

Required/Elective Courses for Department of Electrical Engineering, Feng Chia University (Applicable to Students Admitted in the Academic Year 2025)

[illegible]

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逢甲大學 電機工程學系 必選修科目表(114學年度入學學生適用)

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	1	2		1	2		1	2		1	2		1	2
MATH1006 微積分(二) CALCULUS(2)		3												
IEE1006 邏輯設計 LOGIC DESIGN		3												
IEE1007 邏輯設計實習 LOGIC DESIGN LAB.		1												
選 修 科 目 Elective														
			EEEN2014 向量分析 VECTOR ANALYSIS	3		EEEN3011 半導體物理 SEMICONDUCTOR PHYSICS	3		EEEN4001 工業電子學 INDUSTRIAL ELECTRONICS	3				
			EEEN2016 資料結構 DATA STRUCTURE	3		EEEN3045 光電半導體物理 SEMICONDUCTOR PHYSICS OF OPTO-ELECTRONICS	3		EEEN4005 半導體製程 SEMICONDUCTOR PROCESS	3				

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			EEEN3031 數位光電影像處理 DIGITAL OPTO-ELECTRONIC IMAGE PROCESSING		3	EEEN3040 光學設計實作 OPTICAL DESIGN IMPLEMENTATION		3	IEE5016 系統思維與統計應用 SYSTEM THINKING AND APPLIED STATISTICS		3			
			EEEN2020 系統程式 SYSTEM PROGRAMMING		3	EEEN2004 信號與系統 SIGNALS AND SYSTEMS		3	EEEN4003 保護電驛 PROTECTION RELAY		3			
			EEEN2017 近代物理 MODERN PHYSICS		3	EEEN3009 計算機控制 COMPUTER CONTROL		3	EEEN4004 智慧能源科技導論 THE INTRODUCTION OF INTELLIGENT ENERGY TECHNOLOGY		3			
			EEEN3024 能源轉換 ENERGY SOURCE CONVERSION		3	EEEN3014 高頻電路概論 INTRODUCTION TO RADIO FREQUENCY CIRCUIT		3	EEEN4028 超大型積體電路設計 VLSI DESIGN		3			
			EEEN2018 電波工程概論 INTRODUCTION TO ELECTRO-WAVE ENGINEERING		2	EEEN3039 基礎光電子學 FUNDAMENTAL OF OPTOELECTRONICS		3	EEEN4012 微波元件 MICROWAVE DEVICES		3			
			EEEN2019 機率論 PROBABILITY		3	EEEN3008 控制工程 CONTROL ENGINEERING		3	EEEN3035 微波主動電路電腦輔助設計 MICROWAVE ACTIVE CIRCUIT COMPUTER AIDED DESIGN		3			
						IEE3011 智慧機器人概論與實作 INTRODUCTION AND IMPLEMENTATION OF INTELLIGENT ROBOTS		3	EEEN4027 新能源監控與智慧分析 INTELLIGENT NEW ENERGY MONITORING AND ANALYSIS		3			

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						IEE3012 智慧辨識檢測與應用 APPLICATIONS OF INTELLIGENT RECOGNITION AND OBJECTS DETECTION	3		EEEN4009 電磁波傳播 ELECTROMAGNETIC WAVE PROPAGATION	3				
						EEEN3041 虛擬儀控程式設計 LABORATORY VIRTUAL INSTRUMENT ENGINEERING WORKBENCH	3		EEEN4002 電機設計 ELECTRIC MACHINERY DESIGN	3				
						EEEN3003 電力系統分析 POWER SYSTEM ANALYSIS	3		EEEN4016 工業配電 INDUSTRIAL POWER DISTRIBUTION		3			
						EEEN3001 電子學實驗(三) ELECTRONICS LAB.(3)	1		EEEN4018 天線原理 ANTENNA THEORY		3			
						EEEN3016 電波實驗 MICROWAVE LAB.	3		EEEN4030 天線實務設計與應用 PRACTICAL ANTENNA DESIGN AND APPLICATIONS		3			
						EEEN3005 電磁波 ELECTROMAGNETIC WAVE	3		EEEN4029 半導體量測技術 PROBING TECHNOLOGIES ON SEMICONDUCTORS		3			
						EEEN3007 電機機械 ELECTRIC MACHINES	3		EEEN4008 光纖通訊 OPTICAL FIBER COMMUNICATION		3			

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						EEEN3038 數位系統設計 DIGITAL SYSTEM DESIGN	3		EEEN4014 技術商品化與創新創意 TECHNOLOGY COMMERCIALIZATION AND INNOVATION		3			
						EEEN3006 複變函數 COMPLEX VARIABLES AND FUNCTIONS	3		EEEN4013 基礎科技英文 BASIC ENGLISH FOR TECHNOLOGY		3			
						EEEN3027 半導體元件 SEMICONDUCTOR DEVICES		3	EEEN4954 專題產業實習(一) PROJECT-COOPERATIVE INDUSTRY INTERNSHIP(1)		3			
						EEEN3026 光電工程 OPTO-ELECTRIC ENGINEERING		3	EEEN4955 專題產業實習(二) PROJECT-COOPERATIVE INDUSTRY INTERNSHIP(2)		3			
						EEEN3046 光電半導體元件 SEMICONDUCTOR DEVICES OF OPTO-ELECTRONICS		3	EEEN4956 專題產業實習(三) PROJECT-COOPERATIVE INDUSTRY INTERNSHIP(3)		3			
						EEEN3030 光學製造技術 OPTICS MANUFACTURING TECHNOLOGY		3	EEEN4007 智能光電系統 SMART OPTO-ELECTRONIC SYSTEM		3			
						EEEN3029 光纖工程 OPTIC FIBER ENGINEERING		3	EEEN4031 量子計算與量子晶片設計 QUANTUM COMPUTING AND QUANTUM CHIP DESIGN		3			

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						IEE5015 系統思維與機率應用 SYSTEM THINKING AND APPLIED PROBABILITY		3	EEEN4015 資電技術專利實務 PATENT PRACTICE FOR INFORMATION AND ELECTRICAL TECHNOLOGY		3			
						EEEN3033 高頻電路設計 RADIO FREQUENCY CIRCUIT DESIGN		3	EEEN4017 電機控制 CONTROL OF ELECTRIC MACHINES		3			
						EEEN3028 基礎光電實驗 BASIC PHOTONICS LAB.		3						
						EEEN3015 通訊系統概論 INTRODUCTION TO COMMUNICATION SYSTEMS		3						
						EEEN3025 智慧控制工程 INTELLIGENT CONTROL ENGINEERING		3						
						EEEN3042 智慧電網大數據分析概論 OVERVIEW OF BIG DATA ANALYTICS TECHNOLOGIES IN SMART GRID		3						
						EEEN3036 微波被動電路電腦輔助設計 MICROWAVE PASSIVE CIRCUIT COMPUTER AIDED DESIGN		3						

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						IEE3013 感測與定位整合平台 SENSING AND POSITIONING INTEGRATION PLATFORM		3						
						EEEN3044 電力系統設計 POWER SYSTEM DESIGN		3						
						EEEN3023 電力電子 POWER ELECTRONICS		3						
						EEEN3037 電動車技術導論 THE INTRODUCTION OF ELECTRIC VEHICLES TECHNOLOGY		3						
						EEEN3032 電磁干擾概論 INTRODUCTION TO ELECTRO MAGNETIC INTERFERENCE		3						

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- (1)畢業學分：【130】學分
 (2)本系必修：【63】學分
 (3)本系選修：至少【36】學分
 (4)外系選修：至少【3】學分
 (5)通識基礎課程：【16】學分
 (6)通識選修課程：【12】學分

說明：

一、通識課程修課規定：

(一)通識基礎必修課程16學分：

1. 中文思辨與表達4學分。

2. 英文8學分：大學基礎英文4學分、大學精進英文4學分。(外文系、國科管院除外)

3. 核心必修4學分：【現代公民與社會實踐】及【科學與人文的對話】均為單學期2學分之課程。

(二)通識選修課程12學分：

分為【全球氣候變遷與永續發展】、【人文藝術與社會經典教育】、【世界格局與歷史地理視野】及【科技知識原理與趨勢浪潮】等四大領域課程，合計修畢12學分始符合規定。跨領域設計學院、社會創新學院、創能學院、圖書館 MOOCs、各學院之跨域專題課程得申請認列上述四大領域課程，並以6學分為上限，但同一課程不得重複認列(相關認列課程以網路公告為主)。

(三)通識共同必修課程3學分：(不計入畢業學分)

1. 全民國防教育軍事訓練。一年級必修課程(國防科技)1學分，以學院別劃分為原則，第一學期或第二學期均開設課程。

2. 體育。一年級必修2學分。

3. 班級活動。

二、軍訓、體育選修科目畢業學分採計規定：

(一)軍訓：全民國防教育選修課程為2學分，學生至多修習四門(國際情勢、全民國防、防衛動員、國防政策)，列入畢業之學分數請參考本系修業須知。

(二)體育：選修課程是否計分及其他修課規定，請參考本系修業須知。

三、有關修習非本系至少9學分及其他修課規定，請參考本系修業須知。

四、外籍生經國際處審核後，送相關單位辦理免修全部軍訓課程。

(1)Graduation credits : 【130】 credits

(2)Required credits in this department : 【63】 credits

(3)Elective credits in this department : At least 【36】 credits

(4)Elective credits from other departments : At least 【3】 credits

(5)General education foundation course credits : 【16】 credits

(6)General education elective course credits : 【12】 credits

◆Regulations for General Education Course Selection

(1) Foundation Required Courses 16 Credits:

■ Critical Thinking and Expression In Chinese 4 Credits.

■ English 8 Credits: General English 4 Credits, Advanced English 4 Credits. (Excluding Department of Foreign Languages and Literature, DFLL and International School of Technology and Management, ISTM)

■ Required Core Course 4 Credits: "Modern Citizenship and Social Practice" and "The Dialogue between Science and Humanities" are both one-semester, 2-credit courses.

(2) Elective Courses 12 Credits:

These courses are divided into four major domains: "Global climate change and sustainable development. GEG," "Humanities & arts and classical education of social science. GEH," "World patterns and perspectives of history & geography. GEW," and "Knowledge, principles and trends of science and technology. GEK." Completion of 12 credits in total is required to meet the regulations. Interdisciplinary thematic courses of D.School, S.School, i.School, Library MOOCs, and each college can be recognized as the above four major domains with a limit of 6 credits, but the same course cannot be recognized repeatedly. Please refer to the online announcement for further details.

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			<p>(3) Common Required Courses 3 Credits: (Not counted in graduation credits)</p> <p>■ National Defense Education and Military Training (National Defense Science And Technology) : This is a one-credit, mandatory course for freshmen offered in both the first semester and the second semester based on college divisions.</p> <p>■ Physical Education: This is a 2-credit, mandatory for freshmen.</p> <p>■ Class Activities.</p> <p>◆Military Training and Physical Education Elective Course Graduation Credit Calculation Regulations:</p> <p>(1) Military Training: “Civil Defense Education” is a two-credit elective course. Students may take up to four courses, including International Situation, Civil Defense, Defense Mobilization, National Defense Politics. Please refer to the department’s academic regulations for the inclusion of credits towards graduation.</p> <p>(2) Physical Education: Please refer to the department’s academic regulations and other enrollment requirements for whether physical education elective courses are counted as credits.</p> <p>◆Foreign students, after reviewed by the Office of International Affairs, are exempted from taking all military training courses after being sent to relevant units for processing.</p> <p>◆Regarding the completion of at least 9 credits from courses outside the department and other degree programs requirements, please refer to the department’s academic regulations.</p>											

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