

淡江大學 113 學年度機械與機電工程學系入學新生課程地圖

LEARNING MAP of Sep. 2024 freshman. Department of Mechanical and Electro-Mechanical Engineering, TKU

一年級 1st year

微積分(2*2)
CALCULUS

普通物理(3)
GENERAL PHYSICS

工場實習(1*2)
WORKSHOP PRACTICE

應用力學(一)(2)
APPLIED MECHANICS (I)

工程圖學實作(1*2)
PRACTICE OF ENGINEERING GRAPHICS

智慧機械概論與實務(選3)
INTRODUCTION AND PRACTICES OF INTELLIGENT MACHINE

數位邏輯設計(選3)
DIGITAL LOGIC DESIGN

微機電系統概論
(工選2) TOPICS ON MICROELECTROMECHANICAL SYSTEMS

第1學期 Fall credits
4 / 6+2

程式語言(選3)
COMPUTER PROGRAMMING

金屬材料顯微組織觀察和實務
(選2) METALLIC MATERIAL MICROSTRUCTURE OBSERVATION AND PRACTICE

SolidWorks立體機構製圖(選2)
SOLIDWORKS 3D MECHANISM DRAWING

光資機電產業趨勢(工選2)
OPTO-MECHATRONICS AND INFORMATION TECH TRENDS

第2學期 Spring credits
9 / 7+2

二年級 2nd year

工程數學(3*3)
ENGINEERING MATHEMATICS

材料力學(一)(3)
STRENGTH OF MATERIALS (I)

材料科學與工程(3)
MATERIALS SCIENCE AND ENGINEERING

電路學(3)
CIRCUIT THEORY

電子學(3)
ELECTRONICS

應用力學(二)(3)
APPLIED MECHANICS (II)

機動學(3)
MECHANISM

熱力學(2*2)
THERMODYNAMICS

機械畫實作(1)
PRACTICE OF MECHANICAL DRAWING

電腦繪圖實作(1)
PRACTICE OF COMPUTER GRAPHICS

基礎實驗設計(選2)
FUNDAMENTAL DESIGN OF EXPERIMENTS

電腦程式設計(選3)
COMPUTER PROGRAM DESIGN

微處理機(選3)
MICROPROCESSORS

人因工程學(選3)
HUMAN FACTOR

第1學期 Fall credits
15 / 11

CNC操作與加工實務專題(選2)
CNC OPERATING PRACTICE TOPICS

機電整合(選3)
MECHATRONICS

材料力學(二)(選3)
STRENGTH OF MATERIALS (II)

第2學期 Spring credits
15 / 8

三年級 3rd year

應用物理學(3)
APPLIED PHYSICS

畢業專題(1)
KEY ISSUES IN CAREER PLANNING

自動控制(3)
AUTOMATIC CONTROL

工業控制(2)
INDUSTRIAL CONTROL ENGINEERING

精密機械設計(2/2)
FUNDAMENTALS OF PRECISION MACHINE ELEMENTS

機械製造(3)
MANUFACTURING PROCESSES

流體力學(3)
FLUID MECHANICS

熱傳學(3)
HEAT TRANSFER

機械工程實驗(一)(1)
LABORATORY OF MECHANICAL ENGINEERING (I)

機械工程實驗(二)(1)
LABORATORY OF MECHANICAL ENGINEERING (II)

能源工程與永續(選3)
ENERGY ENGINEERING AND SUSTAINABILITY

電腦輔助製造專題(選2)
COMPUTER AIDED MANUFACTURING TOPICS

工程光學(選3)
ENGINEERING OPTICS

人工智慧實務(選3)
ARTIFICIAL INTELLIGENCE WITH PRACTICES

動態系統分析(選3)
ANALYSIS OF DYNAMIC SYSTEMS

工業材料應用(選3)
APPLICATION OF INDUSTRIAL MATERIALS

電子計算機工程應用(一)(選2)
ENGINEERING APPLICATION OF COMPUTERS (I)

第1學期 Fall credits
12 / 19

電磁學(選2)
ELECTROMAGNETICS

電腦輔助設計(選3)
COMPUTER AIDED DESIGN

精密量測原理(選2)
FUNDAMENTALS AND APPLICATIONS OF ENGINEERING METROLOGY

物聯網感測電路設計(選3) IOT
SENSING CIRCUIT DESIGN

可靠性工程(選3)
RELIABILITY ENGINEERING WITH APPLICATIONS

機構設計(選3)
MECHANISM DESIGN

加減法加工實務(選3)
ADDITIVE AND SUBTRACTIVE MANUFACTURING WORKSHOP

數位訊號處理(選3) DIGITAL
SIGNAL PROCESSING

電子計算機工程應用(二)(選2)
ENGINEERING APPLICATION OF COMPUTERS (II)

第2學期 Spring credits
12 / 24

四年級 4th year

機械工程實驗(三)(1)
LABORATORY OF MECHANICAL ENGINEERING (III)

機械工程實驗(四)(1)
LABORATORY OF MECHANICAL ENGINEERING (IV)

專案管理實習(選3)
PROJECT MANAGEMENT PRACTICE

研發技術實習(選3)
RESEARCH TECHNOLOGY PRACTICE

產線技術實習(選3)
PRODUCTION-LINE TECHNOLOGY PRACTICE

機械振動(選3)
MECHANICAL VIBRATION

創新創業與管理(選2)
ENTREPRENEURSHIP AND INNOVATION MANAGEMENT

半導體製程設備(選3)
SEMICONDUCTOR PROCESS EQUIPMENT

工業4.0特色技術(選3)
INTRODUCTION TO INDUSTRY 4.0

有限元素法概論(選3)
INTRO. TO FINITE ELEMENT METHOD

精密加工概論(選3)
INTRODUCTION TO PRECISION MACHINING

第1學期 Fall credits
1 / 9

第2學期 Spring credits
1 / 26

綠色製程(選3)
GREEN PROCESS

電動機械(選3)
ELECTRIC MACHINERY

影像處理與機器視覺(選3)
IMAGE PROCESSING AND MACHINE VISION

第1學期 Fall credits
1 / 9

第2學期 Spring credits
1 / 26

備註：必修Required/選修Elective+工學院共同科Electives courses by College of Engineering

113學年度起 必修學分95學分(含通識24學分)；本系選修課最低學分13學分；畢業學分數：128學分
Sep. 2024- Completion of 128 credits, including 95 credits of compulsory courses and 13 credits of elective courses.