國立勤益科技大學 115 學年度工程學院冷凍空調與能源系二技國際學生產學合作專班
National Chin-Yi University of Technology
Curriculum Planning of 2026 Two-Year College Industry-Academia Collaboration Program
for International Students in Department of Refrigeration, Air Conditioning and Energy Engineering of College of Engineering

科目	Courses	上學期 First Semester			下學期 Second Semester		
		學分 Credits	正課 Lecture	實習 Internship	學分 Credits	正課 Lecture	實習 Internship
共同科目(17 學分) General Required Courses (17 credits hours)							
第一學年 First Year							
華語聽說(一)	Chinese Listening and Speaking（Ⅰ）	3	5	0			
華語讀寫(一)	Chinese Reading and Writing（Ⅰ）	3	5	0			
體育(一)	Physical Education（Ⅰ）	0	2	0			
華語聽說(二)	Chinese Listening and Speaking（Ⅱ）				3	5	0
華語讀寫(二)	Chinese Reading and Writing（Ⅱ）				3	5	0
藝術與哲學	Art and Philosophy				2	2	0
體育(二)	Physical Education（Ⅱ）				0	2	0
第二學年 Second Year							
華語聽說(三)	Chinese Listening and Speaking（Ⅲ）	3	3	0			
第三學年 Third Year(無共同科目課程 No General Required Courses)							
校訂必修科目(35 學分) Professional Required Courses(35 credits hours)							
第一學年 First Year							
工程數學(一)	Engineering Mathematics（Ⅰ）	3	3	0			
熱力學	Thermodynamics	3	3	0			
環境控制	Environmental Control	3	3	0			
冷凍空調基礎裝修實務	Basic Practices of Refrigeration and Air-Conditioning	3	2	2			
空調工程與實習	Air- Condition Engineering and Practices				3	2	2
冷凍工程及實習	Refrigeration Engineering and Practices				3	2	2
機電整合實務	Mechatronices Integration Practice				3	2	2
第二學年 Second Year							
實務專題	Project Study	2	0	6			
能源工程原理與實習	Energy Engineering Principle and Practices	3	2	2			
產業實習(一)	Industry Internship（Ⅰ）				9	0	9
第三學年 Third Year(無校訂必修科目課程 No Professional Required Courses)							
校訂選修科目(20 學分) Professional Electives Courses(20 credits hours)							
第一學年 First Year							
自動控制	Automatic Control	3	3	0			
燃料電池概論	Introduction to Fuel Cells	3	3	0			
變頻節能控制	Variable Frequency Energy Saving Control	3	3	0			
虛擬儀控軟體應用	Basic Programming and Application of Virtual Instrument Software	3	3	0			
流體力學與流體機械	Fluid Dynamics and Fluid Mechanics	3	3	0			
模糊控制概論	Fuzzy Control Theory				3	3	0
電腦立體製圖	Computer 3D Graphics				3	3	0
消防控制概論	Introduction to Fire Fighting Engineering				3	3	0
工程數學(二)	Engineering Mathematics（Ⅱ）				3	3	0
電子設備冷卻技術	Cooling Technique of Electronic Equipment				3	3	0

科技溝通	Communication of Science and Technology				3	3	0
冷凍空調設備與實習	Equipment and Practices of Refrigeration and Air-Conditioning				3	2	2
冷凍空調裝修實務	Practice of Refrigeration and Air-Conditioning Installation and Maintenance				3	2	2
第二學年 Second Year							
工業安全	Industry Safety	3	3	0			
現代控制	Modern Control	3	3	0			
振動與噪音控制	Vibration and Noise Control	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			
太陽能工程	Solar Energy Engineering	3	3	0			
廠務技術	Facility System Technique	3	3	0			
熱交換器設計	Heat Exchanger Design	3	3	0			
工程力學	Engineering Mechanics	3	3	0			
無塵室技術	Cleanroom Technology	3	3	0			
電腦輔助設計與實習	Computer Aided Design	3	1	2			
精密加工技術	Precision Machining Technique	3	3	0			
風力發電	Wind Power Generation				3	3	0
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
冷凍空調工程規劃及管理	Planning and Management of Refrigeration and Air- Conditioning Engineering				3	3	0
第三學年 Third Year							
產業實習（Ⅱ）	Industry Internship（Ⅱ）	9	0	9			
專案研究	Project Research	3	3	0			
通風工程	Ventilation and Air Moving Engineering	3	3	0			
綠建築與照明節能	Energy Saving of Green Building and Lighting	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、學生須於三年級第二學期結束前通過華語文能力A2(含)級以上測驗。如未能通過華語文能力A2(含)級以上測驗者，則學校應逕予退學。
Students must pass the Chinese Language Proficiency Test of A2 (inclusive) or above before the end of the second semester of the third grade. Those who fail to pass the Chinese language proficiency test of A2 (included) or above will be expelled from the school.

三、學生應於三年級第一學期修畢華語輔導課程(0學分5學時)。
Students should complete the Extracurricular Chinese Class in the first Semester of the third grade.

四、為因應法規變更、評鑑建議或政府計畫規定等外在因素，本系保有調整學分計畫之權利。若有修訂，將於學期開始前公告，並明確說明修訂內容、影響範圍及相關配套措施，以保障學生權益。
The department reserves the right to adjust the curriculum in response to external factors such as changes in regulations, suggestions of evaluation and accreditation, or government program regulations. If there are any revisions, will be announced before the start of the semester, and the revised content, scope of impact, and related supporting measures will be clearly stated to protect the rights and interests of students.