CTBC university of technology Curriculum of Refrigeration Air Conditioning and Energy Department for Four-Year Bachelor's Degree Program
-Night Division (Effective from Fall 2024)

		-Ni			from Fall 20					
		科目名稱	第一 第一	學年 下學期	第二	學 年 下學期	第三上學期	學 年 下學期	第 四 上學期	日 學 年 下學期
		Subject	上字期 學分 時數Ho		上字期 學分 時數Ho		上字明 學分 時數Ho	學分 時數Ho	上字明 學分 時數Ho	學分 時數Ho
		中文閱讀與表達(1)(2)	Credits urs	Credits urs						
		Chinese Reading and Expression(1)(2) 英文聽力與閱讀(1)(2)			1					
	通識 基礎	English Listening and Reading(1)(2)	2/ 2	2/ 2						
		服務教育與大學社會責任(1)(2) Service Education and University Social	1/ 1	1/ 1						
	必修 Required General	Responsibility (1)(2) 體育(1)(2)(3)								
	Education Courses	Physical Education(1)(2)(3)	2/ 2	2/ 2	2/ 2					
		多元語言 Multilingual Learning			2/ 2					
		小 計Subtotal	7/7	7/7	4/ 4	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
		健康與生活 Health and Life	2/ 2	2/ 2						
Lander		創意思考與訓練		2/ 2						
校訂課程		Creative Thinking and Training 博雅與跨域學習(1)			2/ 2					
Stipulated Courses	通識博雅必修	Liberal Arts and Interdisciplinary Learning (1) 資訊與智慧生活								
	Required Liberal	Information and Smart Life			2/ 2					
	Arts Courses	生命與永續 Life and Sustainability				2/ 2	2/ 2			
		人文與社會 Humanities and Social Sciences					2/ 2			
		藝術與美感			İ			2/ 2		
		Art and Beauty /小 計Subtotal	2/ 2	4/ 4	4/ 4	2/ 2	4/ 4	2/ 2	0/ 0	0/ 0
		全民國防教育軍事訓練(1)(2)(3)(4)								
	一般選修	National Defense Education and Military Training (1)(2)(3)(4)	2/ 2	2/ 2	2/ 2	2/ 2				
	General Elective Courses	博雅與跨域學習(2)(3)(4)(5) Liberal Arts and Interdisciplinary Learning				2/ 2	2/ 2	2/ 2	2/ 2	
	Courses	(2)(3)(4)(5)								
		小 計Subtotal 數學演練習作	2/ 2	2/ 2	2/ 2	4/ 4	2/ 2	2/ 2	2/ 2	0/ 0
		Math exercises	2/ 2							
		生活物理 Physics of life	2/ 2		1				212 0	
	W. 3.44	電腦軟體應用		2/ 2						
	院必修 課程	Computer Software Application 職場倫理								
	Required College Courses	Employment Ethics 創意實作		2/ 2						
		剧息貝作 Creative Implementation			2/ 2					
		半導體概論 Introduction of Semiconductor	-		2/ 2					
		簡報製作與表達				2/ 2				
		Presentation and Communication Skills	4/ 4	4/ 4	4/ 4	2/ 2	0/ 0	0/ 0	0/ 0	0/ 0
		熱力學	2/ 2							
		Thermodynamics 工程圖學	2/ 2							
專業必		Engineering Drawing 電工學								
修課程		Electricity Engineering	2/ 2							
Professional Required		冷凍空調原理 Principles of Refrigeration and Air		2/ 2	L					
Courses		冷凍空調裝修實習 Maintenance & Practice of Refrigeration and			4/ 4					
		Air Conditioning			7/ 7					
	系必修	流體力學 Fluid Mechanics			<u> </u>	2/ 2		<u></u>		<u></u>
	課程 Required	能源工程 Energy Engineering				2/ 2				
	Department Courses	冷凍工程與設計				2/ 2				
		Refrigeration Engineering and Design 冷凍空調原理實驗				41 4				
		Experiment of Refrigeration and Air Conditioning Principle				2/ 2				
		空調工程與設計					2/ 2			
		Air Conditioning Engineering and Design 冷凍空調自動控制					212			
		Automatic Control of Refrigeration and Air Conditioning					2/ 2			
		實務專題(1)(2)(3)(4)			2/ 2	2/ 2	2/ 2	2/ 2		
		Practical Project(1)(2)(3)(4)	6/ 6	2/ 2	6/ 6	10/ 10	6/ 6	2/ 2	0/ 0	0/ 0
		水電實務基本技能實習		LI L	. 0/0	10/ 10	37 0	LI L	JI V	U
		Basic Practice in Electrical, Plumbing & Air Conditioning Engineering	2/ 2							
		程式語言	2/ 2							
		Programming Language 微積分	2/ 2							
		Calculus 基礎冷凍空調裝修實習	41 4							
		Basic Maintenance & Practice of Refrigeration		4/ 4						
		and Air Conditioning 電子學		2/2						
		Electronics 電器修護實習		2/ 2						
		Electric RepAiring Practice			4/ 4					
		電力電子學 Power Electronics			2/ 2					
		風力發電			2/ 2					
		Wind Power 進階冷凍空調裝修實習								
		Advanced Maintenance & Practice of Refrigeration and Air Conditioning				4/ 4				
		可程式控制實習				2/ 2				
		Programmable Logic Control Practice 太陽能工程				2/ 2				
		Solar Energy Engineering				21 2				

CTBC university of technology Curriculum of Refrigeration Air Conditioning and Energy Department for Four-Year Bachelor's Degree Program -Night Division (Effective from Fall 2024)

		gnt Division 第一	`		學年	第三	學年	第 四	學年
	科目名稱	上學期	下學期	上學期	下學期	上學期	下學期	上學期	下學期
	Subject	學分 時數Ho	學分 時數Ho	學分 時數Ho	學分 時數Ho	學分 時數Ho	學分 時數Ho	學分 時數Ho	學分 時數Ho
	電腦輔助冷凍空調繪圖 Computer Aided Refrigeration and Air Conditioning Drafting	Credits UIS	Credis Urs	Creas   urs	Credits   tars	4/ 4	Creais   ars	Creais   ars	Creais   urs
	消防工程 Fire Protection Engineering					2/ 2			
	機電與能源實習 Practice of Mechatronics and Energy						4/ 4		
4	通風工程 Ventilation Engineering						2/ 2		
系專業選修 課程	熱傳學 Heat Transfer						2/ 2		
Professional Elective	半導體廠務工程 Semiconductor Facility Engineering						2/ 2		
Courses	低溫工程 Cryogenic Engineering						2/ 2		
	冷凍空調節能技術 Energy-Saving Technology in Refrigeration and Air Conditioning							2/ 2	
	流體機械 Fluid Machinery							2/ 2	
	空調設計實務 Design Practice of Air Conditioning							2/ 2	
	冷凍空調工程管理 Management of Refrigerating and Air Conditioning Engineering							2/ 2	
	智慧財產權 Intellectual Property Right							2/ 2	
	工業安全衛生 Industrial Safety and Health							2/ 2	
	產業校外實習 Industrial Off-Campus Internship							9/	
	智慧能源管理技術 Smart Energy Management Technology								2/ 2
	智慧生活與物聯網實習 Smart living and practical training of Internet of Thing								2/ 2
	熱交換器設計 Heat Exchanger Design								2/ 2
	電腦輔助空調系統分析 Computer Aided Air Conditioning System Analysis								2/ 2
	冷凍空調系統設計 Design & Construction of refrigeration and Air-								2/ 2
	Conditioning System 噪音原理與防治								2/ 2
	Noise principle and Prevention 學期校外實習								9/
擬開最低專業選修學分 Proposed Minimum Elective Credits	Off-campus Semester Internship 合 計Total	2/ 2	4/ 4	4/ 4	6/ 6	4/ 4	8/8	10/ 10	8/ 8
					113年08月日	校課程發展	■ 委員會會議通		ate: 2024-08-

The total number of credits completed to be eligible to graduate shall not be less than 128 credits.

1.校訂必修36學分(含通識基礎必修18學分、通識博雅必修18學分)。

The stipulated compulsory credits shall be 36 credits.(18 credits for required general education courses, and 18 credits for required liberal arts courses.) 2.專業必修46學分(院必修14學分、系必修32學分)。

The professional compulsory credits shall be 46 credits.(14 credits for required college courses, and 32 credits for required department courses.) 3.系專業選修至少34學分

The professional elective credits shall be not less than 34 credits.

4.跨系選修至多12學分。

The number of inter-department elective credits shall be up to 12 credits.

※「微學分課程」最多採計12學分。

The number of 'Micro-Credit Courses' credits shall be up to 12credits.

二、畢業門檻: Graduation Threshold

Note

備註

1.學生於修業年限內,應修畢「校訂必修」、「專業必修」、「系專業選修」、「跨系選修」共計128學分。 Students are required to complete a total of 128 credits of "Stipulated Compulsory Course", "Professional Compulsory Course", "Department Professional Elective Course", and "Inter-College Elective Courses " within their academic years.

三、校訂課程:Stipulated Courses

1.校訂課程不須依先後順序修課,不得互抵者,包括「中文閱讀與表達(1)(2)、英文聽力與閱讀(1)(2)、體育(1)(2)(3)」課程。

Stipulated courses are not required to be taken in sequence and the credits shall not be mutually transferred, including "Chinese Reading and Expression (1) (2), English listening and reading (1) (2), and physical education (1) (2) (3) " courses.

2.校訂課程不須依先後順序修課,得互抵者,包括「服務教育與大學社會責任(1)(2)」、「博雅與跨域學習(1)(2)(3)(4)(5)」課程。

Stipulated courses are not required to be taken in sequence and those that may be mutually complemented by each other may be only "Service Education and University Social Responsibility (1) (2)" and "Liberal Arts and Interdisciplinary Learning (1)(2)(3)(4)(5)".

3.校訂課程不須依先後順序修課,包括「全民國防教育軍事訓練(1)(2)(3)(4)」課程

Stipulated courses are not required to be taken in sequence, including National Defense Education and Military Training (1)(2)(3)(4).

四、專業課程: Professional Courses:

1.「實務專題(1)(2) (3) (4)」課程應依先後順序修課,得互抵。

Practical Project(1)(2) (3) (4) shall be taken in sequence and the credits shall be mutually transferred.

		-Ni	ght Division				第三學年		下學期 上學期 下學期					
		科目名稱	第一 上學期	· 學 年 下學期	第二 上學期	學 年 下學期	第三							
		Subject	學分 時數Ho		學分 時數Ho	學分 時數Ho		學分 時數Ho	學分 時數Ho	TOGRAM  U 學 年 下學期 學分				
		中文閱讀與表達(1)(2)	2/ 2	2/ 2	cicus dis	cicuis	cicus dis	Cittas als	cicum i dis	Cicum III				
		Chinese Reading and Expression(1)(2) 英文聽力與閱讀(1)(2)												
	通識	English Listening and Reading(1)(2)	2/ 2	2/ 2										
	基礎	服務教育與大學社會責任(1)(2) Service Education and University Social	1/ 1	1/ 1										
	必修 Required General	Responsibility (1)(2)												
	Education Courses	體育(1)(2)(3) Physical Education(1)(2)(3)	2/ 2	2/ 2	2/ 2									
		多元語言			2/ 2									
		Multilingual Learning 小 計Subtotal	7/7	7/7	4/ 4	0/ 0	0/ 0	0/ 0	0/ 0	0/.0				
		健康與生活	2/ 2	2/ 2	7/ 7	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0				
		Health and Life 創意思考與訓練	21 2	21 2										
校訂 課程 Stipulated Courses		Creative Thinking and Training		2/ 2										
		博雅與跨域學習(1) Liberal Arts and Interdisciplinary Learning (1)			2/ 2									
	通識博雅必修	資訊與智慧生活			2/ 2									
	Required Liberal Arts Courses	Information and Smart Life 牛命與永續			21 2									
	Aras Courses	Life and Sustainability				2/ 2	2/ 2		L					
		人文與社會 Humanities and Social Sciences					2/ 2		<u> </u>					
		藝術與美感						2/ 2						
		Art and Beauty 小 計Subtotal	2/ 2	4/ 4	4/ 4	2/ 2	4/ 4	2/ 2	0/ 0	0/0				
		全民國防教育軍事訓練(1)(2)(3)(4)	21 2	4/ 4	4/ 4	21 2	4/ 4	21 2	0/0	0/ 0				
	Arr Spire CC	National Defense Education and Military	2/ 2	2/ 2	2/ 2	2/ 2								
	一般選修 General Elective	Training (1)(2)(3)(4) 博雅與跨域學習(2)(3)(4)(5)		1										
	Courses	Liberal Arts and Interdisciplinary Learning				2/ 2	2/ 2	2/ 2	2/ 2					
		(2)(3)(4)(5) /小 計Subtotal	2/ 2	2/ 2	2/ 2	4/ 4	2/ 2	2/ 2	2/ 2	0/ 0				
		數學演練習作	2/ 2							J. 0				
		Math exercises 生活物理		1					├──	1				
		Physics of life	2/ 2	<u> </u>										
	( A. V. 64)	電腦軟體應用 Computer Software Application	]	2/ 2										
	院必修 課程	職場倫理		2/ 2										
	Required	Employment Ethics 会社会會方		21 2					├──	1				
	College Courses	創意實作 Creative Implementation			2/ 2									
	Courses	半導體概論			2/ 2				1					
		Introduction of Semiconductor 簡報製作與表達			21 2				<del> </del>	-				
		Presentation and Communication Skills				2/ 2								
		小計Subtotal	4/ 4	4/ 4	4/ 4	2/ 2	0/ 0	0/ 0	0/ 0	0/ 0				
		熱力學 Thermodynamics	2/ 2		<u></u>	<u></u>		<u></u>	<u>L</u>	L_				
		工程圖學	2/ 2			1								
業必		Engineering Drawing 電工學		<u> </u>					<del>                                     </del>	-				
課程		Electricity Engineering	2/ 2						<u> </u>	<u> </u>				
fessional equired		冷凍空調原理 Principles of Refrigeration and Air		2/ 2										
Courses		冷凍空調裝修實習			41.4									
		Maintenance & Practice of Refrigeration and Air Conditioning			4/ 4				<u> </u>					
	系必修	流體力學				2/ 2								
	課程	Fluid Mechanics 能源工程							<u> </u>	<b>†</b>				
	Required Department	Energy Engineering				2/ 2			<b></b>	<u> </u>				
	Courses	冷凍工程與設計 Refrigeration Engineering and Design	<u></u>		<u></u>	2/ 2		<u></u>	<u>L</u>	<u>L.</u>				
		冷凍空調原理實驗				2/2								
		Experiment of Refrigeration and Air Conditioning Principle				2/ 2			<u></u>					
		空調工程與設計 Air Conditioning Engineering and Design					2/ 2		1					
		冷凍空調自動控制							<u> </u>	<u> </u>				
		Automatic Control of Refrigeration and Air Conditioning					2/ 2							
		實務專題(1)(2)(3)(4)			2/ 2	2/ 2	2/ 2	2/ 2	<u> </u>	<u> </u>				
		Practical Project(1)(2)(3)(4)		212					01.0	0.0				
		小 計Subtotal 水電實務基本技能實習	6/ 6	2/ 2	6/ 6	10/ 10	6/ 6	2/ 2	0/ 0	0/0				
		Basic Practice in Electrical, Plumbing & Air	2/ 2											
		Conditioning Engineering 程式語言							<del> </del>	-				
		Programming Language	2/ 2											
		微積分 Calculus	2/ 2											
		基礎冷凍空調裝修實習												
		Basic Maintenance & Practice of Refrigeration and Air Conditioning		4/ 4										
		電子學		2/ 2										
		Electronics 電器修護實習		21 2					<del>                                     </del>	1				
		Electric RepAiring Practice			4/ 4				<u></u>					
		電力電子學			2/ 2	1								
		Power Electronics 風力發電		<u> </u>					<del>                                     </del>	-				
		Wind Power		1	2/ 2				<b></b>	<b></b>				
		進階冷凍空調裝修實習 Advanced Maintenance & Practice of				4/ 4			1					
			1	i	Ì	0.7	Ī	İ	1	Ì				
		Refrigeration and Air Conditioning												
		Refrigeration and Air Conditioning 可程式控制實習 Programmable Logic Control Practice				2/ 2								

中信科技大學 四年制 冷凍空調與能源系 進修部 課程規劃表(適用113學年度入學) CTBC university of technology Curriculum of Refrigeration Air Conditioning and Energy Department for Four-Year Bachelor's Degree Program -Night Division (Effective from Fall 2024) 第 -上學期 第 三 上學期 科日名稱 上學期 下學期 下學期 Subject 時數H 時數H 學分 時數H 學分 時數H 時數H 時數H Computer Aided Refrigeration and Air 4/4 Conditioning Drafting 2/2 Fire Protection Engineering 機電與能源實習 4/4 Practice of Mechatronics and Energy 通風工程 2/2 Ventilation Engineering 系專業選修 2/ 2 Heat Transfer 半導體廠務工程 Professional 2/ 2 Semiconductor Facility Engineering Elective 氏溫工程 2/2 Courses Cryogenic Engineering 令凍空調節能技術 Energy-Saving Technology in Refrigeration and Air Conditioning 2/2 Fluid Machinery 空調設計實務 2/2 Design Practice of Air Conditioning 冷凍空調工程管理 Management of Refrigerating and Air 2/2 Conditioning Engineering 智慧財產權 2/2 Intellectual Property Right L業安全衛生 2/2 Industrial Safety and Health 產業校外實習 9/ Industrial Off-Campus Internship 智慧能源管理技術 2/2 Smart Energy Management Technology 智慧生活與物聯網實習 Smart living and practical training of Interne 2/2 of Thing 熱交換器設計 2/2 Heat Exchanger Design 雷腦輔助空調系統分析 Computer Aided Air Conditioning System 2/2 Analysis 今東空調系統設計 Design & Construction of refrigeration and Air 2/ 2 Conditioning System 2/2 Noise principle and Prevention 學期校外實習 9/ Off-campus Semester Internship 6/6 6/6 8/8 12/ 12 21/12 12/ 12 小 計Subtotal 8/8 6/6 128/ 擬開最低專業選修學分 Proposed Minimum Elective Credits 合 計Total 4/4 4/4 4/ 4 46/ 2/2 6/6 8/8 10/10 8/8 113年08月 日 校課程發展委員會會議通過Amended Date: 2024-08 一、畢業總學分至少128學分: The total number of credits completed to be eligible to graduate shall not be less than 128 credits. 1.校訂必修36學分(含通識基礎必修18學分、通識博雅必修18學分)。 The stipulated compulsory credits shall be 36 credits (18 credits for required general education courses, and 18 credits for required liberal arts courses.) 2.專業必修46學分(院必修14學分、系必修32學分)。 The professional compulsory credits shall be 46 credits.(14 credits for required college courses, and 32 credits for required department courses.) 3.系專業選修至少34學分。 The professional elective credits shall be not less than 34 credits 4. 跨系撰修至多12學分。 The number of inter-department elective credits shall be up to 12 credits. ※「微學分課程」最多採計12學分。 The number of 'Micro-Credit Courses' credits shall be up to 12credits. 、畢業門標: Graduation Threshold 備註 學生於修業年限內,應修畢「校訂必修」、「專業必修」、「系專業選修」、「跨系選修」共計128學分。 Students are required to complete a total of 128 credits of "Stipulated Compulsory Course", "Professional Compulsory Course", "Department Professional Note Elective Course", and "Inter-College Elective Courses" within their academic years. 、校訂課程:Stipulated Courses 1.校訂課程不須依先後順序修課,不得互抵者,包括「中文閱讀與表達(1)(2)、英文聽力與閱讀(1)(2)、體育(1)(2)(3)」課程。 Stipulated courses are not required to be taken in sequence and the credits shall not be mutually transferred, including "Chinese Reading and Expression (1) (2), English listening and reading (1) (2), and physical education (1) (2) (3) " courses. 2.校訂課程不須依先後順序修課,得互抵者,包括「服務教育與大學社會責任(1)(2)」、「博雅與跨域學習(1)(2)(3)(4)(5)」課程。 Stipulated courses are not required to be taken in sequence and those that may be mutually complemented by each other may be only "Service Education and University Social Responsibility (1) (2)" and "Liberal Arts and Interdisciplinary Learning (1)(2)(3)(4)(5)". 3.校訂課程不須依先後順序修課,包括「全民國防教育軍事訓練(1)(2)(3)(4)」課程。 Stipulated courses are not required to be taken in sequence, including National Defense Education and Military Training (1)(2)(3)(4). 四、專業課程: Professional Courses: 1.「實務專題(1)(2) (3) (4)」課程應依先後順序修課,得互抵。 Practical Project(1)(2) (3) (4) shall be taken in sequence and the credits shall be mutually transferred.

36+ 院必

14+

系必

32+

擬開

最低

惠業

撰修

128

CTBC university of technology Curriculum of Refrigeration Air Conditioning and Energy Department for Four-Year Bachelor's Degree Program
-Night Division (Effective from Fall 2024)

		-Ni		(Effective fr			fata .			
		科目名稱 Subject	上學期	學 年 下學期 學分 時數Ho	上學期	學 年 下學期 學分 時數Ho	上學期	學 年 下學期 學分 時數Ho	第四 上學期 學分 時數Ho	下學期
		中文閱讀與表達(1)(2)	Credits urs	Credits urs	學分 時數Ho Credits urs	学分 时氨Ho Credits urs	學分 時數Ho Credits urs	学分 时數Ho Credits urs	學分 時數Ho Credits urs	學分 時數Ho Credits urs
		Chinese Reading and Expression(1)(2) 英文聽力與閱讀(1)(2)	2/ 2	2/ 2						
	通識 基礎 必修	English Listening and Reading(1)(2) 服務教育與大學社會責任(1)(2)	2/ 2	2/ 2						
		Service Education and University Social	1/ 1	1/ 1						
	Required General	Responsibility (1)(2) 體育(1)(2)(3)	2/ 2	2/ 2	2/ 2					
	Education Courses	Physical Education(1)(2)(3) 多元語言	21 2	21 2	2/ 2					
		Multilingual Learning /小 計Subtotal	7/ 7	7/7	4/4	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
		健康與生活	2/ 2	2/ 2	17 1	O/ U	0/ 0	0/ 0	0/ 0	or o
		Health and Life 創意思考與訓練		2/ 2						
校訂課程		Creative Thinking and Training 博雅與跨域學習(1)		27 2	2/ 2					
Stipulated Courses	通識博雅必修	Liberal Arts and Interdisciplinary Learning (1) 資訊與智慧生活								
	Required Liberal Arts Courses	Information and Smart Life 生命與永續			2/ 2					
	Courses	Life and Sustainability 人文與社會				2/ 2	2/ 2			
		Humanities and Social Sciences					2/ 2			
		藝術與美感 Art and Beauty						2/ 2		
		小 計Subtotal 全民國防教育軍事訓練(1)(2)(3)(4)	2/ 2	4/ 4	4/ 4	2/ 2	4/ 4	2/ 2	0/ 0	0/ 0
	一般選修 General Elective Courses	National Defense Education and Military Training (1)(2)(3)(4)	2/ 2	2/ 2	2/ 2	2/ 2				
		博雅與跨域學習(2)(3)(4)(5) Liberal Arts and Interdisciplinary Learning				2/2	2/2	2/2	2/2	
		(2)(3)(4)(5)				2/ 2	2/ 2	2/ 2	2/ 2	
		小 計Subtotal 數學演練習作	2/ 2	2/ 2	2/ 2	4/ 4	2/ 2	2/ 2	2/ 2	0/ 0
	院必修 課程 Required College Courses	Math exercises 生活物理	3/ 3							
		Physics of life 電腦軟體應用	3/ 3							
		Computer Software Application		2/ 2						
		職場倫理 Employment Ethics		2/ 2						
		半導體概論 Introduction of Semiconductor			2/ 2					
		簡報製作與表達 Presentation and Communication Skills				2/ 2				
		小 計Subtotal 熱力學	6/ 6	4/ 4	2/ 2	2/ 2	0/ 0	0/ 0	0/ 0	0/ 0
專業必	系必修 課程	Thermodynamics 冷凍空調原理	3/ 3							
修課程 Professional		Principles of Refrigeration and Air Conditioning		3/ 3						
Required Courses		電工學 Electricity Engineering		3/ 3						
		能源工程 Energy Engineering			3/ 3					
		流體力學 Fluid Mechanics			3/ 3					
	Required Department	冷凍工程與設計 Refrigeration Engineering and Design				3/ 3				
	Courses	空調工程與設計 Air Conditioning Engineering and Design					3/ 3			
		冷凍空調自動控制 Automatic Control of Refrigeration and Air					3/ 3			
		Conditioning					د اد			
		實務專題(1)(2)(3)(4) Practical Project(1)(2)(3)(4)			2/ 2	2/ 2	2/ 2	2/ 2		
		小 計Subtotal 工程圖學	3/3	6/ 6	8/ 8	5/ 5	8/ 8	2/ 2	0/ 0	0/ 0
		Engineering Drawing 電子學	3/ 3							
		Electronics 水電實務基本技能實習	3/ 3							
		Basic Practice in Electrical, Plumbing & Air Conditioning Engineering	3/ 3							
		微積分 Calculus	3/ 3							
		基礎冷凍空調裝修實習		2/2						
		Basic Maintenance & Practice of Refrigeration and Air Conditioning		3/ 3						
		程式語言 Programming Language		3/ 3						
		電力電子學 Power Electronics		3/ 3						
		冷凍空調裝修實習 Maintenance & Practice of Refrigeration and			3/ 3					
		Air Conditioning 電器修護實習								
		Electric RepAiring Practice 冷凍空調原理實驗			3/ 3					
		Experiment of Refrigeration and Air Conditioning Principle			3/ 3					
		進階冷凍空調裝修實習 Advanced Maintenance & Practice of				212				
		Refrigeration and Air Conditioning				3/ 3				
		半導體廠務工程 Semiconductor Facility Engineering				3/ 3				
		可程式控制實習 Programmable Logic Control Practice				3/ 3				

CTBC university of technology Curriculum of Refrigeration Air Conditioning and Energy Department for Four-Year Bachelor's Degree Program -Night Division (Effective from Fall 2024)

		第一	第一學年 第二學年				學年	第四學年	
	科目名稱	上學期	下學期	上學期 下學期		上學期 下學期		上學期 下學	
	Subject	學分 時數Ho Credits urs	學分 時數Ho Credits urs	學分 時數Ho Credits urs	學分 時數Ho Credits urs	學分 時數Ho Credits urs	學分 時數Ho Credits urs	學分 時數Ho Credits urs	學分 時數 Credits urs
	風力發電				3/3				
	Wind Power				5, 5				
	電腦輔助冷凍空調繪圖					2/2			
	Computer Aided Refrigeration and Air Conditioning Drafting					3/ 3			
	LED原理與應用								
	Principle and Application of LED					3/ 3			
<b></b> 尔特未进修	機電與能源實習								
課程	Practice of Mechatronics and Energy						3/ 3		
Professional	空調設計實務						212		
Elective	Design Practice of Air Conditioning						3/ 3		
Courses	通風工程						3/ 3		
	Ventilation Engineering						3/ 3		
	熱傳學						3/ 3		
	Heat Transfer						31 3		
	消防工程						3/ 3		
	Fire Protection Engineering						5, 5		
	冷凍空調節能技術 Energy-Saving Technology in Refrigeration and							2/2	
	Air Conditioning							3/ 3	
	流體機械								
	Fluid Machinery							3/ 3	
	太陽能工程								
	Solar Energy Engineering							3/ 3	
	冷凍空調工程管理								
	Management of Refrigerating and Air							3/ 3	
	Conditioning Engineering								
	智慧財產權							2/ 2	
	Intellectual Property Right							27 2	
	工業安全衛生							2/ 2	
	Industrial Safety and Health 產業校外實習								
	座来校介員省 Industrial Off-Campus Internship							9/	
	智慧能源管理技術								
	Smart Energy Management Technology								3/ 3
	智慧生活與物聯網實習								
	Smart living and practical training of Internet								3/3
	of Thing								
	熱交換器設計								3/ 3
	Heat Exchanger Design								31 3
	電腦輔助空調系統分析								
	Computer Aided Air Conditioning System								3/ 3
	Analysis								
	冷凍空調系統設計 Design & Construction of refrigeration and Air-								3/ 3
	Conditioning System								31 3
	學期校外實習								
	Off-campus Semester Internship								9/
	小計Subtotal	12/ 12	9/ 9	9/ 9	12/ 12	6/ 6	15/ 15	16/ 16	15/ 15
擬開最低專業選修學分									
Proposed Minimum Elective	合 計Total	3/ 3	3/ 3	3/3	6/ 6	3/ 3	9/ 9	10/ 10	9/ 9
		J, J	J, J	J. J	0, 0	J. J			

、畢業總學分至少128學分:

The total number of credits completed to be eligible to graduate shall not be less than 128 credits.

1.校訂必修36學分(含通識基礎必修18學分、通識博雅必修18學分)。

The stipulated compulsory credits shall be 36 credits.(18 credits for required general education courses, and 18 credits for required liberal arts courses.) 2.專業必修46學分(院必修14學分、系必修32學分)。

The professional compulsory credits shall be 46 credits.(14 credits for required college courses, and 32 credits for required department courses.) 3.系專業選修至少34學分。

The professional elective credits shall be not less than 34 credits.

4.跨系選修至多12學分。

備註 Note

The number of inter-department elective credits shall be up to 12 credits.

※「微學分課程」最多採計12學分。

The number of 'Micro-Credit Courses' credits shall be up to 12credits.

、畢業門檻: Graduation Threshold

1.學生於修業年限內,應修畢「校訂必修」、「專業必修」、「系專業避修」、「跨系選修」共計128學分。 Students are required to complete a total of 128 credits of "Stipulated Compulsory Course", "Professional Compulsory Course", "Department Professional Elective Course", and "Inter-College Elective Courses" within their academic years.

三、校訂課程:Stipulated Courses

1.校訂課程不須依先後順序修課,不得互抵者,包括「中文閱讀與表達(1)(2)、英文聽力與閱讀(1)(2)、體育(1)(2)(3)」課程。

Stipulated courses are not required to be taken in sequence and the credits shall not be mutually transferred, including "Chinese Reading and Expression (1) (2), English listening and reading (1) (2), and physical education (1) (2) (3) " courses.

2.校訂課程不須依先後順序修課,得互抵者,包括「服務教育與大學社會責任(1)(2)」、「博雅與跨域學習(1)(2)(3)(4)(5)」課程。

Stipulated courses are not required to be taken in sequence and those that may be mutually complemented by each other may be only "Service Education and University Social Responsibility (1) (2)" and "Liberal Arts and Interdisciplinary Learning (1)(2)(3)(4)(5)".

3.校訂課程不須依先後順序修課,包括「全民國防教育軍事訓練(1)(2)(3)(4)」課程

Stipulated courses are not required to be taken in sequence, including National Defense Education and Military Training (1)(2)(3)(4).

四、專業課程:Professional Courses:

1.「實務專題(1)(2) (3) (4)」課程應依先後順序修課,得互抵。

Practical Project(1)(2) (3) (4) shall be taken in sequence and the credits shall be mutually transferred.