	0							
電腦立體製圖 Computer 3D graphics				3	3	0	工程力學 Engineering Mechanics	3	3	0							
消防控制概論 Introduction to Fire Fighting Engineering				3	3	0	冷凍空調系統故障分析 Refrigeration and Air-Conditioning System Problem Diagnostic and Repair Procedure	3	3	0							
工程數學(二) Engineering Mathematics (II)				3	3	0	電腦輔助設計與實習 Computer Aided Design	3	1	2							
電子設備冷卻技術 Cooling Technique of Electronic Equipment				3	3	0	精密加工技術 Precision Machining Technique	3	3	0							
科技溝通 Communication of Science and Technology				3	3	0	風力發電 Wind Power Generation				3	3	0				
冷凍空調設備與實習 Equipment and Practices of Refrigeration and Air-Conditioning				3	2	2	實務專題(二) Project Study (II)				2	0	6				
冷凍空調裝修實務 Practice of Refrigeration and Air-Conditioning Installation and Maintenance				3	2	2	特殊空調系統 Distinctive Air-Conditioning System				3	3	0				
							流場分析專業軟體應用 Computational Fluid Dynamics				3	3	0				
							校外實習(暑期) Off-campus internship on summer				2	0	2				
							冷凍空調工程規劃及管理 Planning and Management of Refrigeration and Air-Conditioning Engineering				3	3	0				

備 註 note	一、畢業至少應修 72學分(必修52學分，本系專業選修20學分)。 Students should complete at least 72 credits before graduation, including 52 required credits, 20 elective credits (elective credits should have at least 20 credits from department elective courses) 二、修習【產業實習】課程及格者，相關抵免作業依照國立勤益科技大學學生校外實習課程開設要點與國立勤益大學學生校外實習要點辦理。 According to the "Guidelines for Off-Campus Student Internships in NCUT" and " Operation Guidelines for Off-Campus Student Internships in EE",must be study 【Industry practice】 course pass 三、畢業前應通過「華語文能力測驗A2級」。 Students should pass Level A2 on the TOCFL (Test of Chinese as a Foreign Language) to meet the Chinese Proficiency requirement for graduation
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