

2024 Curricula for the Day School (4-year College Program) in Mechanical Engineering Department, College of Engineering

課程類別 Course Category			一年級 1 st Academic Year						二年級 2 nd Academic Year						三年級 3 rd Academic Year						四年級 4 th Academic Year														
			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2			第一學期 Semester 1			第二學期 Semester 2											
			課程名稱 Course Name	學分 Credits	時數 Hours	課程名稱 Course Name	學分 Credits	時數 Hours	課程名稱 Course Name	學分 Credits	時數 Hours	課程名稱 Course Name	學分 Credits	時數 Hours	課程名稱 Course Name	學分 Credits	時數 Hours	課程名稱 Course Name	學分 Credits	時數 Hours	課程名稱 Course Name	學分 Credits	時數 Hours	課程名稱 Course Name	學分 Credits	時數 Hours									
校共同必修課程 University-wide Common Core Requirements			應修學分數 12 學分 (12 credits)			實務應用文 Practical application articles			2	2	中文閱讀與表達 Chinese Reading and Expression			2	2																				
						實用英文(一) Practical English (1)			2	2	實用英文(二) Practical English (2)			2	2	實用英文(三) Practical English (3)			2	2															
						體育(一) Physical Education (1)			0	2	體育(二) Physical Education (2)			0	2	體育(三) Physical Education (3)			0	2															
						服務教育(一) Community Service (1)			0	2	服務教育(二) Community Service (2)			0	2																				
通識課程 General Education Courses	校訂通識 University General Education Domains	基礎探索入門 Introduction to Basic Exploration	應修學分數 至少 2 學分 (min. required: 2 credits)			校訂通識/2/2 University General Education /2/2 校訂(一)藝術美感探索 Exploration in Arts and Beauty、校訂(二)運算與程式設計 Computing and Programming、校訂(三)生命與倫理 Life and Ethics、 校訂(四)走讀高雄 Field Study of Kaohsiung、校訂(五)海洋科技與永續 Sustainable Marine Science and Technology、校訂(六)創意與創新 Creativity and Innovation																													
	博雅通識 Liberal Curriculum Domains	人文與創意美感 Humanities and Creative Aesthetics	應修學分數 14 學分 (至少任選 3 課群) (min. required: 14 credits across at least 3 different course groups)			博雅通識/學分數/時數 Course Name/Credits/Hours																													
		科技與數位知能 Technology and Digital Literacy				博雅通識/學分數/時數 Course Name/Credits/Hours																													
		社會與身心關懷 Society and Physical and Mental Well-being				博雅通識/學分數/時數 Course Name/Credits/Hours																													
		歷史與多元思維 History and Diversity of Thought				博雅通識/學分數/時數 Course Name/Credits/Hours																													
		全球與永續議題 Global and Sustainable Issues				博雅通識/學分數/時數 Course Name/Credits/Hours																													
	通識微學分 General Education Micro-credits	通識微學分(一)/1 General education micro-credits course 1/1、通識微學分(二)/1 General education micro-credits course 2/1、通識微學分(三)/1 General education micro-credits course 3/1、通識微學分(四)/1 General education micro-credits course 4/1、通識微學分(五)/1 General education micro-credits course 5/1、通識微學分(六)/1 General education micro-credits course 6/1、通識微學分(七)/1																																	

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			第一學期 Semester 1		第二學期 Semester 2	第一學期 Semester 1		第二學期 Semester 2	第一學期 Semester 1		第二學期 Semester 2	第一學期 Semester 1		第二學期 Semester 2
			課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours	課程名稱 Course Name	學分數 Credits	時數 Hours
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			機械製造實習 Mechanical Manufacture Practice	1	3									
	選修 Elective	智能系統與控制組學程/領域 Intelligent System and Control Division Program/Specialty	工程圖學實習 Practice of Engineering Graphics /2/3、機械工程概論 Introduction of Mechanical Engineering /2/2、微系統導論 Introduction To Microsystems /3/3、物件導向程式設計 Object-Oriented Programming Design Practice /3/3、電機機械 Electrical Machinery /3/3、電磁學 Electromagnetics /3/3、液壓工程 Hydraulic Engineering /3/3、感測器原理與實習 Sensors Principles and Practice /2/3、應用熱力學 Applied Thermodynamics /3/3、工具機/3/3、暑期實習 Summer Intern/2/320、機器動力學 Dynamics of Machinery/3/3、電腦輔助機構設計 Computer Aided Mechanism Design /3/3、自動化機構設計 Automatic Mechanism Design /3/3、軟體工程 Software Engineering /3/3、智慧型材料 Intelligent Materials /3/3、微系統製程 Micro-system Manufacturing Process /3/3、虛擬實境技術與應用 Virtual Reality Technology and Application /3/3、3D 創客實作 Learning and Practices of 3D Makers /3/3、工業 4.0 概論 Introduction of Industry 4.0 /3/3、振動學 Vibrations /3/3、半導體製程與設備 Manufacturing Processes and Equipments of Semiconductor /3/3、創意性機構設計 Creative Mechanism Design /3/3、邏輯設計 Logical Design /3/3、控制系統設計與模擬 Control System Design and Simulation /3/3、微系統技術與應用 Micro-System Technology and Application/3/3、機電整合 Mechatronics /3/3、半導體物理與元件概論 Introduction to Semiconductor Physics and Components /3/3、機器人學 Robotics /3/3、工廠管理 Factory Management /3/3、現代光學工程基礎 Introduction To Modern Optical Engineering /3/3、生產管理 Production and Operations Management /3/3、工業日文 Industry Japanese /3/3、自動控制實驗 Automatic Control Practice /1/3、壓力容器製造與檢驗 Fabrication and Inspection of Pressure Vessel /3/3、可程式控制器與實習 Programming Controller Application and Practice /2/4、學期實習 Semester Internship (一)/9/9、電動車科技 Electric Vehicle Technology /3/3、先進半導體設備 Advanced Technologies of Semiconductor Equipment /3/3、最佳化設計 Optimum Design /3/3、數位信號處理 Digital Signal Processing /3/3、機電系統動力學 Dynamics of Mechatronic System /3/3、遠距控制工程 Remote Control Project /3/3、影像顯示科技 Display Technologies /3/3、現代光學工程進階 Advanced Modern Optical Engineering /3/3、品質管理 Quality Management /3/3、捷運機電工程概論及整合 Integration and Introduction To E&M of Transit System /3/3、PC-BASED 控制器與實習 PC-Based Controller and Practice /2/4、學期實習 Semester Internship (二)/9/9、壓力容器設計 Design of Pressure Vessel /3/3、伺服控制 Servo Control /3/3、影像處理與量測 Image Processing and Measurement /3/3、節能減碳實務 Energy Saving and Carbon Reduction Practices /3/3、全球再生能源與離岸風電 Global Renewable Energy and Offshore Wind Industry /3/3											
			應修學分數 Number of 28 Credits Needed(General group At least 16 credits)											

備註：

- 一、畢業總學分數為 134 分。Minimum credits required to graduate: 134.
- 二、必修 78 學分，選修 28 學分。(不含校共同必修課程及通識課程的學分數) Required courses: 78credits; elective courses:28 credits (excluding credits earned from university-wide common core requirements and general education courses;
- 三、校共同必修課程及通識課程 28 學分；相關規定依據本校「共同教育課程實施辦法」、「共同教育課程結構規劃表」及「語言教學實施要點」。University-wide common core requirements and general education courses total 28 credits. The relevant regulations are based on the school's "Implementation Regulations of Courses in the College of General Education", "Course Schedule of College of the General Education," and "Implementation Regulations of Language Education".

四、須修滿英(外)語 8 學分，本國籍學生英語畢業門檻為等同 CEFR B1 以上程度之各類英檢成績；各系自訂英語畢業門檻高於校訂者，另依該系規定。在學期間參加 2 次各類英檢考試，未通過者，須提出考試成績證明始得以下列其中一種方式通過：1.通過校內英語畢業門檻檢定考試。2.參加一期外語教育中心開設之短期英文加強課程，並符合課程簡章規定。3.修讀並通過就讀院系開設 2 學分以上全英授課專業課程 1 門。多益成績達 550 分(或等同 CEFR B1 等級)以上者得免修大一英語(4 學分)；多益成績達 785 分(或等同 CEFR B2 等級)以上者得免修大一、大二英語(8 學分)，但須選修主題式英語或其他外語課程補足語言畢業學分數。其他外語課程請參閱外語教育中心課程結構規劃表。

四、8 credits in English and/or a second foreign language are required to graduate.

- A. The English proficiency graduation requirement for domestic students is CEFR B1 level or higher with related grade report or transcript. For departments with higher English proficiency requirements, the requirements will be in effect.
- B. Students who fail to meet the graduation requirement after two attempts at English proficiency tests during their academic years may fulfill it by passing any of the following:
 - a) School's English proficiency graduation test,
 - b) Participation in a short-term English improvement course offered by the Foreign Language Education Center and compliance with the course regulations,
 - c) Taking and passing at least one professional course that adopts English as a Medium of Instruction (EMI) offered by the college or the department which is worth two or more credits.
- C. Students with a TOEIC score of 550 or above (equivalent to CEFR B1 level) are exempt from Practical English (1) and (2) (4 credits); those achieving a TOEIC score of 785 or above (equivalent to CEFR B2 level) are exempt from Practical English (1), (2), (3) and (4) (8 credits), but must take elective courses like English for Specific Purposes (ESP) courses or other foreign languages to meet the English and/or second foreign language graduation credit requirements. For courses of other foreign languages, please refer to the course schedule of the Foreign Language Education Center.

五、學生修讀所屬學院之「學院共同課程」應認列為本系專業課程學分；修讀所屬學院之「學院跨領域課程」或其他學院開課之課程，則認列為外系課程學分。Credits earned by students from the common courses offered by their respective colleges shall be accepted as their affiliated departments' professional courses. However, credits earned from interdisciplinary courses offered either by their colleges or by other colleges will be accepted as credits earned from departments outside their own.

六、系所訂定條件（學程、檢定、證照、承認外系學分、擋修規定、各教學分組之畢業應修學分數及其他）Departmental requirements (programs, certifications, licenses, recognition of external department credits, prerequisite requirements, credits needed for each teaching division, and other requirements):

（一）非本系開設之專業選修課程可承認12學分，但學生如修畢校課程委員會通過之學分學程，應承認至少**18**學分為畢業學分。

12 credits can be recognized for professional elective courses not offered by the department. However, if students complete credit courses approved by the school curriculum committee, at least 18 credits should be recognized as graduation credits.