

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

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逢甲大學 自動控制工程學系 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														
			AUTO2071 人體生理解剖學 HUMAN ANATOMY AND PHYSIOLOGY	3		AUTO3023 工程數學(三) ENGINEERING MATHEMATICS(3)	3		AUTO4076 人工智慧與醫學診斷 ARTIFICIAL INTELLIGENCE AND MEDICAL DIAGNOSIS	3				
			AUTO2031 工程圖學(含實習) ENGINEERING GRAPHICS AND PRACTICE	3		AUTO3025 介面設計 INTERFACE DESIGN	3		AUTO4072 生醫光電 INTRODUCTION TO BIOPHOTONIC	3				

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			AUTO2022 半導體原理 SEMICONDUCTOR PRINCIPLES	3		AUTO3021 半導體製程技術 SEMICONDUCTOR MANUFACTURING TECHNOLOGY	3		AUTO4022 自動化系統設計 AUTOMATIC SYSTEM DESIGN	3				
			AUTO2072 生醫工程導論 INTRODUCTION TO BIOCHEMICAL ENGINEERING	3		AUTO3027 光電系統與應用 ELETRO OPTICAL SYSTEMS AND ITS APPLICATIONS	3		IEE5016 系統思維與統計應用 SYSTEM THINKING AND APPLIED STATISTICS	3				
			AUTO2026 進階程式設計 ADVANCED PROGRAMMING DESIGN	3		AUTO3032 流力與熱傳學 FLUID MECHANICS AND HEAT TRANSFER	3		AUTO4024 油氣壓工程應用 APPLICATIONS OF HYDRAULIC AND PNEUMATIC ENGINEERING	3				
			AUTO2033 數值方法與分析 NUMERICAL METHOD AND ANALYSIS	3		AUTO3033 計算機輔助電路設計 COMPUTER-AIDED CIRCUITS DESIGN	3		AUTO4026 科技產業工程 ENGINEERING OF INDUSTRIAL TECHNOLOGY	3				
			AUTO2028 靜力學 STATICS	3		AUTO4957 校外專業實習(暑一) OFF-CAMPUS INTERNSHIP (SUMMER 1)	1		AUTO4951 校外專業實習(暑三) OFF-CAMPUS INTERNSHIP(SUMMER 3)	1				
			AUTO2023 半導體元件 SEMICONDUCTOR DEVICES		3	AUTO4939 校外實習導論 INTRODUCTION TO OFF-CAMPUS INTERNSHIP	1		AUTO4074 智慧醫療 SMART HEALTHCARE	3				
			AUTO3026 可程式控制(含實驗) PROGRAMMABLE LOGIC CONTROL (WITH EXPERIMENT)		3	AUTO3076 嵌入式系統 EMBEDDED SYSTEMS	3		AUTO4027 虛擬實境技術 VIRTUAL REALITY TECHNOLOGY	3				

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			AUTO2030 材料力學 MECHANICS OF MATERIALS		3	IEE3011 智慧機器人概論與實作 INTRODUCTION AND IMPLEMENTATION OF INTELLIGENT ROBOTS	3		AUTO5001 虛擬儀控 DESIGN AND APPLICATIONS OF VIRTUAL INSTRUMENTATION	3				
			AUTO2029 動力學 DYNAMICS		3	IEE3012 智慧辨識檢測與應用 APPLICATIONS OF INTELLIGENT RECOGNITION AND OBJECTS DETECTION	3		AUTO4028 微光機電工程實務 PRACTICE OF MICRO-OPTO-ELECTRO-ME ENGINEERING	3				
						AUTO2010 電磁學(一) ELECTROMAGNETICS(1)	3		AUTO4021 微傳感器原理與應用 PRINCIPLES AND APPLICATIONS OF MICROTRANSDUCERS	3				
						AUTO3037 數位信號處理 DIGITAL SIGNAL PROCESSING	3		AUTO5008 機器人系統設計與應用 DESIGN AND APPLICATIONS OF ROBOTIC SYSTEMS	3				
						AUTO3039 機率論 PROBABILITY	3		AUTO4075 醫學影像系統 MEDICAL IMAGING SYSTEM	3				
						AUTO3040 機電元件模擬 MECHATRONIC ELEMENT SIMULATION	3		AUTO4071 生醫工程專論 SPECIAL TOPICS IN BIOMEDICAL ENGINEERING		3			
						AUTO3071 醫學量測 MEASUREMENTS IN BIOMEDICAL SYSTEMS	3		AUTO4023 系統識別 SYSTEM IDENTIFICATION		3			

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						AUTO5072 醫學影像系統 MEDICAL IMAGING SYSTEM	3		AUTO4025 科技英文 ENGLISH FOR TECHNOLOGY		3			
						AUTO3044 人工智慧與大數據分析 ARTIFICIAL INTELLIGENCE AND BIG DATA ANALYTICS		3	AUTO4952 校外專業實習(暑四) OFF-CAMPUS INTERNSHIP(SUMMER 4)		1			
						AUTO3024 工業電子學 INDUSTRIAL ELECTRONICS		3	AUTO4953 專題產業實習 PROJECT-COOPERATIVE INDUSTRY INTERNSHIP		9			
						AUTO3072 生醫信號處理 BIOMEDICAL SIGNAL PROCESSING		3	AUTO4030 智慧製造 SMART MANUFACTURING		3			
						AUTO3022 光機電系統設計 OPTO-MECHATRONIC SYSTEM DESIGN		3	IEE6007 資料處理與分析科學 THE SCIENCE OF DATA PROCESSING AND ANALYSIS		3			
						AUTO3028 自動光學檢測 AUTOMATIC OPTICAL INSPECTION		3	AUTO4029 積體電路與元件封裝 INTEGRATED CIRCUIT AND DEVICES PACKAGING		3			
						AUTO3029 伺服控制(含實驗) SERVO CONTROL (WITH EXPERIMENT)		3	AUTO4073 醫療器材專論 SPECIAL TOPICS IN MEDICAL EQUIPMENT		3			

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						IEE5015 系統思維與機率應用 SYSTEM THINKING AND APPLIED PROBABILITY		3						
						AUTO3030 系統模擬 SYSTEM SIMULATION		3						
						AUTO3031 油氣壓控制工程 HYDRAULIC & PNEUMATIC ENGINEERING		3						
						AUTO4958 校外專業實習(暑二) OFF-CAMPUS INTERNSHIP (SUMMER 2)		1						
						AUTO3034 通訊理論與應用 COMMUNICATION THEORY AND APPLICATION		3						
						AUTO3035 進階可程式控制(含實驗) ADVANCED PROGRAMMABLE LOGIC CONTROL (WITH EXPERIMENT)		3						
						IEE3013 感測與定位整合平台 SENSING AND POSITIONING INTEGRATION PLATFORM		3						

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						AUTO2032 電磁學(二) ELECTROMAGNETICS(2)		3						
						AUTO3036 電機機械 ELECTRIC MACHINES		3						
						AUTO3075 數位影像處理 DIGITAL IMAGE PROCESSING		3						
						AUTO3073 醫用電子 MEDICAL ELECTRONICS		3						

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- (1)畢業學分：【130】學分
 (2)本系必修：【71】學分
 (3)本系選修：至少【31】學分
 (4)外系選修：至少【0】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 : 【71】 credits

(3)Elective credits in this department : At least 【31】 credits

(4)Elective credits from other departments : At least 【0】 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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(3) Common Required Courses 3 Credits: (Not counted in graduation credits)

■ 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.

■ Physical Education: This is a 2-credit, mandatory for freshmen.

■ Class Activities.

◆Military Training and Physical Education Elective Course Graduation Credit Calculation Regulations:

(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.

(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.

◆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.

◆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.

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